

COMMScope®

2022 Annual Report

now
meets
next



Three-year selected financial data

(Unaudited—in millions, except per share amounts)

Year Ended December 31

Result of operations	2020	2021	2022
Net sales	\$8,435.9	\$8,586.7	\$9,228.1
Gross profit	2,747.8	2,684.3	2,804.1
Restructuring costs, net	88.4	91.9	62.9
Asset impairments	206.7	13.7	1,119.6
Operating income (loss)	(51.8)	48.6	(713.8)
Net interest expense	(573.4)	(559.3)	(586.1)
Net loss	(573.4)	(462.6)	(1,286.9)
Series A convertible preferred stock dividends	(56.1)	(57.3)	(59.0)
Net loss attributable to common stockholders	(629.5)	(519.9)	(1,345.9)
Loss per share information:			
Weighted average number of shares outstanding:			
Basic	196.8	203.6	207.4
Diluted	196.8	203.6	207.4
Loss per share:			
Basic	\$(3.20)	\$(2.55)	\$(6.49)
Diluted	\$(3.20)	\$(2.55)	\$(6.49)
Non-GAAP adjusted results:			
Non-GAAP adjusted EBITDA ⁽¹⁾	\$1,215.2	\$1,117.0	\$1,276.7
Non-GAAP adjusted earnings per share ⁽¹⁾	\$1.56	\$1.39	\$1.66
Other information:			
Net cash generated by operating activities	\$436.2	\$122.3	\$190.0
Depreciation and amortization	823.3	786.3	696.1
Additions to property, plant and equipment	121.2	131.4	101.3

Balance sheet data

As of December 31

Cash and cash equivalents	\$521.9	\$360.3	\$398.1
Goodwill and other intangible assets, net	8,936.9	8,259.0	6,545.9
Property, plant, and equipment, net	684.5	656.3	609.6
Total assets	13,576.8	13,259.5	11,685.4
Working capital	1,401.1	1,397.2	1,618.7
Long-term debt, including current maturities	9,520.6	9,510.5	9,501.6
Series A convertible preferred stock	1,041.8	1,056.1	1,100.3
Stockholders' equity (deficit)	355.0	(156.6)	(1,546.0)

(1) See reconciliation of GAAP measures to Non-GAAP measures (page 8).

To our shareholders **NEXT Steps**

2022 was a very rewarding year for CommScope. Despite significant inflation and continued supply chain challenges, we were able to achieve our financial objectives shared at our 2021 Investor Day. We showed sequential financial improvement through 2022 and are exiting 2022 as a substantially stronger company than when we entered the year.

In spite of the ongoing economic uncertainty, our comprehensive CommScope NEXT transformation plan provided the guidance we needed to adapt and thrive over the course of the year. We are excited to announce that we finished 2022 stronger than expected on virtually every front.

CommScope NEXT is a carefully mapped series of steps our company must take to achieve portfolio optimization, drive organic growth and improve operational efficiency to enhance the value of the CommScope brand for our customers worldwide and increase shareholder value at the same time. Our successful reorganization of CommScope's business segments—and the concurrent adoption of the general manager model in those segments—has paved the way for some truly exceptional year-end results.

Our headline achievements are consolidated sales growth of 7%, and adjusted EBITDA* growth of 14%, underpinned by Core CommScope's net sales increase of 12% and adjusted EBITDA growth of 15%. CommScope also successfully reached the high-end 2022 target for Core adjusted EBITDA of \$1.15 – 1.25 billion by delivering \$1.25 billion of adjusted EBITDA for the Core portfolio. And with our improved profitability, we reduced our year end net leverage to 6.9x, towards the bottom of our 6.8x – 7.2x targeted net leverage range.

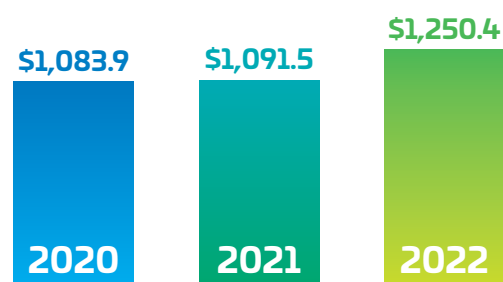


Chuck Treadway

President and Chief Executive Officer

In spite of 2022's dynamic and challenging global business climate, characterized by steep inflationary pressures and ongoing supply chain disruptions, following the CommScope NEXT playbook enabled us to compete, overcome and succeed on every level. Much of this success is due to our business segment realignment and the clearer accountabilities it provides. These segments include:

- Connectivity and Cable Solutions (CCS)
- Networking, Intelligent Cellular and Security (NICS)
- Outdoor Wireless Networks (OWN)
- Access Network Solutions (ANS)
- Home Networks (HOME)



FY Core Adjusted EBITDA (\$ in millions)

Comprising 14 individual business units, these segments are better able to align the business with sales, supply chain, operations, marketing and engineering resources to empower faster, smarter decision-making. Segments also have simpler structures, making them more efficient and more easily compared to our industry peers, something that helps investors to appropriately evaluate our company's portfolio.

CommScope also remains among the world's top innovators in networking technology, keenly attuned to being ready for the next big shift in communications. In 2022, we saw the growing importance of rural broadband connectivity and the public imperative of closing the digital divide between the connected haves and have nots. While 2023 remains an uncertain time for the global economy, CommScope is already positioned to be a key player in this great step toward universal broadband connectivity in the United States and elsewhere.

CommScope NEXT is a long-term roadmap, but as our 2022 performance demonstrates, each step we take on that journey, to the benefit of our customers and shareholders alike, has been the right one.

2022 Financial and Operational Performance

2022 provided some limited relief on the supply chain front, but also delivered greater inflationary challenges. Judicious pricing adjustments helped to insulate CommScope financially from the worst of these effects, and with the slowly untangling supply chain, CommScope has begun to clear the substantial backlog that was built up over the previous year. The end result is strong growth in sales and EBITDA across the company, particularly in the Core CommScope business.

These are the top-line company-wide results for 2022:

- 2022 consolidated net sales of \$9.23 billion increased 7% YoY, led by the Core portfolio delivering growth in CCS, NICS and OWN but partially offset by declines in ANS and non-Core Home.
- Core CommScope delivered net sales of \$7.52 billion, growing 12% from the prior year.
- 2022 consolidated adjusted EBITDA* was \$1.28 billion, an increase of 14% YoY, with growth across all segments except ANS. Core adjusted EBITDA of \$1.25 billion grew 15% YoY and delivered at the high-end of our CommScope NEXT full year 2022 target of \$1.15 - \$1.25 billion.
- Adjusted earnings per share* was \$1.66, an increase of 19% from the prior year.
- For the full year 2022, CommScope delivered \$190 million of cash flow from operations, free cash flow of \$89 million and adjusted free cash flow* of \$198 million, all significant improvements from the prior year, despite headwinds faced throughout the year relating primarily to supply chain.
- CommScope delivered a reduction in year-end net leverage from the prior year, ending at 6.9x. This represents nearly a full turn reduction in net leverage from the prior year and within the lower end of our 2022 targeted range between 6.8x – 7.2x.
- We expect continued execution of CommScope NEXT to help drive further reduction in net leverage in the range of 5.5x – 6.5x by the end of 2023, and to substantially reduce it to less than 4.0x by the end of 2025.



Highlights

Our five reorganized business segments took great steps forward in 2022, thanks in large part to the general manager model driving each business with flexibility, transparency and accountability. Here are some of our most prominent wins in 2022.

Connectivity and Cable Solutions (CCS)

- CommScope introduced our **XGS-PON solution suite**, the next-generation 10G-capable cloud-to-edge platform designed to support rapidly-growing **fiber-to-the-home (FTTH) networks**. The XGS-PON solution suite's flexible architecture, exceptional interoperability and cloud-based operation enables providers to bridge multiple network topologies and take advantage of **software-defined network (SDN)** efficiencies to connect homes, businesses, manufacturing and even smart cities.
- The launch of the **Propel™ high-speed fiber platform** put **terabit speeds** within easy reach for data centers. CommScope's innovative answer to the ever-accelerating demand on data center infrastructure, the Propel platform, enables faster, more efficient cloud computing and AI applications at **400 Gbps and 800 Gbps, as well as at the emerging 1.6 Tbps standard**. The Propel solution was a Gold Honoree in the Cabling Installation & Maintenance Awards.
- CommScope's **Prodigy™ fiber connectors and NOVUX™ FTTX solutions** earned 2022 Diamond Technology Awards from Broadband Technology Report.
- CommScope joined the prestigious **Innovative Optical and Wireless Network Global Forum**, securing our place among more than 100 leading companies in advancing communication and infrastructure technologies for the advancement of all society.

Networking, Intelligence Cellular and Security (NICS)

- CommScope collaborated with **Microsoft** to advance industrial manufacturing by integrating our **citizens broadband radio service (CBRS) access points**, which use unlicensed spectrum for private wireless networking with **Microsoft Azure private MEC**, to streamline manufacturing processes in our own plant in Shakopee, Minnesota. This proof-of-concept demonstration in our own plant enabled new capabilities and efficiencies as we lean into **Industry 4.0**.
- CommScope was selected by **Spurs Sports & Entertainment (SS&E)** to provide next-generation for the **AT&T Center**, the home of the San Antonio Spurs professional basketball organization. CommScope's **ERA® all-digital DAS solution** expanded capacity and availability over 4G, 5G and private wireless networks in the vast arena.
- CommScope's **RUCKUS Networks** debuted a new and expanded **RUCKUS BIG DOGS Partner Program**, adding a third middle tier while streamlining management across all tiers. Together, Elite, Certified and Registered Partners can now offer more specialized service for customers and grow their own businesses through improved incentives.
- Front-running India's fast-growing IT market and its increasingly connected society, **CommScope's RUCKUS Networks**, opened **a new R&D center in collaboration with IIT Madras Research Park in Chennai**. This is the second R&D innovation center RUCKUS operates in India, and the first collaboration with IIT Madras, the top-ranked institute in the country.
- CommScope expanded our partnership with **Trackhouse Racing** with the launch of the CommScope Ignition Program, which leverages the excitement of motorsports to foster **STEM learning**. The team's star driver, **Daniel Suárez**, and their CommScope-branded Chevrolet racecars, traveled to six schools across the United States to deliver classroom sessions to ignite curiosity in STEM subjects and get them involved in the technologies and careers of tomorrow.

Outdoor Wireless Networks (OWN)

- The release of CommScope's innovative new **Mosaic™** modular base station antenna made waves in the industry as it provided a uniquely flexible, economical and environmentally responsible platform for network operators' staged 5G rollouts without compromising existing 4G passive antenna performance at the same site.
- CommScope collaborated with **Meta Connect** to accelerate the adoption of **Open RAN (O-RAN) interoperability standards** in the massive MIMO (mMIMO) Evenstar program. This competitive reference model disaggregates the radio from antennas and filters, a key advantage for the growing O-RAN market.
- CommScope's **PowerShift™ intelligent power management solution** has been deployed in more than **20,000 macro cellular sites worldwide**. By dynamically regulating voltage levels to tower-top C-Band and other high-power remote radio units, **PowerShift improves energy efficiency by as much as 10%**, helping mobile network operators reduce costs and improve their sustainability profiles.

Access Network Solutions (ANS)

- Leading broadband provider **Liberty Global** selected CommScope as their **DOCSIS 4.0** technology partner, trusting us to help them achieve 10G network capabilities in Europe. CommScope developed and deployed a Remote MACPHY (RMD) node platform for D4.0 to simplify and enhance the operational efficiency of Liberty Global's hybrid fiber-coaxial infrastructure.
- **Mediacom**, the 5th largest broadband and cable operator in North America, turned to CommScope to power their network migration to a **distributed access architecture (DAA)** based on Remote MACPHY. **CommScope RD2322 RxD devices** were deployed to increase network speeds and reduce latency in Mediacom's multi-gigabit network.
- **ViacomCBS** partnered with CommScope to migrate satellite-delivered channels to a **content delivery network (CDN)** powered by the **CommScope DigiCiper Streaming system**. This shift provided cost efficiencies and eliminated geographical dependencies, enabling ViacomCBS to expand its footprint to connect with larger audiences worldwide.

Home Networks (HOME)

- CommScope launched the **HomeSight™ platform** for healthcare and homecare applications and partnered with **Kraydel** to put this easy-to-use and potentially life-saving remote networking technology into homes of the medically at-risk in the UK. Branded as **Konnect**, this intuitive, TV-based connectivity solution is an economical way to improve levels of care.
- The new **HomeVista™ streaming solution** was launched at **SCTE Cable-Tec Expo 2022**, demonstrating the new device's highly customizable delivery of streamed content and live TV over its RDK-based technology. HomeVista successfully blends **the best of OTT and streaming applications** seamlessly, with a highly individualized platform.
- **Vodafone Germany** selected **CommScope's TG6442 DOCSIS 3.1 cable gateways** to deliver **Wi-Fi 6** performance to millions of subscribers in Germany. The CommScope solution delivers multi-gigabit data rates to homes and meets growing user demand for faster upstream feeds as well.
- **Orange Belgium** began delivering 4K UHD video and seamless streaming to subscribers on **CommScope's latest-generation set-top box (STB) solution** running the Android TV™ operating system. The solution provides multiscreen cloud recording, Chromecast built-in™ and voice-activated content search. This deployment comes after the successful rollout in 2021 for Orange Slovensko. In both cases, Orange also appreciated the **99 percent post-consumer recycled plastics** used in the STB's construction.
- CommScope entered the **Wi-Fi 6** retail market with the launch of two new products from our ARRIS® business: The **SURFBoard THRUSTER Gaming Acceleration Kit** and the **SURFBOARD Wi-Fi 6E Network Upgrade Kit**. By enabling Wi-Fi 6's massive bandwidth boosts, these solutions are poised to redefine video gaming. The Wi-Fi 6E upgrade also enables IoT applications that are at the cornerstone of today's modern smart homes.

NEXT steps in our ESG transformation

Our CommScope NEXT roadmap focuses on the importance of our global responsibility to people, society at large and the environment we all share. 2022 was a great year on the ESG front as well.

From a sustainability standpoint, CommScope was once again named to Newsweek's list of **"America's Most Responsible Companies."** We were also honored to be recognized in our inclusion on Forbes' **"Mexico's Best Employers"** list, on Investor's Business Daily's **"100 Best ESG Companies"** list. We were also honored with our 7th consecutive **"Gold"** sustainability rating by Ecovadis.

In regard to personal development and social equity, CommScope also made headlines in the achievements of our employees all over the world, including honors from Innovator in Action Awards, CRN Women of the Channel Awards, CPI Media Most Innovative Go-To-Market Strategist, WICT Women to Watch, TIA Star Awards and the Broadband Forum Individual Awards.

Taking the NEXT step into 2023

While there remains a great deal of uncertainty about what the world economy will look like in 2023, CommScope is proud to say that the steps we've taken in 2021 and 2022 have positioned us well for the coming year. Communications remain the most precious commodity in the modern world, and networks are the vast exchanges where values and ideas are traded every second of every day. Connecting more people, in more places, in more ways than ever before, is not just CommScope's business. It's our mission—and it's a mission we will continue to pursue relentlessly.

CommScope NEXT will continue to guide our decision-making processes with the flexibility, transparency and accountability that delivered such impressive results in 2022.



Chuck Treadway

President and Chief Executive Officer

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learn more.**



Find our interactive
annual report at
ir.commscope.com



* See Description of Non-GAAP Financial Measures and Reconciliation of GAAP Measures to Non-GAAP Adjusted Measures contained within this annual report.

Reconciliation of GAAP measures to non-GAAP adjusted measures

(Unaudited—in millions, except per share amounts)

Year Ended December 31

Reconciliation of adjusted EBITDA

	2020	2021	2022
Net loss, as reported	\$(573.4)	\$(462.6)	\$(1,286.9)
Income tax benefit, as reported	(81.1)	(71.9)	(13.1)
Interest income, as reported	(4.4)	(1.9)	(2.8)
Interest expense, as reported	577.8	561.2	588.9
Other expense, net, as reported	29.3	23.8	0.1
Operating income (loss), as reported	(51.8)	48.6	(713.8)
Adjustments:			
Amortization of purchased intangible assets	630.5	613.0	543.0
Restructuring costs, net	88.4	91.9	62.9
Equity-based compensation	115.0	79.6	61.1
Asset impairments	206.7	13.7	1,119.6
Transaction, transformation and integration costs ⁽¹⁾	24.9	90.3	38.2
Acquisition accounting adjustments ⁽²⁾	20.6	11.5	7.3
Patent claims and litigation settlements	16.3	31.7	28.5
Executive severance	6.3	-	-
Reserve for Russian accounts receivable	-	-	2.7
Depreciation	158.3	136.7	127.2
Non-GAAP adjusted EBITDA	<u>\$1,215.2</u>	<u>\$1,117.0</u>	<u>\$1,276.7</u>

Reconciliation of adjusted net income and adjusted diluted EPS

Net loss, as reported	\$(573.4)	\$(462.6)	\$(1,286.9)
Adjustments:			
Total pretax adjustments to adjusted EBITDA	1,108.7	931.7	1,863.3
Pretax amortization of debt issuance costs and OID ⁽³⁾	34.5	36.5	25.8
Pretax loss on debt transactions ⁽⁴⁾	17.9	34.4	—
Tax effects of adjustments and other tax items ⁽⁵⁾	(216.7)	(196.3)	(189.4)
Non-GAAP adjusted net income	<u>\$371.0</u>	<u>\$343.7</u>	<u>\$412.8</u>
Diluted EPS, as reported ⁽⁶⁾	\$(3.20)	\$(2.55)	\$(6.49)
Non-GAAP adjusted diluted EPS ⁽⁷⁾	\$1.56	\$1.39	\$1.66

Reconciliation of adjusted free cash flow

Cash flow generated by operating activities, as reported	\$436.2	\$122.3	\$190.0
Less: Additions to property, plant and equipment	(121.2)	(131.4)	(101.3)
Adjustments:			
Cash paid for transaction, transformation and integration costs	21.7	66.7	50.7
Cash paid for restructuring costs, net	78.7	42.6	58.1
Non-GAAP adjusted free cash flow	<u>\$415.4</u>	<u>\$100.2</u>	<u>\$197.5</u>

Note: Components may not sum to total due to rounding.

(1) In 2022, primarily reflects transformation costs related to CommScope NEXT and integration costs related to the ARRIS acquisition. In 2021, primarily reflects transaction separation costs related to the planned separation of the Home Networks segment from CommScope, transformation costs related to CommScope NEXT and integration costs related to the ARRIS acquisition. In 2020, primarily reflects integration costs related to the ARRIS acquisition.

(2) In 2022, 2021 and 2020, reflects ARRIS acquisition accounting adjustments related to reducing deferred revenue to its estimated fair value.

(3) Included in interest expense.

(4) Included in other expense, net.

(5) The tax rates applied to adjustments reflect the tax expense or benefit based on the tax jurisdiction of the entity generating the adjustment. There are certain items for which we expect little or no tax effect.

(6) For all periods presented, GAAP EPS was calculated using net loss attributable to common stockholders in the numerator, which includes the impact of the Series A convertible preferred stock dividend.

(7) Diluted shares used in the calculation of non-GAAP adjusted diluted EPS for the years ended December 31, 2022, 2021 and 2020 were 249.4 million, 246.4 million and 238.3 million, respectively.

CommScope management believes that presenting certain non-GAAP financial measures noted above enhances an investor's understanding of CommScope's financial performance when considered together with the GAAP financial measures. CommScope management further believes that these non-GAAP financial measures are useful in assessing CommScope's operating performance from period to period by excluding certain items that it believes are not representative of its core business. In addition, CommScope management uses certain of these financial measures for business planning purposes and in measuring CommScope's performance relative to that of its competitors.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2022

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number: 001-36146

CommScope Holding Company, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

27-4332098

(I.R.S. Employer
Identification No.)

**1100 CommScope Place, SE
Hickory, North Carolina**

28602
(Zip Code)

(828) 324-2200
(Telephone number)

(Address of principal executive offices)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Ticker symbol	Name of each exchange on which registered
Common Stock, par value \$.01 per share	COMM	Nasdaq

Securities registered pursuant to Section 12(g) of the Act: **NONE**

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2). Yes ☐ No ☒

The aggregate market value of shares of Common Stock held by non-affiliates of the registrant was approximately \$1,247.6 million as of June 30, 2022. For purposes of this computation, shares held by affiliates and by directors and officers of the registrant have been excluded.

As of February 10, 2023 there were 208,455,920 shares of the registrant’s Common Stock outstanding.

Documents Incorporated by Reference

Portions of the registrant’s Proxy Statement for the 2023 Annual Meeting of Stockholders are incorporated by reference in Part III hereof.

CommScope Holding Company, Inc.
Form 10-K
December 31, 2022
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PART I

Unless the context otherwise requires, references to “CommScope Holding Company, Inc.,” “CommScope,” “the Company,” “Registrant,” “we,” “us,” or “our” are to CommScope Holding Company, Inc. and its direct and indirect subsidiaries on a consolidated basis.

This Annual Report on Form 10-K includes certain statements that constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, which reflect our current views with respect to future events and financial performance. These forward-looking statements are generally identified by their use of such terms and phrases as “intend,” “goal,” “estimate,” “expect,” “project,” “projections,” “plans,” “potential,” “anticipate,” “should,” “could,” “designed to,” “foreseeable future,” “believe,” “think,” “scheduled,” “outlook,” “target,” “guidance” and similar expressions, although not all forward-looking statements contain such terms. This list of indicative terms and phrases is not intended to be all-inclusive.

These statements are subject to various risks and uncertainties, many of which are outside of our control. Item 1A, “Risk Factors,” of this Annual Report on Form 10-K sets forth more detailed information about the factors that may cause our actual results to differ, perhaps materially, from the views stated in such forward-looking statements. Although the information contained in this Annual Report on Form 10-K represents our best judgment as of the date of this report based on information currently available and reasonable assumptions, we can give no assurance that the expectations will be attained or that any deviation will not be material. Given these uncertainties, we caution you not to place undue reliance on these forward-looking statements, which speak only as of the date made. We are not undertaking any duty or obligation to update any forward-looking statements to reflect developments or information obtained after the date of this Annual Report on Form 10-K, except to the extent required by law.

ITEM 1. BUSINESS

Company Overview

CommScope Holding Company, Inc. was incorporated in Delaware on October 22, 2010 and our initial public offering for our common stock was on October 25, 2013. Since our founding as an independent company in 1976, we have consistently played a significant role in many of the world’s leading communication networks. Our evolution has been driven by technological innovation and strategic acquisitions that expanded our product offerings and complemented our existing solutions. We are a global provider of infrastructure solutions for communication, data center and entertainment networks. Our solutions for wired and wireless networks enable service providers, including cable, telephone, data center and digital broadcast satellite operators and media programmers, to deliver media, voice, Internet Protocol (IP) data services and Wi-Fi to their subscribers and allow enterprises to experience constant wireless and wired connectivity across complex and varied networking environments. Our solutions are complemented by services including technical support, systems design and integration. We are a leader in digital video and IP television (IPTV) distribution systems, broadband access infrastructure platforms and equipment that delivers data and voice networks to homes. Our global leadership position is built upon innovative technology, broad solution offerings, high-quality and cost-effective customer solutions, and global manufacturing and distribution scale.

We have a team of over 30,000 people who serve our customers in over 150 countries through a network of world-class manufacturing and distribution facilities strategically located around the globe. Our customers include substantially all the leading global telecommunications operators, data center managers, cable television providers or multi-system operators (MSOs) and thousands of enterprise customers, including many Fortune 500 companies. We have long-standing, direct relationships with our customers and serve them through a direct sales force and a global network of channel partners.

In 2021, we announced a transformation initiative called CommScope NEXT designed to drive shareholder value through three pillars: profitable growth, operational efficiency and portfolio optimization. We believe these efforts are critical to making us more competitive and allowing us to invest in growth, de-leverage and maximize stockholder and other stakeholder value. We incurred \$62.9 million and \$91.9 million of restructuring costs and \$38.2 million and \$90.3 million of transaction, transformation and integration costs during the years ended December 31, 2022 and 2021, respectively, which were primarily related to CommScope NEXT. We expect to continue to incur restructuring costs and transaction, transformation and integration costs related to CommScope NEXT in 2023 and such costs could be material.

As a step to optimize our portfolio through CommScope NEXT, as of January 1, 2022, we reorganized our internal management and reporting structure to align our portfolio of products and solutions more closely with the markets we serve and provide better performance comparability with our competitive peer set across our businesses. The reorganization changed the information regularly reviewed by our chief operating decision maker for purposes of allocating resources and assessing performance. As a result, we are now reporting financial performance based on the following operating segments: Connectivity and Cable Solutions (CCS), Outdoor Wireless Networks (OWN), Networking, Intelligent Cellular and Security Solutions (NICS), Access Network Solutions (ANS) and Home Networks (Home). Prior to this change, we operated and reported four operating segments: Broadband Networks, Outdoor Wireless Networks, Venue and Campus Networks and Home Networks. The Home segment was unchanged in this realignment.

Also as a step in our CommScope NEXT transformation plan, in 2021, we announced a plan to separate the Home Networks business. Due to the impact of the uncertain supply chain environment, capital spending patterns of customers and other macroeconomic factors related to the Home Networks business, we have delayed our separation plan, but we continue to analyze the financial results of our "Core" business separately from Home. See the Operating Segments section below for an illustration of the aggregation of our Core financial measures.

For the year ended December 31, 2022, our revenues were \$9.23 billion and our net loss was \$1,286.9 million. For further discussion of our current and prior year financial results, see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Operating Segments

As discussed above, as of January 1, 2022, we reorganized our reporting structure and are now reporting financial performance based on five operating segments: CCS, OWN, NICS, ANS and Home. All prior period amounts have been recast to reflect these operating segment changes. Our Core segments include our CCS, OWN, NICS and ANS segments and exclude our Home segment. The distribution of net revenues among our five segments was as follows:

	Year Ended December 31,		
	2022	2021	2020
CCS	41.0%	35.6%	30.4%
OWN	15.9	16.5	14.8
NICS	10.2	10.0	10.0
ANS	14.4	16.4	16.3
Core segments	81.5	78.5	71.5
Home	18.5	21.5	28.5
Total	100.0%	100.0%	100.0%

CCS Segment (2022 Net Sales of \$3.8 billion)

Our CCS segment provides fiber optic and copper connectivity and cable solutions for use in telecommunications, cable television, residential broadband networks, data centers and business enterprises. The CCS portfolio includes network solutions for indoor and outdoor network applications. Indoor network solutions include optical fiber and twisted pair structured cable solutions, intelligent infrastructure management hardware and software and network rack and cabinet enclosures. Outdoor network solutions are used in both local-area and wide-area networks and “last mile” fiber-to-the-home installations, including deployments of fiber-to-the-node, fiber-to-the-premises and fiber-to-the-distribution point to homes, businesses and cell sites.

OWN Segment (2022 Net Sales of \$1.5 billion)

Our OWN segment focuses on the macro and metro cell markets. The segment includes base station antennas, radio frequency (RF) filters, tower connectivity, microwave antennas, metro cell products, cabinets, steel, accessories and our wireless spectrum management business, Comsearch.

NICS Segment (2022 Net Sales of \$0.9 billion)

Our NICS segment provides wireless networks for enterprises and service providers. Product offerings include indoor and outdoor Wi-Fi and long-term evolution (LTE) access points, access and aggregation switches; an Internet of Things (IoT) suite, on-premises and cloud-based control and management systems; and software and software-as-a-service applications addressing security, location, reporting and analytics.

ANS Segment (2022 Net Sales of \$1.3 billion)

Our ANS segment’s product solutions include cable modem termination systems (CMTS), video infrastructure, distribution and transmission equipment and cloud solutions that enable facility-based service providers to construct a state-of-the-art residential and metro distribution network.

Home Segment (2022 Net Sales of \$1.7 billion)

Our Home segment includes subscriber-based solutions that support broadband and video applications. The broadband offerings in the Home segment include devices that provide residential connectivity to a service provider’s network, such as digital subscriber line and cable modems and telephony and data gateways which incorporate routing and Wi-Fi functionality. Video offerings include set top boxes that support cable, satellite and IPTV content delivery and include products such as digital video recorders, high definition set top boxes and hybrid set top devices.

Industry Background

We participate in the large and growing global market for connectivity and essential communications infrastructure. This market is being driven by the growth in bandwidth demand associated with the continued demand of smartphones, tablets and machine-to-machine (M2M) communication as well as the proliferation of data centers, Big Data, cloud-based services, streaming media content and IoT. In addition, video distribution over the broadband IP network is transforming how content is managed and consumed. IP facilitates new forms of video such as Over-the-Top (OTT) and interactive television. During the COVID-19 pandemic, we learned even more about business and consumer reliance on their network connectivity, as our products and services allowed a dramatic shift from working in offices to working in the home. As the world is now recovering from the COVID-19 pandemic, we continue to see a mix of connectivity needs in homes, in offices and while on the move. We are still seeing a shift in how people are using the network which is continuing to drive higher upstream usage than downstream usage. Additionally, as the network becomes more bi-directional and interactive, the need for lower and more consistent latency is growing in importance. Some of these trends have subsided and may continue to subside as people work less from home, but other recent network usage trends involving increased upstream usage remain the new normal, still requiring network bandwidth capacities to be more symmetrical than in the past.

There are several major trends that we expect to continue to drive network deployments and investment, including:

Evolving Network Architecture and Technology

The pace of change in networking has increased as consumers and data-driven businesses utilize more bandwidth and shift toward cloud and mobile applications. Exponential growth in video and mobile data consumption are revolutionizing how we connect to each other and changing the network architecture needed to support consumer demand. This trend requires better network coverage, greater broadband access, and increased capacity and data storage.

Our customers are working to transition their networks to become faster, more responsive, more efficient and more reliable. The work from home trend caused by the COVID-19 pandemic has accelerated many of these network trends. We believe the following key network trends will continue to impact CommScope and the industry during 2023:

- 1) **Network Convergence:** Operators are moving toward converged or multi-use network architectures. Rather than building upon independent wireline and wireless networks, operators are shifting toward networks that combine voice, video and data communications into a single converged data network for wired and wireless services.
- 2) **Continued Disruption by Over-the-Top TV:** Although content consumption continues to increase, subscriptions to pay TV continue declining. As a result, cable operators are compelled to invest in and upgrade their networks for broadband but have mixed feelings about investments in their video and voice services. While past data trends have been defined by rapid growth in the downlink, more interactive experiences and IoT will drive the need for major network change in the uplink.
- 3) **Densification:** As wireless operators work to meet consumer demand, cell splitting, in the form of densification, is expected to be a key driver for fulfilling the promise of 5G networks. Increased sectorization at macro cell sites and establishing better inbuilding coverage will also play significant roles in the 5G network. We expect that densification will require significant fiber cable and connectivity between wireless cell sites.
- 4) **Virtualization, Centralization and Disaggregation:** Operators are virtualizing and centralizing their networks to make them more flexible and efficient. Wireless operators are deploying centralized radio access networks (CRAN) as a first step in the evolution to a virtualized radio access network. Eventually this will enable servers and switches to replace some of the hardware specific equipment that exists today and allow much of the processing to be performed on general purpose processors wherever and whenever it is needed throughout the network. Cable operators are also seeking to virtualize their networks by moving from a traditional converged cable access platform (CCAP) architecture to a distributed access architecture (DAA). This moves some of the processing from the head end to the node and virtualizes the rest on traditional switches and servers.

- 5) **Low Latency Services:** To support the increased demands of a growing game-playing subscriber base, all operators are seeking new ways to reduce the latency and jitter of the gaming packet streams. As an example, Data Over Cable Service Interface Specification (DOCSIS) deployments will likely be adding the new low latency DOCSIS technologies to their CMTS and customer premises equipment (CPE) gear in the coming year. Node-splits will also be used to reduce congestion. Over time, we expect these low latency services to allow support of Web3.0 and the metaverse, as access networks are increasing and used in a more interactive way. The densification of 5G networks will also reduce congestion and decrease latency as well.
- 6) **Capacity Expansion:** Wired and wireless network providers are both cognizant of the need to stay ahead of the traffic growth that occurs every year. This traffic growth results from increases in average subscriber consumption levels and in maximum service level agreement (SLA) levels. For cable providers, the next years will see many increases in spectrum, including moves to DOCSIS 3.1 upstream mid-splits (85 MHz) and DOCSIS 3.1 upstream high-splits (204 MHz) and downstream DOCSIS 3.1 transitions to 1.2 GHz. Capacity will also be increased via the increased use of the spectrally-efficient DOCSIS 3.1 orthogonal frequency-division multiplexing (OFDM) and orthogonal frequency-division multiple access (OFDMA) channels within the cable spectrum. Additionally, some operators will begin their upgrade path to DOCSIS 4.0 in certain regions of their networks. New DOCSIS equipment will be needed for this expansion. For wireless providers, the next years will see continued deployment of 5G that will include ongoing additions to their wireless spectrum in the CBRS band, the C-band and the millimeter wave (mmWave) bands. New antenna equipment will be needed for this expansion.
- 7) **Government-sponsored Broadband Improvements:** Several government-sponsored programs aimed at improving the Broadband infrastructure connecting to rural and other under-served areas launched in the second half of 2022. The funds from these programs and initiatives to build more equitable access—in particular, in the United States (U.S.), the Rural Digital Opportunity Fund (RDOF), American Rescue Plan Act (ARPA), and the Broadband Equity, Access, and Deployment (BEAD) Program—are expected to drive technology and device sales across the board. While we did not see money flowing under the BEAD Program in 2022, we expect planning activity to pick up dramatically in 2023, and for funds to start being distributed by 2024.

Transition to 5G

5G wireless is evolving from an industry vision toward a tangible next generation wireless technology. Many operators have begun a transition to 5G networks with countries in North America, Northeast Asia, Gulf Cooperation Council and Western Europe leading the way in terms of 5G subscription penetration. To date, there are over 240 5G commercial networks launched worldwide and over 500 operators investing in 5G technology. The number of 5G-enabled devices is expected to continue to increase during 2023. The primary benefits of 5G are expected to include:

- Enhanced mobile broadband—to support significant improvement in data rates and user experience in both the uplink and downlink,
- IoT communications to support the expected billions of connections between machines, as well as short bursts of information to other systems,
- Low latency, high-reliability—to support applications that are critical or are needed in real time, like factory machines, virtual reality and augmentation, and
- Underlying capacity to support fixed broadband services in underserved areas.

As described above, wireless operators will need to both acquire and launch new spectrum for 5G, as well as continue their strategy of re-allocation of spectrum from one generation to another. Some of this spectrum will be at much higher frequencies and will use new technologies to deliver exceptional amounts of bandwidth to subscribers. 5G also requires significant fiber infrastructure to connect wireless access points to each other to improve the response time of the network. As wireless operators transition toward 5G, they must also manage the fundamental network deployment issues of site acquisition, power, backhaul and in-building wireless proliferation.

In addition to investment required by wireless operators, the transition to 5G could also spark an investment cycle by cable operators as they upgrade their networks to compete with fixed wireless broadband, which is becoming a viable alternative to traditional broadband internet access. Many cable operators are already offering or planning to offer 5G wireless services on top of their wired cable services, and one approach under consideration employs convergence techniques that utilize wired networks, such as DOCSIS or passive optical networks (PON), to support Crosshaul (xHaul) to the more heavily-densified wireless access points and radio units of 5G. All of these transitions are expected to lead to increased investment.

Fiber Deep Deployments

Residential and business bandwidth consumption continues to grow substantially. The proliferation of OTT video, multiscreen viewing, cloud services and social media are prompting operators to accelerate fiber deployment. Operators can increase network capacity by installing fiber deeper into their networks. Although consumer devices are increasingly connected to the network via a wireless connection such as LTE or Wi-Fi, these wireless access points must have abundant optical backhaul capacity available to provide consumers the experience they expect. Operators around the globe are deploying fiber deep to build next generation networks. These networks use the capabilities of fiber to enable consumers access to content at higher speeds with improved network response time.

As networks improve and deliver higher speed and greater reliability, many operators are choosing to provide both residential and business services over a common physical layer infrastructure, saving them time and money. In addition, with the deployments of metro cells, outdoor small cells and fixed wireless broadband to the home, these same service providers are planning to utilize this common physical layer infrastructure to provide connectivity to these wireless access points.

Ethernet passive optical networks (EPON) and XGS PON are both being included in the plans of network operators, and CommScope is developing optical line terminal (OLT) and optical network terminal (ONT) equipment for both technologies. CommScope's broad PON product portfolio will include both node-based platforms and shelf-based platforms.

Shift in Enterprise Spending

Several trends in the enterprise market are expected to create opportunities and challenges for us. First, the shift toward mobility in business enterprises is expected to impact the amount and type of structured copper connectivity needed over the longer term. As the bandwidth requirements for Wi-Fi, indoor cellular networks (private and public), and IoT devices increase, more access points will be needed throughout commercial buildings. As a result, enterprises are expected to adjust in-building cabling designs to deliver both power and high-speed data to those devices. Power-over-ethernet is expected to become increasingly important as the number of devices used for Wi-Fi and indoor cellular networks multiplies. While enterprises continue to need copper connectivity to power edge devices, enterprises are deploying fiber more extensively in data centers. Over the next several years, we expect the growing demand for fiber and Wi-Fi solutions to result in decelerating demand for copper solutions in networks.

Due to huge increases in data traffic and migration of applications to the cloud, enterprises are also shifting spending toward multi-tenant (co-located) data centers and hyperscale cloud service providers, which offer cloud data center services as a replacement for in-house corporate data centers. Multi-tenant and hyperscale data center managers are focused on ultra-low loss, high density, scalable fiber connectivity solutions.

Enterprises are also looking at using LTE and 5G for their own, private uses. It is expected that private networks will become far more important to an enterprise's information technology plans and will provide a level of reliable connection that they have not been able to get from their Wi-Fi networks, further moving the demand of enterprise communications into the wireless domain.

Metro Cell, DAS and Small Cell Investment to Enhance and Expand Wireless Coverage and Capacity

As demand growth continues to outpace macro cell capacity growth, new solutions are required for densely populated areas. Metro cells and indoor networks have emerged as important layers of the network. Metro cells are smaller outdoor cell sites, located closer to the ground, having a lower power level than traditional macro cell sites. Metro cells blend into their environment and are often found integrated with traditional street furniture, which helps alleviate zoning restrictions that have made traditional deployments difficult.

Small cell and DAS solutions address the capacity and speed requirements from an indoor perspective. These systems provide coverage and capacity to the indoor environment and reduce the load from the macro and metro layers, which improves overall network performance. Small cell and DAS systems may range from small single operator, single-band, low-capacity systems for use in enterprise buildings to large multi-carrier, multi-technology, multi-band systems for use in high-capacity public venues.

Transition to Wi-Fi 6E

Wi-Fi 6E (extended) is the next generation standard in Wi-Fi technology that builds on and improves the current Wi-Fi 6 standard. The Wi-Fi 6E standard will bring a new dimension to Wi-Fi 6 capacity through additional spectrum allocation in the 6 GHz frequency band. With tri-band enterprise grade access points (2.4/5/6Ghz), wireless bandwidth capacities will increase to support multiple Gbps services, requiring even higher bandwidth capacities on the wired networks that feed them. This is expected to drive investment in Wi-Fi networks and in the DOCSIS, PON and ethernet solutions that can provide the required connectivity.

Strategy

In 2021, we announced a transformation initiative, CommScope NEXT, designed to drive stockholder value through three pillars: profitable growth, operational efficiency and portfolio optimization. We believe these efforts are critical to making us more competitive and allowing us to invest in growth, de-leverage and maximize stockholder and stakeholder value.

Profitable Growth

Organic growth is fundamental to achieving the financial returns that investors expect from us. While acquisitions and inorganic growth can change the structure of a business and reset financial expectations resulting in short-term financial returns, the only reliable means for consistently producing long-term positive financial performance is strong organic growth. Our plan to achieve our growth opportunities are driven by five themes:

- Become more market and customer centric – work to truly understand the needs of our customers and applications for data and video networking solutions.
- Expand to service providers outside of North America – expand market share with service providers in the rest of the world.
- Expand Enterprise sales coverage – enhance sales coverage in historically underpenetrated top metropolitan statistical areas and verticals within the North American region, as well as targeted country/vertical combinations around the world.
- Introduce new products and scale software solutions – build and scale our differentiated products, software and technology.
- Investment in capacity – expand capacity for products with high backlog, fast-growth and long-term demand visibility.

The underpinning of our growth opportunities is also optimizing pricing across our products and solutions. We are revamping our pricing processes, policies, tools and governance structure to simplify and create more ownership and accountability so that we can better react to changes in the market and maintain acceptable margins.

Operational Efficiency

We are pursuing strategic initiatives aimed at optimizing our utilization of resources by improving direct procurement processes, increasing transparency and control over indirect procurement spend, driving operational improvements to lower manufacturing costs and streamlining and optimizing our period overhead cost structure. Our management team has a strong track record of improving operational efficiency and successfully executing on formalized annual profit improvement plans, cost-savings initiatives and working capital improvements to drive future profitability and cash flow.

Portfolio Optimization

As discussed above, in addition to optimizing our portfolio with our commitment to separate the Home Networks business from Core CommScope, we reorganized our internal management and reporting structure as of January 1, 2022 to align our portfolio of products and solutions more closely with the markets we serve and provide better performance comparability with our competitive peer set. As a result, our new operating segments are CCS, OWN, NICS, ANS and Home.

We utilize a general management model in our segments. This enables us to manage our portfolio more granularly, assign responsibilities and build a culture of accountability and ownership. We continuously review our portfolio and look for ways to better manage and optimize our product offerings.

The Future of CommScope

We are positioned as a leader in most of our Core segments already and will work to defend our leadership in the more mature parts of these markets, while also shifting resources towards our targeted growth choices within them. We believe that with CommScope NEXT, we will achieve the following:

- Deliver organic growth
- Create a well-positioned comprehensive portfolio of products and services
- Stimulate market leading innovation, delivering powerful software and services
- Maintain world class operational efficiency and cost structures
- Architect a simplified organization, with more accountability, responsibility and visibility

With CommScope NEXT, we are transforming our organization into one that has better operational efficiency, speed and resilience and one that can better service our existing customers, as well as new ones. We expect CommScope NEXT to drive adjusted EBITDA expansion over the next several years that will enable us to significantly increase our cash flow to accelerate our de-leveraging and further invest in our growth.

Customers

Our customers include substantially all the leading global telecommunications operators, data center managers, cable television providers or MSOs and thousands of enterprise customers, including many Fortune 500 companies. Major customers and distributors include companies such as Altice USA, Inc.; America Movil, S.A.B. de C.V.; AT&T Inc.; Charter Communications, Inc.; Comcast Corporation (Comcast); Cox Communications, Inc.; Graybar Electric Co. Inc.; KGP Co.; Liberty Media Corporation; Power & Telephone Supply Co.; Purchase Power Exchange LLC; Talley Inc.; T-Mobile U.S. Inc.; Verizon Communications Inc.; Vodafone Group PLC; and Wesco International, Inc. (including Anixter International Inc.). For the year ended December 31, 2022, we derived approximately 15% of our consolidated net sales from our top two direct customers, but no single direct customer accounted for 10% or more of our net sales. No single direct customer accounted for 10% or more of our net sales for the year ended December 31, 2021, and we derived approximately 11% of our consolidated net sales from Comcast for the year ended December 31, 2020.

Products from our CCS segment are primarily sold directly to cable television system operators, broadband operators and other service providers that deploy broadband networks. CCS segment products are also sold through independent distributors or system integrators for large telecommunication operators.

Products from our OWN segment are primarily sold directly to wireless operators, original equipment manufacturers (OEMs) that sell equipment to wireless operators and other service providers that deploy elements of wireless networks at the direction of wireless operators. Our customer service and engineering groups maintain close working relationships with these customers due to the significant amount of customization associated with some of these products. Although we sell to most wireless operators globally, we are dependent on a small number of large operators.

Products from our NICS segment are primarily sold through independent distributors or system integrators for large telecommunications operators and to customers in a broad range of enterprise vertical markets, including hospitality, education, smart cities, government, venues and service providers indirectly through channel partners. We also sell directly to cable television system operators, broadband operators and service providers that deploy broadband networks. In certain circumstances, we sell NICS segment products directly to end customers, but it is a relatively small part of the overall business.

Products from our ANS segment are primarily sold directly to wireline network service providers, such as telephone companies and cable television network providers, to be deployed into their service delivery networks. In some cases, we sell through specialized resellers and distributors who primarily provide logistics support and in certain circumstances post-sale service and support. Our customer service and engineering groups maintain close working relationships with these customers due to the significant amount of customization associated with some of these products. We sell these products to most of the wireline and satellite operators globally.

Products from our Home segment are primarily sold directly to wireline network service providers, such as telephone companies and cable television network providers, to be deployed by them into their subscribers' homes and businesses. We sell some products to satellite video distributors who also deploy our products into their subscribers' premises. In some cases, we sell through specialized resellers and distributors who primarily provide logistics support and, in certain circumstances, post-sale service and support. Our customer service and engineering groups maintain close working relationships with these customers due to the significant amount of customization associated with some of these products. We sell these products to most of the wireline and satellite operators globally. In the U.S., we also sell certain products directly to consumers over the internet and through brick and mortar retailers.

We generally have no minimum purchase commitments from any of our distributors, system integrators, channel partners, value-added resellers, wireless operators or OEM customers, and our contracts with these parties generally do not prohibit them from purchasing from our competitors or offering products or services that compete with ours. Although we maintain long-term relationships with these parties and have not historically lost key customers, we have experienced significant variability in the level of purchases by our key customers. Any significant reduction in sales to these customers, including as a result of the inability or unwillingness of these customers to continue purchasing our products, could materially and adversely affect our business, financial condition, results of operations and cash flows. See Part 1, Item 1A, "Risk Factors."

Competition

The markets in which we participate are dynamic and highly competitive, requiring companies to react quickly to capitalize on opportunity. We retain skilled and experienced personnel and deploy substantial resources to meet the changing demands of the industry and to capitalize on change. The market for our products is highly competitive and subject to rapid technological change. We encounter significant domestic and international competition across all segments of our business.

Our competitors include large, diversified companies some of whom have substantially more assets and greater financial resources than we do. We also face competition from small to medium-sized companies and less diversified companies that have concentrated efforts in one or more areas of the markets we serve. Major competitors by segment include the following: CCS segment – Amphenol Corporation, Belden Inc., Clearfield, Inc., Corning Inc. and Sterlite Corporation.; OWN segment – Comba Telecom Systems Holding Ltd., Huawei Technologies Co., Ltd., Rosenberger NA and Telefonaktiebolaget LM Ericsson; NICS segment – Cisco Systems, Inc., Comba Telecom Systems Holding Ltd., Corning Inc., Extreme Networks, Inc., Hewlett Packard Enterprise Development LP, Huawei Technologies Co., Ltd, JMA Wireless, Juniper Networks, Inc., SOLiD, Inc. and Ubiquiti Inc.; ANS segment – ATX Networks Corp., Casa Systems, Inc., Cisco Systems, Inc., Harmonic Inc., Technetix Group Ltd., Teleste Corporation and Vecima Networks Inc.; and Home segment – Humax Co., Ltd., Kaonmedia Co., Ltd., Nokia Oyj, Sagemcom Broadband SAS, Vantiva SA. and ZTE Corporation.

We compete primarily on the basis of delivering solutions, product specifications, quality, price, customer service and delivery time. We believe that we differentiate ourselves in many of our markets based on our market leadership, global sales channels, intellectual property, strong reputation with our customer base, the scope of our product offering, the quality and performance of our solutions, and our service and technical support.

Competitive Strengths

We are a global leader in connectivity and essential infrastructure solutions for communications and entertainment networks, and we believe we hold leading market positions in most of our segments. Since our founding in 1976, CommScope has been a leading brand in connectivity solutions for communications networks. In the cable television and video network equipment industry, both CommScope and ARRIS are longstanding market leaders, along with other brands we own such as RUCKUS, PACE, ADC and many smaller brands. In the wireless industry, ANDREW is one of the world's most recognized brands and a global leader in RF solutions for wireless networks. In the enterprise market, SYSTIMAX, NETCONNECT and UNIPRISE are recognized as global market leaders in enterprise connectivity solutions for business enterprise and data center applications.

We believe the following competitive strengths have been instrumental to our success and position us well for future growth and strong financial performance:

Differentiated Solutions Supported by Ongoing Innovation and Significant Proprietary Intellectual Property

Our integrated solutions for building better networks are differentiated in the marketplace and are a significant global competitive advantage. We invested \$657.4 million in research and development (R&D) during 2022 to advance product innovation and drive total cost of deployment and ownership down. Our ongoing innovation, supported by proprietary intellectual property and technology know-how, has allowed us to build and sustain a competitive advantage.

Established Sales Channels and Customer Relationships

We serve customers in over 150 countries and have become a trusted advisor to many of them through our industry expertise, quality products, leading technology and long-term relationships. These factors enable us to provide mission-critical connectivity solutions that our customers need to build and maintain high-performing communication networks. Our customers include substantially all the leading global telecommunications operators, data center managers, cable television providers or MSOs and thousands of enterprise customers, including many Fortune 500 companies. We are a key supplier within the wireless infrastructure market and enjoy established sales channels across all geographies and technologies. Our long-standing relationships with telecommunication operators enable us to work closely with them in providing highly customized solutions aligned with their technology roadmaps. We have a global sales force with sales representatives based in North America, Europe, Latin America, Asia and other regions, and an extensive global network of channel partners, including independent distributors, system integrators and value-added resellers. Our sales force has direct relationships with our customers and end users which generates demand for our products, with a significant portion of our sales fulfilled through channel partners. Our direct sales force and channel partner relationships give us extensive reach and distribution capabilities to customers globally. Given our understanding of their existing networks, when it comes to deploying networks at scale, these customers trust CommScope and hold high regards for our ability to help them achieve their goals.

Global Scale, Manufacturing Footprint and Quality

Our global manufacturing and distribution footprint and worldwide sales force give us significant scale within our addressable markets. We believe our scale, stability and quality make us an attractive strategic partner to our large global customers, and we have been repeatedly recognized by key customers for these attributes.

Our manufacturing and distribution facilities are strategically located to optimize service levels and product delivery times. We also utilize lower-cost geographies for high labor content products and largely automated plants in higher cost regions. Most of our manufacturing employees are in lower-cost geographies such as Mexico, China, India and the Czech Republic. The combination of our dynamic manufacturing organization, our global network of third-party manufacturers and our distribution organization allows us to:

- Flex our capacity to meet market demand and expand our market position;
- Deliver high-quality customer solutions;
- Provide high customer service levels due to proximity to the customer; and
- Effectively integrate acquisitions and capitalize on related synergies.

Manufacturing and Distribution

We maintain a balance of internal and external manufacturing providers to continue offering our customers a competitive combination of quality, cost and flexibility in meeting their needs. We develop, design, fabricate, manufacture and assemble many of our products and solutions in-house at our facilities located around the world. We have strategically located our manufacturing and distribution facilities to provide superior service levels to customers. We utilize lower-cost geographies for high labor content products while investing in largely automated plants in higher-cost regions close to customers. Most of our manufacturing employees are located in lower-cost geographies such as Mexico, China, India and the Czech Republic.

In addition, we utilize contract manufacturers located throughout the world, including in Brazil, China, Malaysia, Mexico, South Africa, Thailand, Vietnam and the U.S., for many of our product groups, including those in our Home segment, certain products in our CCS, OWN and ANS segments and all of our Ruckus products. There can be no guarantee that the Company will be able to extend or renew agreements with contract manufacturers on similar terms, or at all.

Our global footprint allows us to mitigate macroeconomic headwinds in an everchanging environment. We continuously evaluate and adjust operations to improve service, lower cost and improve the return on our capital investments, and we expect to continue modifying our global operations to adapt to changing product demand and business conditions.

Raw Materials and Components

Our products are manufactured or assembled from both standard components and parts that are unique to our specifications. Our internal manufacturing operations are largely process oriented and we use significant quantities of various raw materials, including aluminum, copper, steel, bimetals, optical fiber and plastics and other polymers, among others. Portions of the requirements for these materials are purchased under supply arrangements where some portion of the unit pricing may be indexed to commodity market prices for these metals. We may occasionally enter forward purchase commitments or otherwise secure availability for specific commodities to mitigate our exposure to price changes for a portion of our anticipated purchases. Certain of the raw materials utilized in our products may only be available from a few suppliers, and we may enter into longer term agreements to secure access to certain key inputs. We may, therefore, encounter significant price increases and/or availability issues for the materials we obtain from these suppliers as we have seen in recent years. These supply chain constraints have limited our ability to manufacture and deliver products to our customers in the past and could have similar impacts in the future.

Our profitability has been and may continue to be materially affected by changes in the market price of our raw materials and components, most of which are linked to the commodity markets. Prices for aluminum, copper, plastics, silicon and certain other polymers derived from oil and natural gas have fluctuated substantially during the past several years. We have adjusted our prices for certain products and may have to adjust prices again. Delays in implementing price increases, failure to achieve market acceptance of price increases, or price reductions in response to a rapid decline in raw material costs, could have a material adverse impact on the results of our operations.

In addition, some of our products are assembled from specialized components and subassemblies manufactured by third-party suppliers. We depend upon sole suppliers for certain of these components, including capacitors, memory devices and silicon chips. Our results of operations have been and may continue to be materially affected if these suppliers cannot provide these components in sufficient quantity and quality on a timely and cost-efficient basis. We believe that our supply contracts and our supplier contingency plans mitigate some of this risk. Our supply agreements include technology licensing and component purchase contracts, and several of our competitors have similar supply agreements for these components. There can be no guarantee that the Company will be able to extend or renew these supply agreements on similar terms, or at all. In addition, we license software for operating network and security systems or sub-systems and a variety of routing protocols from different suppliers.

Research and Development

We operate in an industry that is subject to rapid changes in technology, and our success is largely contingent upon anticipating and reacting to such changes. Accordingly, R&D is important to preserve and expand our position as a market leader and to provide the most technologically advanced solutions in the marketplace. We invested \$657.4 million in R&D during 2022, and we expect to continue with substantial investments in future years. We intend to focus our major R&D activities on high-growth opportunities such as fiber optic connectivity for fiber-to-the-x (FTTX) and data centers, Wi-Fi 6E and 6GHz, CCAP, DAA, DOCSIS 4.0, gigabit passive optical network (GPON), active and passive base-station antennas and metro cell and small cell wireless solutions. We are also developing solutions that support the convergence of wireline and wireless networks in connection with the rollout of 5G. Several of our professionals are leaders and active contributors in standards-setting organizations, which helps ensure that our products can be formulated to achieve broad market acceptance.

Backlog and Seasonality

At December 31, 2022 and 2021, we had an order backlog of \$3,588.8 million and \$3,953.9 million, respectively. Orders typically fluctuate from quarter to quarter based on customer demand and general business conditions. Our backlog includes only orders that are believed to be firm. Sometimes, unfilled orders may be canceled prior to shipment of goods, but cancellations historically have not been material. However, our current order backlog may not guarantee future demand. We expect a majority of our backlog as of December 31, 2022 to be recognized as revenue during 2023.

Due to the variability of shipments under large contracts, customers' seasonal installation considerations and variations in product mix and in profitability of individual orders, we can experience significant fluctuations in quarterly sales and operating income. Our operating performance is typically the weakest during the first quarter, and this pattern is expected to continue in the future. It may be more meaningful to focus on our annual rather than interim results.

Patents and Trademarks

We pursue an active policy of seeking intellectual property protection, including patents and registered trademarks, for new products and designs. For technology that is not owned by us, we have a program for obtaining appropriate licenses to help ensure that we have the necessary license coverage for our products. In addition, we have formed strategic relationships with leading technology companies to provide us with early access to technology that we believe will help keep us at the forefront of our industry.

On a worldwide basis, as of December 31, 2022, we held over 16,000 patents and patent applications and approximately 3,000 registered trademarks and trademark applications. Over the next five years, approximately 2,100, or about 19%, of our issued patents will expire, while at the same time CommScope intends to seek patents protecting new innovations. We consider our patents and trademarks to be valuable assets, and although no single patent is material to our overall operations, we believe the COMMScope, ARRIS, SURFBOARD, RUCKUS, SYSTIMAX, NETCONNECT, NOVUX, ERA, ONECELL and HELIAX trade names and related trademarks are critical assets to our business. We intend to rely on our intellectual property rights, including our proprietary knowledge, trade secrets and continuing technological innovation, to develop and maintain our competitive position. From time to time there are disputes with respect to the ownership of the technology used in our industry and accusations of patent infringements. We will continue to protect our key intellectual property rights.

Government Regulation

We are subject to various domestic and international government regulations. For example, our international operations expose us to increased challenges in complying with anti-corruption laws and regulations of the U.S. government and various other international jurisdictions. We are also subject to governmental export and import regulations and sanctions programs that could subject us to liability or impair our ability to compete in international markets. In addition, because of the nature of information that may pass through or is stored on our solutions or networks, we and our end customers may be subject to complex and evolving U.S. and foreign laws and regulations regarding information privacy, data protection, cybersecurity and other matters. Further, we are subject to various federal, state, local and foreign environmental laws and regulations governing, among other things, substances used in our products, discharges to air and water, management of regulated materials, handling and disposal of solid and hazardous waste, and investigation and remediation of contaminated sites. These descriptions are not exhaustive, and these laws, regulations and rules frequently change and are increasing in number. See Part I, Item 1A, “Risk Factors” for additional discussion of our risks related to government laws and regulations.

Corporate Responsibility and Sustainability

We believe that corporate responsibility and sustainability means making decisions that have a positive impact on our people, planet and bottom line. Our company-wide sustainability mission is to enable faster, smarter and more sustainable solutions while demonstrating the utmost respect for our human and natural resources. We are accomplishing this mission by utilizing innovative technology, intelligent engineering and energy efficient design to build more sustainable networks that make our customers more agile, while at the same time seeking to preserve the natural ecosystems from which we source our raw materials.

While we may provide technological solutions, it is our people who make the real difference in our communities. Their commitment to our customers, fellow employees and the communities in which they live and work drives them to provide creative solutions, services and practices that are safe and sustainable for our environment and future generations.

We understand how important it is to consider the larger impact of our actions beyond the balance sheet. We are proud of CommScope’s prominent standing in one of the world’s most vital and dynamic industries. We push ourselves and our thinking for the purpose of creating a better and sustainable tomorrow. For the sake of our current and future generations, we will continue to grow as a sustainable, environmentally conscious business that benefits the whole planet.

For additional information, which is not incorporated by reference in this Annual Report on Form 10-K, see our Corporate Responsibility & Sustainability pages on the CommScope website: <https://www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability/>.

Human Capital Management

Our employees are at the center of everything we do at CommScope and are the driving force for our innovation and success. CommScope works to ensure it provides a safe, inclusive and positive employee experience and workplace environment for all its employees. We have a global team of over 30,000 employees with approximately 62% classified as manufacturing employees. The majority of these manufacturing employees are located in low-cost labor countries such as Mexico, China, India and the Czech Republic. Our U.S. workforce is a mix of manufacturing and non-manufacturing employees and makes up almost 20% of our employee base.

Our employees have continued to unite behind our common purpose to “Create Lasting Connections” all over the world. We collaborate and innovate to create the world’s most advanced networks and succeed by having people who come to work passionate about delivering on this vision every day. Core pillars underlying our Human Capital Management strategy focus on engagement; total rewards; training and development; inclusion, equality, and diversity; and health, safety and well-being.

Employee Engagement

CommScope prides itself on creating a collaborative, engaged and enabled workforce. We believe communication and feedback are integral to building engaged employees and driving a high-performance culture. In support of this, we periodically “take the pulse” of our organization through a global engagement survey. Our Pulse Survey is one way our employees worldwide can voice their opinions and give feedback. The survey seeks to understand how employees experience company values, asks questions to determine if employees feel a strong sense of inclusion and belonging, and measures overall engagement. With this rich feedback, we can identify strengths and determine potential areas for focused improvement. We consistently see strong results in engagement, strategic alignment, teamwork, trust, collaboration, belonging, psychological safety and pride in working for CommScope. CommScope continues to further build out the employee experience by leveraging technology, enabling managers, emphasizing communication, providing flexible work approaches and aiming to become a destination for the best talent.

Total Rewards

We compensate employees equitably, relative to experience and performance, regardless of gender, nationality or disability. Globally, we sustain our pay-for-performance compensation philosophy, regularly completing pay equity assessments to calculate the results of our pay practices. CommScope’s compensation plans and programs strive to attract and retain skilled, high-performing individuals; pay base salaries that are competitive in our industry and the local markets in each country where we operate; and provide short- and long-term incentives (when appropriate) that are tied to superior employee and company performance. The proportion of total rewards aligned with variable (incentive) pay increases with job level and is reflective of the job level’s influence on both short- and long-term results. Eligibility for the Annual Incentive Plan (AIP) or Sales Incentive Plan (SIP), which are both cash incentive plans, and the Long-Term Incentive Plan (LTIP), which is our equity-based compensation plan, is based on the job level and market competitiveness.

We provide comprehensive market-aligned benefits at a country level, reviewing annually to validate against proprietary market data. Benefits typically include medical plans, life/disability and accident coverage, retirement benefits, paid time-off policies and other locally applicable benefits.

Employee Education, Training and Development

We are committed to developing the careers and capabilities of our current and future employees. We have an Early Career Strategy aimed at recruiting great talent for internships, co-ops and graduate rotation programs, ensuring we are hiring the top early-in-career talent where and when they are needed. Once hired, our career development and learning philosophy is based on the belief that employees learn best through a combination of work experience, coaching, feedback, training and education.

We use an online solution to manage permanent employees' performance and goals throughout the year, providing continuous development opportunities through coaching and feedback. We also maintain an online learning platform consisting of a wealth of work-related development topics, including product knowledge, leadership development, project management, general business content as well as ethics and diversity training. Growth is not only achieved through these learning platforms but also through our regular town halls, round tables and everyday interaction with our front-line managers. We focus heavily on interacting with our employees how, when and where it matters most.

Employee Inclusion, Equity, and Diversity

CommScope strives to create an inclusive environment that draws upon the strength of our diverse workforce to exceed the expectations of all our partners and stakeholders. CommScope's global workforce is comprised of individuals of many races, cultures, backgrounds, geographies and experiences. We focus on ensuring equity in the workplace and take pride in our diverse workforce and inclusive culture for which we diligently strive to uphold. The results of our focused efforts on diversity, equity and inclusion make us stronger and pave a path for innovation, which drives business differentiation, talent engagement and retention. CommScope has also continued to strengthen the global Diversity & Inclusion Business Network that was established in 2020, providing over 1,600 employees with targeted opportunities to network, learn and lead, grow their careers and support their communities. In February 2022, our chief executive officer signed the CEO Pledge for the CEO Action for Diversity & Inclusion and committed to a set of actions. This is the largest CEO-driven business commitment to advance diversity and inclusion in the workplace—a commitment that recognizes diversity and inclusion is not a competitive issue but a societal issue.

Employee Health, Safety and Well-being

At CommScope, our employees' health, safety and well-being are our top priority. This came into focus more than ever with the COVID-19 pandemic. In response, we implemented rigorous health and safety protocols globally, which continue. Overall, our vision is to seek opportunities to protect the well-being of our employees, customers, suppliers, environment and communities.

A commitment to business practices that are innovative, safe and sustainable is key to our company's success. To achieve this, we maintain a robust Environment, Health & Safety (EHS) management system, set objectives and targets, provide necessary resources and create a comprehensive well-being and benefits program. All of this encourages ongoing improvement as we continue to unlock the greatest potential of our employees. The global EHS team utilizes a companywide EHS management system designed and implemented based on the requirements of the International Standards of ISO45001 and ISO14001.

CommScope seeks to inspire a culture of proactive and productive health such that our employees make lifestyle decisions that lead to rewarding careers and balanced lives. To realize this goal, we support our workforce by providing tools, services and programs that help our employees achieve and maintain optimal personal health. We make a commitment in our benefits program to ensure we provide our employees and their family members with a compelling and competitive benefits package that offers value, choices and resources to help manage their well-being, including our GuidanceResources program, which provides physical, emotional, legal and financial well-being resources to employees.

Available Information

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on our web site at www.commscope.com under Company — Investor Relations as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission. The information posted to our website is not incorporated elsewhere in this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS

The following is a cautionary discussion of risks, uncertainties and assumptions that we believe are significant to our business. In addition to the factors discussed elsewhere in this Annual Report on Form 10-K, the following are some of the important factors that, individually or in the aggregate, we believe could make our results differ materially from those described in any forward-looking statements. It is impossible to predict or identify all such factors and, as a result, you should not consider the following factors to be a complete discussion of risks, uncertainties and assumptions related to us or our business.

Summary Risk Factors

The following is a summary of some of the risks, uncertainties and assumptions that could materially adversely affect our business, financial position, results of operations and cash flows. You should read this summary together with the more detailed description of each risk factor contained below.

Competitive Risks

- Our business is dependent upon third-party capital spending for data, communication and entertainment equipment, and reductions in such capital spending could adversely affect our business.
- A substantial portion of our business is derived from a limited number of key customers and channel partners.
- We face competitive pressures with respect to all our major product groups.
- Our ability to sell our products is highly dependent on the quality of our support services after the sale, and our inability to provide adequate support after the sale would have a material adverse effect on business.
- Changes to the regulatory environment in which our customers operate and changes in or uncertainty about government funded programs may negatively impact our business.

Supply Chain Risks

- We are dependent on a limited number of key suppliers for logistics support and certain raw materials and components, and supply shortages or delays could limit our ability to manufacture products.
- Our dependence on commodities and certain components subjects us to cost volatility and potential availability constraints.
- If our integrated global manufacturing operations, including our contract manufacturers, suffer capacity constraints or production or shipping delays, we may have difficulty meeting customer demands.

Strategic Risks

- The successful execution of our CommScope NEXT transformation plan is key to the long-term success of our business.
- Difficulties may be encountered in the realignment of manufacturing capacity and capabilities among our global manufacturing facilities and our contract manufacturers that could adversely affect our ability to meet customer demand for our products.
- The separation, discontinuance or divestiture of a business or product line is subject to various risks and uncertainties that could disrupt or adversely affect our business.
- Our business strategy has historically relied, in part, on acquisitions to create growth. We may not fully realize anticipated benefits from past or future acquisitions or investments in other companies.
- We may need to undertake additional restructuring actions in the future.
- The Carlyle Group (Carlyle) owns a substantial portion of our equity and its interests may not be aligned with yours.

Financial Risks

- Our substantial indebtedness could adversely affect our ability to raise additional capital to fund our operations, limit our ability to react to changes in the economy or our industry, expose us to interest rate risk to the extent of our variable rate debt and prevent us from meeting our financial obligations.
- Despite current indebtedness levels and restrictive covenants, we may still incur additional indebtedness that could further exacerbate the risks associated with our substantial financial leverage.
- To service our indebtedness and pay dividends on our preferred stock, we will require a significant amount of cash, and our ability to generate sufficient cash depends on many factors beyond our control.
- We may need to recognize additional impairment charges related to goodwill, identified intangible assets, fixed assets and right of use assets.

- The IRS may not agree ARRIS International plc (ARRIS) was a foreign corporation for United States (U.S.) federal income tax purposes.

Business and Operational Risks

- Our future success depends on our ability to anticipate and adapt to changes in technology and customer preferences and develop, implement and market innovative solutions.
- If we do not stay current with product life cycle developments, our business may suffer.
- If our products do not effectively interoperate with cellular networks and mobile devices, future sales of our products could be negatively affected.
- If our product or service offerings, including material purchased from our suppliers, have quality or performance issues, our business may suffer.
- We depend on cloud computing infrastructure operated by third parties and any disruption in these operations could adversely affect our business.
- Our business depends on effective management information systems.
- Cybersecurity incidents, including data security breaches, ransomware or computer viruses, could harm our business by exposing us to various liabilities, disrupting our delivery of products and services and damaging our reputation.
- Climate change may have a long-term impact on our business.

Labor-Related Risks

- We may not be able to attract and retain key employees.
- Labor unrest could have a material adverse effect on our business, results of operations and financial condition.

International Risks

- Our significant international operations expose us to economic, political, foreign exchange rate and other risks.
- Additional or new tariffs or a global trade war could increase the cost of our products, which could adversely impact the competitiveness of our products.
- Our significant international operations expose us to increased challenges in complying with anti-corruption laws and regulations of the U.S. government and various other international jurisdictions.
- We are subject to governmental export and import controls and sanctions programs that could subject us to liability or impair our ability to compete in international markets.

Litigation and Regulatory Risks

- We may not be successful in protecting our intellectual property and in defending against claims that we are infringing on the intellectual property of others, and any such actions may be costly.
- Because of the nature of information that may pass through or be stored on certain of our solutions or networks, we, our vendors and our end customers are subject to complex and evolving U.S. and foreign laws and regulations regarding information privacy, data protection, cybersecurity, and other related matters.
- Compliance with current and future social and environmental laws, regulations, policies and provisions, customer and investor pressures, other efforts to mitigate climate change and potential environmental liabilities may have a material adverse impact on our business, financial condition and results of operations.

General Risks

- Any future public health crisis, similar to the COVID-19 pandemic, could materially adversely affect our business, financial condition, results of operations and cash flows.
- Our stock price has been volatile and may continue to fluctuate significantly.
- We may experience significant variability in our quarterly or annual effective income tax rate.
- We do not intend to pay dividends on our common stock and, consequently, the ability of investors to achieve a return on their investment will depend on appreciation in the price of our common stock.
- Provisions of our certificate of incorporation and bylaws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, as a result, depress the trading price of our common stock.

Competitive Risks

Our business is dependent upon third-party capital spending for data, communication and entertainment equipment, and reductions in such capital spending could adversely affect our business.

Our performance is dependent on third parties' capital spending for constructing, rebuilding, maintaining or upgrading data, communication and entertainment networks, which can be volatile and difficult to forecast. Capital spending in the communications industry is cyclical and can be curtailed or deferred on short notice. We have experienced and may continue to experience significant quarterly fluctuations in sales and operating income due to the volatility in our industry. A variety of factors affect the timing and amount of capital spending in the communications industry, including:

- general economic and market conditions, including increased costs due to rising inflation or interest rates;
- customer-specific financial conditions or budget allocation decisions;
- competitive pressures, including pricing pressures;
- competing technologies;
- timing and adoption of the global rollout of new technologies;
- customer acceptance of new technologies and services offered;
- foreign currency fluctuations;
- seasonality of outdoor deployments;
- changes in customer preferences or requirements;
- availability and cost of capital;
- governmental regulation;
- demand for network services;
- consumer demand for video content and pay TV services;
- variability of shipments under large contracts;
- industry consolidation; and
- real or perceived trends or uncertainties in these factors.

As a result of these factors, we may not be able to maintain or increase our sales in the future, and our business, financial condition, results of operations and cash flows could be materially and adversely affected.

The global economy experienced high inflation in 2022, which many central banks are responding to by raising interest rates. Many perceive these actions as increasing the risk of a downturn in the economy in 2023. A downturn in the economy that negatively impacts the capital spending of our customers could materially adversely affect our business, financial condition, results of operations, cash flows and stock price.

A substantial portion of our business is derived from a limited number of key customers and channel partners.

Our customer base includes direct customers, original equipment manufacturers (OEMs) and channel partners, which include distributors, system integrators, value-added resellers and sales representatives. For the year ended December 31, 2022, we derived approximately 15% of our consolidated net sales from our top two direct customers. The concentration of our net sales with these key customers subjects us to a variety of risks, including:

- lower sales volumes that could result from the loss of one or more of our key customers;
- dependency on customers with substantial purchasing power and leverage in negotiating contractual obligations as well as the operational structure of the relationship, resulting in potential reductions in profit;

- less efficient operations that could result in higher costs from an inability to accurately forecast and plan for volatile spending patterns of key customers;
- financial difficulties experienced by one or more of our key customers that could result in reduced purchases of our products and/or delays or difficulties in collecting accounts receivable balances;
- election by our key customers to purchase products from our competitors in order to diversify their supplier base and dual-source key products, resulting in reduced purchases of our products; and
- reductions in inventory levels held by channel partners and OEMs, which may be unrelated to purchasing trends by end customers.

We are also exposed to similar risks to the extent that we have significant indirect sales to one or more end-users of our products, who may also be a direct customer.

A material portion of our sales is derived through our channel partners, including distributors, systems integrators and value-added resellers. Our channel partners have experienced financial difficulties in the past that has adversely affected our collection of accounts receivable. Our exposure to credit risks of our channel partners may increase if our channel partners and their end customers are adversely affected by global or regional economic conditions. One or more of these channel partners could delay payments or default on credit extended to them, either of which could materially adversely affect our business, financial condition, results of operations and cash flows.

We generally have no minimum purchase commitments with any of our distributors, value-added resellers, operators, OEMs or other customers, and our contracts with these parties generally do not prohibit them from purchasing or offering products or services that compete with ours. We have historically experienced variability in the level of purchases by our key customers and expect that similar variability could affect future sales. Any significant reduction in sales to these customers, including as a result of the inability or unwillingness of these customers to continue purchasing our products, could materially and adversely affect our business, financial condition, results of operations, cash flows and stock price.

We face competitive pressures with respect to all our major product groups.

Competition in our industry depends on a number of factors, including: innovative product and service solution offerings; the ability to adapt to changing markets and customer preferences; product and service quality; timing of the introduction of new products and services; speed of delivery; pricing; and customer service, including the total customer experience. In each of our major product groups, we compete with a substantial number of foreign and domestic companies, some of which have greater financial, technical, marketing and other resources or lower operating costs. They may also have broader product offerings and market focus. This gives many of these enterprises a competitive advantage to withstand any significant reduction in capital spending by customers in our markets over the long term. Further, our industry continues to consolidate, and the combination of any of our competitors could further increase these advantages and result in competitors with broader market presence.

Some competitors may be able to bundle their products and services together and may be capable of delivering more complete solutions that better meet customer preferences than we are able to provide, which may cause us to lose sales opportunities and revenue. Competitors' actions, such as price reductions, acceptance of high-risk contractual terms or the introduction of new, innovative products and services, and the use of exclusively price-driven auctions by customers have caused lost sales opportunities in the past and may cause us to lose sales opportunities in the future.

The rapid technological changes occurring in the communications industry could also lead to the entry of new competitors against whom we may not be able to compete successfully. For example, as networks become more virtualized, the functionality of our products is at risk of being subsumed by competitors who utilize software to provide the same functions as our products. A related trend that could affect us is the emerging interest in distributed access architecture (DAA), which disaggregates some of the functions of the Converged cable access platform (CCAP) and the access and transport platforms to enable deployment of these functions in ways that could reduce traditional operator capital expenditures in hybrid fiber-coaxial. We have developed and deployed a line of DAA products, but some operators may not be aligned on the specific implementations of DAA and we could lose market share to competitors. Service providers also have the goal of virtualizing CCAP management and control functions as they deploy DAA, and although we are developing a fully virtualized CCAP product, this could potentially enable new competitors to enter the market and reduce operator dependence on our products. In our mobile wireless markets, the shift to 5G includes the deployment of new spectrum in higher frequency bands where larger available bandwidths enable a significant increase in network capacity. In many cases, massive MIMO technology (active antennas) is the most effective way to deliver coverage in these bands. Consequently, 5G deployments present an inherent headwind to our traditional passive base station antenna business. We are developing technologies and new products to address this shift from passive to active antennas, but we may not be able to completely offset this trend. As there is technology evolution or transformation within the industry, whether it be DOCSIS 4.0, PON, Wi-Fi technology or the shift to 5G, there is a risk that our market position would be weakened. If any of our competitors' products or technologies were to become the industry standard, our business would be negatively affected.

The continued industry move toward open standards may result in an increase in competition for our products that may adversely impact our future revenues and margins. In addition, many of our customers participate in "technology pools" and increasingly request that we donate a portion of our source code used by customers to these pools, which may impact our ability to recapture the R&D investment made in developing such code. We believe that we will be increasingly required to work with third-party technology providers. As a result, we expect the shift to more open standards may require us to license software and other components indirectly to third parties via various open-source or royalty-free licenses. In some circumstances, our use of such open-source technology may include technology or protocols developed by standards settings bodies, other industry forums or third-party companies. The terms of the open-source licenses granted by such parties, or the granting of royalty-free licenses, may limit our ability to commercialize products that utilize such technology, which could have a material adverse effect on our results of operations.

In some instances, our customers themselves may also be our competition in other business areas. Some of our customers may develop their own software requiring support within our products and/or may design and develop products of their own that are produced to their own specifications directly by a contract manufacturer. Further, if we are unable to transform our business processes to support changing customer expectations and deliver a superior total customer experience, we may lose sales opportunities in the future. We are also facing significant and increased competition from original design manufacturers (ODMs) and contract manufacturers who are selling and attempting to sell their products directly to service providers.

We cannot assure you that we will continue to compete successfully with our existing competitors or with new competitors. If we are unable to compete in any of our markets at the same level as we have in the past or are forced to reduce the prices of our products in order to continue to be competitive, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Our ability to sell our products is highly dependent on the quality of our support services after the sale, and our inability to provide adequate support after the sale would have a material adverse effect on our business.

After our products are deployed, our channel partners and end customers depend on our support organization to resolve any issues relating to our products. A high level of support is important for the successful marketing and sale of our products. In many cases, our channel partners provide support directly to our end customers. We do not have complete control over the level or quality of support provided by our channel partners. These channel partners may also provide support for other third-party products, which may potentially distract resources from support for our products. If we and our channel partners do not effectively assist our end customers in deploying our products, quickly resolving post-deployment issues and provide effective ongoing support, it could adversely affect our ability to sell our products to existing end customers and could harm our reputation with potential end customers. In some cases, we guarantee a certain level of performance to our end customers, which could prove to be resource-intensive and expensive for us to fulfill if unforeseen technical problems arise.

Many of our service provider and large enterprise end customers have more complex networks and require higher levels of support than our smaller end customers. In addition, given the extent of our international operations, our support organization faces challenges, including those associated with delivering support, training and documentation in languages other than English. Our failure to maintain high-quality support and services could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Changes to the regulatory environment in which our customers operate and changes in or uncertainty about government funded programs may negatively impact our business.

The telecommunications and cable television industries are subject to significant and changing federal and state regulation, both in the U.S. and other countries. Many of our customers are subject to various rules and regulations as Internet service providers and changes to such rules and regulations could adversely impact our customers' decisions regarding capital spending. We, as well as some of our customers, also participate in and benefit from government funded programs that encourage the development of network infrastructures such as the Infrastructure Investment and Jobs Act (IIJA), Rural Digital Opportunity Fund (RDOF) and American Rescue Plan Act (ARPA). Changes in government programs in our industry or uncertainty regarding future changes could adversely impact our customers' decisions regarding capital spending, which could decrease demand for our products and could materially and adversely affect our business, financial condition, results of operations, cash flows and stock price.

Supply Chain Risks

We are dependent on a limited number of key suppliers for logistics support and certain raw materials and components, and supply shortages or delays could limit our ability to manufacture products.

We are dependent on a limited number of key suppliers for logistics support and certain of our raw material and component purchases, including certain semiconductors, memory and chip capacitors, polymers, copper rod, copper and aluminum tapes, fine aluminum wire, steel wire, optical fiber, circuit boards and other electronic components, subassemblies and modules. Certain of our suppliers are sole source suppliers and a number of our agreements with suppliers are short-term in nature. Our reliance on sole or limited suppliers and our reliance on subcontractors involves several risks, including a potential inability to obtain an adequate supply of required materials, components and other products, and reduced control over pricing, quality, terms and conditions of purchase and timely delivery.

Current limited supply of memory devices, capacitors and silicon chips have impacted and could continue to impact our ability to deliver on a timely basis due to extended lead times and have increased and could continue to increase overall product costs. Key silicon providers may have significant power and ability to influence prices and supply. We are currently experiencing extended lead times from certain of our key suppliers which has affected our ability to deliver on a timely basis and could continue to affect our performance in the future. In some instances, we are purchasing components as much as fifteen months in advance of our expected need for such components, which has diverted and may continue to divert our working capital from other needs. The extended lead times also contribute to increased risk of excess and obsolescence of components which can lead to increased costs.

Our key suppliers have experienced in the past, and could experience in the future, production, operational or financial difficulties, or there may be global shortages and pricing inflation of certain raw materials or components we use. Our inability to find sufficient sources of supply on reasonable terms could impact our ability to manufacture products in a cost-effective manner. We have adjusted our market prices for certain of our products as component prices have changed, but we may not be able to pass along all further cost increases to our customers, which could have a material adverse effect on our gross margin and results of operations, especially in a highly inflationary environment. Our ability to ship products on a timely basis has been and may continue to be unfavorably impacted, which could damage relationships with current and prospective customers and potentially have a material adverse effect on our business. We also face the risk of our customers canceling their orders and moving them to our competitors who can ship more timely, which would not allow us to realize our backlog and would have a material adverse effect on our business.

We also source many of our components from international markets. Any change in the laws and policies of the U.S. or other countries affecting trade is a risk to us. To the extent there are unfavorable changes imposed by the U.S. or other countries and/or retaliatory actions taken by trading partners, such as the addition of new tariffs or trade restrictions, we may experience material adverse impacts on earnings. For a more complete discussion of our risks related to tariffs and trade restrictions, see the risk factor, “Additional tariffs or a global trade war could increase the cost of our products, which could adversely impact the competitiveness of our products” under our “International Risk Factors” in this Item 1A. Risk Factors section.

Our dependence on commodities and certain components subjects us to cost volatility and potential availability constraints.

Our profitability may be materially affected by changes in the market price and availability of certain raw materials and components, some of which are linked to the commodity markets. The principal raw materials and components we purchase are aluminum, copper, steel, bimetals, optical fiber, plastics and other polymers, capacitors, memory devices and silicon chips. Prices for aluminum, copper, steel, silicon, fluoropolymers and certain other polymers have experienced significant volatility as a result of changes in the levels of global demand, supply disruptions, including port, transportation and distribution delays or interruptions, and other factors. As a result, we have seen a significant increase in costs that has negatively impacted our results of operations. We have adjusted our prices for most of our products, but we may have to adjust prices again in the future. Delays in implementing price increases or a failure to achieve market acceptance of price increases has in the past, and could in the future, have a material adverse impact on our results of operations. Conversely, in an environment of falling commodities prices, we may be unable to sell higher-cost inventory before implementing price decreases, which could have a material adverse impact on our business, financial condition and results of operations.

If our integrated global manufacturing operations, including our contract manufacturers, suffer capacity constraints or production or shipping delays, we may have difficulty meeting customer demands.

Disruption of our ability to produce at or distribute from our manufacturing or contract manufacturing facilities could adversely affect our ability to manufacture products in a cost-effective and timely manner. We experienced lost sales opportunities in the past due to lack of capacity to meet the demand for certain of our products. If we cannot ramp up capacity fast enough to meet customer demand in the future, we may experience lost sales opportunities, lose market share and experience customer relations problems, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

We rely on unaffiliated contract manufacturers, both domestically and internationally, to produce certain products or key components of products. Our reliance on these contract manufacturers reduces our control over the manufacturing process and exposes us to risks, including reduced control over quality assurance, product supply and costs and timing. Any manufacturing disruption by our contract manufacturers could severely impair our ability to fulfill orders. Our reliance on outsourced manufacturers also increases the potential for infringement or misappropriation of our intellectual property.

If our internal manufacturing operations or contract manufacturers suffer delays or disruptions in production or other operations for any reason, including financial instability of the contract manufacturer, labor disturbances or shortages, fires, electrical outages, cybersecurity incidents, pandemics/epidemics, severe weather events, natural disasters, geopolitical instability, acts of violence or terrorism, shipping interruptions including port distribution delays or interruptions, increased manufacturing lead times, capacity constraints or quality control problems in their manufacturing operations, failure to meet our future requirements for timely delivery or some other catastrophic event, our ability to manufacture products at our manufacturing or contract manufacturer facilities and ship products to our customers in a cost-effective and timely manner could be impaired, which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our contract manufacturers typically fulfill our supply requirements on the basis of individual orders. In most cases, we do not have long-term contracts with our contract manufacturers that guarantee capacity, the continuation of particular pricing terms or the extension of credit limits. Accordingly, our contract manufacturers are not always obligated to continue to fulfill our supply requirements, which could result in supply shortages, and the prices we are charged for manufacturing services could be increased on short notice. If our manufacturers are unable or unwilling to continue manufacturing our products in required volumes, we will be required to identify one or more acceptable alternative manufacturers to satisfy our demand. There is no assurance that we would be able to identify suitable alternative manufacturing partners on a timely basis, on terms that are acceptable to us, or at all.

Some of our manufacturing and contract manufacturing facilities rely on aging production equipment and information technology infrastructure, and if we fail or our contract manufacturers fail to properly maintain or update this equipment, it could affect our ability to manufacture or ship products.

Strategic Risks

The successful execution of our CommScope NEXT transformation plan is key to the long-term success of our business.

We are currently implementing a business transformation initiative called CommScope NEXT, designed to drive stakeholder value. CommScope NEXT could result in changes to our business that may result in a number of risks and uncertainties, including the following: lost customers or reduced sales volumes if customers do not accept higher pricing, our new product offerings or if we discontinue or divest of product lines; higher one-time costs such as restructuring costs and transaction, transformation and integration costs; the loss of key management and other employees if we are not successful in getting employee buy-in for CommScope NEXT; and additional supply chain disruptions or higher costs of supplies if we do not successfully execute our projects related to direct and indirect procurement. The implementation of CommScope NEXT may take longer than anticipated, and once implemented, we may not realize, in full or in part, the anticipated benefits or such benefits may be realized more slowly than anticipated. The failure to realize benefits, which may be due to our inability to execute plans or delays in the implementation of CommScope NEXT, could have a material adverse effect on our business, financial condition, results of operations, cash flows and stock price.

Difficulties may be encountered in the realignment of manufacturing capacity and capabilities among our global manufacturing facilities and our contract manufacturers that could adversely affect our ability to meet customer demand for our products.

We periodically realign manufacturing capacity among our global facilities and contract manufacturers in order to reduce costs by improving manufacturing efficiency and to strengthen our long-term competitive position. The implementation of these strategic initiatives may include significant shifts of production capacity among facilities and contract manufacturers. We have done this in the past related to the integration of certain acquisitions, including the integration of the ARRIS business. Also, in prior years, with some of the uncertainties in the U.S. trade tariff environment, we transitioned manufacturing for certain impacted products to non-tariff countries. In addition, in response to intermittent shutdowns of our facilities during the COVID-19 pandemic, we transitioned certain manufacturing to less impacted facilities. These changes are time-consuming and costly, and changes in our contract manufacturers or manufacturing locations may cause significant interruptions in supply if the manufacturers have difficulty manufacturing products to our specifications. There are significant risks inherent in the implementation of these initiatives, including our failure to ensure the following: adequate inventory on hand or production capacity to meet customer demand while capacity is being shifted among facilities; maintaining product quality as a result of shifting capacity; adequate raw material and other service providers to meet the needs at the new production locations; ability to successfully remove, transport and re-install equipment; and availability of adequate supervisory, production and support personnel to accommodate the shifted production. In the event manufacturing realignment initiatives are not successfully implemented, we could experience lost future sales and increased operating costs, as well as customer relations problems, any of which could have a material adverse effect on our business, financial condition, results of operations and cash flows.

The separation, discontinuance or divestiture of a business or product line is subject to various risks and uncertainties that could disrupt or adversely affect our business.

To better optimize our portfolio of products, we may decide in the future to separate, discontinue or divest of businesses or product lines that we believe are not core to CommScope's business. A plan to separate, discontinue or divest a business or product line is complex in nature and can be affected by unanticipated developments or changes, including changes in the macroeconomic, regulatory or political environment, changes in credit or equity markets or changes in other market conditions. For example, these and other unanticipated developments have delayed the planned separation of the Home Networks business that was announced in April 2021.

If we do choose to separate, discontinue or divest of a business or product line and successfully complete the separation plan, we cannot assure you or any of our stakeholders that we will achieve the expected benefits. Upon completion, we would also be a smaller, less diversified company and may be more vulnerable to changing market conditions. In addition, we will continue to incur ongoing costs some of which may exceed our estimates and may be stranded.

Whether or not a separation plan is completed, our businesses may face risks and uncertainties, including, but not limited to: the diversion of senior management's attention from ongoing business concerns; maintaining employee morale and retaining key management and other employees; retaining existing business and operational relationships, including with customers, suppliers and employees, and attracting new business and operational relationships; foreseen and unforeseen costs and expenses; and potential negative reactions from the financial markets if we fail to complete a separation plan as expected, within the anticipated time frame, or at all. Any of these factors could have a material adverse effect on our business, financial condition, results of operations, cash flows and stock price.

Our business strategy has historically relied, in part, on acquisitions to create growth. We may not fully realize anticipated benefits from past or future acquisitions or investments in other companies.

Our business strategy has historically relied, in part, on acquisitions to create growth, such as CommScope's 2019 acquisition of ARRIS, ARRIS' 2017 acquisition of Ruckus Wireless and the ICX Switch business, ARRIS' 2016 combination with Pace plc and CommScope's 2015 acquisition of TE Connectivity's Broadband Network Solutions business (the BNS business). We anticipate that a portion of our future growth may be accomplished by acquiring existing businesses, products or technologies. We cannot guarantee that we will be able to identify suitable acquisition opportunities or obtain the necessary financing on acceptable terms to provide these future growth opportunities. We may spend time and money investigating and negotiating with potential acquisition or investment targets but not complete the transaction which may divert or waste resources.

All acquisitions involve risks, such as the assumption of additional liabilities and expenses, issuance of debt, incurrence of transaction and integration costs, diversion of management's attention from other business concerns, assumption of unknown contingent liabilities, unanticipated litigation costs and falling short of growth expectations. There are also significant challenges to integrating an acquired operation into our business, including, but not limited to successfully managing the operations, manufacturing facilities and technology of the combined business; integrating the sales organizations; maintaining and increasing the customer base; retaining key employees, suppliers and distributors; integrating management information systems, including enterprise resource planning (ERP) systems; integrating inventory management and accounting activities; integrating R&D activities; navigating markets in which we potentially have limited or no prior experience; integrating and implementing effective disclosure controls and procedures and internal controls over financial reporting; and the impact of goodwill or other impairment charges, amortization costs for acquired intangible assets and acquisition accounting treatment, including the loss of deferred revenue and increases in the fair values of inventory and other acquired assets, on our financial condition and results of operations. Furthermore, such acquisitions may be dilutive to our financial results. Although we typically expect to realize strategic, operational and financial benefits as a result of our past and future acquisitions and investments, we cannot predict or guarantee whether and to what extent anticipated cost savings, synergies and growth prospects will be achieved. For example, we have not fully achieved the expected growth prospects associated with the ARRIS acquisition and that has had adverse effects on our financial condition, results of operations, cash flows and stock price.

We may need to undertake additional restructuring actions in the future.

We have previously recognized restructuring charges in response to slowdowns in demand for our products, in conjunction with the implementation of initiatives to reduce costs and improve the efficiency of our operations and to integrate acquisitions. For example, the CommScope NEXT actions to date have included the planned closure of a manufacturing facility as well as workforce reductions. In prior years, we have also undertaken a number of initiatives to support the integration of acquisitions, such as the 2019 acquisition of the ARRIS business and the 2015 acquisition of the BNS business. These initiatives included the closure of manufacturing facilities, consolidation of distribution centers and other real estate and various other workforce reductions. As a result of the continued efforts related to CommScope NEXT, changes in business conditions and other developments, we may need to initiate additional restructuring actions that could result in workforce reductions and restructuring charges, which could adversely and materially affect our cash flows.

Carlyle owns a substantial portion of our equity and its interests may not be aligned with yours.

Funding for the acquisition of ARRIS included an investment by Carlyle in our Series A Convertible Preferred Stock. As a result, Carlyle owns approximately 16% of our common stock on an if-converted basis and has the right to designate up to two directors on our Board of Directors. In addition, certain of our existing directors are senior advisors to Carlyle. As a result, Carlyle has significant influence on our business. Circumstances may occur in which the interests of Carlyle could conflict with the interests of our other stockholders.

Financial Risks

Our substantial indebtedness could adversely affect our ability to raise additional capital to fund our operations, limit our ability to react to changes in the economy or our industry, expose us to interest rate risk to the extent of our variable rate debt and prevent us from meeting our financial obligations.

As of December 31, 2022, we had approximately \$9.6 billion of indebtedness. As of December 31, 2022, we had no outstanding loans under our asset-based revolving credit facility (Revolving Credit Facility) and the remaining availability was \$908.8 million, reflecting a borrowing base subject to maximum capacity of \$1,000.0 million reduced by \$91.2 million of outstanding letters of credit. Our ability to borrow under our Revolving Credit Facility depends, in part, on inventory, accounts receivable and other assets that fluctuate from time to time and may further depend on lenders' discretionary ability to impose reserves and availability blocks. In October 2022, we completed the refinancing of our Revolving Credit Facility which continues to provide borrowing capacity of up to \$1.0 billion, subject to certain limitations, but includes additional assets under the borrowing base not previously included and extends the maturity from April 2024 to September 2027.

Our interest cost on our senior secured term loan due 2026 (2026 Term Loan) and our Revolving Credit Facility, which make up about \$3.1 billion of our indebtedness, is variable and subject to the risk of changes in interest rates. As the Federal Reserve has increased interest rates in 2022, we have seen increased interest cost which has adversely impacted our results of operations and cash flows. This may continue into 2023 if the Federal Reserve continues to maintain higher interest rates or chooses to raise interest rates further. We have entered into certain hedging agreements to reduce our exposure to variable rate debt.

Other consequences our substantial indebtedness has had and could continue to have on our business are as follows:

- limit our ability to obtain additional financing for working capital, capital expenditures, acquisitions, investments and other general corporate purposes;
- require a substantial portion of our cash flows to be dedicated to debt service payments and reduce the amount of cash flows available for working capital, capital expenditures, investments or acquisitions and other general corporate purposes;
- place us at a competitive disadvantage compared to certain of our competitors who have less debt;
- hinder our ability to adjust rapidly to changing market conditions;
- limit our ability to secure adequate bank financing or our ability to refinance existing indebtedness in the future with reasonable terms and conditions, or at all; and
- increase our vulnerability to and limit our flexibility in planning for, or reacting to, a potential downturn in general economic conditions or in one or more of our businesses.

LIBOR has historically been the reference interest rate in our variable rate debt agreements, but LIBOR is being discontinued and is scheduled to be fully phased out in June 2023. In anticipation of the cessation of LIBOR and in connection with the refinancing of our Revolving Credit Facility in October 2022, we transitioned to a variable rate based on Secured Overnight Financing Rate as administered by the Federal Reserve Bank of New York (SOFR) for borrowings under that facility. We also expect to amend our 2026 Term Loan to replace LIBOR with SOFR as the reference interest rate in the first half of 2023. SOFR is calculated differently than LIBOR and they have inherent differences, which could give rise to uncertainties, including limited historical data and volatility. While we do not expect the transition to SOFR to have a material adverse effect on our business, the full effects of the transition to SOFR remains uncertain.

In addition, the indentures and credit agreements governing our indebtedness contain affirmative and negative covenants that limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all of our debt.

Despite current indebtedness levels and restrictive covenants, we may still incur additional indebtedness that could further exacerbate the risks associated with our substantial financial leverage.

We may incur significant additional indebtedness in the future under the agreements governing our indebtedness. Although the indentures and the credit agreements governing our indebtedness contain restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of thresholds, qualifications and exceptions, and additional indebtedness incurred in compliance with these restrictions could be substantial. Additionally, these restrictions permit us to incur obligations that, although preferential to our common stock in terms of payment, do not constitute indebtedness.

To service our indebtedness and pay dividends on our preferred stock, we will require a significant amount of cash, and our ability to generate sufficient cash depends on many factors beyond our control.

Our operations are conducted through our global subsidiaries and our ability to make cash payments on our indebtedness and pay cash dividends on our preferred stock will depend on the level of earnings and distributable funds from our subsidiaries. Certain of our subsidiaries may have limitations or restrictions on paying dividends and otherwise transferring funds to us. Our ability to make cash payments on and to refinance our indebtedness will depend upon our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to financial, business, legislative, regulatory and other factors beyond our control. We might not be able to achieve a level of cash flows from operating activities or transfer sufficient funds from our subsidiaries to permit us to pay the principal, premium, if any, and interest on our indebtedness and dividends on our preferred stock.

If we are unable to generate sufficient cash flow or are otherwise unable to obtain funds necessary to meet required payments of principal, premium, if any, and interest on our indebtedness or if we fail to comply with the various covenants in the instruments governing our indebtedness and we are unable to obtain waivers from the required lenders, we could be in default under the terms of the agreements governing such indebtedness. In the event of such default, the holders of our indebtedness could elect to declare all the funds borrowed to be due and payable, together with accrued and unpaid interest. The lenders under our Revolving Credit Facility could elect to terminate their commitments, cease making further loans and institute foreclosure proceedings against our assets. As a result, we could be forced into bankruptcy or liquidation.

We may need to recognize additional impairment charges related to goodwill, identified intangible assets, fixed assets and right of use assets.

We have substantial balances of goodwill and identified intangible assets. As of December 31, 2022, goodwill and identified intangible assets represented approximately 56% of our total assets. We are required to test goodwill for possible impairment on the same date each year and on an interim basis if there are indicators of a possible impairment. We have recognized substantial impairment charges related to goodwill, some of them being significant, including \$1,119.6 million in 2022, \$13.7 million in 2021 and \$206.7 million in 2020. As of the October 2022 annual impairment test, the fair value of a certain reporting unit only modestly exceeded its carrying value and slight changes in significant assumptions or business factors could result in material impairment. In the future, if we are unable to improve our results of operations and cash flows, or other indicators of impairment exist, such as a sustained significant decline in our share price and market capitalization, we may incur material charges against earnings relating to our remaining goodwill.

We are also required to evaluate identified intangible assets, fixed assets and right of use assets for impairment if there are indicators of a possible impairment. In the past, due to revisions in financial performance outlooks or deterioration in certain markets, we have recognized significant impairment charges on identified intangible assets and fixed assets. In the future, we may again determine that one or more of our long-lived assets is impaired and additional impairment charges may be recognized that could have a material adverse effect on our financial condition and results of operations.

The IRS may not agree ARRIS was a foreign corporation for U.S. federal income tax purposes.

Following the Pace combination, ARRIS was incorporated under the laws of England and Wales and a tax resident in the United Kingdom (U.K.) for U.K. tax purposes. There is a risk that the Internal Revenue Service does not agree that ARRIS was a foreign corporation for U.S. federal income tax purposes in periods prior to the acquisition of ARRIS by CommScope and we could be subject to substantial additional U.S. taxes. For U.K. tax purposes, ARRIS was expected to be treated as a U.K. tax resident for all periods prior to the acquisition of ARRIS by CommScope and following the Pace combination, regardless of how ARRIS was treated in the U.S. Therefore, if ARRIS was treated as a U.S. corporation for U.S. federal income tax purposes, we could be liable for both U.S. and U.K. taxes in certain periods prior to the acquisition of ARRIS by CommScope, which could have a material adverse effect on our financial condition, results of operations and cash flows.

Business and Operational Risks

Our future success depends on our ability to anticipate and adapt to changes in technology and customer preferences and develop, implement and market innovative solutions.

Many of our markets are characterized by rapid advances in information processing and communications capabilities that require increased transmission speeds and density and greater bandwidth. These advances require significant investments in R&D in order to improve the capabilities of our products and services and develop new offerings or solutions that will meet the needs and preferences of our customers. There can be no assurance that our investments in R&D will yield marketable product or service innovations.

We may not be successful in our ongoing innovation efforts if, among other things, our products and services are not cost effective, brought to market in a timely manner, compliant with evolving industry standards, accepted in the market or recognized as meeting customer requirements. We could experience a material adverse effect on our business, financial condition, results of operations and cash flows if we are not successful in our ongoing innovation efforts.

As our products become more complex and customer preferences continue to change, we may encounter difficulties in meeting customer preferences, including performance, service and delivery expectations. Developing our products is expensive, complex and involves uncertainties. Each phase in the development of our products presents serious risks of failure, rework or delay, any one of which could impact the timing and cost-effective development of such product and could jeopardize end customer acceptance of the product. We have experienced in the past, and may in the future experience, design, manufacturing, marketing and other difficulties that could delay or prevent the development, introduction or marketing of new products and enhancements. Any such difficulties or delays could have a material adverse effect on our results of operations, financial condition and cash flows.

If we do not stay current with product life cycle developments, our business may suffer.

To compete successfully, we must continue to innovate in anticipation of both our customers' needs and developing industry trends, which require us to quickly design, develop, manufacture and sell new or enhanced products that provide increasingly higher levels of performance and reliability. If we do not have competitively priced, market-accepted products available to meet our customers' planned roll-out of new technologies, we may miss a significant opportunity and our business, financial condition, results of operations and cash flows could be materially and adversely affected.

The introduction of new or enhanced products requires that we carefully manage the transition from older products to minimize disruption in customer ordering practices and ensure that new products can be timely delivered to meet our customers' demand. If we are not able to support our customers in an effective and cost-efficient manner as they advance from older generation networks or as they expand the capacity of their networks, our business will suffer.

Furthermore, there are several major trends that we expect to continue to impact the enterprise market and product life cycles, including the shift to 5G, enterprises shifting toward mobility indoors and adjusting in-building cabling designs to support Wi-Fi, more access points and in-building cellular applications. Due to significant increases in data traffic and migrations of applications to the cloud, enterprises are also shifting spending toward multi-tenant data centers and hyperscale cloud service providers, which offer cloud data centers services as a replacement to in-house corporate data centers. As a result, there is growing demand for fiber solutions and decelerating demand for copper solutions. If we are unable to continue to support customers in these transitions, or if sales of copper products decline faster than expected, we could experience a material adverse effect on our business, financial condition, results of operations and cash flows.

In order to stay current with product life cycle developments, we have formed strategic relationships with leading technology companies to provide us with early access to technology that we believe will help keep us at the forefront of our industry. Our strategic alliances are generally based on business relationships that have not been the subject of written agreements expressly providing for the alliance to continue for a significant period of time, and the loss of any such strategic relationship could have a material adverse effect on our business and results of operations.

If our products do not effectively interoperate with cellular networks and mobile devices, future sales of our products could be negatively affected.

Many of our products are designed to interoperate with cellular networks and mobile devices using Wi-Fi technology. These networks and devices have varied and complex specifications. As a result, we must ensure that our products interoperate effectively with these existing and planned networks and devices. To meet these requirements, we must continue development and testing efforts that require significant capital and employee resources. We may not accomplish these development efforts quickly or cost-effectively, or at all. If our products do not interoperate effectively, orders for our products could be delayed or cancelled, which would harm our revenue, operating results and reputation, potentially resulting in the loss of existing and potential end customers. The failure of our products to interoperate effectively with cellular networks or mobile devices may result in significant warranty, support and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems. In addition, our end customers may require our products to comply with new and rapidly evolving security or other certifications and standards. If our products are late in achieving or fail to achieve compliance with these certifications and standards, or our competitors first achieve compliance with these certifications and standards, such end customers may not purchase our products, which would harm our business, operating results, financial condition and cash flows.

If our product or service offerings, including material purchased from our suppliers, have quality or performance issues, our business may suffer.

Our business depends on delivering products and services of consistently high quality. Many of our solutions are highly complex, and testing procedures used by us and our customers are limited to evaluating them under likely and foreseeable failure scenarios. Many of our products include both hardware and software components. It is not unusual for software, especially in earlier versions, to contain bugs that can unexpectedly interfere with expected operations. For various reasons, once deployed, our products may fail to perform as expected. Performance issues could result from faulty design, defective raw materials or components purchased from suppliers, problems in manufacturing or installation errors. We have experienced such performance issues in the past and remain exposed to such performance issues in the future. In some cases, recall of some or all affected products, product redesigns or additional capital expenditures may be required to correct a defect; and depending on the number of products affected, the cost of fixing or replacing such products could have a material impact on our results of operations and cash flows. Our agreements with our contract manufacturers and component suppliers may not cover all costs related to defects.

In some cases, we are dependent on a sole supplier for components used in our products. Defects in sole-sourced components subject us to additional risk of being unable to quickly address any product issues or failures experienced by our customers as a result of the component defect and could delay our ability to deliver new products until the defective components are corrected or a new supplier is identified and qualified. This could increase our costs in resolving the product issue, result in decreased sales of the impacted product or damage our reputation with customers, any of which could negatively impact our results of operations.

Hardware or software defects could also permit unauthorized users to gain access to our customers' networks and/or a consumer's home network. In addition to potentially damaging our reputation with customers, such defects may also subject us to claims for damages under agreements with our customers and fines by regulatory authorities.

We offer warranties on most products, the terms and conditions of which depend upon the product subject to the warranty. In many cases, we also indemnify our customers against damages or losses that might arise from certain claims relating to our products and services. Future claims may have a material adverse effect on our business, financial condition, results of operations and cash flows. Any significant or systemic product or service failure could also result in lost future sales as a result of reputational damage.

Our products have been deployed in many different locations and user environments and are capable of providing services and connectivity to many different types of devices operating a variety of applications. The ability of our products to operate effectively can be negatively impacted by many different elements unrelated to our products. For example, a user's experience may suffer from an incorrect setting in a Wi-Fi device. Although certain technical problems experienced by users may not be caused by our products, users often may perceive them to be the underlying cause of poor performance of the wireless network. This perception, even if incorrect, could harm our business and reputation. Similarly, a high-profile network failure may be caused by improper operation of the network or failure of a network component that we did not supply, but service providers may perceive that our products were implicated, which, even if incorrect, could harm our business, financial condition, results of operations and cash flows.

We depend on cloud computing infrastructure operated by third parties and any disruption in these operations could adversely affect our business.

For certain of our service offerings, in particular our Wi-Fi-related cloud services, we rely on third parties to provide cloud computing infrastructure that offers storage capabilities, data processing and other services. We currently operate our cloud-dependent services using Amazon Web Service (AWS), Google Compute Engine (GCE) or Microsoft Azure (Azure). We cannot easily switch our AWS, GCE or Azure operations to another cloud provider. Any disruption of or interference with our use of these cloud services would impact our operations and our business could be adversely impacted.

Problems faced by our third-party cloud services with the telecommunications network providers with whom we or they contract or with the systems by which our telecommunications providers allocate capacity among their customers, including us, could adversely affect the experience of our end customers. If AWS, GCE or Azure are unable to keep up with our needs for capacity, this could have an adverse effect on our business. Any changes in third-party cloud services or any errors, defects, disruptions or other performance problems with our cloud-based applications, could adversely affect our reputation and may damage our end customers' stored files or result in lengthy interruptions in our services. Interruptions in our services might adversely affect our reputation and operating results, cause us to issue refunds or service credits, subject us to potential liabilities or result in contract terminations.

Our business depends on effective management information systems.

We rely on effective management information systems for critical business operations, to support strategic business decisions and to maintain a competitive edge in the marketplace. We rely on our ERP systems to support critical business operations such as processing sales orders and invoicing, manufacturing, shipping, inventory control, purchasing and supply chain management, human resources and financial reporting. In 2020, we began the upgrade and integration of our ERP software to a newer, cloud-based version. The first phase was completed in early 2021 and the next phase is ongoing. We may experience difficulties as we transition to the upgraded systems, including loss or corruption of data, delayed shipments, decreases in productivity as personnel implement and become familiar with new systems and processes, unanticipated expenses (including increased costs of implementation or costs of conducting business) and lost revenue. Difficulties in implementing the upgrade or significant system failure could disrupt our operations, divert management's attention and have an adverse effect on our capital resources, financial condition, results of operations or cash flows.

We also rely on management information systems to produce information for business decision-making and planning and to support e-commerce activities. Failure to maintain an adequate digital platform or to make additional investment in our digital platform to support e-commerce activities and improve our customer experience could have a material adverse impact on our business through lost sales opportunities.

If we are unable to maintain our management information systems, including our IT infrastructure, to support critical business operations, produce information for business decision-making activities and support digital customer experience activities, we could experience a material adverse impact on our business or an inability to timely and accurately report our financial results.

Cybersecurity incidents, including data security breaches, ransomware or computer viruses, could harm our business by exposing us to various liabilities, disrupting our delivery of products and services and damaging our reputation.

We rely extensively on our management information technology systems and those of third parties to operate our business and store proprietary information about our products and intellectual property. Additionally, we and others acting on our behalf receive, process, store and transmit confidential data, including “personally identifiable information,” with respect to employees, vendors, customers and others. As the continued rise in cybersecurity incidents around the world indicates, all management information technology systems are vulnerable. Despite the security controls we have in place, our facilities, systems and procedures, and those of our third-party service providers, are at risk of security breaches, acts of vandalism, ransomware, software viruses, misplaced or lost data, programming and/or human errors or other similar events. In particular, unauthorized access to our computer systems or stored data could result in the theft or improper disclosure of proprietary, confidential, sensitive or personal information, the deletion or modification of records or interruptions in our operations. These cybersecurity risks increase when we transmit information from one location to another, including transmissions over the Internet or other electronic networks. Any future significant compromise or breach of our data security, whether external or internal, or misuse of employee, vendor, customer, or Company data, could result in significant costs, lost sales, fines, lawsuits, lost customers and damage to our reputation. We employ a variety of security breach countermeasures and security controls designed to mitigate these risks, but we cannot guarantee that all breach attempts can be successfully thwarted by these measures as the sophistication of attacks increases. As cyber threats continue to evolve, we may be required to expend additional resources to mitigate new and emerging threats while continuing to enhance our information security capabilities or to investigate and remediate security vulnerabilities.

In addition, defects in some of the hardware or software we develop and sell, including in our engineering or in their implementation by our customers, could also result in unauthorized access to our customers’ and/or consumers’ networks. Such unauthorized access could result in third parties gaining access to the private information of our customers, such as home health information, home cameras or other personal information or technology. Any such events could result in theft of personal information, trade secrets and intellectual property; give rise to legal proceedings; cause us to incur increased costs for insurance premiums, security, remediation and regulatory compliance; subject us to civil and criminal penalties; expose us to liabilities to our customers, employees, vendors, governmental authorities or other third parties; allow others to unfairly compete with us; disrupt our delivery of products and services; expose the confidential information of our clients and others; and have a negative impact on our reputation, all of which could have a material adverse effect on our business, financial condition, results of operations, cash flows and stock price.

Climate change may have a long-term impact on our business.

There are inherent climate change risks wherever business is conducted. The potential physical impacts of climate change on our operations are highly uncertain and would be particular to the geographic areas in which we operate. These may include changes in rainfall and storm patterns and intensities, water shortages, changing sea levels and changing temperatures. These impacts may adversely impact the cost, production levels and financial performance of our operations. Climate-related events, including the increasing frequency of extreme weather events and their impact on critical infrastructure in the regions in which we operate, have the potential to disrupt our business, our third-party suppliers, and/or the business of our customers and may cause us to experience higher attrition, losses and additional costs to maintain or resume operations. CommScope aligns with the Sustainability Accounting Standards Board (SASB) standards, Global Reporting Initiative (GRI) standards and makes use of the Carbon Disclosure Project (CDP) platform, which is committed to aligning with the Task Force on Climate Related Financial Disclosures (TCFD) recommendations to accurately assess, take potential proactive action and report as appropriate. For additional information, which is not incorporated by reference in this Annual Report on Form 10-K, see our Corporate Responsibility and Sustainability report on the CommScope website: <https://www.commscope.com/corporate-responsibility-and-sustainability/>.

Labor-Related Risks

We may not be able to attract and retain key employees.

Our business depends upon our continued ability to hire and retain key employees. Effective succession planning is important to our long-term success. We depend on our senior management team and other key employees for strategic success. Some of our key employees have retired or are at or near retirement age, including a disproportionate amount of our workforce in key geographic areas who will reach retirement age in the next decade. Failure to ensure effective transfer of knowledge and smooth transitions involving key employees could hinder our strategic planning and execution.

Key employees include individuals in our sales force, operations management, engineers and skilled production workers at our operations around the world. Competition for skilled personnel and highly qualified managers in the industries in which we operate is intense. Our growth by acquisitions and changes in key leadership has created and could continue to create challenges in retaining employees as well. As the corporate culture evolves, some employees may not find the new culture appealing. In addition, the pace of integration and transformation may cause retention issues with our workforce due to change fatigue.

Furthermore, as our workforce ages, we are challenged to find and attract a younger population to replace them. Younger generations are motivated by progression and opportunity, which may be limited by our current employee population. In addition, many of our employees are highly experienced, skilled individuals who have extensive knowledge or relationships in our industry. As these employees leave CommScope, we may not be able to easily replicate their experience, knowledge and relationships; and with rising labor costs, replacing these employees may increase costs. Difficulties in attracting or retaining employees with the necessary management, technical and financial skills needed to achieve our business objectives may limit our growth potential and have had and may continue to have a material adverse effect on our business, financial condition and results of operations.

Labor unrest could have a material adverse effect on our business, results of operations and financial condition.

Although none of our U.S. employees are represented by unions, a significant portion of our international employees are members of unions or subject to works' councils or similar statutory arrangements. We are required to consult with, and seek the consent or advice of, various employee groups or works' councils that represent our employees for any changes to our activities or employee benefits. We have recently concluded negotiations resulting in an agreement for the establishment of a European Works Council that would serve as a representative body of our European workforce. Requirements to consult with such groups could have a significant impact on our flexibility in managing costs and responding to market changes. In addition, many of our direct and indirect customers and vendors have unionized workforces. Strikes, work stoppages or slowdowns experienced by us at our international locations or experienced by our customers or vendors could have a negative impact on us. Organizations responsible for manufacturing or shipping our products may also be impacted by labor disruptions. Any interruption in the delivery of our products could harm our reputation with our customers, reduce demand for our products, increase costs and have a material adverse effect on us.

International Risks

Our significant international operations expose us to economic, political, foreign exchange rate and other risks.

We have significant international sales, manufacturing, distribution and R&D operations. Our major international manufacturing, distribution and R&D facilities are located in China, the Czech Republic, Germany, India, Ireland, Mexico, the Netherlands, Singapore and the United Kingdom. For the year ended December 31, 2022, international sales represented 38% of our consolidated net sales. In general, our international sales have lower gross profit percentages than our domestic sales. To the extent international sales increase as a percentage of our net sales, our overall gross profit percentages may decline.

Our international sales, manufacturing, distribution and R&D operations are subject to the risks inherent in operating abroad, including, but not limited to, coordinating communications among and managing international operations; currency exchange rate fluctuations; economic and political destabilization, including the current risk with China-Taiwan relations, China-U.S. relations and Russia-U.S. relations; restrictive actions by foreign governments; price inflation; volatile interest rates; wage inflation; nationalization of businesses and expropriation of assets; the laws and policies of the U.S. and other countries affecting trade and tariffs, anti-bribery, foreign investment and loans; foreign tax laws, including the ability to recover amounts paid as value-added and similar taxes; potential restrictions on the repatriation of cash; reduced protection of intellectual property; longer customer payment cycles; compliance with local laws and regulations, including the imposition of new data privacy and climate change regulations; volatile geopolitical turmoil, including popular uprisings, regional conflicts, terrorism, and war; shipping interruptions, including shortages of containers or port congestion; major public health or safety concerns, such as pandemics and infectious diseases; natural or man-made disasters; inflexible labor contracts or labor laws in the event of business downturns; and economic boycott for doing business in certain countries. Although the Company maintains insurance coverage for certain types of losses, such insurance coverage may be insufficient to cover all losses that may arise.

A significant portion of our products sold in the U.S. are manufactured outside the U.S. To the extent there are changes in U.S. trade policies, such as significant increases in tariffs or duties for goods brought into the U.S., our competitive position may be adversely impacted and the resulting effect on our earnings could be material. For a more complete discussion of our risks related to trade policies, see the risk factor, "Additional tariffs or a global trade war could increase the cost of our products, which could adversely impact the competitiveness of our products" under "International Risks" in this Item 1A, Risk Factors section.

Risks related to fluctuations in foreign currency rates has impacted in the past and could continue to impact our sales, financial condition, results of operations and cash flows. Our foreign currency risk exposure is mainly concentrated in Chinese yuan, euro, British pound sterling, Mexican peso, Japanese yen, Canadian dollar, Australian dollar, Brazilian real, South African rand, Indian rupee and Czech koruna. We manage our foreign currency rate risks through regular operating and financing activities and use derivative financial instruments such as foreign exchange forward contracts. There can be no assurance that our risk management strategies will be effective or that the counterparties to our derivative contracts will be able to perform. In addition, foreign currency rates in many of the countries in which we operate have at times been extremely volatile and unpredictable. We may choose not to hedge or determine we are unable to effectively hedge the risks associated with this volatility. In such cases, we may experience declines in sales and adverse impacts on earnings and such changes could be material.

Additional tariffs or a global trade war could increase the cost of our products, which could adversely impact the competitiveness of our products.

There is uncertainty about the future relationship between the U.S. and various other countries, most significantly China, with respect to trade policies and tariffs. Past U.S. administrations have called for substantial changes to U.S. foreign trade policy with respect to China and other countries, including the possibility of imposing greater restrictions on international trade and significant increases in tariffs on goods imported into the U.S. The current administration could have a different approach to U.S. foreign trade policy with China as well as other countries but there remains uncertainty.

This uncertainty about the future relationship between the U.S. and certain of its trading partners may reduce trade between the U.S. and other nations, including countries in which we currently operate, or result in a global economic slowdown with long-term changes to global trade. Changes in policy or continued uncertainty could depress economic activity and restrict our access to suppliers or customers. The tariffs implemented on our products (or on materials, parts or components we use to manufacture our products) by past U.S. administrations increased the cost of our products manufactured in the U.S. and imported into the U.S. If additional tariffs or trade restrictions are implemented on our products (or on materials, parts or components we use to manufacture our products) by the U.S. or other countries, the cost of our products manufactured in China, Mexico or other countries and imported into the U.S. or other countries could increase further. We expect to continue to pass along some of these costs to our customers, but the increased cost could adversely affect the demand for products. We have been successful in the past in shifting the manufacturing locations for the impacted products, but this takes time and results in additional one-time costs and these alternative locations may have higher ongoing manufacturing costs. These cost increases could adversely affect the demand for our products and/or reduce margins, which could have a material adverse effect on our business and our earnings. In addition, a significant percentage of our component parts are manufactured in China and other southeastern Asian countries. The impact of tariffs or other geopolitical instability may limit our access and our manufacturing partners' access to those components which would impact production and could lead to further increases to product costs. Additionally, further escalation of trade tensions could lead to the possible decoupling of the U.S. and China economies. Any or all of these factors could negatively affect demand for our products and our business, financial condition, results of operations and cash flows, and such effects could be material.

Our significant international operations expose us to increased challenges in complying with anti-corruption laws and regulations of the U.S. government and various other international jurisdictions.

We are required to comply with the anti-corruption laws and regulations of the U.S. government and various other international jurisdictions, and our failure to comply with these laws and regulations may expose us to significant liabilities. These laws and regulations may apply to companies, individual directors, officers, employees and agents, and may restrict our operations, trade practices, investment decisions and partnering activities. In particular, we are subject to U.S. and foreign anti-corruption laws and regulations, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. Violations of these legal requirements are punishable by significant criminal fines and imprisonment, civil penalties, disgorgement of profits, injunctions, debarment from government contracts and other remedial measures. We have established policies, procedures and internal controls designed to assist us and our personnel in complying with applicable U.S. and international anti-corruption laws and regulations. However, our employees, subcontractors or channel partners could take actions that violate these requirements. In addition, some of the international jurisdictions in which we operate have elevated levels of corruption. As a result, we are exposed to an increased risk of violating anti-corruption laws. Violation of anti-corruption laws could adversely affect our reputation, business, financial condition, results of operations and cash flows, and such effects could be material.

We are subject to governmental export and import controls and sanctions programs that could subject us to liability or impair our ability to compete in international markets.

Certain of our products, including purchased components of such products, are subject to export controls and may be exported only with the required export license or through an export license exemption. In addition, we are required to comply with certain U.S. and foreign import and customs rules, sanctions and embargos such as the U.S. enacted Uyghur Forced Labor Prevention Act (UFLPA) that became effective in 2022. Although we believe the risk of a UFLPA enforcement action against the Company to be low at this time, we will continue to monitor the ongoing potential impact as the Customs and Border Protection guidance will continue to evolve. If we were to fail to comply with applicable export licensing, customs regulations, economic sanctions and other laws, we could be subject to substantial civil and criminal penalties, including fines, the incarceration of responsible employees and managers and the possible loss of export or import privileges. In addition, if our distributors fail to obtain appropriate import, export or re-export licenses or permits, we may also be adversely affected through reputational harm and penalties. Obtaining the necessary export license for a particular sale may be time-consuming and may result in a delay or loss of sales opportunities.

Furthermore, export control laws and economic sanctions prohibit the shipment of certain products to embargoed or sanctioned countries, governments and persons. While we train our employees to comply with these regulations and have systems in place designed to prevent compliance failures, we cannot assure you that a violation will not occur, whether knowingly or inadvertently. Any such shipment could have negative consequences, including government investigations, penalties, fines, civil and criminal sanctions and reputational harm.

Any change in export or import regulations, economic sanctions or related legislation, shift in the enforcement or scope of existing regulations or change in the countries, governments, persons or technologies targeted by such regulations could result in our decreased ability to export, import or sell our products to existing or potential customers, particularly those with international operations. Any limitation on our ability to export, import or sell our products could adversely affect our business, financial condition, results of operations and cash flows, and such effects could be material.

Litigation and Regulatory Risks

We may not be successful in protecting our intellectual property and in defending against claims that we are infringing on the intellectual property of others, and any such actions may be costly.

We may encounter difficulties and significant costs in protecting our intellectual property rights or obtaining rights to additional intellectual property to permit us to continue or expand our business. Other companies, including some of our largest competitors, hold intellectual property rights in our industry and the intellectual property rights of others could inhibit our ability to introduce new products unless we secure necessary licenses on commercially reasonable terms.

In the past, we have initiated litigation in order to enforce patents issued or licensed to us or to determine the scope and/or validity of a third-party's patent or other proprietary rights, and we may initiate similar litigation in the future. We also have been and may in the future be subject to lawsuits by third parties seeking to enforce their own intellectual property rights, including against certain of the products or intellectual property that we have acquired through acquisitions. Any such litigation, regardless of outcome, could be costly and could subject us to significant liabilities or require us to cease using proprietary third-party technology. In addition, the payment of any damages or any necessary licensing fees or indemnification costs associated with a patent infringement claim could be material and could also materially adversely affect our cash flows and operating results. Such litigation can also be a significant distraction to management.

In certain markets, we may be required to address counterfeit versions of our products. We may incur significant costs in pursuing the originators of such counterfeit products and, if we are unsuccessful in eliminating them from the market, we may experience a reduction in the value of our products, harm to our reputation and/or a reduction in our net sales.

Because of the nature of information that may pass through or be stored on certain of our solutions or networks, we, our vendors and our end customers are subject to complex and evolving U.S. and foreign laws and regulations regarding information privacy, data protection, cybersecurity and other related matters.

Globally, there has been an increase in laws and regulatory action concerning privacy-related matters. Generally, these laws create rights for individuals in their personal data as well as impose obligations on businesses regarding the handling of personal data, including data of employees, consumers and business contacts. Several U.S. states are considering or have adopted legislation requiring companies to disclose the collection of personal data, protect the security of personal information that they hold or respond to rights individuals' rights regarding their personal data. For example, the California Consumer Privacy Act, which went into effect on January 1, 2020, subjects us to stricter obligations, greater fines and more private causes of action related to data security. The California Privacy Rights Act (CPRA), which is effective in 2023, amends and further expands the California Consumer Privacy Act. Virginia, Connecticut, Utah and Colorado also have similar laws going into effect in 2023. Also, many jurisdictions have enacted or are enacting laws requiring companies to notify regulators or individuals of data security incidents involving certain types of personal data, including recently proposed rules by the Securities and Exchange Commission in the U.S. that are expected to be adopted in 2023 that would, among other things, require public disclosure of material security incidents. These mandatory disclosures regarding security incidents often lead to widespread negative publicity. Any security incident, whether actual or perceived, could harm our reputation, erode customer confidence in the effectiveness of our data security measures, negatively impact our ability to attract or retain customers, or subject us to third-party lawsuits, regulatory fines or other action or liability, which could materially and adversely affect our business and operating results.

Foreign data protection, privacy and other laws and regulations can be more restrictive than those in the U.S. For example, the E.U.'s General Data Protection Regulation (GDPR), which became effective in May 2018, was designed to harmonize data privacy laws across Europe, to protect all E.U. citizens' data privacy, empower E.U. citizens with respect to their personal data and to reshape the way organizations across the region approach data privacy. Compliance with GDPR has required changes to products and service offerings, internal and external software systems, including our websites, and changes to many company processes and policies. Failure to comply with GDPR could cause significant penalties and loss of business. Subsequent judicial rulings in Europe about GDPR have invalidated the E.U.-U.S. privacy shield framework, which was the mechanism relied upon by some of our vendors for personal data transfers out of the E.U. Additionally, these rulings require companies like ours to assess their personal data transfers from the E.U. to determine whether the protections in the U.S. or any country without an adequacy determination meet E.U. standards in the context of the specific transfer. A European data protection authority could disagree with our assessment of such transfers, resulting in penalties or required changes in how we transfer data within our company.

In addition, some countries are considering or have passed legislation requiring local storage and processing of data. For example, Brazil and India have each adopted such laws that became effective in January 2020. These new and proposed laws could increase the cost and complexity of offering our solutions or maintaining our business operations in those jurisdictions. The introduction of new solutions or expansion of our activities in certain jurisdictions may subject us to additional laws and regulations. Our channel partners and end customers also may be subject to such laws and regulations in the use of our products and services.

These U.S. federal and state and foreign laws and regulations, which often can be enforced by private parties or government entities, are constantly evolving. In addition, the application and interpretation of these laws and regulations are often uncertain, may be interpreted and applied inconsistently from jurisdiction to jurisdiction and may be contradictory with each other. For example, a government entity in one jurisdiction may demand the transfer of information forbidden from transfer by a government entity in another jurisdiction. If our actions were determined to be in violation of any of these disparate laws and regulations, in addition to the possibility of fines, we could be ordered to change our data practices, which could have an adverse effect on our business and results of operations and financial condition. There is also a risk that we, directly or as the result of a third-party service provider we use, could be found to have failed to comply with the laws or regulations applicable in a jurisdiction regarding the collection, handling, transfer, disposal or consent to the use of personal data, which could subject us to fines or other sanctions, as well as adverse reputational impact.

Some states and countries are considering or have introduced laws and regulations requiring minimum or particular security controls be incorporated into devices that connect to the internet (so called “Internet of Things Security laws”). Where products we manufacture are considered in scope for some of these laws and regulations, compliance obligations or customer contracts may necessitate modification of existing product features and specifications or make inventory obsolete. Inconsistencies in these laws can introduce complexity into our design, manufacturing and inventory management processes.

Compliance with these existing and proposed laws and regulations can be costly and require significant management time and attention, and failure to comply can result in negative publicity and subject us to inquiries or investigations, claims or other remedies, including fines or demands that we modify or cease existing business practices. Customers may demand or request additional functionality in our products or services that they believe are necessary or appropriate to comply with such laws and regulations, which can cause us to incur significant additional costs and can delay or impede the development of new solutions. In addition, there is a risk that failures in systems designed to protect private, personal or proprietary data held by us or our customers using our solutions will allow such data to be disclosed to or seen by others, resulting in application of regulatory penalties, enforcement actions, remediation obligations, private litigation by parties whose data were improperly disclosed or claims from our customers for costs or damages they incur. There can be no assurance that the limitations of liability in our contracts would be enforceable or adequate or would otherwise protect us from any such liabilities or damages with respect to any particular claim. Our existing general liability insurance coverage and coverage for errors and omissions may not continue to be available on acceptable terms or may not be available in sufficient amounts to cover one or more large claims, or our insurers may deny coverage as to any future claim. The successful assertion of one or more large claims against us that exceeds available insurance coverage, or the occurrence of changes in our insurance policies, including premium increases or the imposition of large deductible or co-insurance requirements, could have a material adverse effect on our business, financial condition, results of operations and cash flow.

Compliance with current and future social and environmental laws, regulations, policies and provisions, customer and investor pressures, other efforts to mitigate climate change and potential environmental liabilities may have a material adverse impact on our business, financial condition and results of operations.

We are subject to various federal, state, local and foreign environmental laws and regulations governing, among other things, discharges to air and water, management of regulated materials, energy consumption, handling and disposal of solid and hazardous waste and investigation and remediation of contaminated sites. We are also subject to laws and regulations regarding the types of substances allowable in certain of our products and the handling of our products at the end of their useful life. Because of the nature of our business, we have incurred and will continue to incur costs relating to compliance with or liability under these environmental laws and regulations and these costs could be material. In addition, there is an increasing focus on corporate social and environmental responsibility in our industry, in which new laws and regulations, new or different interpretations of existing laws and regulations, expansion of existing legal requirements related to our products, the discovery of previously unknown contamination or the imposition of new remediation or discharge requirements could require us to incur costs or become the basis for new or increased liabilities that could have a material adverse effect on our financial condition.

Certain environmental laws impose strict and, in some circumstances, joint and several liability on current or former owners or operators of a contaminated property, as well as companies that generated, disposed of or arranged for the disposal of hazardous substances at a contaminated property, for the costs of investigation and remediation of the contaminated property. Our present and past facilities have been in operation for many years and over that time, in the course of those operations, hazardous substances and wastes have been used, generated and occasionally disposed of at such facilities, and we have disposed of waste products either directly or through third parties at numerous disposal sites. Consequently, it has been necessary to undertake investigation and remediation projects at certain sites and we have been, and may in the future be, held responsible for a portion of the investigation and clean-up costs at these sites and our share of those costs may be material.

Efforts to regulate emissions of greenhouse gases (GHGs), such as carbon dioxide, are continuing to evolve in the U.S. and other countries where we operate, and this could increase the cost of raw materials, production processes and transportation of our products. If we are unable to comply with such regulations or sufficiently increase prices or otherwise reduce costs to offset the increased costs of compliance, GHG regulation could have a material adverse effect on our business, financial condition, results of operations and cash flow.

A number of governments or governmental bodies have also introduced or are contemplating regulatory changes in response to various climate change interest groups and the potential impact of climate change, such as the proposed reporting regulations issued by the Securities and Exchange Commission in the U.S. and final regulations issued in the U.K. Legislation and increased regulation regarding climate change could impose significant costs on us and our suppliers, including costs related to increased energy requirements, capital equipment, environmental monitoring and reporting, and other costs to comply with such regulations. Any adopted future climate change regulations could also negatively impact our ability to compete with companies situated in areas not subject to such limitations.

Additionally, some of our customers have adopted, or may adopt, procurement policies that include social and environmental responsibility provisions or requirements with which their suppliers should comply. An increasing number of investors are also pushing companies to disclose corporate social and environmental policies, practices and metrics. If we are unable to comply with such policies or meet the requirements of our customers and investors, it may impact the demand for our products, negatively impact our stock price or expose us to potential litigation.

Given the political significance around and uncertainty about how to best mitigate climate change, we cannot predict how legislation, regulation or customer and investor expectations will affect our financial condition, operating performance and ability to compete. Furthermore, even without such regulation, increased awareness and any adverse publicity in the global marketplace about potential impacts on climate change by us or other companies in our industry could harm our reputation.

General Risk Factors

Any future public health crisis, similar to the COVID-19 pandemic, could materially adversely affect our business, financial condition, results of operations and cash flows.

Pandemics, such as the COVID-19 pandemic, have had and could have in the future, material and adverse effects on our ability to successfully operate and on our financial condition, results of operations and cash flows due to the following factors, among others:

- health concerns that may lead to a complete or partial closure of, or other operational issues at, our manufacturing facilities or those of our contract manufacturers like we experienced related to the COVID-19 pandemic in the first quarter of 2020 with the shutdown of our factories in Suzhou, China;
- the reduced economic activity may severely impact our customers' financial condition and liquidity and may lead to decreased demand for our products and services like we experienced in 2020 related to the COVID-19 pandemic or impact the timing of on-going or planned projects;
- difficulty accessing debt and equity capital on attractive terms, or at all, and a severe disruption and instability in the global financial markets or deteriorations in credit and financing conditions may affect our access to capital necessary to fund business operations or address existing and anticipated liabilities on a timely basis;
- a deterioration in our ability to operate in affected areas or delays in the supply of products or services to us from vendors that are needed for our efficient operations could adversely affect our operations like we experienced related to the COVID-19 pandemic in 2021 and 2022;
- the potential outbreaks among our personnel, particularly if a significant number of them are impacted, could result in a deterioration in our ability to ensure business continuity during a disruption; and
- remote working arrangements may increase our vulnerability to cybersecurity incidents, including breaches of information systems security, which could damage our reputation, disrupt operations and expose us to claims from customers, suppliers, employees and others.

The extent to which any future public health crisis, such as COVID-19, impacts our operations and those of our customers and suppliers will depend on the scope, severity, duration and spread of the health crisis, the actions taken to contain it or mitigate its impact, and the direct and indirect economic effects of the crisis and containment measures, among others, all of which are uncertain and cannot be predicted with confidence. Although the negative impacts of COVID-19 have receded as we experienced recovery in demand for our products in 2022, the pandemic continues to present future uncertainty and risks both domestically and internationally related to indirect consequences such as inflation, rising interest rates, shortages in materials and components and increased logistics costs. Any continued global supply chain and economic disruption could impact the timing and amount of capital spending by our customers, affect our ability to deliver products in a timely manner and negatively impact our business, financial condition, results of operations, cash flows and access to sources of liquidity.

Our stock price has been volatile and may continue to fluctuate significantly.

Stock price volatility may make it more difficult for you to resell your common stock when desired. Our common stock price may fluctuate significantly due to a variety of factors that include the following:

- actual or expected variations in quarterly results of operations;
- recommendations by securities analysts;
- operating and stock price performance of comparable companies, as deemed by investors;
- news reports relating to trends, concerns and other issues in our industry;
- perceptions in the marketplace about our company or competitors;
- new technology used, or services offered, by competitors;
- significant acquisitions or business combinations, strategic partnerships, joint ventures or capital commitments by, or involving, our Company or competitors;
- failure to integrate acquisitions or realize expected benefits from acquisitions;
- changes in government regulations; and
- general economic conditions and events, such as economic slowdowns, recessions, interest rate changes or credit loss trends.

In recent years, the stock market, in general, has experienced significant price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. Broad market and industry factors may affect the market price of our common stock, regardless of our actual operating performance. A low or declining stock price may make us attractive to hedge funds or other short-term investors which could result in substantial stock price volatility and cause fluctuations in trading volumes for our stock. As a result of this volatility, you may not be able to sell your common stock at or above the price paid for the shares.

We may experience significant variability in our quarterly or annual effective income tax rate.

We have a large and complex international tax profile and a significant level of tax credit carryforwards in the U.S. and other carryforwards in various jurisdictions. Variability in the mix and profitability of domestic and international activities, identification and resolution of various tax uncertainties and the inability to realize tax credits and other carryforwards included in deferred tax assets, among other matters, have impacted our effective income tax rate in the past and may impact our effective income tax rate in the future.

Tax law changes in the U.S. and certain other countries have also impacted our effective income tax rate in the past and may impact our effective tax rate in the future, including the implementation of any global minimum tax for corporations. A significant increase in our quarterly or annual effective income tax rate could have a material adverse impact on our results of operations. The enactment of tax reform legislation, including legislation implementing changes in taxation of international business activities, could adversely impact our financial position and results of operations.

We are commonly audited by various tax authorities, and some jurisdictions, both in the U.S. and abroad, have become more aggressive in their approach to audits and their enforcement of their applicable tax laws. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. Significant judgment is required in determining our worldwide provision for income taxes. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation could be materially different from our historical income tax provisions and accruals. The results of an audit or litigation could have a material effect on our financial statements in the period or periods for which that determination is made and on our overall effective income tax rate.

The full realization of our deferred tax assets may be affected by a number of factors, including future earnings and the feasibility of on-going planning strategies. We have deferred tax assets including state and foreign net operating loss carryforwards, accruals not yet deductible for tax purposes, employee benefit items and other items. We have established valuation allowances to reduce the deferred tax assets to an amount that is more likely than not to be realized. Our ability to utilize the deferred tax assets depends in part upon our ability to generate future taxable income within each respective jurisdiction during the periods in which these temporary differences reverse or our ability to carryback any losses created by the deduction of these temporary differences. We expect to realize the deferred tax assets over an extended period. If we are unable to generate sufficient future taxable income in the U.S. and/or certain foreign jurisdictions, or if there is a significant change in the time period within which the underlying temporary differences become taxable or deductible, we could be required to increase our valuation allowances against our deferred tax assets. Our effective tax rate would increase if we were required to increase our valuation allowances against our deferred tax assets which would negatively impact our results of operations.

We do not intend to pay dividends on our common stock and, consequently, the ability of investors to achieve a return on their investment will depend on appreciation in the price of our common stock.

We do not intend to declare and pay dividends on our common stock for the foreseeable future. The payment of future dividends will be at the discretion of our Board of Directors; however, the indentures and the credit agreements governing our indebtedness place limitations on our ability to pay dividends. We currently intend to invest our future earnings, if any, to reduce our debt and fund our growth. The success of an investment in our common stock will largely depend upon future appreciation in value, and there can be no guarantee that our common stock will appreciate in value.

Provisions of our certificate of incorporation and bylaws and Delaware law might discourage, delay or prevent a change of control of our company or changes in our management and, as a result, depress the trading price of our common stock.

Our certificate of incorporation and bylaws contain provisions that could discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions:

- authorize 1,300,000,000 shares of common stock, which, to the extent unissued, could be issued by the Board of Directors, without stockholder approval, to increase the number of outstanding shares and to discourage a takeover attempt;
- authorize the issuance, without stockholder approval, of blank check preferred stock that our Board of Directors could issue to increase the number of outstanding shares and to discourage a takeover attempt;
- grant to the Board of Directors the sole power to set the number of directors and to fill any vacancy on the Board of Directors;
- until the 2023 annual meeting of stockholders, limit the ability of stockholders to remove directors only “for cause” and require any such removal to be approved by holders of at least three-quarters of the outstanding shares of common stock;
- prohibit our stockholders from calling a special meeting of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the Board of Directors is expressly authorized to adopt, or to alter or repeal our bylaws;
- establish advance notice and certain information requirements for nominations for election to our Board of Directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- require the approval of holders of at least three-quarters of the outstanding shares of common stock to amend the bylaws and certain provisions of the certificate of incorporation.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company and may prevent our stockholders from receiving the benefit from any premium to the market price of our common stock offered by a bidder in a takeover context. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our common stock if the provisions are viewed as discouraging takeover attempts in the future. These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors of their choosing and cause us to take corporate actions other than those our stockholders may desire.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our facilities are used primarily for manufacturing, distribution and administration. Facilities primarily used for manufacturing may also be used for distribution, engineering, research and development, storage, administration, sales and customer service. Facilities primarily used for administration may also be used for research and development, sales and customer service. As of December 31, 2022, our principal facilities, grouped according to the facility's primary use, were as follows:

Location	Approximate square feet	Principal segments	Owned or leased
Administrative facilities:			
Hickory, NC ⁽¹⁾	84,000	Corporate headquarters	Owned
Horsham, PA	325,000	Corporate	Owned
Suwanee, GA	103,000	Corporate	Leased
Richardson, TX ⁽¹⁾	100,000	Corporate	Owned
Shakopee, MN	177,000	CCS	Leased
Bangalore, India	151,000	Home & CCS	Leased
Lowell, MA	144,000	CCS, ANS & NICS	Leased
Santa Clara, CA	132,000	ANS	Leased
Manufacturing and distribution facilities:			
Catawba, NC ⁽¹⁾	1,000,000	CCS	Owned
Claremont, NC ⁽¹⁾	589,000	CCS	Owned
Kessel-Lo, Belgium ⁽²⁾	431,000	CCS	Owned
Suzhou, China ⁽³⁾	400,000	OWN & NICS	Owned
Suzhou, China ⁽³⁾	363,000	CCS	Owned
Goa, India ⁽³⁾	353,000	OWN & NICS	Owned
Santa Teresa, NM	333,800	Global Logistics	Leased
Juarez, Mexico	327,000	NICS	Owned
Brno, Czech Republic	281,000	CCS	Leased
Reynosa, Mexico	279,000	CCS	Owned
Suzhou, China	225,000	CCS, NICS & OWN	Leased
Veenendaal, Netherlands	215,000	OWN & NICS	Leased
Juarez, Mexico	189,000	CCS	Leased
Cary, NC	151,000	Global Logistics	Owned
Mission, TX	150,000	Global Logistics	Leased
Delicias, Mexico	139,000	CCS	Owned
Bray, Ireland	130,000	NICS	Owned
Tijuana, Mexico	128,000	ANS	Leased
Buchdorf, Germany	109,000	NICS	Owned
Vacant facilities and properties:			
Sorocaba, Brazil ⁽⁴⁾	157,000	OWN	Owned
Richardson, TX ⁽⁵⁾	100,000	OWN	Leased
Orland Park, IL ⁽⁶⁾	—	Corporate	Owned

- (1) Our interest in each of these properties is encumbered by a mortgage or deed of trust lien securing our senior secured credit facilities (see Note 7 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K).
- (2) The Kessel-Lo, Belgium facility is currently being marketed for sale.
- (3) The buildings in these facilities are owned while the land is held under long-term lease agreements.
- (4) The Sorocaba, Brazil facility is not currently being marketed for sale.
- (5) The Richardson, TX facility is vacant and is currently being marketed for sublease.
- (6) The building at the Orland Park, IL facility was demolished and cleared. The 73-acre parcel is vacant and currently being negotiated for sale.

We believe that our facilities and equipment generally are well maintained, in good condition and suitable for our purposes and adequate for our present operations. While we currently have excess manufacturing capacity in certain of our facilities, utilization is subject to change based on customer demand. We can give no assurances that we will not have excess manufacturing capacity or encounter capacity constraints over the long term.

ITEM 3. LEGAL PROCEEDINGS

The Company is party to certain intellectual property claims and also periodically receives notices asserting that its products infringe on another party's patents and other intellectual property rights. These claims and assertions, whether against the Company directly or against its customers, could require the Company to pay damages, royalties, stop offering the relevant products and/or cease other activities. The Company may also be called upon to indemnify certain customers for costs related to products sold to such customers. The outcome of these claims and notices is uncertain and a reasonable estimate of the loss from unfavorable outcomes in certain of these matters either cannot be determined or is estimated at the minimum amount of a range of estimates. The actual loss, through settlement or trial, could be material and may vary significantly from our estimates. From time to time, the Company may also be involved as a plaintiff involving intellectual property claims. Gain contingencies, if any, are recognized when they are realized.

The Company is also either a plaintiff or a defendant in certain other pending legal matters in the normal course of business. Management believes none of these pending legal matters will have a material adverse effect on the Company's business or financial condition upon final disposition.

In addition, the Company is subject to various federal, state, local and foreign laws and regulations governing the use, discharge, disposal and remediation of hazardous materials. Compliance with current laws and regulations has not had, and is not expected to have, a materially adverse effect on the Company's financial condition or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information and Holders

Our common stock is traded on the Nasdaq Global Select Market under the symbol COMM. As of February 10, 2023, all of our outstanding shares of common stock are held by one stockholder of record, Cede & Co., as nominee for the Depository Trust Company. Many brokers, banks and other institutions hold shares of common stock as nominees for beneficial owners that deposit these shares of common stock in participant accounts at the Depository Trust Company.

Issuer Purchases of Equity Securities

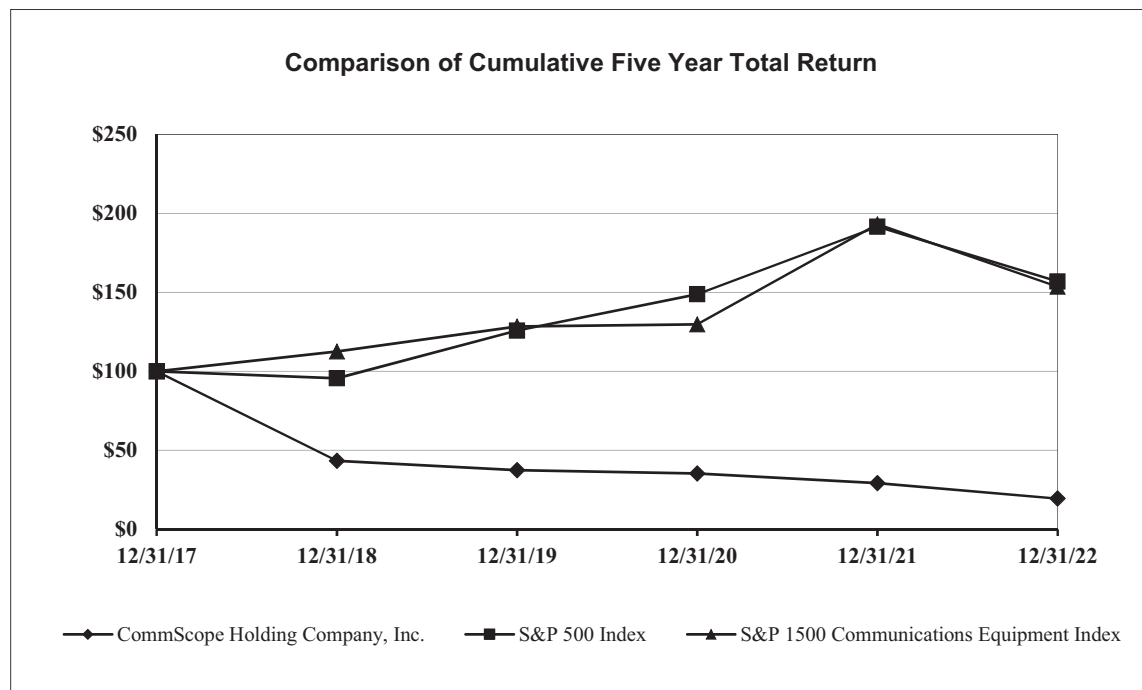
The following table summarizes the stock purchase activity for the three months ended December 31, 2022:

Period	Total Number of Shares Purchased ⁽¹⁾	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Value of Shares that May Yet be Purchased Under the Plans or Programs
October 1, 2022 - October 31, 2022	67,086	\$ 9.21	—	\$ —
November 1, 2022 - November 30, 2022	1,967	\$ 13.07	—	\$ —
December 1, 2022 - December 31, 2022	12,080	\$ 8.76	—	\$ —
Total	<u>81,133</u>	<u>\$ 9.24</u>	<u>—</u>	<u>\$ —</u>

- (1) The shares purchased were withheld to satisfy the withholding tax obligations related to restricted stock units and performance share units that vested during the period.

Stock Performance Graph

The following graph compares cumulative total return on \$100 invested on December 31, 2017 in each of CommScope's Common Stock, the Standard & Poor's 500 Stock Index (S&P 500 Index) and the Standard & Poor's 1500 Communications Equipment Index (S&P 1500 Communications Equipment). The return of the Standard & Poor's indices is calculated assuming reinvestment of dividends. CommScope has not paid any dividends on its common stock over this period.



Company / Index	Base Period	INDEXED RETURNS				
	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
CommScope Holding Company, Inc.	100	43.33	37.51	35.42	29.18	19.43
S&P 500 Index	100	95.62	125.72	148.85	191.58	156.88
S&P 1500 Communications Equipment Index	100	112.57	128.50	129.80	193.14	153.61

ITEM 6. RESERVED

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations is for the year ended December 31, 2022 compared with the year ended December 31, 2021. This comparison should be read in conjunction with our consolidated financial statements and related notes appearing elsewhere in this Annual Report on Form 10-K. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors" included in Part I, Item 1A or in other parts of this Annual Report on Form 10-K. For a discussion and analysis of our financial condition and results of operations for the year ended December 31, 2021 compared to December 31, 2020, see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in the 2021 Annual Report on Form 10-K, filed with the Securities and Exchange Commission on February 17, 2022.

OVERVIEW

We are a global provider of infrastructure solutions for communication, data center and entertainment networks. Our solutions for wired and wireless networks enable service providers, including cable, telephone and digital broadcast satellite operators and media programmers, to deliver media, voice, Internet Protocol (IP) data services and Wi-Fi to their subscribers and allow enterprises to experience constant wireless and wired connectivity across complex and varied networking environments. Our solutions are complemented by services including technical support, systems design and integration. We are a leader in digital video and IP Television distribution systems, broadband access infrastructure platforms and equipment that delivers data and voice networks to homes. Our global leadership position is built upon innovative technology, broad solution offerings, high-quality and cost-effective customer solutions, and global manufacturing and distribution scale.

In 2021, we announced a transformation initiative referred to as CommScope NEXT designed to drive shareholder value through three pillars: profitable growth, operational efficiency and portfolio optimization. We believe these efforts are critical to making us more competitive and allowing us to invest in growth, de-leverage and maximize stockholder and other stakeholder value. We have incurred \$62.9 million and \$91.9 million of restructuring costs and \$38.2 million and \$90.3 million of transaction, transformation and integration costs during the years ended December 31, 2022 and 2021, respectively, primarily related to CommScope NEXT. We expect to continue to incur restructuring costs and transaction, transformation and integration costs related to CommScope NEXT in 2023 and such costs could be material.

As a step to optimize our portfolio through CommScope NEXT, as of January 1, 2022, we reorganized our internal management and reporting structure to align our portfolio of products and solutions more closely with the markets we serve and provide better performance comparability with our competitive peer set across our businesses. The reorganization changed the information regularly reviewed by our chief operating decision maker for purposes of allocating resources and assessing performance. As a result, we are now reporting financial performance based on the following operating segments: Connectivity and Cable Solutions (CCS), Outdoor Wireless Networks (OWN), Networking, Intelligent Cellular and Security Solutions (NICS), Access Network Solutions (ANS) and Home Networks (Home). Prior to this change, we operated and reported four operating segments: Broadband Networks, Outdoor Wireless Networks, Venue and Campus Networks and Home Networks. The Home segment was unchanged in this realignment. All prior period amounts have been recast to reflect these operating segment changes.

Also as a step in our CommScope NEXT transformation plan, in 2021, we announced a plan to separate the Home Networks business. Due to the impact of the uncertain supply chain environment, capital spending patterns of customers and other macroeconomic factors related to the Home Networks business, we have delayed our separation plan, but we continue to analyze the financial results of our "Core" business separately from Home. As such, below we refer to certain supplementary Core financial measures, which reflect the results of our CCS, OWN, NICS and ANS segments in the aggregate. See the Segment Results section below for the aggregation of our Core financial measures.

Impacts of Supply Chain Constraints and Inflation

As in many industries, we have seen the negative impacts of COVID-19 recede and a recovery in demand for our products over the past year, but this has created negative indirect consequences such as inflation, shortages in materials and components and increased logistics costs. Prices for certain commodities and other raw materials that we use have experienced significant volatility as a result of changes in the levels of global demand, supply disruptions, including port, transportation and distribution delays or interruptions, and other factors. As a result, we have seen a significant increase in costs that has negatively impacted our results of operations. We are also experiencing limited supply of memory devices, capacitors and silicon chips, which has increased our costs and has impacted our ability to deliver products on a timely basis due to extended lead times. We have mitigated some of our increased component and logistics costs by implementing higher prices on our products and services. We are also mitigating certain shortages by purchasing components in advance and maintaining higher levels of inventory, finding alternate vendors for some components or in certain cases, product redesign.

We believe the global supply chain challenges and their adverse impact on our business and financial results will continue to improve in 2023 but certain shortages could continue throughout 2023. We also believe certain macroeconomic pressures in the U.S. and the global economy, such as rising interest rates and energy prices as well as customer concern about an economic slow-down, could impact the timing and amount of capital spending by our customers in 2023, which could negatively impact our results of operations.

For more discussion, see Part I, Item 1A, "Risk Factors" elsewhere in this Annual Report on Form 10-K.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our consolidated financial statements have been prepared in conformity with generally accepted accounting principles (GAAP) in the United States (U.S.). The preparation of these financial statements requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These estimates and their underlying assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other objective sources. Management bases its estimates on historical experience and on assumptions that are believed to be reasonable under the circumstances and revises its estimates, as appropriate, when changes in events or circumstances indicate that revisions may be necessary.

The following critical accounting policies and estimates reflected in our financial statements are based on management's knowledge of and experience with past and current events and on management's assumptions about future events. While we have generally not experienced significant deviations from our critical estimates in the past, it is reasonably possible that these estimates may ultimately differ materially from actual results. See Note 2 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for a description of all our significant accounting policies.

Asset Impairment Reviews

Impairment Reviews of Goodwill

We test goodwill at the reporting unit level for impairment annually as of October 1 and on an interim basis when events occur or circumstances exist that indicate the carrying value may no longer be recoverable. We compare the fair value of our reporting units with the carrying amount, including goodwill. We recognize an impairment charge for the amount by which the reporting unit's carrying amount exceeds its fair value.

We estimate the fair value of a reporting unit using a discounted cash flow (DCF) method or, as appropriate, a combination of the DCF method and a market approach known as the guideline public company method. Under the DCF method, we calculate the fair value of a reporting unit based on the present value of estimated future cash flows. The significant assumptions in the DCF model primarily include, but are not limited to, forecasts of annual revenue growth rates, annual operating income margin, the terminal growth rate and the discount rate used to determine the present value of the cash flow projections. When determining these assumptions and preparing these estimates, we consider historical performance trends, industry data, insight derived from customers, relevant changes in the reporting unit's underlying business and other market trends that may affect the reporting unit. The discount rate is based on the estimated weighted average cost of capital as of the test date of market participants in the industry in which the reporting unit operates and is commensurate with the risk and uncertainty inherent in each reporting unit and in internally developed forecasts. Under the guideline public company method, we estimate the fair value based upon market multiples of revenue and earnings derived from publicly-traded companies with similar operating and investment characteristics as the reporting unit. The weighting of the fair value derived from the market approach may vary depending on the level of comparability of these publicly-traded companies to the reporting unit. When comparable public companies are not meaningful or not available, we may estimate the fair value of a reporting unit using only the DCF method.

Estimating the fair value of a reporting unit involves uncertainties because it requires management to develop numerous assumptions, including assumptions about the future growth and potential volatility in revenues and costs, capital expenditures, industry economic factors and future business strategy. Changes in projected revenue growth rates, projected operating income margins or estimated discount rates due to uncertain market conditions, loss of one or more key customers, changes in our strategy, changes in technology or other factors could negatively affect the fair value in one or more of our reporting units and result in a material impairment charge in the future.

To assess the reasonableness of the calculated fair values of our reporting units, we also compare the sum of the reporting units' fair values to our market capitalization and calculate an implied control premium (the excess of the sum of the reporting units' fair values over the market capitalization). If the implied control premium is not reasonable, we will reevaluate the fair value estimates of the reporting units by adjusting the discount rates and/or other assumptions.

2022 Interim and Annual Goodwill Analysis

Goodwill is tested for impairment annually or at other times if events have occurred or circumstances exist that indicate the carrying value of the reporting unit may exceed its fair value. We assessed goodwill for impairment due to a change in the composition of certain reporting units resulting from the new segment structure as of January 1, 2022. We performed impairment testing immediately before and after the change and determined that no goodwill impairment existed.

The annual test of goodwill impairment was performed for each of the reporting units with goodwill balances as of October 1, 2022. For the 2022 annual goodwill test, we determined the fair value of each reporting unit using a DCF model and a guideline public company approach, with 75% of the value determined using the DCF model and 25% of the value determined using the market approach. The range of discount rates used in our annual tests were 10.0% to 12.0% for 2022. During the annual impairment test performed in the fourth quarter of 2022 and in conjunction with the development of our 2023 and long-range plans, we identified changes in our ANS reporting unit's expected future cash flows due to various market trends expected to affect the business, including technology shifts affecting hardware sales, trends affecting bandwidth growth and other operational challenges, as well as an increase in the cost of capital. As a result, we determined the goodwill balance in the ANS reporting unit was partially impaired and recorded a \$1,119.6 million impairment charge. The ANS reporting unit has remaining goodwill allocated of \$734.0 million as of October 1, 2022. The ANS reporting unit is the same as our ANS reportable segment.

As discussed, our ANS reporting unit failed the annual goodwill impairment test and a partial impairment was recorded as of October 1, 2022. Also, the amount by which our Building and Data Center Connectivity (BDCC) reporting unit's fair value exceeded its carrying value was lower year over year. The BDCC reporting unit is in our CCS reportable segment. Considering the headroom going forward for each of the ANS and BDCC reporting units, there is a risk for future impairment in the event of declines in general economic, market or business conditions or any significant unfavorable change in the forecasted cash flows, weighted average cost of capital or growth rates. If current and long-term projections for our ANS and BDCC reporting units are not realized or decrease materially, we may be required to recognize additional goodwill impairment charges and these charges could be material to our results of operations.

The following table provides summary information regarding our reporting units with goodwill balances as of December 31, 2022 that have the lowest level of headroom. The table presents key assumptions used in our annual goodwill analysis, along with sensitivity analysis showing the effect of a change in certain key assumptions, assuming all other assumptions remain constant, to the resulting fair value using an income approach.

Reporting Unit	Key Assumptions		Goodwill		Excess (Deficit) of Fair Value to Carrying Value			
	Discount Rate	Terminal Growth Rate	Balance at December 31, 2022	% of Total Assets	Result of Annual Goodwill Test as of October 1, 2022	Decrease of 10% in Cash Flows	Decrease of 0.5% in Long-term Growth Rate	Increase of 0.5% in Discount Rate
ANS	10.0%	1.0%	\$ 734.0	6.3%	\$ (1,119.6)	\$ (1,265.5)	\$ (1,165.8)	\$ (1,196.6)
BDCC	11.5%	1.5%	975.9	8.4%	290.4	161.5	258.5	231.3

Definite-Lived Intangible Assets and Other Long-Lived Assets

Management reviews definite-lived intangible assets and other long-lived assets for impairment when events or changes in circumstances indicate that their carrying values may not be fully recoverable. This analysis differs from our goodwill impairment analysis in that an intangible or other long-lived asset impairment is only deemed to have occurred if the sum of the forecasted undiscounted future net cash flows related to the assets being evaluated is less than the carrying value of the assets. If the forecasted net cash flows are less than the carrying value, then the asset is written down to its estimated fair value. We performed a recoverability test for our ANS reporting unit because of the goodwill impairment recognized in the fourth quarter of 2022. Our Home Networks reporting unit also had an indicator of impairment as its carrying amount exceeded its estimated fair value. We did not identify any impairments of definite-lived intangible assets as a result of these tests. Changes in the estimates of forecasted net cash flows or changes in classification from held for use may result in future asset impairments that could be material to our results of operations. We impaired certain other long-lived assets as a result of restructuring actions in 2022.

Revenue Recognition

We recognize revenue based on the satisfaction of distinct obligations to transfer goods and services to customers. Our revenue is generated primarily from product or equipment sales. We also generate revenue from custom design and installation services as well as bundled sales arrangements that include product, software and services. We apply a five-step approach as defined in ASC 606, *Revenue from Contracts with Customers*, in determining the amount and timing of revenue to be recognized: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when a corresponding performance obligation is satisfied. Most contracts with customers are to provide distinct products or services within a single contract. However, if a contract is separated into more than one performance obligation, the total transaction price is allocated to each performance obligation in an amount based on the estimated relative standalone selling price.

Product sales, to end-customers or distributors, represent over 90% of our revenue and are recognized at a point-in-time, which is generally at the point in time when products have been shipped, right to payment has been obtained and risk of loss has been transferred. Certain of our product performance obligations include proprietary operating system software, which typically is not considered separately identifiable. Therefore, sales of these products and the related software are considered one performance obligation.

License contracts include revenue recognized for the licensing of intellectual property, including software, sold separately without products. Functional intellectual property licenses do not meet the criteria for revenue to be recognized over time and revenue is most commonly recognized upon delivery of the license/software to the customer.

The Company has service arrangements where net sales are recognized over time. These arrangements include a variety of post-contract support service offerings, which are generally recognized over time as the services are provided, including the following: maintenance and support services provided under annual service-level agreements; “Day 2” professional services to help customers maximize their utilization of deployed systems; and installation services related to the routine installation of equipment ordered by the customer at the customer’s site.

Revenue is measured based on the consideration to which we expect to be entitled based on customer contracts. Sales are adjusted for variable consideration amounts, including but not limited to estimated discounts, rebates, distributor price protection programs and returns. These estimates are determined based upon historical experience, contract terms, inventory levels in the distributor channel and other related factors. Adjustments to variable consideration estimates are recorded when circumstances indicate revisions may be necessary. Variable consideration is primarily related to sales to our distributors, system integrators and value-added resellers.

A contract liability for deferred revenue is recorded when consideration is received or is unconditionally due from a customer prior to transferring control of goods or services to the customer under the terms of a contract. Deferred revenue balances typically result from advance payments received from customers for product contracts or from billings in excess of revenue recognized on project or services arrangements.

Unbilled receivables are recorded when revenues are recognized in advance of invoice issuance. These assets are presented on a combined basis with accounts receivable and are converted to accounts receivable once our right to the consideration becomes unconditional, which varies by contract but is generally based on achieving certain acceptance milestones. We recognize the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset would be one year or less.

We include shipping and handling costs billed to customers in net sales and include the costs incurred to transport product to customers as well as certain internal handling costs, which relate to activities to prepare goods for shipment, as cost of sales. Shipping and handling costs incurred after control is transferred to the customer are accounted for as fulfillment costs and are not accounted for as separate revenue obligations.

Contingencies and Litigation

We are a party to lawsuits, claims and proceedings incident to the operation of our business, including intellectual property infringement matters, those pertaining to labor and employment contracts and other matters, some of which allege substantial monetary damages. We assess these matters in order to determine if a contingent liability should be recorded. In making this determination, management may, depending on the nature of the matter, consult with internal and external legal counsel and technical experts. We expense legal fees associated with consultations and defense of lawsuits as incurred. We accrue for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability. Gain contingencies are recognized when they are realized.

Litigation outcomes are difficult to predict and are often resolved over long periods of time, making our estimates highly judgmental. Estimating probable losses requires the analysis of multiple possible outcomes that often depend on judgments about potential actions by third parties, such as future changes in facts and circumstances, differing interpretations of the law, assessments of the amount of damages and other factors beyond our control. There is the potential for a material adverse effect on our results of operation and cash flows if one or more matters are resolved in a particular period in an amount materially in excess of what we anticipated. Alternatively, if the judgments and estimates made by management are incorrect and a particular contingent loss does not occur, the contingent loss recorded would be reversed, thereby favorably impacting our results of operations.

Inventory Reserves

We maintain reserves to reduce the value of inventory based on the lower of cost or net realizable value, including allowances for excess and obsolete inventory. These reserves are based on management's assumptions about and analysis of relevant factors including current levels of orders and backlog, forecasted demand, market conditions and new products or innovations that diminish the value of existing inventories. If actual market conditions deteriorate from those anticipated by management, additional allowances for excess and obsolete inventory could be required and may be material to our results of operations.

Product Warranty Reserves

We recognize a liability for the estimated claims that may be paid under our customer assurance-type warranty agreements to remedy potential deficiencies of quality or performance of our products. The product warranties extend over various periods, depending upon the product subject to the warranty and the terms of the individual agreements. We record a provision for estimated future warranty claims based upon the historical relationship of warranty claims to sales and specifically identified warranty issues. We base our estimates on historical experience and on assumptions that are believed to be reasonable under the circumstances and revise our estimates, as appropriate, when events or changes in circumstances indicate that revisions may be necessary. Although these estimates are based on management's knowledge of and experience with past and current events and on management's assumptions about future events, it is reasonably possible that they may ultimately differ materially from actual results, including in the case of a significant product failure, and may be material to our results of operations.

Tax Valuation Allowances and Liabilities for Unrecognized Tax Benefits

We establish an income tax valuation allowance when available evidence indicates that it is more likely than not that all or a portion of a deferred tax asset will not be realized. In assessing the need for a valuation allowance, we consider the amounts, character, source and timing of expected future deductions or carryforwards as well as sources of taxable income and tax planning strategies that may enable utilization. We maintain an existing valuation allowance until sufficient positive evidence exists to support its reversal. Changes in the amount or timing of expected future deductions or taxable income may have a material impact on the level of income tax valuation allowances. If we determine that we will not be able to realize all or part of a deferred tax asset in the future, an increase to an income tax valuation allowance would be charged to earnings in the period such determination was made.

We recognize income tax benefits related to particular tax positions only when it is considered more likely than not that the tax position will be sustained if examined on its technical merits by tax authorities. The amount of benefit recognized is the largest amount of tax benefit that is evaluated to be greater than 50% likely to be realized. Considerable judgment is required to evaluate the technical merits of various positions and to evaluate the likely amount of benefit to be realized. Lapses in statutes of limitations, developments in tax laws, regulations and interpretations, and changes in assessments of the likely outcome of uncertain tax positions could have a material impact on the overall tax provision.

We establish deferred tax liabilities for the estimated tax cost associated with foreign earnings that we do not consider permanently reinvested (primarily foreign withholding and state income taxes). These liabilities are subject to adjustment if there is a change in the assertion of whether the foreign earnings are considered to be permanently reinvested.

We also establish allowances related to value-added and similar recoverable taxes when it is considered probable that those assets are not recoverable. Changes in the probability of recovery or in the estimates of the amount recoverable are recognized in the period such determination is made and may be material to our net loss.

RESULTS OF OPERATIONS

Comparison of results of operations for the year ended December 31, 2022 with the year ended December 31, 2021

	Year Ended December 31,				\$ Change	% Change
	2022	% of Net Sales	2021	% of Net Sales		
	Amount		Amount			
	(dollars in millions, except per share amounts)					
Net sales	\$ 9,228.1	100.0%	\$ 8,586.7	100.0%	\$ 641.4	7.5%
Core net sales ⁽¹⁾	7,524.7	81.5	6,737.4	78.5	787.3	11.7
Gross profit	2,804.1	30.4	2,684.3	31.3	119.8	4.5
Operating income (loss)	(713.8)	(7.7)	48.6	0.6	(762.4)	(1,568.7)
Core operating income (loss) ⁽¹⁾	(573.6)	(7.6)	263.5	3.9	(837.1)	(317.7)
Non-GAAP adjusted EBITDA ⁽²⁾	1,276.7	13.8	1,117.0	13.0	159.7	14.3
Core adjusted EBITDA ⁽¹⁾	1,250.4	16.6	1,091.5	16.2	158.9	14.6
Net loss	(1,286.9)	(13.9)	(462.6)	(5.4)	(824.3)	178.2
Diluted loss per share	\$ (6.49)		\$ (2.55)		\$ (3.94)	154.1

- (1) Core financial measures reflect the results of our CCS, OWN, NICS and ANS segments, in the aggregate, and exclude the results of our Home segment. See the Segment Results section below for illustration of the aggregation of our Core financial measures.
- (2) See "Reconciliation of Non-GAAP Measures" in this Management's Discussion and Analysis of Financial Condition and Results of Operations, below.

Net sales

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Net sales	\$ 9,228.1	\$ 8,586.7	\$ 641.4	7.5%
Domestic	5,750.5	4,960.5	790.0	15.9
International	3,477.6	3,626.2	(148.6)	(4.1)

Net sales in 2022 increased \$641.4 million, or 7.5%, compared to the prior year driven by higher pricing. Core net sales in 2022 increased \$787.3 million, or 11.7%, compared to the prior year with increases in the CCS segment of \$735.8 million, the NICS segment of \$77.8 million and the OWN segment of \$50.8 million, partially offset by a decrease of \$77.1 million in the ANS segment. Net sales in 2022 in the Home segment decreased \$145.9 million compared to the prior year. During 2022, we continued to experience supply shortages and extended lead times for certain materials that negatively affected our ability to meet customer demand for certain of our products. We expect these shortages and delays to improve for some components, but we expect to continue to experience shortages and delays for others into 2023. For further details by segment, see the discussion of Segment Results below.

From a regional perspective in 2022, net sales increased in the U.S. by \$790.0 million and Canada by \$94.4 million, but these increases were partially offset by decreases in the Asia Pacific (APAC) region of \$114.1 million, the Caribbean and Latin American (CALA) region of \$103.3 million and the Europe, Middle East and Africa (EMEA) region of \$25.6 million. Net sales to customers located outside of the U.S. comprised 38% of total net sales for 2022 compared to 42% for 2021. Foreign exchange rate changes impacted net sales unfavorably by approximately 2% for 2022 compared to the prior year. For additional information on regional sales by segment, see discussion of Segment Results below and Note 16 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K.

Gross profit, SG&A expense and R&D expense

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Gross profit	\$ 2,804.1	\$ 2,684.3	\$ 119.8	4.5%
As a percent of sales	30.4%	31.3%		
SG&A expense	1,135.0	1,233.9	(98.9)	(8.0)
As a percent of sales	12.3%	14.4%		
R&D expense	657.4	683.2	(25.8)	(3.8)
As a percent of sales	7.1%	8.0%		

Gross profit (net sales less cost of sales)

Gross profit increased in 2022 compared to the prior year primarily due to higher net sales, partially offset by higher material and freight costs and unfavorable product mix.

Selling, general and administrative expense

For 2022, selling, general and administrative (SG&A) expense decreased by \$98.9 million compared to 2021, primarily due to a decrease in transaction, transformation, and integration costs of \$52.1 million and cost savings initiatives. We expect to continue to incur transaction, transformation and integration costs related to CommScope NEXT in 2023 and such costs could be material. Also included in 2022 SG&A expense is \$20.9 million of bad debt expense related to deterioration in the credit profile of a certain distributor in the OWN segment; and similarly, in 2021, we recorded bad debt expense of \$30.3 million related to the credit deterioration of a specific Home segment value added reseller.

Research and development expense

Research and development (R&D) expense for 2022 decreased primarily due to lower spending on ANS segment products of \$27.3 million. Spending on OWN and Home segment products also declined but was offset by higher spending on CCS and NICS segment products. R&D activities generally relate to ensuring that our products are capable of meeting the evolving technological needs of our customers, bringing new products to market and modifying existing products to better serve our customers.

Amortization of purchased intangible assets, Restructuring costs, net and Asset impairments

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Amortization of purchased intangible assets	\$ 543.0	\$ 613.0	\$ (70.0)	(11.4)%
Restructuring costs, net	62.9	91.9	(29.0)	(31.6)
Asset impairments	1,119.6	13.7	1,105.9	8,072.3

Amortization of purchased intangible assets

The amortization of purchased intangible assets was lower in 2022 compared to the prior year because certain of our intangible assets became fully amortized.

Restructuring costs, net

The net restructuring costs recorded in 2022 included \$59.3 million related to CommScope NEXT. From a cash perspective, we paid \$49.4 million to settle CommScope NEXT restructuring liabilities during 2022 and expect to pay an additional \$58.2 million in 2023 and \$0.5 million in 2024 related to restructuring actions that have been initiated. The net restructuring costs recorded in 2021 included \$90.7 million related to CommScope NEXT. Additional restructuring actions related to CommScope NEXT are expected to be identified and the resulting charges and cash requirements could be material.

Asset impairments

We recorded goodwill impairment charges of \$1,119.6 million in 2022 related to our ANS reporting unit which is the same as our ANS segment. See the discussion above under “Critical Accounting Policies” for more information regarding the annual goodwill impairment test performed during 2022. We recorded goodwill impairment charges of \$13.7 million during 2021 related to our Home Networks reporting unit within our Home segment.

Other expense, net

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Foreign currency loss	\$ (4.1)	\$ (4.4)	\$ 0.3	(6.8)%
Other income (expense), net	4.0	(19.4)	23.4	NM

NM - Not meaningful

Foreign currency loss

Foreign currency loss includes the net foreign currency gains and losses resulting from the settlement of receivables and payables, foreign currency contracts and short-term intercompany advances in a currency other than the subsidiary’s functional currency. The change in foreign currency loss in 2022 compared to 2021 was not significant.

Other income (expense), net

The change in other income (expense), net in 2022 compared to 2021 was primarily due to a redemption fee paid in 2021 of \$34.4 million related to the refinancing of our 5.50% senior secured notes due March 2024 (2024 Secured Notes). The remaining change is due to changes in income derived from equity method investments and other miscellaneous investments.

Interest expense, Interest income and Income taxes

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Interest expense	\$ (588.9)	\$ (561.2)	\$ (27.7)	4.9%
Interest income	2.8	1.9	0.9	47.4
Income tax benefit	13.1	71.9	(58.8)	(81.8)

Interest expense and Interest income

Interest expense increased in 2022 compared to 2021. The increase was driven by higher interest expense related to our senior secured term loan due 2026 (2026 Term Loan) due to the increased variable interest rate compared to 2021. This increase was partially offset by lower interest on our fixed rate debt due to the refinancing of our 2024 Secured Notes in 2021. We expect our interest expense will increase in 2023 as a result of the Federal Reserve's increase in interest rates in 2022 and the expectation that they will continue to raise interest rates into 2023. Our weighted average effective interest rate on outstanding borrowings, including the impact of the interest rate swap and the amortization of debt issuance costs and original issue discount, was 6.91% at December 31, 2022 and 5.74% at December 31, 2021.

Income tax benefit

For 2022, we recognized an income tax benefit of \$13.1 million on a pretax loss of \$1,300.0 million. Our tax benefit was less than the statutory rate of 21.0% in 2022 primarily due to a goodwill impairment charge of \$1,119.6 million, for which minimal tax benefits were recorded. Our tax benefit was also impacted by the unfavorable impacts of U.S. anti-deferral provisions and non-creditable withholding taxes, partially offset by tax benefit related to federal tax credits. See Note 12 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for more discussion of our income tax benefit.

For 2021, our effective tax rate was 13.5% and we recognized an income tax benefit of \$71.9 million on a pretax loss of \$534.5 million. Our tax benefit was less than the statutory rate primarily due to the impact of \$37.4 million of tax expense related to a foreign tax rate change.

Segment Results

	Year Ended December 31,						\$ Change	% Change
	2022		2021					
	Amount	% of Net Sales	Amount	% of Net Sales				
					(dollars in millions)			
Net sales by segment:								
CCS	\$ 3,789.6	41.1 %	\$ 3,053.8	35.6 %	\$ 735.8	24.1 %		
OWN	1,467.9	15.9	1,417.1	16.5	50.8	3.6		
NICS	939.7	10.2	861.9	10.0	77.8	9.0		
ANS	1,327.5	14.4	1,404.6	16.4	(77.1)	(5.5)		
Core net sales ⁽¹⁾	7,524.7	81.5	6,737.4	78.5	787.3	11.7		
Home	1,703.4	18.5	1,849.3	21.5	(145.9)	(7.9)		
Consolidated net sales	<u>\$ 9,228.1</u>	100.0 %	<u>\$ 8,586.7</u>	100.0 %	<u>\$ 641.4</u>	7.5 %		
Operating income (loss)								
by segment:								
CCS	\$ 438.2	11.6 %	\$ 138.5	4.5 %	\$ 299.7	216.4 %		
OWN	189.0	12.9	197.3	13.9	(8.3)	(4.2)		
NICS	(51.2)	(5.4)	(143.5)	(16.6)	92.3	(64.3)		
ANS	(1,149.6)	(86.6)	71.2	5.1	(1,220.8)	(1,714.6)		
Core operating income (loss) ⁽¹⁾	(573.6)	(7.6)	263.5	3.9	(837.1)	(317.7)		
Home	(140.2)	(8.2)	(214.9)	(11.6)	74.7	(34.8)		
Consolidated operating income (loss)	<u>\$ (713.8)</u>	(7.7)%	<u>\$ 48.6</u>	0.6 %	<u>\$ (762.4)</u>	(1,568.7)%		
Adjusted EBITDA by segment:								
CCS	\$ 643.6	17.0 %	\$ 448.9	14.7 %	\$ 194.7	43.4 %		
OWN	269.7	18.4	266.8	18.8	2.9	1.1		
NICS	51.9	5.5	(15.3)	(1.8)	67.2	NM		
ANS	285.2	21.5	391.1	27.8	(105.9)	(27.1)		
Core adjusted EBITDA ⁽¹⁾	1,250.4	16.6	1,091.5	16.2	158.9	14.6		
Home	26.3	1.5	25.5	1.4	0.8	3.1		
Non-GAAP consolidated adjusted EBITDA ⁽²⁾	<u>\$ 1,276.7</u>	13.8 %	<u>\$ 1,117.0</u>	13.0 %	<u>\$ 159.7</u>	14.3 %		

NM - Not meaningful

- (1) Core financial measures reflect the results of our CCS, OWN, NICS and ANS segments, in the aggregate, and exclude the results of our Home segment.
- (2) See "Reconciliation of Non-GAAP Measures" within this Management's Discussion and Analysis of Financial Condition and Results of Operations.

Connectivity and Cable Solutions Segment

Net sales for the CCS segment increased in 2022 compared to the prior year primarily due to increased demand for our products and services as service providers continued to enhance their networks to keep pace with increasing broadband demand. We were able to meet this increased demand with the additional production enabled by our capacity expansion. CCS segment net sales also significantly benefitted from pricing increases. The supply shortages with certain of our network cable products experienced during the first half of the year eased in the second half and are expected to continue to improve into 2023. From a regional perspective in 2022, net sales increased in the U.S. by \$690.0 million, the EMEA region by \$23.9 million, Canada by \$20.1 million and the CALA region by \$10.2 million but decreased in the APAC region by \$8.4 million compared to the prior year. Foreign exchange rate changes impacted CCS segment net sales unfavorably by approximately 2% during 2022.

For 2022, CCS segment operating income and adjusted EBITDA both benefitted from pricing increases, higher sales volumes and operational efficiencies compared to the prior year. These benefits were partially offset by higher material costs, unfavorable product mix, increases in SG&A costs, higher freight costs and increases in R&D costs. In 2022, CCS segment operating income was favorably impacted by reductions of \$57.2 million in amortization expense, \$44.9 million in restructuring expense and \$7.9 million in transaction, transformation and integration costs but was unfavorably impacted by a \$2.7 million net charge to establish an allowance against certain accounts receivable determined to be uncollectible as a result of the Russia/Ukraine conflict. Amortization expense, restructuring expense, transaction, transformation and integration costs and the charge related to certain uncollectible accounts receivable resulting from the Russia/Ukraine conflict are not reflected in adjusted EBITDA. See “Reconciliation of Segment Adjusted EBITDA” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations, below.

Outdoor Wireless Networks Segment

For 2022, OWN segment net sales increased compared to the prior year primarily due to favorable pricing impacts. From a regional perspective in 2022, OWN segment net sales increased in the U.S. by \$168.3 million but decreased in the EMEA region by \$54.4 million, the APAC region by \$29.9 million, Canada by \$21.4 million and the CALA region by \$11.8 million. Foreign exchange rate changes impacted OWN segment net sales unfavorably by approximately 2% during 2022.

For 2022, OWN segment operating income decreased and adjusted EBITDA increased compared to the prior year. Both operating income and adjusted EBITDA benefitted from favorable pricing impacts, favorable product mix and benefits from decreases in selling and marketing and R&D costs, but these were partially offset by higher material and freight costs and higher bad debt expense, driven by a \$20.9 million reserve related to a distribution customer. In addition, OWN segment operating income for 2022 was unfavorably impacted by an increase of \$18.8 million in restructuring expense which is not reflected in adjusted EBITDA. See “Reconciliation of Segment Adjusted EBITDA” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations, below.

Networking, Intelligent Cellular and Security Solutions Segment

Net sales increased in 2022 compared to the prior year primarily due to the impacts of favorable pricing and to a lesser extent increases in sales volumes particularly in the second half of the year. We experienced material shortages related to our Ruckus products during the first half of 2022 which negatively impacted our sales volumes for the year. We saw some improvement in material shortages in the second half of 2022, but we expect certain shortages to continue into 2023. From a regional perspective in 2022, net sales increased in the U.S. by \$49.1 million, the EMEA region by \$12.5 million, the APAC region by \$11.6 million, Canada by \$2.6 million and the CALA region by \$2.0 million compared to the prior year. Foreign exchange rate changes impacted NICS segment net sales unfavorably by approximately 2% during 2022.

For 2022, NICS segment operating loss decreased and adjusted EBITDA increased compared to the prior year and both benefitted from favorable pricing impacts on certain products, higher sales volumes, lower SG&A costs and lower freight costs. These favorable impacts were partially offset by higher material costs and higher R&D costs. For 2022, NICS segment operating loss was favorably impacted by reductions of \$12.3 million in amortization expense which is not reflected in adjusted EBITDA. See “Reconciliation of Segment Adjusted EBITDA” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations, below.

Access Network Solutions Segment

Net sales decreased in 2022 compared to the prior year primarily due to lower volumes related to the negative impact of supply constraints and also due to projects in the first half of 2021 that did not recur in 2022. These unfavorable impacts to net sales were partially offset by pricing increases on ANS segment products. From a regional perspective in 2022, net sales decreased in the CALA region by \$82.5 million, the APAC region by \$52.2 million and the EMEA region by \$22.5 million but increased in the U.S. by \$77.9 million and Canada by \$2.2 million compared to the prior year. Foreign exchange rate changes impacted ANS segment net sales unfavorably by approximately 1% during 2022.

In 2022, ANS segment operating loss increased and adjusted EBITDA decreased compared to the prior year period. Both ANS segment operating loss and adjusted EBITDA were unfavorably impacted by product mix and decreased sales volumes, but these negative impacts were partially offset by favorable pricing impacts and lower R&D and SG&A costs. For 2022, ANS segment operating loss was unfavorably impacted by a goodwill impairment charge of \$1,119.6 million, an increase of \$4.6 million of transaction, transformation and integration costs mostly related to the termination of a supply agreement as part of CommScope NEXT and an increase of \$3.0 million in restructuring expense but was favorably impacted by a reduction of \$2.9 million in intellectual property litigation settlement charges. Goodwill impairment charges, transaction, transformation and integration costs, restructuring expense and intellectual property litigation settlement charges are not reflected in adjusted EBITDA. See the discussion above under "Critical Accounting Policies" for more information regarding the annual goodwill impairment test performed during 2022. Also see “Reconciliation of Segment Adjusted EBITDA” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations, below.

Home Networks Segment

Net sales for the Home segment decreased in 2022 compared to the prior year. While net sales of broadband and video products benefitted from favorable pricing impacts, these increases were more than offset by lower net sales volumes across all our Home segment products primarily due to continued supply shortages. Although we are working to secure components from key suppliers, we still expect to experience some supply chain challenges into 2023 for our Home segment products. From a regional perspective in 2022, net sales decreased in the U.S. by \$195.3 million, the APAC region by \$35.2 million and the CALA region by \$21.2 million but increased in Canada by \$90.9 million and the EMEA region by \$14.9 million compared to the prior year. Foreign exchange rate changes impacted Home segment net sales unfavorably by approximately 2% during 2022.

Home segment operating loss decreased and adjusted EBITDA increased in 2022 compared to the prior year. Both benefitted from favorable pricing impacts, lower bad debt expense and lower warranty costs, but these were partially offset by increased material costs and lower sales volumes. In 2021, Home segment bad debt expense was driven by a \$30.3 million charge related to a value-added reseller customer. Home segment operating loss was favorably impacted in 2022 by reductions of \$41.6 million in transaction, transformation and integration costs and \$7.3 million in restructuring expense. Home segment operating loss in 2021 also included a goodwill impairment charge of \$13.7 million. Transaction, transformation and integration costs, restructuring expense and goodwill impairment charges are not reflected in adjusted EBITDA. See “Reconciliation of Segment Adjusted EBITDA” within this Management’s Discussion and Analysis of Financial Condition and Results of Operations, below.

Liquidity and Capital Resources

The following table summarizes certain key measures of our liquidity and capital resources:

	December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Cash and cash equivalents	\$ 398.1	\$ 360.3	\$ 37.8	10.5 %
Working capital ⁽¹⁾ , excluding cash and cash equivalents and current portion of long-term debt	1,252.6	1,068.9	183.7	17.2
Availability under Revolving Credit Facility	908.8	684.1	224.7	32.8
Long-term debt, including current portion	9,501.6	9,510.5	(8.9)	(0.1)
Total capitalization ⁽²⁾	9,055.9	10,410.0	(1,354.1)	(13.0)
Long-term debt as a percentage of total capitalization	104.9%	91.4%		

- (1) Working capital consists of current assets of \$3,726.2 million less current liabilities of \$2,107.5 million as of December 31, 2022 and current assets of \$3,579.7 million less current liabilities of \$2,182.5 million as of December 31, 2021.
- (2) Total capitalization includes long-term debt, including the current portion, Series A convertible preferred stock (Convertible Preferred Stock) and stockholders' equity (deficit).

Our principal sources of liquidity on a short-term basis are cash and cash equivalents, cash flows provided by operations and availability under our credit facilities. On a long-term basis, our potential sources of liquidity also include raising capital through the issuance of additional equity and/or debt.

On October 19, 2022, we completed the refinancing of our senior secured asset-based revolving credit facility (Revolving Credit Facility), the main result of which was to extend the maturity to September 30, 2027. We continue to have borrowing capacity up to \$1.0 billion, subject to certain limitations, but we have added additional assets under the borrowing base which increases our availability. The interest rate in the amended Revolving Credit Agreement is an adjusted Secured Overnight Financing Rate as administered by the Federal Reserve Bank of New York (SOFR) with a spread of 1.25% to 1.50%. In the first half of 2023, we expect to amend our 2026 Term Loan to replace LIBOR with SOFR as the reference interest rate in anticipation of the cessation of LIBOR in 2023. We do not anticipate a material impact on our results of operations or cash flows with the transition to SOFR in our variable rate debt, but the impact is still uncertain.

The primary uses of liquidity include debt service requirements, voluntary debt repayments, redemptions or purchases on the open market, working capital requirements, capital expenditures, business separation transaction costs, transformation costs, restructuring costs, dividends related to the Convertible Preferred Stock if we elect to pay such dividends in cash, litigation settlements, income tax payments and other contractual obligations. We believe that our existing cash, cash equivalents and cash flows from operations, combined with availability under our Revolving Credit Facility, will be sufficient to meet our presently anticipated future cash needs. We may experience volatility in cash flows between periods due to, among other reasons, variability in the timing of vendor payments and customer receipts. We may, from time to time, borrow additional amounts under our Revolving Credit Facility or issue debt or equity securities, if market conditions are favorable, to meet future cash needs or to reduce our borrowing costs.

Our interest payments on long-term debt are expected to total \$2,466.4 million over the duration of the debt, with \$635.8 million due in 2023 (assuming interest rates in effect as of December 31, 2022 on our variable rate debt). In 2022, the interest payments on our 2026 Term Loan and our Revolving Credit Facility increased as a result of the Federal Reserve's increase in interest rates in 2022, and we expect that they will continue to raise interest rates into 2023. For additional information regarding our long-term debt obligations, see Note 7 in the Notes to Consolidated Financial Statements and our discussion of our interest rate risk in Item 7A. Quantitative and Qualitative Disclosures About Market Risk included elsewhere in this Annual Report on Form 10-K. For information on our obligations related to our Convertible Preferred Stock, see Note 13 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K.

We periodically enter into sell / buy transactions with our contract manufacturers, where we sell certain component inventory to them for use in our finished goods. We are obligated to subsequently repurchase this inventory either as a finished good or the original component inventory if not used after a specific period of time. We record an accounts receivable and a contract manufacturer inventory repurchase liability related to these transactions. We do not record a sale upon shipment of the inventory to the contract manufacturer and the original value of the inventory remains in our inventory balance. Our current accrued liability related to these transactions is \$79.1 million as of December 31, 2022, and we expect to repurchase a portion of this inventory either as a finished good or the original component inventory in 2023.

During the normal course of business, to manage manufacturing lead times and help ensure adequate component supply, we enter into agreements with our contract manufacturers and suppliers that allow them to produce and procure inventory based upon our forecasted requirements. We estimate our obligations under these agreements to be \$340.0 million as of December 31, 2022. While we believe we have adequate liabilities recorded related to our excess inventory under these purchase commitments, unexpected changes to projected demand may result in us being committed to purchase additional excess inventory to satisfy these commitments and the related charges could be material.

We have \$124.0 million in unrecognized tax benefits; however, the timing of the related tax payments is highly uncertain. We anticipate a reduction of up to \$7.0 million of unrecognized tax benefits during the next twelve months. See Note 12 in the Notes to Consolidated Financial Statements included elsewhere in the Annual Report on Form 10-K for further discussion.

We are contingently liable under open standby letters of credit issued by our banks to support performance obligations of a third-party contractor that totaled \$44.0 million as of December 31, 2022. These amounts represent our estimate of the maximum amounts we would expect to incur upon the contractual non-performance of the contractor, but we also have cross-indemnities in place that may enable us to recover some or all of our losses in the event of the contractor's non-performance. We believe the likelihood of having to perform under these guarantees is remote. There were no material amounts recorded in our consolidated financial statements related to third-party guarantee agreements as of December 31, 2022 or 2021.

Although there are no financial maintenance covenants under the terms of our senior notes, there is a limitation, among other limitations, on certain future borrowings based on an adjusted leverage ratio or a fixed charge coverage ratio. These ratios are based on financial measures similar to non-GAAP adjusted EBITDA as presented in the "Reconciliation of Non-GAAP Measures" section below, but also give pro forma effect to certain events, including acquisitions, synergies and savings from cost reduction initiatives such as facility closures and headcount reductions. For the year ended December 31, 2022, our non-GAAP pro forma adjusted EBITDA, as measured pursuant to the indentures governing our notes, was \$1,327.3 million, which included annualized savings expected from cost reduction initiatives of \$50.6 million so that the impact of cost reduction initiatives is fully reflected in the twelve-month period used in the calculation of the ratios. In addition to limitations under these indentures, our senior secured credit facilities contain customary negative covenants based on similar financial measures. We believe we are in compliance with the covenants under our indentures and senior secured credit facilities at December 31, 2022.

Cash and cash equivalents increased during 2022 primarily driven by cash generated by operating activities of \$190.0 million and proceeds from other investing activities of \$19.1 million, partially offset by capital expenditures of \$101.3 million, our required amortization payments on our 2026 Term Loan totaling \$32.0 million, cash dividends paid for the Convertible Preferred Stock of \$14.9 million and tax withholding payments for vested equity-based compensation awards of \$14.8 million. As of December 31, 2022, approximately 49% of our cash and cash equivalents were held outside the U.S.

Working capital, excluding cash and cash equivalents and the current portion of long-term debt, increased during 2022 primarily due to higher inventory balances as a result of rising material costs and increases in stock as we build inventory waiting for certain materials or components to complete our products for sale and lower accounts payable due to the timing of payments. During 2022, we sold accounts receivable under customer-sponsored supplier financing agreements. This had an impact of approximately \$78 million on working capital, excluding cash and cash equivalents and the current portion of long-term debt, as of December 31, 2022. Under these agreements, we are able to sell accounts receivable to a bank, and we retain no interest in and have no servicing responsibilities for the accounts receivable sold. The net reduction in total capitalization during 2022 reflected the net loss for the year.

Cash Flow Overview

	Year Ended December 31,		\$	%
	2022	2021	Change	Change
	(dollars in millions)			
Net cash generated by operating activities	\$ 190.0	\$ 122.3	\$ 67.7	55.4%
Net cash used in investing activities	(82.1)	(136.8)	54.7	(40.0)
Net cash used in financing activities	(65.0)	(139.5)	74.5	(53.4)

Operating Activities

	Year Ended December 31,	
	2022	2021
	(in millions)	
Net loss	\$ (1,286.9)	\$ (462.6)
Adjustments to reconcile net loss to net cash generated by operating activities:		
Depreciation and amortization	696.1	786.3
Equity-based compensation	61.1	79.6
Deferred income taxes	(118.4)	(147.5)
Asset impairments	1,119.6	13.7
Changes in assets and liabilities:		
Accounts receivable	(16.0)	(59.6)
Inventories	(178.8)	(359.8)
Prepaid expenses and other current assets	30.9	3.2
Accounts payable and other accrued liabilities	(43.2)	256.0
Other noncurrent assets	8.2	(45.5)
Other noncurrent liabilities	(88.8)	8.4
Other	6.2	50.1
Net cash generated by operating activities	<u>\$ 190.0</u>	<u>\$ 122.3</u>

During 2022, cash generated by operating activities increased compared to the prior year primarily as a result of better operating performance and lower payments of litigation settlements of \$35.1 million, partially offset by higher interest paid of \$37.3 million and higher taxes paid of \$51.3 million.

Investing Activities

	Year Ended December 31,	
	2022	2021
	(in millions)	
Additions to property, plant and equipment	\$ (101.3)	\$ (131.4)
Proceeds from sale of property, plant and equipment	0.1	13.1
Payments upon settlement of net investment hedge	—	(18.0)
Other	19.1	(0.5)
Net cash used in investing activities	<u>\$ (82.1)</u>	<u>\$ (136.8)</u>

During 2022, the decrease in cash used in investing activities compared to the prior year was primarily driven by lower capital expenditures in the current year and a payment of \$18.0 million to settle a net investment hedge in the prior year that did not recur. The increased capital expenditures in 2021 related to the capacity expansion in our CCS segment. Our investments in property, plant and equipment generally relate to supporting improvements and expanding production capacity in manufacturing operations and investing in information technology. Cash used in investing activities was also favorably impacted in the current year by proceeds of \$8.2 million on the sale of certain nonfinancial assets, \$6.9 million related to the sale of an equity method investment and a return of \$4.5 million on equity method investments.

Financing Activities

	Year Ended December 31,	
	2022	2021
	(in millions)	
Long-term debt repaid	\$ (365.0)	\$ (1,282.0)
Long-term debt proceeds	333.0	1,250.0
Debt issuance costs	(7.2)	(12.0)
Debt extinguishment costs	—	(34.4)
Dividends paid on Series A convertible preferred stock	(14.9)	(43.0)
Proceeds from the issuance of common shares under equity-based compensation plans	0.1	5.6
Tax withholding payments for vested equity-based compensation awards	(14.8)	(26.4)
Other	3.8	2.7
Net cash used in financing activities	<u>\$ (65.0)</u>	<u>\$ (139.5)</u>

In 2022, we borrowed \$333.0 million and repaid \$333.0 million under the Revolving Credit Facility. We also paid four quarterly scheduled amortization payments totaling \$32.0 million on our 2026 Term Loan during 2022.

As of December 31, 2022, we had no outstanding borrowings under the Revolving Credit Facility and the remaining availability was \$908.8 million, reflecting a borrowing base subject to maximum capacity of \$1,000.0 million reduced by \$91.2 million of letters of credit issued under the Revolving Credit Facility. In connection with the refinancing of our Revolving Credit Facility in October 2022, we paid \$7.2 million of debt issuance costs. We may continue to look for favorable opportunities to refinance portions of our existing debt to lower borrowing costs, extend the term or adjust the total amount of fixed-rate or floating-rate debt.

In 2021, we issued \$1,250.0 million of 4.75% senior secured notes due 2029 (the 2029 Secured Notes) and used the net proceeds from the offering, together with cash on hand, to redeem and retire \$1,250.0 million outstanding under the 2024 Secured Notes. In connection with the issuance of the 2029 Secured Notes, we paid \$9.6 million of debt issuance costs. We paid a redemption premium of \$34.4 million to retire the 2024 Secured Notes. We also paid four quarterly scheduled amortization payments totaling \$32.0 million on our 2026 Term Loan.

Also impacting cash used in financing activities for 2022 was a decrease of \$28.1 million in cash dividends paid for the Convertible Preferred Stock. In 2022, we paid cash dividends of \$14.9 million and paid \$44.1 million of dividends in additional shares of the Convertible Preferred Stock. In 2021, we paid cash dividends of \$43.0 million and paid \$14.3 million of dividends in additional shares of the Convertible Preferred Stock. During 2022, employees surrendered shares of our common stock to satisfy their tax withholding requirements on vested restricted stock units and performance share units which reduced cash flows by \$14.8 million compared to \$26.4 million in the prior year. During 2022, we received proceeds of \$0.1 million related to the exercise of stock options compared to \$5.6 million in the prior year.

Reconciliation of Non-GAAP Measures

We believe that presenting certain non-GAAP financial measures enhances an investor's understanding of our financial performance. We further believe that these financial measures are useful in assessing our operating performance from period to period by excluding certain items that we believe are not representative of our core business. We also use certain of these financial measures for business planning purposes and in measuring our performance relative to that of our competitors.

We believe these financial measures are commonly used by investors to evaluate our performance and that of our competitors. However, our use of the term non-GAAP adjusted EBITDA may vary from that of others in our industry. This financial measure should not be considered as an alternative to operating income (loss), net income (loss) or any other performance measures derived in accordance with U.S. GAAP as measures of operating performance, operating cash flows or liquidity.

Although there are no financial maintenance covenants under the terms of our senior notes, there is a limitation, among other limitations, on certain future borrowings based on an adjusted leverage ratio or a fixed charge coverage ratio. These ratios are based on financial measures similar to non-GAAP adjusted EBITDA as presented in this section, but also give pro forma effect to certain events, including acquisitions and savings from cost reduction initiatives such as facility closures and headcount reductions.

Consolidated

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Net loss	\$ (1,286.9)	\$ (462.6)	\$ (573.4)
Income tax benefit	(13.1)	(71.9)	(81.1)
Interest income	(2.8)	(1.9)	(4.4)
Interest expense	588.9	561.2	577.8
Other expense, net	0.1	23.8	29.3
Operating income (loss)	\$ (713.8)	\$ 48.6	\$ (51.8)
Adjustments:			
Amortization of purchased intangible assets	543.0	613.0	630.5
Restructuring costs, net	62.9	91.9	88.4
Equity-based compensation	61.1	79.6	115.0
Asset impairments	1,119.6	13.7	206.7
Transaction, transformation and integration costs ⁽¹⁾	38.2	90.3	24.9
Acquisition accounting adjustments ⁽²⁾	7.3	11.5	20.6
Patent claims and litigation settlements	28.5	31.7	16.3
Executive severance	—	—	6.3
Reserve of Russian accounts receivable	2.7	—	—
Depreciation	127.2	136.7	158.3
Non-GAAP adjusted EBITDA	<u>\$ 1,276.7</u>	<u>\$ 1,117.0</u>	<u>\$ 1,215.2</u>

- (1) In 2022, primarily reflects transformation costs related to CommScope NEXT and integration costs related to the ARRIS acquisition. In 2021, primarily reflects transaction separation costs related to the planned separation of the Home segment from CommScope, transformation costs related to CommScope NEXT and integration costs related to the ARRIS acquisition. In 2020, primarily reflects integration costs related to the ARRIS acquisition.
- (2) In 2022, 2021 and 2020, reflects ARRIS acquisition accounting adjustments related to reducing deferred revenue to its estimated fair value.

Reconciliation of Segment Adjusted EBITDA

Segment adjusted EBITDA is provided as a performance measure in Note 16 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K. Below we reconcile segment adjusted EBITDA for each segment individually to operating income (loss) for that segment to supplement the reconciliation of the total segment adjusted EBITDA to consolidated operating income (loss) in that footnote.

Connectivity and Cable Solutions Segment

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Operating income	\$ 438.2	\$ 138.5	\$ 169.3
Adjustments:			
Amortization of purchased intangible assets	99.5	156.7	161.6
Restructuring costs, net	17.1	62.0	25.9
Equity-based compensation	14.9	19.5	28.6
Transaction, transformation and integration costs	10.6	18.5	7.9
Patent claims and litigation settlements	1.7	—	(1.3)
Executive severance	—	—	1.7
Reserve of Russian accounts receivable	2.7	—	—
Depreciation	58.8	53.6	53.9
Adjusted EBITDA	<u>\$ 643.6</u>	<u>\$ 448.9</u>	<u>\$ 447.5</u>

Outdoor Wireless Networks Segment

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Operating income	\$ 189.0	\$ 197.3	\$ 179.3
Adjustments:			
Amortization of purchased intangible assets	32.4	33.5	45.8
Restructuring costs, net	22.4	3.6	15.7
Equity-based compensation	7.1	8.4	13.8
Transaction, transformation and integration costs	4.5	8.5	4.2
Executive severance	—	—	1.2
Depreciation	14.3	15.4	17.2
Adjusted EBITDA	<u>\$ 269.7</u>	<u>\$ 266.8</u>	<u>\$ 277.3</u>

Networking, Intelligent Cellular and Security Solutions Segment

	Year Ended December 31,		
	2022	2021	2020
	(in millions)		
Operating loss	\$ (51.2)	\$ (143.5)	\$ (136.7)
Adjustments:			
Amortization of purchased intangible assets	59.7	72.0	72.2
Restructuring costs, net	9.9	8.5	8.0
Equity-based compensation	13.5	17.4	22.6
Transaction, transformation and integration costs	3.0	6.2	2.5
Acquisition accounting adjustments	2.0	4.6	7.3
Patent claims and litigation settlements	—	0.3	15.0
Executive severance	—	—	0.8
Depreciation	15.0	19.2	21.0
Adjusted EBITDA	<u>\$ 51.9</u>	<u>\$ (15.3)</u>	<u>\$ 12.8</u>

Access Network Solutions Segment

	Year Ended December 31,		
	2022	2021 (in millions)	2020
Operating income (loss)	\$ (1,149.6)	\$ 71.2	\$ 11.6
Adjustments:			
Amortization of purchased intangible assets	247.2	247.0	247.0
Restructuring costs, net	12.2	9.2	8.8
Equity-based compensation	15.8	20.9	27.8
Asset impairments	1,119.6	—	—
Transaction, transformation and integration costs	14.0	9.4	4.1
Acquisition accounting adjustments	3.3	4.8	11.4
Patent claims and litigation settlements	—	2.9	3.0
Executive severance	—	—	1.5
Depreciation	22.5	25.8	31.1
Adjusted EBITDA	<u>\$ 285.2</u>	<u>\$ 391.1</u>	<u>\$ 346.3</u>

Home Networks Segment

	Year Ended December 31,		
	2022	2021 (in millions)	2020
Operating loss	\$ (140.2)	\$ (214.9)	\$ (275.4)
Adjustments:			
Amortization of purchased intangible assets	104.1	103.9	103.9
Restructuring costs, net	1.3	8.6	30.0
Equity-based compensation	9.9	13.4	22.1
Asset impairments	—	13.7	206.7
Transaction, transformation and integration costs	6.2	47.8	6.2
Acquisition accounting adjustments	1.7	1.9	1.9
Patent claims and litigation settlements	26.9	28.5	(0.3)
Executive severance	—	—	1.2
Depreciation	16.6	22.7	35.1
Adjusted EBITDA	<u>\$ 26.3</u>	<u>\$ 25.5</u>	<u>\$ 131.3</u>

Note: Components may not sum to total due to rounding

Recent Accounting Pronouncements

See Note 2 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for a discussion of recent accounting pronouncements.

Effects of Inflation and Changing Prices

We continually attempt to minimize the effect of inflation on earnings by controlling our operating costs and adjusting our selling prices. The principal raw materials and components purchased by us (aluminum, copper, steel, bimetals, optical fiber, plastics and other polymers, capacitors, memory devices and silicon chips) are subject to changes in market price as they are influenced by commodity markets and other factors. Prices for these items have, at times, been volatile. As a result, we have adjusted our prices for certain products and may have to adjust prices again in the future. To the extent that we are unable to pass on cost increases to customers quickly and without a significant decrease in sales volume or must implement price reductions in response to a rapid decline in raw material costs, these cost changes could have a material adverse impact on the results of our operations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks related to changes in interest rates, foreign currency exchange rates and commodity prices. We may utilize derivative financial instruments, among other methods, to hedge some of these exposures. We do not use derivative financial instruments for speculative or trading purposes.

Interest Rate Risk

The table below summarizes the expected interest and principal payments associated with our variable rate debt outstanding at December 31, 2022 (mainly the \$3.1 billion variable rate senior secured term loan due 2026 (2026 Term Loan) and our asset-based revolving credit facility). The principal payments presented below are based on scheduled maturities and assume no borrowings under our asset-based revolving credit facility. The interest payments presented below assume the interest rates in effect as of December 31, 2022 (see Note 7 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K). The impact of a 1% increase in the interest rate index on projected future interest payments on the variable rate debt is also included in the table below.

	2023	2024	2025	2026	2027	Thereafter
Principal and interest payments on variable rate debt	\$ 270.5	\$ 265.8	\$ 262.2	\$ 3,028.7	\$ —	\$ —
Average cash interest rate	7.74%	7.67%	7.63%	7.63%	—	—
Impact of 1% increase in interest rate index	\$ 30.8	\$ 30.5	\$ 30.2	\$ 3.7	\$ —	\$ —

We also have \$6.5 billion aggregate principal amount of fixed rate senior notes. The table below summarizes our expected interest and principal payments related to our fixed rate debt at December 31, 2022.

	2023	2024	2025	2026	2027	Thereafter
Principal and interest payments on fixed rate debt	\$ 397.3	\$ 397.3	\$ 1,658.2	\$ 1,774.2	\$ 1,919.3	\$ 2,088.9
Average cash interest rate	6.11%	6.11%	6.12%	6.16%	5.99%	5.01%

As part of our hedging strategy to mitigate a portion of the exposure to changes in cash flows resulting from the variable interest rate on our 2026 Term Loan, in March 2019, we entered into and designated pay-fixed, receive-variable interest rate swap derivatives as cash flow hedges of interest rate risk. The total notional amount of the interest rate swap derivatives as of December 31, 2022 was \$300 million with outstanding maturities of up to fifteen months. As of December 31, 2022, the combined fair value of the interest rate swaps was an \$8.6 million gain. The table above excludes the impact of these interest rate swap derivatives. See Note 8 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for further discussion of these contracts.

Foreign Currency Risk

Approximately 38% and 42% of net sales for 2022 and 2021, respectively, were to customers located outside the U.S. Significant changes in foreign currency exchange rates could adversely affect our international sales levels and the related collection of amounts due. In addition, a significant decline in the value of currencies used in certain regions of the world as compared to the U.S. dollar could adversely affect product sales in those regions because our products may become more expensive for those customers to pay for in their local currency. Conversely, significant increases in the value of foreign currencies as compared to the U.S. dollar could adversely affect profitability as certain product costs increase relative to a U.S. dollar-denominated sales price. The foreign currencies to which we have the greatest exposure include the Chinese yuan, euro, British pound sterling, Mexican peso, Japanese yen, Canadian dollar, Australian dollar, Brazilian real, South African rand, Indian rupee and Czech koruna. Local manufacturing provides a partial natural hedge and we continue to evaluate additional alternatives to help us reasonably manage the market risk related to foreign currency exposures.

We use derivative instruments such as forward exchange contracts to manage the risk of fluctuations in the value of certain foreign currencies. As of December 31, 2022, we had foreign exchange contracts with a net unrealized gain of \$3.4 million, with maturities of up to eight months and aggregate notional value of \$522.2 million (based on exchange rates as of December 31, 2022). These contracts are not designated as hedges for accounting purposes and are marked to market each period through earnings and, as such, there were no unrecognized gains or losses as of December 31, 2022 or 2021. Our derivative instruments are not leveraged and are not held for trading or speculation. See Note 8 in the Notes to Consolidated Financial Statements included elsewhere in this Annual Report on Form 10-K for further discussion of these contracts. We continuously evaluate the amount and type of derivative instruments utilized to manage the market risk related to foreign currency exposures.

Commodity Price Risk

Materials account for a large portion of our cost of sales. These materials, such as aluminum, copper, steel, bimetals, optical fiber, plastics and other polymers, capacitors, memory devices and silicon chips, are subject to changes in market price as they are influenced by commodity markets and supply and demand levels, among other factors. Management attempts to mitigate these risks through effective requirements planning and by working closely with key suppliers to obtain the best possible pricing and delivery terms. We may also enter into agreements with certain suppliers to guarantee our access to certain key components. As of December 31, 2022, we had forward purchase commitments outstanding under take-or-pay contracts for certain metals of approximately \$4.9 million that we expect to consume in the normal course of operations through the second quarter of 2023. We continuously evaluate the amount and type of derivative instruments utilized to manage commodity price risk.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of CommScope Holding Company, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of CommScope Holding Company, Inc. (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2022, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 22, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

<i>Description of the Matter</i>	<i>Valuation of Goodwill for the ANS Reporting Unit</i>
	As more fully described in Note 3 to the consolidated financial statements, at December 31, 2022, the Company's goodwill was \$4,072.4 million, of which \$734.0 million relates to the Access Network Solutions (ANS) reporting unit. The Company's goodwill is initially assigned to its reporting units as of the acquisition date. Goodwill is tested for impairment at least annually at the reporting unit level. The Company performed its annual goodwill impairment test in the fourth quarter of 2022 using both a discounted cash flow model and a guideline public company approach. As a result of the annual goodwill impairment test, the Company recorded a \$1,119.6 million impairment charge in the ANS reporting unit, which reflects a partial impairment of the goodwill of that reporting unit, as its estimated fair value was less than the carrying value.

Auditing management's goodwill impairment test was complex and highly judgmental due to the significant estimation required in determining the fair value of the ANS reporting unit. In particular, the fair value estimate was sensitive to changes in significant assumptions, such as the estimated discount rates, projected revenue growth rates and projected operating income margins, which are affected by expectations about future market or economic conditions.

*How We Addressed
the Matter in Our
Audit*

We evaluated the Company's assessment of the impairment of goodwill for the ANS reporting unit. We obtained an understanding, evaluated the design and tested the operating effectiveness of controls that address the risks of material misstatement relating to the annual goodwill impairment test for this reporting unit, including controls over management's development and review of the significant assumptions discussed above.

To test the estimated fair value of the ANS reporting unit, we performed audit procedures with the assistance of our valuation specialists that included, among others, assessing methodologies and testing the significant assumptions discussed above and the underlying data used by the Company in its analysis. We evaluated the Company's estimated discount rate methodology and developed independent ranges of reasonable discount rates. We compared the significant assumptions of projected revenue growth rates and projected operating income margins used by management to current industry and economic trends, changes to the Company's business model, customer base or product mix and other relevant factors. We also evaluated the reasonableness of the guideline public companies used to develop the fair value estimate of the ANS reporting unit. We assessed the historical accuracy of management's estimates and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of this reporting unit that would result from changes in the assumptions. We also evaluated the related goodwill disclosures included in Note 3 to the consolidated financial statements.

*Description of the
Matter*

Incomes Taxes - Valuation Allowance

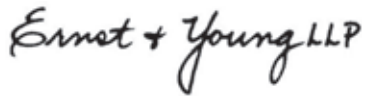
As more fully described in Note 12 to the consolidated financial statements, at December 31, 2022, the Company recognized deferred tax assets related to deductible temporary differences and carryforwards of \$924.9 million, net of valuation allowances of \$643.1 million. Deferred tax assets are reduced by a valuation allowance if, based on the weight of all available evidence, in management's judgment, it is more likely than not that some portion, or all, of the deferred tax assets will not be realized.

Auditing management's assessment of the realizability of deferred tax assets involved especially challenging and subjective auditor judgment in determining whether the reversal of existing taxable temporary differences and the generation of sufficient future taxable income support the realization of the Company's existing deferred tax assets before expiration.

*How We Addressed
the Matter in Our
Audit*

We evaluated the Company's assessment of the realizability of deferred tax assets, with the assistance of our income tax professionals. We obtained an understanding, evaluated the design and tested the operating effectiveness of controls that address the risks of material misstatement relating to the realizability of deferred tax assets, including controls over management's development and review of the estimated future taxable income discussed above.

To test the realizability of deferred tax assets, we performed audit procedures that included, among others, evaluating whether the sources of management's estimated future taxable income were of the appropriate character and would be sufficient to utilize the deferred tax assets under the relevant tax laws. We tested the forecasted timing of the reversal of existing taxable temporary differences by evaluating the projected sources of future taxable income and considering the nature of the temporary differences. We also evaluated the significant assumptions used by the Company to develop estimates of future taxable income and tested the completeness and accuracy of the underlying data. For example, we compared management's estimates of future income with current industry and economic trends, the actual results of prior periods and other forecasted financial information prepared by the Company. We also evaluated the related income tax disclosures included in Note 12 to the consolidated financial statements.

The logo for Ernst & Young LLP, featuring the company name in a stylized, handwritten-style script.

We have served as the Company's auditor since 2008.
Charlotte, North Carolina
February 22, 2023

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of CommScope Holding Company, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited CommScope Holding Company, Inc.'s internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, CommScope Holding Company, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive loss, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2022, and the related notes and our report dated February 22, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

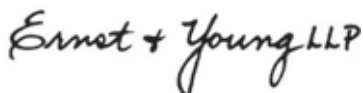
We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.



Charlotte, North Carolina
February 22, 2023

CommScope Holding Company, Inc.
Consolidated Statements of Operations
(In millions, except per share amounts)

	Year Ended December 31,		
	2022	2021	2020
Net sales	\$ 9,228.1	\$ 8,586.7	\$ 8,435.9
Cost of sales	6,424.0	5,902.4	5,688.1
Gross profit	2,804.1	2,684.3	2,747.8
Operating expenses:			
Selling, general and administrative	1,135.0	1,233.9	1,170.7
Research and development	657.4	683.2	703.3
Amortization of purchased intangible assets	543.0	613.0	630.5
Restructuring costs, net	62.9	91.9	88.4
Asset impairments	1,119.6	13.7	206.7
Total operating expenses	3,517.9	2,635.7	2,799.6
Operating income (loss)	(713.8)	48.6	(51.8)
Other expense, net	(0.1)	(23.8)	(29.3)
Interest expense	(588.9)	(561.2)	(577.8)
Interest income	2.8	1.9	4.4
Loss before income taxes	(1,300.0)	(534.5)	(654.5)
Income tax benefit	13.1	71.9	81.1
Net loss	(1,286.9)	(462.6)	(573.4)
Series A convertible preferred stock dividends	(59.0)	(57.3)	(56.1)
Net loss attributable to common stockholders	<u>\$ (1,345.9)</u>	<u>\$ (519.9)</u>	<u>\$ (629.5)</u>
Loss per share:			
Basic	\$ (6.49)	\$ (2.55)	\$ (3.20)
Diluted	\$ (6.49)	\$ (2.55)	\$ (3.20)
Weighted average shares outstanding:			
Basic	207.4	203.6	196.8
Diluted	207.4	203.6	196.8

See notes to consolidated financial statements.

CommScope Holding Company, Inc.
Consolidated Statements of Comprehensive Loss
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Comprehensive loss:			
Net loss	\$ (1,286.9)	\$ (462.6)	\$ (573.4)
Other comprehensive income (loss), net of tax:			
Foreign currency translation gain (loss)	(104.5)	(85.3)	82.2
Defined benefit plans:			
Change in unrecognized actuarial gain (loss)	(1.5)	22.8	(10.8)
Change in unrecognized net prior service credit	0.1	0.2	(0.2)
Gain (loss) on hedging instruments	16.0	11.8	(30.1)
Total other comprehensive income (loss), net of tax	(89.9)	(50.5)	41.1
Total comprehensive loss	<u>\$ (1,376.8)</u>	<u>\$ (513.1)</u>	<u>\$ (532.3)</u>

See notes to consolidated financial statements.

CommScope Holding Company, Inc.
Consolidated Balance Sheets
(In millions, except share amounts)

	December 31,	
	2022	2021
Assets		
Cash and cash equivalents	\$ 398.1	\$ 360.3
Accounts receivable, net of allowance for doubtful accounts of \$82.8 and \$63.7, respectively	1,523.6	1,532.6
Inventories, net	1,588.1	1,435.8
Prepaid expenses and other current assets	216.4	251.0
Total current assets	3,726.2	3,579.7
Property, plant and equipment, net of accumulated depreciation of \$873.5 and \$787.4, respectively	609.6	656.3
Goodwill	4,072.4	5,231.7
Other intangible assets, net	2,473.5	3,027.3
Other noncurrent assets	803.7	764.5
Total assets	<u>\$ 11,685.4</u>	<u>\$ 13,259.5</u>
Liabilities and Stockholders' Deficit		
Accounts payable	\$ 1,025.5	\$ 1,160.7
Accrued and other liabilities	1,050.0	989.8
Current portion of long-term debt	32.0	32.0
Total current liabilities	2,107.5	2,182.5
Long-term debt	9,469.6	9,478.5
Deferred income taxes	173.4	208.2
Other noncurrent liabilities	380.6	490.8
Total liabilities	12,131.1	12,360.0
Commitments and contingencies		
Series A convertible preferred stock, \$0.01 par value	1,100.3	1,056.1
Stockholders' deficit:		
Preferred stock, \$0.01 par value: Authorized shares: 200,000,000; Issued and outstanding shares: 1,100,310 and 1,056,144, respectively, Series A convertible preferred stock	—	—
Common stock, \$0.01 par value: Authorized shares: 1,300,000,000; Issued and outstanding shares: 208,371,426 and 204,567,294, respectively	2.2	2.2
Additional paid-in capital	2,542.9	2,540.7
Accumulated deficit	(3,502.2)	(2,215.3)
Accumulated other comprehensive loss	(296.3)	(206.4)
Treasury stock, at cost: 12,726,695 shares and 10,970,585 shares, respectively	(292.6)	(277.8)
Total stockholders' deficit	(1,546.0)	(156.6)
Total liabilities and stockholders' deficit	<u>\$ 11,685.4</u>	<u>\$ 13,259.5</u>

See notes to consolidated financial statements.

CommScope Holding Company, Inc.
Consolidated Statements of Cash Flows
(In millions)

	Year Ended December 31,		
	2022	2021	2020
Operating Activities:			
Net loss	\$ (1,286.9)	\$ (462.6)	\$ (573.4)
Adjustments to reconcile net loss to net cash generated by operating activities:			
Depreciation and amortization	696.1	786.3	823.3
Equity-based compensation	61.1	79.6	115.0
Deferred income taxes	(118.4)	(147.5)	(154.7)
Asset impairments	1,119.6	13.7	206.7
Changes in assets and liabilities:			
Accounts receivable	(16.0)	(59.6)	228.4
Inventories	(178.8)	(359.8)	(100.5)
Prepaid expenses and other current assets	30.9	3.2	(17.2)
Accounts payable and other accrued liabilities	(43.2)	256.0	(175.2)
Other noncurrent assets	8.2	(45.5)	28.8
Other noncurrent liabilities	(88.8)	8.4	(4.0)
Other	6.2	50.1	59.0
Net cash generated by operating activities	190.0	122.3	436.2
Investing Activities:			
Additions to property, plant and equipment	(101.3)	(131.4)	(121.2)
Proceeds from sale of property, plant and equipment	0.1	13.1	5.0
Cash paid for Cable Exchange acquisition	—	—	(3.5)
Payments upon settlement of net investment hedge	—	(18.0)	—
Other	19.1	(0.5)	(0.5)
Net cash used in investing activities	(82.1)	(136.8)	(120.2)
Financing Activities:			
Long-term debt repaid	(365.0)	(1,282.0)	(1,282.0)
Long-term debt proceeds	333.0	1,250.0	950.0
Debt issuance costs	(7.2)	(12.0)	(11.7)
Debt extinguishment costs	—	(34.4)	(17.9)
Dividends paid on Series A convertible preferred stock	(14.9)	(43.0)	(14.3)
Proceeds from the issuance of common shares under equity-based compensation plans	0.1	5.6	9.0
Tax withholding payments for vested equity-based compensation awards	(14.8)	(26.4)	(16.9)
Other	3.8	2.7	—
Net cash used in financing activities	(65.0)	(139.5)	(383.8)
Effect of exchange rate changes on cash and cash equivalents	(5.1)	(7.6)	(8.5)
Change in cash and cash equivalents	37.8	(161.6)	(76.3)
Cash and cash equivalents at beginning of period	360.3	521.9	598.2
Cash and cash equivalents at end of period	<u>\$ 398.1</u>	<u>\$ 360.3</u>	<u>\$ 521.9</u>

See notes to consolidated financial statements.

CommScope Holding Company, Inc.
Consolidated Statements of Stockholders' Equity (Deficit)
(In millions, except share amounts)

	Year Ended December 31,		
	2022	2021	2020
Number of common shares outstanding:			
Balance at beginning of period	204,567,294	200,095,232	194,563,530
Issuance of shares under equity-based compensation plans	5,560,242	6,219,566	7,343,401
Shares surrendered under equity-based compensation plans	(1,756,110)	(1,747,504)	(1,811,699)
Balance at end of period	<u>208,371,426</u>	<u>204,567,294</u>	<u>200,095,232</u>
Common stock:			
Balance at beginning of period	\$ 2.2	\$ 2.1	\$ 2.0
Issuance of shares under equity-based compensation plans	—	0.1	0.1
Balance at end of period	<u>\$ 2.2</u>	<u>\$ 2.2</u>	<u>\$ 2.1</u>
Additional paid-in capital:			
Balance at beginning of period	\$ 2,540.7	\$ 2,512.9	\$ 2,445.1
Issuance of shares under equity-based compensation plans	0.1	5.5	8.9
Equity-based compensation	61.1	79.6	115.0
Dividends on Series A convertible preferred stock	(59.0)	(57.3)	(56.1)
Balance at end of period	<u>\$ 2,542.9</u>	<u>\$ 2,540.7</u>	<u>\$ 2,512.9</u>
Accumulated deficit:			
Balance at beginning of period	\$ (2,215.3)	\$ (1,752.7)	\$ (1,179.3)
Net loss	(1,286.9)	(462.6)	(573.4)
Balance at end of period	<u>\$ (3,502.2)</u>	<u>\$ (2,215.3)</u>	<u>\$ (1,752.7)</u>
Accumulated other comprehensive loss:			
Balance at beginning of period	\$ (206.4)	\$ (155.9)	\$ (197.0)
Other comprehensive income (loss), net of tax	(89.9)	(50.5)	41.1
Balance at end of period	<u>\$ (296.3)</u>	<u>\$ (206.4)</u>	<u>\$ (155.9)</u>
Treasury stock, at cost:			
Balance at beginning of period	\$ (277.8)	\$ (251.4)	\$ (234.5)
Net shares surrendered under equity-based compensation plans	(14.8)	(26.4)	(16.9)
Balance at end of period	<u>\$ (292.6)</u>	<u>\$ (277.8)</u>	<u>\$ (251.4)</u>
Total stockholders' equity (deficit)	<u>\$ (1,546.0)</u>	<u>\$ (156.6)</u>	<u>\$ 355.0</u>

See notes to consolidated financial statements.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements
(In millions, unless otherwise noted)

1. BACKGROUND AND DESCRIPTION OF THE BUSINESS

CommScope Holding Company, Inc., along with its direct and indirect subsidiaries (CommScope or the Company), is a global provider of infrastructure solutions for communication, data center and entertainment networks. The Company's solutions for wired and wireless networks enable service providers including cable, telephone and digital broadcast satellite operators and media programmers to deliver media, voice, Internet Protocol (IP) data services and Wi-Fi to their subscribers and allow enterprises to experience constant wireless and wired connectivity across complex and varied networking environments. The Company's solutions are complemented by services including technical support, systems design and integration. CommScope is a leader in digital video and IP television (IPTV) distribution systems, broadband access infrastructure platforms and equipment that delivers data and voice networks to homes. CommScope's global leadership position is built upon innovative technology, broad solution offerings, high-quality and cost-effective customer solutions, and global manufacturing and distribution scale.

As of January 1, 2022, the Company reorganized its internal management and reporting structure to align its portfolio of products and solutions more closely with the markets it serves and provides better performance comparability with its competitive peer set. The reorganization changed the information regularly reviewed by the Company's chief operating decision maker for purposes of allocating resources and assessing performance. As a result, the Company is now reporting financial performance based on the following operating segments: Connectivity and Cable Solutions (CCS), Outdoor Wireless Networks (OWN), Networking, Intelligent Cellular and Security Solutions (NICS), Access Network Solutions (ANS) and Home Networks (Home). These five segments represent non-aggregated reportable operating segments. Prior to this change, the Company operated and reported four operating segments: Broadband Networks, Outdoor Wireless Networks, Venue and Campus Networks and Home Networks. All prior period amounts in these consolidated financial statements have been recast to reflect these operating segment changes.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Consolidation

The accompanying consolidated financial statements include CommScope Holding Company, Inc., along with its direct and indirect subsidiaries. All intercompany accounts and transactions are eliminated in consolidation.

Certain prior year amounts have been reclassified to conform to the current year presentation.

Use of Estimates in the Preparation of the Financial Statements

The preparation of the accompanying consolidated financial statements in conformity with accounting principles generally accepted in the United States (U.S.) requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. These estimates and their underlying assumptions form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other objective sources. The Company bases its estimates on historical experience and on assumptions that are believed to be reasonable under the circumstances and revises its estimates, as appropriate, when events or changes in circumstances indicate that revisions may be necessary. Significant accounting estimates reflected in the Company's financial statements include the allowance for doubtful accounts; reserves for sales returns, discounts, allowances, rebates and distributor price protection programs; inventory excess and obsolescence reserves; product warranty reserves and other contingent liabilities; tax valuation allowances; liabilities for unrecognized tax benefits; impairment reviews for investments, property, plant and equipment, goodwill and other intangible assets; and pension and other postretirement benefit costs and liabilities. Although these estimates are based on management's knowledge of and experience with past and current events and on management's assumptions about future events, it is at least reasonably possible that they may ultimately differ materially from actual results.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Cash and Cash Equivalents

Cash and cash equivalents represent deposits in banks and cash invested temporarily in various instruments that are highly liquid and have a maturity of three months or less at the time of purchase.

Accounts Receivable and Allowance for Doubtful Accounts

Trade accounts receivable and contract assets for unbilled receivables are stated at the amount owed by the customer, net of allowances for estimated doubtful accounts, discounts, returns and rebates. The Company measures the allowance for doubtful accounts using an expected credit loss model, which uses a lifetime expected loss allowance for all trade accounts receivable and contract assets. To measure the expected credit losses, trade accounts receivable and contract assets are grouped based on shared credit risk characteristics and the days past due based on the contractual terms of the receivable. Contract assets relate to unbilled work in progress and have substantially the same risk characteristics as trade accounts receivable for the same types of contracts. Therefore, the Company has concluded that the expected loss rates for trade accounts receivables are a reasonable approximation of the loss rates for the contract assets.

In calculating an allowance for doubtful accounts, the Company uses its historical experience, external indicators and forward-looking information to calculate expected credit losses using an aging method. The Company assesses impairment of trade accounts receivable on a collective basis as they possess shared credit risk characteristics which have been grouped based on the days past due.

The expected loss rates are based on the payment profiles of sales over the preceding thirty-six months and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle their trade accounts receivable. Accounts are written off against the allowance account when they are determined to be no longer collectible.

The Company sells certain of its accounts receivable under a customer-sponsored supplier financing agreement. Under this agreement, the Company is able to sell certain accounts receivable to a bank at a discount. The Company sold approximately \$339 million and \$45 million of trade accounts receivable under this program during the years ended December 31, 2022 and 2021, respectively, and the cost of factoring such receivables was not material. The Company derecognizes the accounts receivable on the Consolidated Balance Sheet once sold to the bank, as it retains no interest in and has no servicing responsibilities for them once they have been sold. The cash received from the bank is classified within the operating activities section in the Consolidated Statements of Cash Flows.

Inventories

Inventories are stated at the lower of cost or net realizable value. Inventory cost is determined on a first-in, first-out (FIFO) basis. Costs such as idle facility expense, excessive scrap and re-handling costs are expensed as incurred. The Company maintains reserves to reduce the value of inventory to the lower of cost or net realizable value, including reserves for excess and obsolete inventory.

Derivative Instruments and Hedging Activities

CommScope is exposed to risks resulting from adverse fluctuations in commodity prices, interest rates and foreign currency exchange rates. CommScope's risk management strategy includes the use of derivative financial instruments whenever management determines their use to be reasonable and practical. This strategy does not permit the use of derivative financial instruments for trading or speculation.

The Company periodically uses forward contracts to hedge a portion of its balance sheet foreign exchange re-measurement risk and to hedge certain planned foreign currency expenditures. Unrealized gains and losses resulting from these contracts are recognized in other expense, net and partially offset corresponding foreign exchange gains and losses on the balances and expenditures being hedged. These instruments are not designated as hedges for hedge accounting purposes and are marked to market each period through earnings.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The Company also has a hedging strategy to mitigate a portion of the exposure to changes in cash flows resulting from variable interest rates on the senior secured term loan due 2026 (2026 Term Loan), which are based on the one-month LIBOR benchmark rate. Hedge effectiveness is assessed each quarter, and for hedges that meet the effectiveness requirements, changes in fair value are recorded as a component of other comprehensive income (loss), net of tax, and are reclassified to interest expense as interest payments are made on the Company's variable rate debt.

The Company has elected and documented the use of the normal purchases and sales exception for normal purchase and sales contracts that meet the definition of a derivative financial instrument. See Note 8 for further disclosure related to the derivative instruments and hedging activities.

Leases

The Company determines if a contract is a lease or contains a lease at inception. Right of use assets related to operating type leases are reported in other noncurrent assets and the present value of remaining lease obligations is reported in accrued and other liabilities and other noncurrent liabilities on the Consolidated Balance Sheets. For the periods presented, CommScope does not have any financing type leases.

Operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. The majority of the Company's leases do not provide an implicit rate; therefore, the Company uses the incremental borrowing rates applicable to the economic environment and the duration of the lease, based on the information available at commencement date, in determining the present value of future payments. The right of use asset for operating leases is measured using the lease liability adjusted for the impact of lease payments made prior to commencement, lease incentives received, initial direct costs incurred and any asset impairments. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the option will be exercised. Lease expense for minimum lease payments is recognized on a straight-line basis over the lease term.

The Company remeasures and reallocates the consideration in a lease when there is a modification of the lease that is not accounted for as a separate contract. The lease liability is remeasured when there is a change in the lease term or a change in the assessment of whether the Company will exercise a lease option. The Company assesses right of use assets for impairment in accordance with its long-lived asset impairment policy.

The Company accounts for lease agreements with contractually required lease and non-lease components on a combined basis. Lease payments made for cancellable leases, variable amounts that are not based on an observable index and lease agreements with an original duration of less than twelve months are recorded directly to lease expense.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Upon application of acquisition accounting, property, plant and equipment are measured at estimated fair value as of the acquisition date to establish a new historical cost basis. Provisions for depreciation are based on estimated useful lives of the assets using the straight-line method. Useful lives generally range from 10 to 35 years for buildings and improvements and 3 to 10 years for machinery and equipment. Expenditures for repairs and maintenance are expensed as incurred. Assets that management intends to dispose of and that meet held for sale criteria are carried at the lower of the carrying value or fair value less costs to sell.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Goodwill and Other Intangible Assets

Goodwill is assigned to reporting units based on the difference between the purchase price as allocated to the reporting units and the estimated fair value of the identified net assets acquired as allocated to the reporting units. Purchased intangible assets with finite lives are carried at their estimated fair values at the time of acquisition less accumulated amortization and any impairment charges. Amortization is recognized on a straight-line basis over the estimated useful lives of the respective assets, which approximates the pattern that the economic benefits are realized by the Company.

Asset Impairments

Goodwill is tested for impairment annually or at other times if events have occurred or circumstances exist that indicate the carrying value of the reporting unit may exceed its fair value. Property, plant and equipment, intangible assets with finite lives and right of use assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable, based on the undiscounted cash flows expected to be derived from the use and ultimate disposition of the assets. Assets identified as impaired are adjusted to estimated fair value. Equity investments without readily determinable fair values are evaluated each reporting period for impairment based on a qualitative assessment and are then measured at fair value if an impairment is determined to exist. See Notes 3 and 9 for discussion of asset impairment charges.

Inventory Repurchase Obligations

The Company periodically enters into sell / buy transactions with its contract manufacturers, where it sells certain component inventory to its contract manufacturers for use in its finished goods. The Company is obligated to subsequently repurchase this inventory either as a finished food or the original component inventory if it is not consumed after a specific period of time. The Company records an accounts receivable and a corresponding contract manufacturer inventory repurchase obligation in accrued and other liabilities related to these transactions. The Company does not record a sale upon shipment of the inventory to the contract manufacturer and the original value of the inventory remains in its inventory balance.

Revenue Recognition

The Company recognizes revenue based on the satisfaction of distinct obligations to transfer goods and services to customers. The Company's revenue is generated primarily from product or equipment sales. The Company also generates revenue from custom design and installation services as well as bundled sales arrangements that include product, software and services. The Company applies a five-step approach as defined in ASC 606, *Revenue from Contracts with Customers*, in determining the amount and timing of revenue to be recognized: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognize revenue when a corresponding performance obligation is satisfied. Most contracts with customers are to provide distinct products or services within a single contract. However, if a contract is separated into more than one performance obligation, the total transaction price is allocated to each performance obligation in an amount based on the estimated relative standalone selling price.

Product sales to end-customers or distributors represent over 90% of the Company's revenue and are recognized at a point-in-time, which is generally at the point in time when products have been shipped, right to payment has been obtained and risk of loss has been transferred. Certain of the Company's product performance obligations include proprietary operating system software, which typically is not considered separately identifiable. Therefore, sales of these products and the related software are considered one performance obligation.

License contracts include revenue recognized for the licensing of intellectual property, including software, sold separately without products. Functional intellectual property licenses do not meet the criteria for revenue to be recognized over time and revenue is most commonly recognized upon delivery of the license/software to the customer.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The Company has service arrangements where net sales are recognized over time. These arrangements include a variety of post-contract support service offerings, which are generally recognized over time as the services are provided, including the following: maintenance and support services provided under annual service-level agreements; “Day 2” professional services to help customers maximize their utilization of deployed systems; and installation services related to the routine installation of equipment ordered by the customer at the customer’s site.

Revenue is measured based on the consideration the Company expects to be entitled based on customer contracts. Sales are adjusted for variable consideration amounts, including but not limited to estimated discounts, rebates, distributor price protection programs and returns. These estimates are determined based upon historical experience, contract terms, inventory levels in the distributor channel and other related factors. Adjustments to variable consideration estimates are recorded when circumstances indicate revisions may be necessary. Variable consideration is primarily related to the Company's sales to distributors, system integrators and value-added resellers.

A contract liability for deferred revenue is recorded when consideration is received or is unconditionally due from a customer prior to transferring control of goods or services to the customer under the terms of a contract. Deferred revenue balances typically result from advance payments received from customers for product contracts or from billings in excess of revenue recognized on services arrangements.

Unbilled receivables are recorded when revenues are recognized in advance of invoice issuance. These assets are presented on a combined basis with accounts receivable and are converted to accounts receivable once the Company’s right to the consideration becomes unconditional, which varies by contract but is generally based on achieving certain acceptance milestones. The Company recognizes the incremental costs of obtaining a contract as an expense when incurred if the amortization period of the asset would be one year or less.

Shipping and Handling Costs

The Company includes shipping and handling costs billed to customers in net sales and includes the costs incurred to transport product to customers as well as certain internal handling costs, which relate to activities to prepare goods for shipment, as cost of sales. Shipping and handling costs incurred after control is transferred to the customer are accounted for as fulfillment costs and are not accounted for as separate revenue obligations.

Tax Collected from Customers

Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, which are collected by the Company from customers, are excluded from net sales.

Advertising Costs

Advertising costs are expensed in the period in which they are incurred and are reflected in selling, general and administrative expense on the Consolidated Statements of Operations. Advertising expense was \$39.4 million, \$35.8 million and \$45.9 million for the years ended December 31, 2022, 2021 and 2020, respectively.

Product Warranties

The Company recognizes a liability for the estimated claims that may be paid under its customer assurance-type warranty agreements to remedy potential deficiencies of quality or performance of the Company’s products. These product warranties extend over various periods, depending on the product subject to the warranty and the terms of the individual agreements. The Company records a provision for estimated future warranty claims as cost of sales based upon the historical relationship of warranty claims to sales and specifically identified warranty issues. The Company bases its estimates on assumptions that are believed to be reasonable under the circumstances and revises its estimates, as appropriate, when events or changes in circumstances indicate that revisions may be necessary. Such revisions may be material.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Research and Development

Research and development (R&D) costs are expensed in the period in which they are incurred. R&D costs include materials and equipment that have no alternative future use, depreciation on equipment and facilities currently used for R&D purposes, personnel costs, contract services and reasonable allocations of indirect costs, if clearly related to an R&D activity. Expenditures in the pre-production phase of an R&D project are recorded as R&D expense. However, costs incurred in the pre-production phase that are associated with output actually used in production are recorded in cost of sales. A project is considered finished with pre-production efforts when management determines that it has achieved acceptable levels of scrap and yield, which vary by project. Expenditures related to ongoing production are recorded in cost of sales.

Restructuring

The Company records restructuring charges associated with management-approved restructuring plans, which could include the elimination of job functions, closure or relocation of facilities, reorganization of operations, changes in management structure, workforce reductions or other actions. Restructuring charges may include ongoing and enhanced termination benefits related to employee separations, contract termination costs, impairment of certain assets and other related costs associated with exit or disposal activities. Severance benefits are provided to employees primarily under the Company's ongoing benefit arrangements. These severance costs are accrued once management commits to a plan of termination and it becomes probable that employees will be separated and entitled to benefits at amounts that can be reasonably estimated. In some instances, the Company enhances its ongoing termination benefits with one-time termination benefits, which are recognized when employees are notified of their enhanced termination benefits.

Foreign Currency Translation

For the years ended December 31, 2022, 2021 and 2020, approximately 38%, 42% and 39%, respectively, of the Company's net sales were to customers located outside the U.S. A portion of these sales was denominated in currencies other than the U.S. dollar, particularly sales from the Company's foreign subsidiaries. The financial position and results of operations of certain of the Company's foreign subsidiaries are measured using the local currency as the functional currency. Revenues and expenses of these subsidiaries have been translated into U.S. dollars at average exchange rates prevailing during the period. Assets and liabilities of these subsidiaries have been translated at the exchange rates as of the balance sheet date. Translation gains and losses are recorded in accumulated other comprehensive loss. Upon sale or liquidation of an investment in a foreign subsidiary, the amount of net translation gains or losses that have been accumulated in other comprehensive loss attributable to that investment are reported as a gain or loss in earnings in the period in which the sale or liquidation occurs.

Aggregate foreign currency gains and losses, such as those resulting from the settlement of receivables or payables, foreign currency contracts and short-term intercompany advances in a currency other than the subsidiary's functional currency, are recorded currently in earnings (included in other expense, net) and resulted in losses of \$4.1 million, \$4.4 million and \$19.2 million during the years ended December 31, 2022, 2021 and 2020, respectively. Foreign currency remeasurement gains and losses related to certain long-term intercompany loans that are not expected to be settled in the foreseeable future are recorded in accumulated other comprehensive loss.

Equity-Based Compensation

The estimated fair value of stock awards is recognized as expense over the requisite service periods. Forfeitures of stock awards are recognized as they occur. The Company records deferred tax assets related to compensation expense for awards that are expected to result in future tax deductions for the Company, based on the amount of compensation cost recognized and the Company's statutory tax rate in the jurisdiction in which it expects to receive a deduction. Differences between the deferred tax assets recognized for financial reporting purposes and actual tax deductions reported on the Company's income tax return are recorded in the Consolidated Statements of Operations within income tax expense benefit.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Income Taxes

Deferred income taxes reflect the future tax consequences of differences between the financial reporting and tax basis of assets and liabilities. The Company records a valuation allowance, when appropriate, to reduce deferred tax assets to an amount that is more likely than not to be realized.

Tax benefits that result from uncertain tax positions may be recognized only if they are considered more likely than not to be sustainable, based on their technical merits. The amount of benefit to be recognized is the largest amount of tax benefit that is at least 50% likely to be realized.

In addition, the Company does not provide for U.S. taxes related to the foreign currency remeasurement gains and losses on its long-term intercompany loans with foreign subsidiaries. These loans are not expected to be repaid in the foreseeable future, and the foreign currency gains and losses are therefore recorded to accumulated other comprehensive loss.

The Company records the income tax effects related to the activity of its defined benefit plans and hedging instruments in accumulated other comprehensive loss at the currently enacted tax rate and reclassifies it to net income (loss) in the same period that the related pre-tax accumulated comprehensive income (loss) reclassifications are recognized.

Earnings (Loss) Per Share

Basic earnings (loss) per share (EPS) is computed by dividing net income (loss), less any dividends related to the Series A convertible preferred stock (Convertible Preferred Stock), by the weighted average number of common shares outstanding during the period. The numerator in diluted EPS is based on the basic EPS numerator adjusted to add back any dividends related to the Convertible Preferred Stock, subject to antidilution requirements. The denominator used in diluted EPS is based on the basic EPS computation plus the effect of potentially dilutive common shares related to the Convertible Preferred Stock and equity-based compensation plans, subject to antidilution requirements.

For the years ended December 31, 2022, 2021 and 2020, 11.3 million, 12.2 million and 17.4 million shares, respectively, of outstanding equity-based compensation awards were not included in the computation of diluted EPS because either the effect was antidilutive or the performance conditions were not met. Of those amounts, for the years ended December 31, 2022, 2021 and 2020, 2.9 million, 4.9 million and 4.4 million shares, respectively, would have been considered dilutive if the Company had not been in a net loss position.

For the years ended December 31, 2022, 2021 and 2020, 39.1 million, 37.9 million and 37.1 million, respectively, of as-if converted shares related to the Convertible Preferred Stock were excluded from the diluted share count because they were anti-dilutive; however, they may have been considered dilutive if the Company had not been in a net loss position.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

	Year ended December 31,		
	2022	2021	2020
Numerator:			
Net loss	\$ (1,286.9)	\$ (462.6)	\$ (573.4)
Dividends on Series A convertible preferred stock	(59.0)	(57.3)	(56.1)
Net loss attributable to common stockholders	<u>\$ (1,345.9)</u>	<u>\$ (519.9)</u>	<u>\$ (629.5)</u>
Denominator:			
Weighted average common shares outstanding – basic	207.4	203.6	196.8
Dilutive effect of as-if converted Series A convertible preferred stock	—	—	—
Dilutive effect of equity-based awards	—	—	—
Weighted average common shares outstanding – diluted	<u>207.4</u>	<u>203.6</u>	<u>196.8</u>
Loss per share:			
Basic	\$ (6.49)	\$ (2.55)	\$ (3.20)
Diluted	\$ (6.49)	\$ (2.55)	\$ (3.20)

Concentrations of Risk

Non-derivative financial instruments used by the Company in the normal course of business include letters of credit and commitments to extend credit, primarily accounts receivable. The Company generally does not require collateral on its accounts receivable. These financial instruments involve risk, including the credit risk of nonperformance by the counterparties to those instruments, and the actual loss may exceed the reserves provided in the Company's Consolidated Balance Sheets. See Note 16 for further discussion of customer-related concentrations of risk.

The Company manages its exposures to credit risk associated with accounts receivable using such tools as credit approvals, credit limits and monitoring procedures. CommScope estimates the allowance for doubtful accounts based on the actual payment history and individual circumstances of significant customers as well as the age of receivables. In management's opinion, as of December 31, 2022, the Company did not have significant unreserved risk of credit loss due to the non-performance of customers or other counterparties related to amounts receivable. However, an adverse change in financial condition of a significant customer or group of customers or in the telecommunications industry could materially affect the Company's estimates related to doubtful accounts.

The principal raw materials and components purchased by CommScope (aluminum, copper, steel, bimetals, optical fiber, plastics and other polymers, capacitors, memory devices and silicon chips) are subject to changes in market price as these materials are linked to various commodity markets. The Company attempts to mitigate these risks through effective requirements planning and by working closely with its key suppliers to obtain the best possible pricing and delivery terms.

The Company relies on sole suppliers or a limited group of suppliers for certain key components (memory devices, capacitors and silicon chips), subassemblies and modules and a limited group of contract manufacturers to manufacture a significant portion of its products. Any disruption or termination of these arrangements could have a material adverse impact on the Company's results of operations.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Recent Accounting Pronouncements

Adopted in 2022

On January 1, 2022, the Company adopted Accounting Standards Update (ASU) No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*. The new guidance simplifies the accounting for convertible instruments by reducing the number of accounting models available for convertible debt instruments and convertible preferred stock and amends the guidance for the derivatives scope exception for contracts in an entity’s own equity to reduce form-over-substance-based accounting conclusions and requires the application of the if-converted method for calculating diluted earnings per share, along with expanded disclosures. The impact of adopting this new guidance was not material to the consolidated financial statements.

On January 1, 2022, the Company early adopted ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*. The new guidance improves the accounting for acquired revenue contracts with customers in a business combination by addressing diversity in practice and inconsistency related to recognition of an acquired contract liability, as well as payment terms which affect subsequent revenue recognized by the acquirer. According to the guidance, at the acquisition date, an acquirer should account for the related revenue contracts in accordance with Topic 606 as if the acquirer had originated the contracts. The adoption of this new guidance had no impact to the consolidated financial statements but will be applied prospectively to future business combinations.

Issued but Not Adopted

In September 2022, the Financial Accounting Standards Board (FASB) issued ASU No. 2022-04, *Liabilities—Supplier Finance Programs (Subtopic 405-50): Disclosure of Supplier Finance Program Obligations*. The new guidance is expected to improve the transparency of supplier finance programs by requiring that a buyer in a supplier finance program disclose sufficient qualitative and quantitative information about the program to allow a user of its financial statements to understand the program's nature, activity during the period, changes from period to period and potential magnitude. ASU No. 2022-04 is effective for the Company as of January 1, 2023 on a retrospective basis including interim periods within those fiscal years, except for the requirement to disclose rollforward information which is effective for the Company as of January 1, 2024. Early adoption is permitted. The Company had no material supplier finance programs in 2022. The Company does not expect this guidance to have a material impact on the consolidated financial statements.

In March 2020, January 2021 and December 2022, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*, ASU No. 2021-01, *Reference Rate Reform (Topic 848): Scope* and ASU No. 2022-06, *Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848*, respectively. Together, the ASUs provide temporary optional guidance to ease the potential burden in accounting for reference rate reform. The new guidance provides optional expedients and exceptions for applying generally accepted accounting principles to transactions affected by reference rate reform if certain criteria are met. These transactions include contract modifications, hedging relationships, and sale or transfer of debt securities classified as held-to-maturity. The most recent amendment defers the sunset date of Topic 848 from December 31, 2022 to December 31, 2024.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

3. GOODWILL AND OTHER INTANGIBLE ASSETS

The following table presents details of the Company's intangible assets other than goodwill as of December 31, 2022 and 2021:

	2022			2021		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Customer base	\$ 3,486.5	\$ 1,941.5	\$ 1,545.0	\$ 3,508.4	\$ 1,779.3	\$ 1,729.1
Trade names and trademarks	1,020.6	502.9	517.7	1,022.3	439.8	582.5
Patents and technologies	2,014.4	1,603.6	410.8	2,025.7	1,310.0	715.7
Other	58.3	58.3	—	58.3	58.3	—
Total intangible assets	<u>\$ 6,579.8</u>	<u>\$ 4,106.3</u>	<u>\$ 2,473.5</u>	<u>\$ 6,614.7</u>	<u>\$ 3,587.4</u>	<u>\$ 3,027.3</u>

There were no impairments of finite-lived intangible assets identified during the years ended December 31, 2022, 2021 or 2020.

Amortization expense for intangible assets was \$543.0 million, \$613.0 million and \$630.5 million for the years ended December 31, 2022, 2021 and 2020, respectively. Future amortization expense as of December 31, 2022 is as follows:

	Estimated Amortization Expense
2023	\$ 429.8
2024	342.7
2025	277.8
2026	229.1
2027	199.1
Thereafter	995.0

The following table presents the activity in goodwill by reportable segment.

	December 31, 2021			Activity			December 31, 2022		
	Goodwill	Accumulated Impairment Losses	Total	Additions (Deductions)	Impairment	Foreign Exchange and Other	Goodwill	Accumulated Impairment Losses	Total
CCS	\$ 2,307.3	\$ (51.5)	\$ 2,255.8	\$ —	\$ —	\$ (26.4)	\$ 2,280.9	\$ (51.5)	\$ 2,229.4
OWN	666.6	(159.5)	507.1	—	—	(6.3)	660.3	(159.5)	500.8
NICS	653.0	(41.2)	611.8	—	—	(3.6)	649.4	(41.2)	608.2
ANS	1,999.1	(142.1)	1,857.0	—	(1,119.6)	(3.4)	1,995.7	(1,261.7)	734.0
Home	413.2	(413.2)	—	—	—	—	413.2	(413.2)	—
Total	<u>\$ 6,039.2</u>	<u>\$ (807.5)</u>	<u>\$ 5,231.7</u>	<u>\$ —</u>	<u>\$ (1,119.6)</u>	<u>\$ (39.7)</u>	<u>\$ 5,999.5</u>	<u>\$ (1,927.1)</u>	<u>\$ 4,072.4</u>

	December 31, 2020			Activity			December 31, 2021		
	Goodwill	Accumulated Impairment Losses	Total	Additions (Deductions)	Impairment	Foreign Exchange and Other	Goodwill	Accumulated Impairment Losses	Total
CCS	\$ 2,323.8	\$ (51.5)	\$ 2,272.3	\$ —	\$ —	\$ (16.5)	\$ 2,307.3	\$ (51.5)	\$ 2,255.8
OWN	670.6	(159.5)	511.1	—	—	(4.0)	666.6	(159.5)	507.1
NICS	657.8	(41.2)	616.6	—	—	(4.8)	653.0	(41.2)	611.8
ANS	2,028.6	(142.1)	1,886.5	(13.7)	—	(15.8)	1,999.1	(142.1)	1,857.0
Home	399.5	(399.5)	—	13.7	(13.7)	—	413.2	(413.2)	—
Total	<u>\$ 6,080.3</u>	<u>\$ (793.8)</u>	<u>\$ 5,286.5</u>	<u>\$ —</u>	<u>\$ (13.7)</u>	<u>\$ (41.1)</u>	<u>\$ 6,039.2</u>	<u>\$ (807.5)</u>	<u>\$ 5,231.7</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

During the annual impairment test performed in the fourth quarter of 2022 and in conjunction with the development of its 2023 and long-range plans, the Company identified changes in the ANS reporting unit's expected future cash flows due to various market trends expected to affect the business, including technology shifts affecting hardware sales, trends affecting bandwidth growth and other operational challenges, as well as an increase in the cost of capital. As a result, the Company determined the goodwill balance in the ANS reporting unit was impaired and recorded a \$1,119.6 million impairment charge. The ANS reporting unit is the same as the ANS segment.

In the second quarter of 2021, management shifted certain product lines from the Company's ANS segment to its Home segment to better align the Home segment with how the business is being managed. The realignment of product lines changed the composition of the Company's reporting units which resulted in the reallocation of \$13.7 million of goodwill from the ANS reporting unit, within the ANS segment, to the Home Networks reporting unit, within the Home segment, which is reflected as additions (deductions) in the table above. During the annual impairment test performed in the fourth quarter of 2021 and in conjunction with the development of the Company's 2022 and long-range plans, the Company identified further weakness in the projected results of its Home Networks reporting unit that stemmed from the continued decline in customer demand for video products. As a result, the Company determined the goodwill balance in the Home Networks reporting unit was impaired and recorded a \$13.7 million impairment charge.

The goodwill balance for the year ended December 31, 2020 reflects the final measurement period adjustments from the ARRIS acquisition. During the second quarter of 2020, the Company recorded a \$206.7 million goodwill impairment charge relating to the Home Networks reporting unit which resulted in a full impairment of the remaining goodwill in the Home segment, and as such, the Home segment had no remaining goodwill balance as of December 31, 2020.

Estimating the fair value of a reporting unit involves uncertainties because it requires management to develop numerous assumptions, including assumptions about the future growth and potential volatility in revenues and costs, capital expenditures, industry economic factors and future business strategy. Changes in projected revenue growth rates, projected operating income margins or estimated discount rates due to uncertain market conditions, loss of one or more key customers, changes in the Company's strategy, changes in technology or other factors could negatively affect the fair value in one or more of the Company's reporting units and result in a material impairment charge in the future.

4. REVENUE FROM CONTRACTS WITH CUSTOMERS

Disaggregated Net Sales

See Note 16 for the presentation of net sales by segment and geographic region.

Allowance for Doubtful Accounts

	Year Ended December 31,		
	2022	2021	2020
Allowance for doubtful accounts, beginning of period	\$ 63.7	\$ 40.3	\$ 35.4
Provision	22.6	25.8	5.0
Write-offs	(2.1)	(0.9)	(3.2)
Foreign exchange and other	(1.4)	(1.5)	3.1
Allowance for doubtful accounts, end of period	<u>\$ 82.8</u>	<u>\$ 63.7</u>	<u>\$ 40.3</u>

During the year ended December 31, 2022, the Company recorded an allowance for \$20.9 million to reserve the balance due from a distributor in the OWN segment based on deterioration in the customer's risk profile. During the year ended December 31, 2021, the Company recorded an allowance for \$30.3 million to reserve the balance due from a value-added reseller in the Home segment due to deterioration in the customer's risk profile. These charges are included in the provision line in the table above and in selling, general and administrative expense on the Consolidated Statements of Operations.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Customer Contract Balances

The following table provides the balance sheet location and amounts of contract assets, or unbilled accounts receivable, and contract liabilities, or deferred revenue, from contracts with customers as of December 31, 2022 and December 31, 2021.

Contract Balance Type	Balance Sheet Location	December 31,	
		2022	2021
Unbilled accounts receivable	Accounts receivable, net of allowance for doubtful accounts	\$ 35.3	\$ 35.0
Deferred revenue - current	Accrued and other liabilities	\$ 97.9	\$ 94.6
Deferred revenue - noncurrent	Other noncurrent liabilities	63.4	61.1
Total contract liabilities		<u>\$ 161.3</u>	<u>\$ 155.7</u>

There were no material changes to contract asset balances for the year ended December 31, 2022 as a result of changes in estimates or impairments. The change in the contract liability balance from December 31, 2021 to December 31, 2022 was primarily due to upfront support billings to be recognized over the support term. During the year ended December 31, 2022, the Company recognized \$88.3 million of revenue related to contract liabilities recorded as of December 31, 2021.

5. LEASES

The Company has operating type leases for real estate, equipment and vehicles both in the U.S. and internationally. As of December 31, 2022 and 2021, the Company had no finance type leases. Operating lease expense was \$97.6 million, \$102.1 million and \$105.2 million for the years ended December 31, 2022, 2021 and 2020, respectively. Operating lease expense included period cost for short-term, cancellable and variable leases that were not included in lease liabilities, of \$36.2 million, \$33.2 million and \$31.3 million for the years ended December 31, 2022, 2021 and 2020, respectively.

The Company occasionally subleases all or a portion of certain unutilized real estate facilities. As of December 31, 2022, the Company's sublease arrangements were classified as operating type leases and the income amounts were not material for the years ended December 31, 2022, 2021 and 2020, respectively.

Supplemental cash flow information related to operating leases:

	Year Ended December 31,		
	2022	2021	2020
Operating cash paid to settle lease liabilities	\$ 59.4	\$ 71.5	\$ 74.6
Right of use asset additions in exchange for lease liabilities	43.5	25.3	21.9

Supplemental balance sheet information related to operating leases:

	Balance Sheet Location	December 31,	
		2022	2021
Right of use assets	Other noncurrent assets	\$ 149.0	\$ 162.5
Lease liabilities - current	Accrued and other liabilities	\$ 47.7	\$ 46.7
Lease liabilities - noncurrent	Other noncurrent liabilities	123.5	140.8
Total lease liabilities		<u>\$ 171.2</u>	<u>\$ 187.5</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Weighted average remaining lease term (in years)	5.3
Weighted average discount rate	8.8%

Future minimum lease payments under non-cancellable leases as of December 31, 2022 are as follows:

	Operating Leases
2023	\$ 57.2
2024	45.0
2025	31.8
2026	24.4
2027	15.0
Thereafter	47.9
Total minimum lease payments	221.3
Less: imputed interest	(50.1)
Total	<u>\$ 171.2</u>

6. SUPPLEMENTAL FINANCIAL STATEMENT INFORMATION

Accounts Receivable

	December 31,	
	2022	2021
Accounts receivable - trade	\$ 1,545.3	\$ 1,499.9
Accounts receivable - other	61.1	96.4
Allowance for doubtful accounts	(82.8)	(63.7)
Total accounts receivable, net	<u>\$ 1,523.6</u>	<u>\$ 1,532.6</u>

Inventories

	December 31,	
	2022	2021
Raw materials	\$ 535.8	\$ 436.0
Work in process	212.7	178.3
Finished goods	839.6	821.5
Total inventories, net	<u>\$ 1,588.1</u>	<u>\$ 1,435.8</u>

Property, Plant and Equipment

	December 31,	
	2022	2021
Land and land improvements	\$ 52.2	\$ 54.1
Buildings and improvements	340.9	334.4
Machinery and equipment	1,038.1	968.0
Construction in progress	51.9	87.2
	1,483.1	1,443.7
Accumulated depreciation	(873.5)	(787.4)
Total property, plant and equipment, net	<u>\$ 609.6</u>	<u>\$ 656.3</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Depreciation expense was \$127.2 million, \$136.7 million and \$158.3 million during the years ended December 31, 2022, 2021 and 2020, respectively. No interest was capitalized during the years ended December 31, 2022, 2021 or 2020.

Accrued and Other Liabilities

	December 31,	
	2022	2021
Compensation and employee benefit liabilities	\$ 301.3	\$ 304.7
Accrued interest	118.1	118.3
Deferred revenue	97.9	94.6
Contract manufacturer inventory repurchase obligation	79.1	14.5
Restructuring liabilities	58.9	41.0
Operating lease liabilities	47.7	46.7
Product warranty accrual	44.8	54.0
Other	302.2	316.0
Total accrued and other liabilities	<u>\$ 1,050.0</u>	<u>\$ 989.8</u>

Accumulated Other Comprehensive Loss

The following table presents changes in accumulated other comprehensive loss (AOCL), net of tax:

	Year Ended December 31,	
	2022	2021
<u>Foreign currency translation</u>		
Balance at beginning of period	\$ (165.8)	\$ (80.5)
Other comprehensive loss	(104.3)	(86.4)
Amounts reclassified from AOCL	(0.2)	1.1
Balance at end of period	<u>\$ (270.3)</u>	<u>\$ (165.8)</u>
<u>Defined benefit plan activity</u>		
Balance at beginning of period	\$ (13.4)	\$ (36.4)
Other comprehensive income (loss)	(1.4)	24.1
Amounts reclassified from AOCL	—	(1.1)
Balance at end of period	<u>\$ (14.8)</u>	<u>\$ (13.4)</u>
<u>Hedging instruments</u>		
Balance at beginning of period	\$ (27.2)	\$ (39.0)
Other comprehensive income	16.0	11.8
Balance at end of period	<u>\$ (11.2)</u>	<u>\$ (27.2)</u>
Net AOCL at end of period	<u>\$ (296.3)</u>	<u>\$ (206.4)</u>

Amounts reclassified from net AOCL related to foreign currency translation and defined benefit plans are recorded in other expense, net in the Consolidated Statements of Operations.

Cash Flow Information

	Year Ended December 31,	
	2022	2021
Cash paid during the period for:		
Income taxes, net of refunds	\$ 130.7	\$ 79.4
Interest	563.2	525.9

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

7. FINANCING

	December 31,	
	2022	2021
7.125% senior notes due July 2028	\$ 700.0	\$ 700.0
5.00% senior notes due March 2027	750.0	750.0
8.25% senior notes due March 2027	1,000.0	1,000.0
6.00% senior notes due June 2025	1,300.0	1,300.0
4.75% senior secured notes due September 2029	1,250.0	1,250.0
6.00% senior secured notes due March 2026	1,500.0	1,500.0
Senior secured term loan due April 2026	3,096.0	3,128.0
Senior secured revolving credit facility	—	—
Total principal amount of debt	9,596.0	9,628.0
Less: Original issue discount, net of amortization	(15.9)	(20.3)
Less: Debt issuance costs, net of amortization	(78.5)	(97.2)
Less: Current portion	(32.0)	(32.0)
Total long-term debt	\$ 9,469.6	\$ 9,478.5

Senior Notes

As of December 31, 2022, the Company had outstanding two series of senior secured notes: (1) \$1,250.0 million of 4.75% senior secured notes due September 1, 2029 (the 2029 Secured Notes) issued by CommScope, Inc. in August 2021; and (2) \$1.5 billion of 6.00% senior secured notes due March 1, 2026 issued by CommScope, Inc. in February 2019 (the 2026 Secured Notes and, together with the 2029 Secured Notes, the Secured Notes). As of December 31, 2022, the Company had outstanding four series of senior unsecured notes: (1) \$700.0 million initial aggregate principal amount of 7.125% senior notes due July 1, 2028 (the 2028 Notes) issued by CommScope, Inc. in July 2020; (2) \$ 750.0 million initial aggregate principal amount of 5.00% senior notes due March 15, 2027 issued by CommScope Technologies LLC (CommScope Technologies), a wholly owned subsidiary of the Company, in March 2017 (the 5.00% 2027 Notes); (3) \$1.3 billion aggregate principal amount of 6.00% senior notes due June 15, 2025 issued by CommScope Technologies in June 2015 (the 2025 Notes, and together with the 5.00% 2027 Notes, the CommScope Technologies Notes); (4) \$1.0 billion initial aggregate principal amount of 8.25% senior notes due March 1, 2027 issued by CommScope, Inc. in February 2019 (the 8.25% 2027 Notes and, together with the 2028 Notes, the CommScope, Inc. Notes; the Secured Notes, the CommScope Technologies Notes and the CommScope, Inc. Notes, collectively, the Senior Notes).

The indentures governing the Senior Notes contain covenants that restrict the ability of CommScope, Inc. and its restricted subsidiaries to, among other things, incur additional debt, make certain payments, including payment of dividends (except, in the case of the CommScope, Inc. Notes and the Secured Notes, with respect to the Convertible Preferred Stock) or repurchases of equity interests of CommScope, Inc. or the applicable issuer, make loans or acquisitions or capital contributions and certain investments, incur certain liens, sell assets, merge or consolidate or liquidate other entities and enter into certain transactions with affiliates.

There are no financial maintenance covenants in the indentures governing the Senior Notes. Events of default under the indentures governing the Senior Notes include, among others, non-payment of principal or interest when due, covenant defaults, bankruptcy and insolvency events and cross acceleration to material debt.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

4.75% Senior Secured Notes due 2029 and 6.00% Senior Secured Notes due 2026 (the Secured Notes)

The 2029 Secured Notes mature on September 1, 2029 and the 2026 Secured Notes mature on March 1, 2026. Interest is payable on the Secured Notes semi-annually in arrears on March 1 and September 1 of each year. The Secured Notes are guaranteed on a senior secured basis by the Company and each of CommScope, Inc.'s existing and future wholly owned domestic restricted subsidiaries that is an obligor under the senior secured credit facilities or certain other debt, subject to certain exceptions. The Secured Notes and the related guarantees are secured on a first-priority basis by security interests in all of the assets that secure indebtedness under the 2026 Term Loan on a first-priority basis, and on a second-priority basis in all assets that secure the Revolving Credit Facility (as defined below) on a first-priority basis and the 2026 Term Loan on a second-priority basis. The Secured Notes and the related guarantees rank senior in right of payment to all of CommScope, Inc.'s and the guarantors' subordinated indebtedness and equally in right of payment with all of CommScope, Inc.'s and the guarantors' senior indebtedness (without giving effect to collateral arrangements), including the senior secured credit facilities and the other Senior Notes. The Secured Notes and the related guarantees are effectively senior to all of CommScope, Inc.'s and the guarantors' unsecured indebtedness and debt secured by a lien junior to the liens securing the Secured Notes, in each case to the extent of the value of the collateral, and effectively equal to all of CommScope, Inc.'s and the guarantors' senior indebtedness secured on the same priority basis as the Secured Notes, including the 2026 Term Loan. The Secured Notes and the related guarantees are effectively subordinated to any of CommScope, Inc.'s or the guarantors' indebtedness that is secured by assets that do not constitute collateral for the Secured Notes and effectively subordinated to any of CommScope, Inc.'s or the guarantors' indebtedness that is secured by a senior-priority lien, including under the Revolving Credit Facility, in each case to the extent of the value of the assets securing such indebtedness. In addition, the Secured Notes and related guarantees are structurally subordinated to all existing and future liabilities (including trade payables) of CommScope, Inc.'s subsidiaries that do not guarantee the Secured Notes.

The Secured Notes may be redeemed prior to maturity under certain circumstances. Upon certain change of control events, the Secured Notes may be redeemed at the option of the holders at 101% of their face amount, plus accrued and unpaid interest. The 2029 Secured Notes may be redeemed on or after September 1, 2024 by CommScope, Inc. at the redemption prices specified in the indenture governing the 2029 Secured Notes. Prior to September 1, 2024, the 2024 Secured Notes may be redeemed by CommScope, Inc. at a redemption price equal to 100% of their principal amount, plus a make-whole premium (as specified in the indenture governing the 2029 Secured Notes), plus accrued and unpaid interest. Prior to September 1, 2024, under certain circumstances, CommScope, Inc. may also redeem up to 40% of the aggregate principal amount of the 2029 Secured Notes at a redemption price of 104.750%, plus accrued and unpaid interest, using the proceeds of certain equity offerings. At any time prior to September 1, 2024, CommScope, Inc. may redeem during each calendar year up to 10.0% of the aggregate principal amount of the 2029 Secured Notes at a redemption price equal to 103.0% of the aggregate principal amount of the 2029 Secured Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the date of redemption. The 2026 Secured Notes may be redeemed by CommScope, Inc. at the redemption prices specified in the indenture governing the 2026 Secured Notes.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

7.125% Senior Notes due 2028 and 8.25% Senior Notes due 2027 (the CommScope, Inc. Notes)

The 2028 Notes mature on July 1, 2028 and the 8.25% 2027 Notes mature on March 1, 2027. Interest is payable semi-annually in arrears on the 2028 Notes on July 1 and January 1 of each year and on the 8.25% 2027 Notes on March 1 and September 1 of each year. The CommScope, Inc. Notes are guaranteed on a senior unsecured basis by each of CommScope, Inc.'s existing and future wholly owned domestic restricted subsidiaries that is an obligor under the senior secured credit facilities or certain other capital markets debt, subject to certain exceptions. The CommScope, Inc. Notes and the related guarantees rank senior in right of payment to all of CommScope, Inc.'s and the guarantors' subordinated indebtedness and equally in right of payment with all of CommScope, Inc.'s and the guarantors' senior indebtedness (without giving effect to collateral arrangements), including the senior secured credit facilities and the other Senior Notes. The CommScope, Inc. Notes and the related guarantees are effectively junior to all of CommScope, Inc.'s and the guarantors' existing and future secured indebtedness, including the Secured Notes and the senior secured credit facilities, to the extent of the value of the assets securing such secured indebtedness. In addition, the CommScope, Inc. Notes and related guarantees are structurally subordinated to all existing and future liabilities (including trade payables) of CommScope, Inc.'s subsidiaries that do not guarantee the CommScope, Inc. Notes.

The CommScope, Inc. Notes may be redeemed prior to maturity under certain circumstances. Upon certain change of control events, the CommScope, Inc. Notes may be redeemed at the option of the holders at 101% of their principal amount, plus accrued and unpaid interest. The 2028 Notes may be redeemed by CommScope, Inc. on or after July 1, 2023 at the redemption prices specified in the indenture governing the 2028 Notes. Prior to July 1, 2023, the 2028 Notes may be redeemed by CommScope, Inc. at a redemption price equal to 100% of their principal amount, plus a make-whole premium (as specified in the indenture governing the 2028 Notes), plus accrued and unpaid interest. Prior to July 1, 2023, under certain circumstances, CommScope, Inc. may also redeem up to 40% of the aggregate principal amount of the 2028 Notes at a redemption price of 107.125%, plus accrued and unpaid interest, using the proceeds of certain equity offerings. The 8.25% 2027 Notes may be redeemed by CommScope, Inc. at the redemption prices specified in the indenture governing the 8.25% 2027 Notes.

5.00% Senior Notes due 2027 and 6.00% Senior Notes due 2025 (the CommScope Technologies Notes)

The 5.00% 2027 Notes mature on March 15, 2027 and the 2025 Notes mature on June 15, 2025. Interest is payable on the 5.00% 2027 Notes semi-annually in arrears on March 15 and September 15 of each year and on the 2025 Notes on June 15 and December 15 of each year.

The CommScope Technologies Notes are guaranteed on a senior unsecured basis by CommScope, Inc. and each of CommScope, Inc.'s existing and future wholly owned domestic restricted subsidiaries (other than CommScope Technologies) that is an obligor under the senior secured credit facilities or certain other capital markets debt, subject to certain exceptions. The CommScope Technologies Notes and the related guarantees rank senior in right of payment to all of CommScope Technologies' and the guarantors' subordinated indebtedness and equally in right of payment with all of CommScope Technologies' and the guarantors' senior indebtedness (without giving effect to collateral arrangements), including the senior secured credit facilities and the other Senior Notes. The CommScope Technologies Notes and the related guarantees are effectively junior to all of CommScope Technologies' and the guarantors' existing and future secured indebtedness, including the Secured Notes and the senior secured credit facilities, to the extent of the value of the assets securing such secured indebtedness. In addition, the CommScope Technologies Notes and related guarantees are structurally subordinated to all existing and future liabilities (including trade payables) of CommScope, Inc.'s subsidiaries that do not guarantee the CommScope Technologies Notes.

The CommScope Technologies Notes may be redeemed prior to maturity under certain circumstances. Upon certain change of control events, the CommScope Technologies Notes may be redeemed at the option of the holders at 101% of their principal amount, plus accrued and unpaid interest. The 5.00% 2027 Notes may be redeemed by CommScope Technologies at the redemption prices specified in the indenture governing the 5.00% 2027 Notes. The 2025 Notes may be redeemed by CommScope Technologies at the redemption prices specified in the indenture governing the 2025 Notes.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Senior Secured Credit Facilities

Senior Secured Term Loan due 2026

The 2026 Term Loan has scheduled amortization payments of \$32.0 million per year due in equal quarterly installments, which began with the quarter ended December 31, 2019, with the balance due at maturity (April 2026). For the year ended December 31, 2022, the interest rate was, at the Company's option, either (1) the base rate (which is the highest of (w) the greater of the then-current federal funds rate set by the Federal Reserve Bank of New York and the overnight federal funds rate, in each case, plus 0.5%, (x) the prime rate on such day, (y) the one-month Eurodollar rate published on such date plus 1.00% and (z) 1.00% per annum) plus an applicable margin of 2.25% or (2) one-, two-, three- or six-month LIBOR or, if available from all lenders, 12-month LIBOR or any shorter period (selected at the option of CommScope, Inc.) plus an applicable margin of 3.25%. For the year ended December 31, 2022, the 2026 Term Loan was subject to a LIBOR floor of 0.00%.

Subject to certain conditions, the 2026 Term Loan may be increased or a new incremental term loan facility may be added to increase the capacity by up to the sum of the greater of \$950.0 million and 50% of Consolidated EBITDA, as defined in the credit agreement governing the 2026 Term Loan (the Credit Agreement), plus an unlimited amount as long as on a pro forma basis the Company meets certain net leverage ratios or fixed charge ratios as defined in the Credit Agreement.

CommScope, Inc. may voluntarily prepay loans under the 2026 Term Loan, subject to minimum amounts, with prior notice but without premium or penalty. CommScope, Inc. must prepay the 2026 Term Loan with the net cash proceeds of certain asset sales, the incurrence or issuance of specified refinancing indebtedness and, commencing with the fiscal year ending in December 2020, 50% of excess cash flow (such percentage subject to reduction based on the achievement of specified Consolidated First Lien Net Leverage Ratios), in each case, subject to certain reinvestment rights and other exceptions.

CommScope, Inc.'s obligations under the 2026 Term Loan are guaranteed by the Company and each of CommScope, Inc.'s direct and indirect wholly owned U.S. subsidiaries (subject to certain permitted exceptions based on immateriality thresholds of aggregate assets and revenues of excluded U.S. subsidiaries). The 2026 Term Loan is secured by a lien on substantially all of CommScope, Inc.'s and the guarantors' current and fixed assets (subject to certain exceptions), and the 2026 Term Loan will have a first-priority lien on all fixed assets and a second-priority lien on all current assets (second in priority to the liens securing the Revolving Credit Facility), in each case, subject to other permitted liens.

The 2026 Term Loan contains customary negative covenants consistent with those applicable to the 2026 Secured Notes, including, but not limited to, restrictions on the ability of CommScope, Inc. and its subsidiaries to merge and consolidate with other companies, incur indebtedness, grant liens or security interests on assets, pay dividends (except with respect to the Convertible Preferred Stock) or make other restricted payments, sell or otherwise transfer assets or enter into certain transactions with affiliates.

The 2026 Term Loan provides that, upon the occurrence of certain events of default, the obligations thereunder may be accelerated. Such events of default will include payment defaults, material inaccuracies of representations and warranties, covenant defaults, cross-defaults to other material indebtedness, voluntary and involuntary bankruptcy proceedings, material money judgments, material pension-plan events, change of control and other customary events of default.

During the year ended December 31, 2022, the Company made scheduled amortization payments totaling \$32.0 million due in equal quarterly installments on the 2026 Term Loan. The current portion of long-term debt reflects \$32.0 million of repayments due under the 2026 Term Loan.

No portion of the 2026 Term Loan was reflected as a current portion of long-term debt as of December 31, 2022 related to the potentially required excess cash flow payment because no such payment is expected to be required. There was no excess cash flow payment required in 2022 related to 2021.

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Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Senior Secured Revolving Credit Facility

On October 19, 2022, the Company completed the refinancing (the Refinancing) of the Company's asset-based revolving credit facility (Revolving Credit Facility) which continues to provide borrowing capacity of up to \$1.0 billion, subject to certain limitations, available to CommScope, Inc. and its U.S. subsidiaries designated as co-borrowers (the U.S. Revolving Borrowers). The Refinancing, among other things, (i) refinanced in full all existing loans outstanding under the Revolving Credit Facility immediately prior to the Refinancing, (ii) extended the maturity of the Revolving Credit Facility from April 2024 to the earliest of (x) September 30, 2027, (y) the date the commitments of the lenders under the Revolving Credit Agreement are reduced to zero and (z) 91 days prior to the maturity date of any other indebtedness of a "Credit Party" (as defined in the credit agreement governing the Revolving Credit Facility) that has a scheduled maturity or weighted average life to maturity that is prior to September 30, 2027 (subject to certain exceptions) and (iii) replaced the existing revolving loan commitments outstanding under the Revolving Credit Facility immediately prior to the Refinancing with a new tranche of commitments (the Tranche A Revolving Commitments) for borrowings denominated in U.S. dollars, euros and pounds sterling made to the U.S. Revolving Borrowers and a separate tranche of commitments (the Tranche B Revolving Commitments) for borrowings denominated in euros, pounds sterling and Swiss francs made to the U.S. Revolving Borrowers and certain of the Company's wholly owned Irish, English and Swiss subsidiaries that are joined as borrowers under the Revolving Credit Facility (such subsidiaries, the European Revolving Borrowers and, together with the U.S. Revolving Borrowers, the Revolving Borrowers). Prior to the joinder of any European Revolving Borrower, Tranche A Loans are available to the U.S. Revolving Borrowers in an aggregate amount equal to (i) the lesser of (x) \$1.0 billion and (y) the borrowing base of the U.S. Revolving Borrowers minus (ii) the aggregate amount of all "Tranche A Revolving Credit Outstandings" (as defined in the credit agreement governing the Revolving Credit Facility). From and after the joinder of any European Revolving Borrower, the Revolving Borrowers may reallocate an amount of the Tranche A Revolving Commitments to Tranche B Revolving Commitments, and Tranche B Loans will then be available to the Revolving Borrowers in an amount equal to (i) the lesser of (x) the Tranche B Revolving Commitments and (y) the sum of the borrowing base of the European Revolving Borrowers minus (ii) the aggregate amount of all "Tranche B Revolving Credit Outstandings" (as defined in the credit agreement governing the Revolving Credit Facility). At no time will the aggregate commitments of the lenders under the Revolving Credit Facility exceed \$1.0 billion. Borrowing base calculations are based on the sum of specific percentages of eligible accounts receivable and eligible inventory, minus the amount of any applicable reserves. The ability to draw under the Revolving Credit Facility or issue letters of credit is conditioned upon, among other things, delivery of prior written notice of a borrowing or issuance, as applicable, the ability of the Revolving Borrowers to reaffirm the representations and warranties contained in the credit agreement governing the Revolving Credit Facility and the absence of any default or event of default. As of December 31, 2022, the Company had no outstanding borrowings under the Revolving Credit Facility and had availability of \$908.8 million, after giving effect to borrowing base limitations and outstanding letters of credit.

Letters of credit under the Revolving Credit Facility are limited to the lesser of (x) \$250.0 million and (y) the aggregate unused amount of commitments under the Revolving Credit Facility then in effect. Subject to certain conditions, the Revolving Credit Facility may be expanded by up to \$400.0 million in additional commitments. Loans under the Revolving Credit Facility may be denominated, at the option of the Revolving Borrowers, (i) with respect to Tranche A Loans, in U.S. dollars, euros or pounds sterling, and (ii) with respect to Tranche B Loans, U.S. dollars, euros, pounds sterling or Swiss francs.

Borrowings under the Revolving Credit Facility will bear interest at a floating rate, which can be either (1) an adjusted Term SOFR rate (for borrowings denominated in U.S. dollars), (2) the EURIBOR rate (for borrowings denominated in euros), (3) the Sterling Overnight Index Average (SONIA) (for borrowings denominated in pounds sterling) or (4) the Swiss Average Rate Overnight (SARON) (for borrowings denominated in Swiss francs), in each case, subject to certain adjustments plus an applicable margin of 1.25% to 1.50% or, at the option of the Revolving Borrowers, a base rate plus an applicable margin of 0.25% to 0.50%.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The obligations of the U.S. Revolving Borrowers under the Revolving Credit Facility are guaranteed by the Company, CommScope, Inc. and each of CommScope, Inc.'s direct and indirect wholly owned U.S. subsidiaries (subject to certain permitted exceptions based on immateriality thresholds of aggregate assets and revenues of excluded U.S. subsidiaries). The Revolving Credit Facility is secured by a lien on substantially all of the U.S. Revolving Borrowers' and the guarantors' current and fixed assets (subject to certain exceptions). The Revolving Credit Facility has a first-priority lien on all current assets and a second-priority lien on all fixed assets (second in priority to the liens securing the 2029 Secured Notes, the 2026 Secured Notes and the 2026 Term Loan), in each case, subject to other permitted liens.

The following fees are applicable under the Revolving Credit Facility: (i) an unused line fee of (x) 0.25% per annum of the unused portion of the Revolving Credit Facility when the average unused portion of the facility is less than 50% of the aggregate commitments under the Revolving Credit Facility or (y) 0.375% per annum of the unused portion of the Revolving Credit Facility when the average unused portion of the facility is equal to or greater than 50% of the aggregate commitments under the Revolving Credit Facility; (ii) a letter of credit participation fee on the aggregate stated amount of each letter of credit equal to the applicable margin for adjusted Term SOFR, EURIBOR, SONIA and SARON loans, as applicable; (iii) a letter of credit fronting fee of 0.125% per annum, multiplied by the average aggregate daily maximum amount available to be drawn under all applicable letters of credit issued by such letter of credit issuer; and (iv) certain other customary fees and expenses of the lenders and agents thereunder.

The Revolving Borrowers will be required to make prepayments under the Revolving Credit Facility at any time when, and to the extent that, the aggregate amount of the outstanding loans and letters of credit under the Revolving Credit Facility exceeds the lesser of the aggregate amount of commitments in respect of the Revolving Credit Facility and the borrowing base.

The Revolving Credit Facility contains customary covenants, including, but not limited to, restrictions on the ability of CommScope, Inc. and its subsidiaries to merge and consolidate with other companies, incur indebtedness, grant liens or security interests on assets, make acquisitions, loans, advances or investments, pay dividends (except with respect to the Convertible Preferred Stock), sell or otherwise transfer assets, optionally prepay or modify terms of any junior indebtedness, enter into certain transactions with affiliates or change lines of business. The Revolving Credit Facility contains a Covenant Fixed Charge Coverage Ratio (as defined in the credit agreement governing the Revolving Credit Facility) of 1.00 to 1.00. The credit agreement governing the Revolving Credit Facility provides that the Covenant Fixed Charge Coverage Ratio must be tested and must exceed the level set forth above only in the event that excess availability under the Revolving Credit Facility is less than the greater of \$80 million and 10% of the maximum credit as of the end of the most recent fiscal quarter. As of December 31, 2022, the Company's excess availability and Covenant Fixed Charge Coverage Ratio were in excess of the Revolving Credit Facility's requirements.

The Revolving Credit Facility provides that, upon the occurrence of certain events of default, the obligations thereunder may be accelerated and the lending commitments terminated. Such events of default include payment defaults, material inaccuracies of representations and warranties, covenant defaults, cross-defaults to other material indebtedness, voluntary and involuntary bankruptcy proceedings, material money judgments, material pension-plan events, certain change of control events and other customary events of default.

Other Matters

The following table summarizes scheduled maturities of long-term debt as of December 31, 2022:

	2023	2024	2025	2026	2027	Thereafter
Scheduled maturities of long-term debt	\$ 32.0	\$ 32.0	\$1,332.0	\$ 4,500.0	\$ 1,750.0	\$ 1,950.0

The Company's non-guarantor subsidiaries held \$3,664 million, or 31%, of total assets and \$1,029 million, or 8%, of total liabilities as of December 31, 2022 and accounted for \$2,708 million, or 29%, of net sales for the year ended December 31, 2022. All amounts presented exclude intercompany balances.

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Notes to Consolidated Financial Statements-(Continued)
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The Company is dependent upon the earnings and cash flow of its subsidiaries to make certain payments, including debt and interest payments. Certain subsidiaries may have limitations or restrictions on transferring funds to other subsidiaries that may be necessary to meet those requirements.

The weighted average effective interest rate on outstanding borrowings, including the impact of the interest rate swap, and the amortization of debt issuance costs and original issue discount, was 6.91% at December 31, 2022 and 5.74% at December 31, 2021.

8. DERIVATIVES AND HEDGING ACTIVITIES

Derivatives Not Designated As Hedging Instruments

The Company uses forward contracts to hedge a portion of its balance sheet foreign exchange re-measurement risk and to hedge certain planned foreign currency expenditures. As of December 31, 2022, the Company had foreign exchange contracts outstanding with maturities of up to eight months and aggregate notional values of \$522.2 million (based on exchange rates as of December 31, 2022). Unrealized gains and losses resulting from these contracts are recognized in other expense, net and partially offset corresponding foreign exchange gains and losses on the balances and expenditures being hedged.

The following table presents the balance sheet location and fair value of the Company's derivatives not designated as hedging instruments:

Contract Type	Location of Asset (Liability)	December 31,	
		2022	2021
Foreign currency contracts	Prepaid expenses and other current assets	\$ 9.9	\$ 5.7
Foreign currency contracts	Accrued and other liabilities	(6.5)	(0.8)
Total derivatives not designated as hedging instruments		<u>\$ 3.4</u>	<u>\$ 4.9</u>

The pretax impact of the foreign currency forward contracts, both matured and outstanding, on the Consolidated Statements of Operations is as follows:

Location of Gain (Loss)	Year Ended December 31,		
	2022	2021	2020
Other expense, net	\$ (19.0)	\$ (2.6)	\$ 24.9

Derivative Instruments Designated As Cash Flow Hedges of Interest Rate Risk

The Company has a hedging strategy to mitigate a portion of the exposure to changes in cash flows resulting from variable interest rates on the 2026 Term Loan. The total notional amount of the interest rate swap derivatives as of December 31, 2022 was \$300 million with outstanding maturities up to fifteen months. There was no ineffectiveness on the instruments designated as cash flow hedges for the years ended December 31, 2022, 2021 or 2020.

The following table presents the balance sheet location and fair value of the derivative instruments designated as cash flow hedges of interest rate risk:

Contract Type	Location of Asset (Liability)	December 31,	
		2022	2021
Interest rate swap contracts	Other noncurrent assets	\$ 8.6	\$ —
Interest rate swap contracts	Accrued and other liabilities	—	(1.5)
Interest rate swap contracts	Other noncurrent liabilities	—	(10.3)
Total derivatives designated as cash flow hedging instruments		<u>\$ 8.6</u>	<u>\$ (11.8)</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The impact of the effective portion of the interest rate swap contracts designated as cash flow hedging instruments on the Consolidated Statements of Comprehensive Loss is as follows:

Location of Gain (Loss)	Year Ended December 31,		
	2022	2021	2020
Other comprehensive income (loss), net of tax	\$ 16.0	\$ 14.4	\$ (10.2)

9. FAIR VALUE MEASUREMENTS

The Company's financial instruments consist primarily of cash and cash equivalents, trade receivables, trade payables, debt instruments, interest rate swap contracts and foreign currency contracts. For cash and cash equivalents, trade receivables and trade payables, the carrying amounts of these financial instruments as of December 31, 2022 and December 31, 2021 were considered representative of their fair values due to their short terms to maturity. The fair values of the Company's debt instruments, interest rate swap contracts and foreign currency contracts were based on indicative quotes.

Fair value measurements using quoted prices in active markets for identical assets and liabilities fall within Level 1 of the fair value hierarchy, measurements using significant other observable inputs fall within Level 2, and measurements using significant unobservable inputs fall within Level 3.

The carrying amounts, estimated fair values and valuation input levels of the Company's debt instruments, interest rate derivatives and foreign currency contracts as of December 31, 2022 and 2021, are as follows:

	December 31, 2022		December 31, 2021		Valuation Inputs
	Carrying Amount	Fair Value	Carrying Amount	Fair Value	
Assets:					
Foreign currency contracts	\$ 9.9	\$ 9.9	\$ 5.7	\$ 5.7	Level 2
Interest rate swap contracts	8.6	8.6	—	—	Level 2
Liabilities:					
7.125% senior notes due 2028	\$ 700.0	\$ 502.6	\$ 700.0	\$ 690.4	Level 2
5.00% senior notes due 2027	750.0	513.4	750.0	705.0	Level 2
8.25% senior notes due 2027	1,000.0	780.8	1,000.0	1,023.8	Level 2
6.00% senior notes due 2025	1,300.0	1,183.4	1,300.0	1,300.0	Level 2
4.75% senior secured notes due 2029	1,250.0	1,000.0	1,250.0	1,240.3	Level 2
6.00% senior secured notes due 2026	1,500.0	1,383.3	1,500.0	1,554.4	Level 2
Senior secured term loan due 2026	3,096.0	2,925.7	3,128.0	3,092.8	Level 2
Foreign currency contracts	6.5	6.5	0.8	0.8	Level 2
Interest rate swap contracts	—	—	11.8	11.8	Level 2

Non-Recurring Fair Value Measurements

During the annual impairment test in the fourth quarter of 2022, a goodwill impairment charge of \$1,119.6 million was recorded related to the ANS reporting unit in the ANS segment. The fair value of each reporting unit was determined using a discounted cash flow (DCF) model and a guideline public company approach, with 75% of the value determined using the DCF model and 25% of the value determined using the guideline public company approach. Under the DCF method, the fair value of a reporting unit is based on the present value of estimated future cash flows. Under the guideline public company method, the fair value is based upon market multiples of revenue and earnings derived from publicly-traded companies with similar operating and investment characteristics as the reporting unit. The inputs to both the DCF model and the guideline public company analysis are Level 3 valuation inputs. Changes in any of these inputs, among other factors, could negatively affect the fair value of one or more of the Company's reporting units and result in a material impairment charge in the future.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

During the annual impairment test in the fourth quarter of 2021, the Company recorded a pretax goodwill impairment charge of \$13.7 million in the Home segment related to the goodwill reallocated from the ANS reporting unit to the Home Networks reporting unit in the second quarter of 2021 as a result of a segment realignment. The fair value of each reporting unit was determined consistent with the approach used in the annual test in 2022 and used Level 3 valuation inputs.

During the second quarter of 2020, the Company recorded a pretax goodwill impairment charge of \$206.7 million related to the Home Networks reporting unit in the Home segment. The fair value of the reporting unit was determined as of May 31, 2020 based on the present value of estimated future cash flows using a DCF model. The inputs to the DCF model were Level 3 valuation inputs.

These fair value estimates are based on pertinent information available to management as of the valuation date. Although management is not aware of any factors that would significantly affect these fair value estimates, such amounts have not been comprehensively revalued for purposes of these financial statements since those dates, and current estimates of fair value may differ significantly from the amounts presented.

10. RESTRUCTURING COSTS

The Company incurs costs associated with restructuring initiatives intended to improve overall operating performance and profitability. The costs related to restructuring actions are generally cash-based and primarily consist of employee-related costs, which include severance and other one-time termination benefits.

In addition to the employee-related costs, the Company records other costs associated with restructuring actions such as the gain or loss on the sale of facilities and impairment costs arising from unutilized real estate or equipment. The Company attempts to sell or lease this unutilized space but additional impairment charges may be incurred related to these or other excess assets.

The Company's net pretax restructuring activity included in restructuring costs, net on the Consolidated Statements of Operations, by segment, was as follows:

	Year Ended December 31,		
	2022	2021	2020
CCS	\$ 17.1	\$ 62.0	\$ 25.9
OWN	22.4	3.6	15.7
NICS	9.9	8.5	8.0
ANS	12.2	9.2	8.8
Home	1.3	8.6	30.0
Total	<u>\$ 62.9</u>	<u>\$ 91.9</u>	<u>\$ 88.4</u>

Restructuring liabilities were included in the Company's Consolidated Balance Sheets as follows:

	December 31,	
	2022	2021
Accrued and other liabilities	\$ 58.9	\$ 41.0
Other noncurrent liabilities	0.5	28.2
Total restructuring liabilities	<u>\$ 59.4</u>	<u>\$ 69.2</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

CommScope NEXT Restructuring Actions

In the first quarter of 2021, the Company announced and began implementing a business transformation initiative called CommScope NEXT. This initiative is designed to drive shareholder value through three pillars: profitable growth, operational efficiency and portfolio optimization. The activity within the liability established for CommScope NEXT restructuring actions was as follows:

	Employee- Related Costs	Other	Total
Balance at December 31, 2020	\$ —	\$ —	\$ —
Additional expense, net	86.7	4.0	90.7
Cash paid	(26.6)	—	(26.6)
Foreign exchange and other non-cash items	0.5	(4.0)	(3.5)
Balance at December 31, 2021	60.6	—	60.6
Additional expense, net	50.7	8.6	59.3
Cash paid	(48.9)	(0.5)	(49.4)
Foreign exchange and other non-cash items	(3.7)	(8.1)	(11.8)
Balance at December 31, 2022	<u>\$ 58.7</u>	<u>\$ —</u>	<u>\$ 58.7</u>

CommScope NEXT actions to date have included employee costs related to the closure of an international manufacturing facility as well as headcount reductions in manufacturing, engineering, marketing, sales and administrative functions. Asset impairment charges related to real estate and property, plant and equipment that are affected by restructuring activities are included in the other category in the table above and in restructuring costs, net on the Consolidated Statements of Operations for the years ended December 31, 2022 and 2021.

The Company has recognized restructuring charges of \$150.0 million to date related to CommScope NEXT actions. The Company expects to make cash payments of \$58.2 million in 2023 and \$0.5 million in 2024 to settle CommScope NEXT restructuring actions. Additional restructuring actions related to CommScope NEXT are expected to be identified and the resulting charges and cash requirements could be material.

11. EMPLOYEE BENEFIT PLANS

Defined Contribution Plans

The Company and certain of its subsidiaries have defined contribution retirement savings plans, the most significant of which is a 401(k) plan in the U.S. These plans allow employees meeting certain requirements to contribute a portion of their compensation on a pretax and/or after-tax basis in accordance with guidelines established by the plans and the Internal Revenue Service or other tax authorities. The Company matches a percentage of the employee contributions up to certain limits. During the years ended December 31, 2022, 2021 and 2020, the Company made contributions to defined contribution retirement savings plans of \$51.2 million, \$50.4 million and \$56.6 million, respectively.

The Company also maintains noncontributory and contributory deferred compensation plans. During the years ended December 31, 2022, 2021 and 2020, the Company recognized pretax costs of \$2.7 million, \$1.3 million and \$2.6 million, respectively, related to these plans. The liability related to these plans was \$22.5 million and \$31.3 million as of December 31, 2022 and 2021, respectively.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Pension Plans

The Company sponsors defined benefit pension plans covering certain active and former domestic and foreign employees. Included in the defined benefit pension plans are both funded and unfunded plans. The following table summarizes information for the defined benefit pension plans:

	December 31,			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Change in benefit obligation:				
Benefit obligation, beginning	\$ 12.5	\$ 13.5	\$ 275.5	\$ 310.5
Service cost	—	—	5.7	6.8
Interest cost	0.3	0.3	3.7	3.1
Actuarial gain	(2.6)	(0.5)	(68.7)	(20.6)
Benefits paid	(0.8)	(0.8)	(4.5)	(5.5)
Settlements	—	—	(6.2)	(3.9)
Curtailment	—	—	—	(4.0)
Foreign exchange and other	—	—	(22.2)	(10.9)
Benefit obligation, ending	\$ 9.4	\$ 12.5	\$ 183.3	\$ 275.5
Change in plan assets:				
Fair value of plan assets, beginning	\$ —	\$ —	\$ 279.4	\$ 279.1
Employer and plan participant contributions	0.8	0.8	6.4	7.5
Return on plan assets	—	—	(69.9)	11.8
Benefits paid	(0.8)	(0.8)	(4.5)	(5.5)
Settlements	—	—	(6.2)	(3.9)
Foreign exchange and other	—	—	(24.0)	(9.6)
Fair value of plan assets, ending	\$ —	\$ —	\$ 181.2	\$ 279.4
Funded status, net liability (asset)	\$ 9.4	\$ 12.5	\$ 2.1	\$ (3.9)

The following table presents the balance sheet location of the Company's pension liabilities and assets:

	December 31,			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Accrued and other liabilities	\$ (0.9)	\$ (0.7)	\$ (0.7)	\$ (0.4)
Other noncurrent liabilities	(8.5)	(11.8)	(15.3)	(22.0)
Other noncurrent assets	—	—	13.9	26.3

The accumulated benefit obligation for the Company's U.S. defined benefit pension plans was \$9.4 million and \$12.5 million as of December 31, 2022 and 2021, respectively, and the accumulated benefit obligation for the Company's non-U.S. defined benefit pension plans was \$159.9 million and \$233.2 million as of December 31, 2022 and 2021, respectively.

The following table summarizes information for the Company's pension plans with an accumulated benefit obligation in excess of plan assets:

	December 31,			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Projected benefit obligation	\$ 9.4	\$ 12.5	\$ 44.1	\$ 48.8
Accumulated benefit obligation	9.4	12.5	41.3	45.9
Fair value of plan assets	—	—	28.4	27.4

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Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The following table summarizes pretax amounts included in accumulated other comprehensive loss:

	December 31,			
	U.S. Plans		Non-U.S. Plans	
	2022	2021	2022	2021
Unrecognized net actuarial gain (loss)	\$ 1.0	\$ (1.7)	\$ (16.5)	\$ (13.6)
Unrecognized prior service cost	—	—	—	(0.1)
Total	<u>\$ 1.0</u>	<u>\$ (1.7)</u>	<u>\$ (16.5)</u>	<u>\$ (13.7)</u>

Actuarial gains and losses are amortized using a corridor approach. The corridor is equal to 10% of the greater of the benefit obligation and the fair value of the assets. Gains and losses in excess of the corridor are generally amortized over the average remaining life of the plan participants. Pretax amounts for net periodic benefit cost and other amounts included in other comprehensive income (loss) for the defined benefit pension plans consisted of the following components:

	Year Ended December 31,					
	U.S. Plans			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
Service cost	\$ —	\$ —	\$ —	\$ 5.7	\$ 6.8	\$ 4.3
Interest cost	0.3	0.3	0.3	3.7	3.1	4.0
Recognized actuarial loss	0.1	0.1	0.1	0.1	1.6	1.3
Expected return on plan assets	—	—	—	(4.9)	(6.4)	(7.0)
Settlement loss	—	—	—	1.6	0.3	1.5
Curtailment gain	—	—	—	—	(2.5)	—
Net periodic benefit cost	<u>\$ 0.4</u>	<u>\$ 0.4</u>	<u>\$ 0.4</u>	<u>\$ 6.2</u>	<u>\$ 2.9</u>	<u>\$ 4.1</u>
Changes in plan assets and benefit obligations included in other comprehensive income (loss):						
Change in unrecognized net actuarial loss (gain)	\$ (2.7)	\$ (0.6)	\$ 1.0	\$ 2.9	\$ (28.0)	\$ 13.4
Change in unrecognized prior service cost	—	—	—	(0.1)	(0.4)	(0.2)
Curtailment and settlements	—	—	—	—	(1.8)	(1.5)
Total included in other comprehensive income (loss)	<u>\$ (2.7)</u>	<u>\$ (0.6)</u>	<u>\$ 1.0</u>	<u>\$ 2.8</u>	<u>\$ (30.2)</u>	<u>\$ 11.7</u>
Total recognized in net periodic benefit cost and included in other comprehensive income (loss)	<u>\$ (2.3)</u>	<u>\$ (0.2)</u>	<u>\$ 1.4</u>	<u>\$ 9.0</u>	<u>\$ (27.3)</u>	<u>\$ 15.8</u>

The Company reports the service cost component of net periodic benefit cost in the same line item as other compensation costs arising from the services rendered by the employee and records the other components of net periodic benefit cost in other expense, net.

Assumptions

Significant weighted average assumptions used in determining benefit obligations and net periodic benefit cost are as follows:

	U.S. Plans			Non-U.S. Plans		
	2022	2021	2020	2022	2021	2020
Benefit obligations:						
Discount rate	4.99 %	2.55 %	2.07 %	4.37 %	1.47 %	1.02 %
Rate of compensation increase	— %	— %	— %	3.36 %	3.79 %	3.59 %
Net periodic benefit cost:						
Discount rate	2.55 %	2.07 %	2.95 %	1.47 %	1.02 %	1.65 %
Rate of return on plan assets	— %	— %	— %	4.03 %	1.96 %	2.33 %
Rate of compensation increase	— %	— %	— %	3.79 %	3.59 %	3.74 %

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The Company considered the available yields on high-quality fixed-income investments with maturities corresponding to the Company's expected benefit obligations to determine the discount rates at each measurement date.

Plan Assets

In developing the expected rate of return on plan assets, the Company considered the expected long-term rate of return on individual asset classes. Expected return on plan assets is based on the market value of the assets. The majority of the non-U.S. pension assets are managed by independent investment advisors. In general, the investment strategy is designed to accumulate a diversified portfolio among markets, asset classes or individual securities in order to reduce market risk and assure that the pension assets are available to pay benefits as they come due.

Mutual funds classified as Level 1 are valued at net asset value, which is based on the fair value of the funds' underlying securities. Certain mutual funds are classified as Level 2 because a portion of the funds' underlying assets are valued using significant other observable inputs. Other assets are primarily composed of fixed income investments (including insurance and real estate products) and are valued based on the investment's stated rate of return, which approximates market interest rates.

The Company had no U.S. defined benefit pension plan assets as of December 31, 2022 or 2021. The estimated fair values and the valuation input levels of the Company's non-U.S. defined benefit pension plan assets are as follows:

December 31, 2022			
Non-U.S. Plans			
	Level 1 Fair Value		Level 2 Fair Value
Mutual funds:			
International equity	\$ 19.7	\$	7.7
International debt	36.8		76.0
Absolute return	—		3.8
Other	7.7		29.5
Total	<u>\$ 64.2</u>	<u>\$</u>	<u>117.0</u>
December 31, 2021			
Non-U.S. Plans			
	Level 1 Fair Value		Level 2 Fair Value
Mutual funds:			
International equity	\$ 25.6	\$	32.2
International debt	47.4		126.5
Absolute return	—		9.5
Other	9.6		28.6
Total	<u>\$ 82.6</u>	<u>\$</u>	<u>196.8</u>

Expected Cash Flows

The Company expects to contribute \$0.9 million to U.S. defined benefit pension plans and \$4.2 million to non-U.S. defined benefit pension plans during 2023.

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Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The following table summarizes projected benefit payments from pension plans through 2032, including benefits attributable to estimated future service (in millions):

	U.S. Plans	Non-U.S. Plans
2023	\$ 0.9	\$ 14.8
2024	0.9	10.0
2025	0.9	10.3
2026	0.9	13.8
2027	0.8	11.6
2028-2032	3.7	57.5

12. INCOME TAXES

Loss before income taxes includes the results from domestic and international operations as follows:

	Year Ended December 31,		
	2022	2021	2020
U.S. companies	\$ (1,359.2)	\$ (541.0)	\$ (689.7)
Non-U.S. companies	59.2	6.5	35.2
Loss before income taxes	<u>\$ (1,300.0)</u>	<u>\$ (534.5)</u>	<u>\$ (654.5)</u>

The components of income tax benefit were as follows:

	Year Ended December 31,		
	2022	2021	2020
Current:			
Federal	\$ 42.0	\$ (19.1)	\$ (0.1)
Foreign	45.5	86.7	67.3
State	17.8	8.0	6.4
Current income tax expense	<u>\$ 105.3</u>	<u>\$ 75.6</u>	<u>\$ 73.6</u>
Deferred:			
Federal	\$ (90.7)	\$ (123.9)	\$ (131.0)
Foreign	(17.1)	(14.0)	(7.1)
State	(10.6)	(9.6)	(16.6)
Deferred income tax benefit	<u>\$ (118.4)</u>	<u>\$ (147.5)</u>	<u>\$ (154.7)</u>
Total income tax benefit	<u>\$ (13.1)</u>	<u>\$ (71.9)</u>	<u>\$ (81.1)</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
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The reconciliation of income taxes calculated at the statutory U.S. federal income tax rate to the Company's benefit for income taxes was as follows:

	Year Ended December 31,		
	2022	2021	2020
Benefit for income taxes at federal statutory rate	\$ (273.0)	\$ (112.2)	\$ (137.4)
State income taxes, net of federal tax effect	(8.4)	(20.9)	(21.6)
Other permanent items	12.5	7.0	11.0
Equity-based compensation	(5.6)	7.0	16.1
Other changes in tax laws and tax rulings	4.7	37.9	(38.2)
Goodwill related items	232.0	2.8	42.8
Base erosion and anti-abuse tax	—	10.2	—
Foreign-derived intangible income deduction	(7.4)	(7.5)	(3.8)
Federal tax credits	(26.4)	(23.2)	(23.4)
Change in unrecognized tax benefits	(7.1)	(13.2)	(2.6)
Withholding taxes and Subpart F income, net of foreign tax credits	48.8	19.7	23.6
Foreign earnings taxed at other than federal rate	6.6	5.6	20.9
Tax provision adjustments and revisions to prior years' returns	(3.2)	(5.8)	7.1
Change in valuation allowances	13.4	20.7	24.4
Total benefit for income taxes	<u>\$ (13.1)</u>	<u>\$ (71.9)</u>	<u>\$ (81.1)</u>

The components of deferred income tax assets and liabilities and the classification of deferred tax balances on the balance sheet were as follows:

	December 31,	
	2022	2021
Deferred tax assets:		
Accounts receivable, inventory and warranty reserves	\$ 138.3	\$ 109.4
Employee benefits	60.4	50.9
Foreign net operating loss and tax credit carryforwards	573.3	649.0
Federal net operating loss and tax credit carryforwards	22.0	115.2
State net operating loss and tax credit carryforwards	103.6	108.9
Unrecognized tax benefits	30.8	43.0
Interest limitation	75.4	51.7
Capitalized research and development costs	471.6	391.6
Other	92.6	85.9
Total deferred tax assets	1,568.0	1,605.6
Valuation allowance	(643.1)	(706.7)
Total deferred tax assets, net of valuation allowance	<u>\$ 924.9</u>	<u>\$ 898.9</u>
Deferred tax liabilities:		
Intangible assets	\$ (542.7)	\$ (629.7)
Property, plant and equipment	(15.3)	(19.1)
Undistributed foreign earnings	(20.6)	(17.6)
Other	(13.0)	(13.6)
Total deferred tax liabilities	<u>\$ (591.6)</u>	<u>\$ (680.0)</u>
Net deferred tax asset	<u>\$ 333.3</u>	<u>\$ 218.9</u>
Deferred taxes recognized on the balance sheet:		
Noncurrent deferred tax asset (included with other noncurrent assets)	\$ 506.7	\$ 427.1
Noncurrent deferred tax liability	(173.4)	(208.2)
Net deferred tax asset	<u>\$ 333.3</u>	<u>\$ 218.9</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The deferred tax asset for foreign net operating loss and tax credit carryforwards as of December 31, 2022 includes foreign net operating loss carryforwards (net of federal tax effects) of \$560.3 million, which begin to expire in 2023, and foreign tax credit carryforwards (net of federal tax effects) of \$13.0 million, which begin to expire in 2023. Certain of these foreign net operating loss carryforwards are subject to local restrictions limiting their utilization. Valuation allowances of \$542.8 million have been established related to these foreign deferred tax assets.

The deferred tax asset for federal net operating loss and tax credit carryforwards as of December 31, 2022 relates to \$4.9 million of net operating loss carryforwards, which begin to expire in 2030 and \$17.1 million of U.S. foreign tax credit carryforwards, which begin to expire in 2028. A valuation allowance of \$17.1 million has been established against these deferred tax assets.

The deferred tax asset for state net operating loss and tax credit carryforwards as of December 31, 2022 includes state net operating loss carryforwards (net of federal tax impact) of \$37.3 million, which begin to expire in 2023, and state tax credit carryforwards (net of federal tax impact) of \$66.3 million, which begin to expire in 2023. A valuation allowance of \$79.8 million has been established against these and other state income tax related deferred tax assets.

In addition to the valuation allowances detailed above, the Company has also established a valuation allowance of \$3.4 million against other deferred tax assets.

Under current U.S. tax regulations, in general, repatriation of foreign earnings to the U.S. can be completed with no incremental U.S. tax. However, repatriation of foreign earnings could subject the Company to U.S. state and non-U.S. jurisdictional taxes (including withholding taxes) on distributions. As of December 31, 2022, the Company has a deferred tax liability of \$20.6 million for the estimated foreign and state tax costs associated with the expected repatriation of the Company's undistributed foreign earnings. The unrecorded deferred tax liability for foreign and state tax costs associated with earnings considered permanently reinvested is not material as of December 31, 2022.

The following table reflects a reconciliation of the beginning and end of period amounts of gross unrecognized tax benefits, excluding interest and penalties:

	Year Ended December 31,		
	2022	2021	2020
Balance at beginning of period	\$ 176.6	\$ 190.5	\$ 191.9
Increase related to prior periods	1.1	0.7	2.5
Decrease related to prior periods	(23.3)	(0.3)	(4.5)
Increase related to current periods	5.1	5.9	5.0
Decrease related to settlements with taxing authorities	(13.4)	(7.5)	(0.9)
Decrease related to lapse in statutes of limitations	(0.6)	(12.7)	(2.6)
Decrease related to the ARRIS acquisition	—	—	(0.9)
Balance at end of period	<u>\$ 145.5</u>	<u>\$ 176.6</u>	<u>\$ 190.5</u>

The Company's liability for unrecognized tax benefits that, if recognized, would favorably affect the effective tax rate in future periods was \$115.6 million as of December 31, 2022. The Company operates in numerous jurisdictions worldwide and is subject to routine tax audits on a regular basis. The determination of the Company's unrecognized tax benefits involves significant management judgment regarding interpretation of relevant facts and tax laws in each of these jurisdictions.

Unrecognized tax benefits are reviewed and evaluated on an ongoing basis and may be adjusted for changing facts and circumstances including the lapse of applicable statutes of limitation and closure of tax examinations. Although the timing and outcome of such events are difficult to predict, the Company estimates that the balance of unrecognized tax benefits, excluding the impact of accrued interest and penalties, may be reduced by up to \$7.0 million within the next twelve months.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The Company provides for interest and penalties related to unrecognized tax benefits as income tax expense. The Company accrued \$9.4 million for interest and penalties as of both December 31, 2022 and 2021. During the years ended December 31, 2022, 2021 and 2020 the net expense (benefit) for interest and penalties recognized through income tax benefit was \$0.1 million, \$(0.1) million and \$(1.3) million, respectively.

The Company files federal, state and local tax returns with statutes of limitation generally ranging from 3 to 4 years. The Company is currently undergoing a U.S. federal income tax audit for the 2019 tax year and is generally no longer subject to state and local tax examinations for years prior to 2019. Tax returns filed by the Company's significant foreign subsidiaries are generally subject to statutes of limitation of 3 to 7 years and are generally no longer subject to examination for years prior to 2017. In many jurisdictions, tax authorities retain the ability to review prior years' tax returns and to adjust any net operating loss or tax credit carryforwards from these years that are available to be utilized in subsequent periods. During 2022, the Company recognized \$9.7 million (net of payments) related to the lapse of applicable statutes of limitations and the conclusion of various domestic and foreign examinations.

The following table presents income tax expense (benefit) related to amounts presented in other comprehensive income (loss):

	Year Ended December 31,		
	2022	2021	2020
Foreign currency translation	\$ 1.2	\$ 1.2	\$ (5.0)
Defined benefit plans	0.8	6.6	(3.5)
Total	<u>\$ 2.0</u>	<u>\$ 7.8</u>	<u>\$ (8.5)</u>

13. SERIES A CONVERTIBLE PREFERRED STOCK

On April 4, 2019, the Company issued and sold 1,000,000 shares of the Convertible Preferred Stock for \$1.0 billion, or \$1,000 per share, pursuant to an Investment Agreement between the Company and The Carlyle Group (Carlyle), dated November 8, 2018 (the Investment Agreement). As of December 31, 2022, the Company had authorized 1,200,000 shares of Series A Convertible Preferred Stock.

Dividend Rights

The Convertible Preferred Stock ranks senior to the shares of the Company's common stock, with respect to dividend rights and rights on the distribution of assets on any voluntary or involuntary liquidation, dissolution or winding up of the affairs of the Company. The Convertible Preferred Stock has a liquidation preference of \$1,000 per share. Holders of the Convertible Preferred Stock are entitled to a cumulative dividend at the rate of 5.5% per year, payable quarterly in arrears. If CommScope does not declare and pay a dividend, the dividend rate will increase by 2.5% to 8.0% per year (and that rate will increase by an additional 0.50% every three months until such unpaid dividend is declared and paid, subject to a cap of 11.0% per year) until all accrued but unpaid dividends have been paid in full. Dividends can be paid in cash, in-kind through the issuance of additional shares of Convertible Preferred Stock or any combination of the two, at the Company's option.

During the years ended December 31, 2022, 2021 and 2020, the Company paid cash dividends of \$14.9 million, \$43.0 million and \$14.3 million, respectively, and dividends in-kind of \$44.1 million, \$14.3 million and \$41.8 million, respectively, which were recorded as additional Convertible Preferred Stock on the Consolidated Balance Sheets.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Conversion Features

The Convertible Preferred Stock is convertible at the option of the holders at any time into shares of CommScope common stock at an initial conversion rate of 36.3636 shares of common stock per share of the Convertible Preferred Stock (equivalent to \$27.50 per common share). The conversion rate is subject to customary anti-dilution and other adjustments. At any time after the third anniversary of the issuance of the Convertible Preferred Stock, if the volume weighted average price of CommScope's common stock exceeds the conversion price of \$49.50, as may be adjusted pursuant to the Certificate of Designations, for at least thirty trading days in any period of forty-five consecutive trading days (including the final five trading days of any such forty-five-trading day period) all of the Convertible Preferred Stock may be converted at the election of CommScope into the relevant number of shares of CommScope common stock.

Redemption Rights

On any date during the three months following the eight year and six-month anniversary of the Investment Agreement closing date and the three months following each anniversary thereafter, holders of the Convertible Preferred Stock will have the right to require CommScope to redeem all or any portion of the Convertible Preferred Stock at 100% of the liquidation preference thereof plus all accrued and unpaid dividends. The redemption price is payable, at the Company's option, in cash or a combination of cash and common stock, subject to certain restrictions.

Upon certain change of control events involving CommScope, CommScope has the right, subject to the holder's right to convert prior to such redemption, to redeem all of the Convertible Preferred Stock for the greater of (i) an amount in cash equal to the sum of the liquidation preference of the Convertible Preferred Stock, all accrued but unpaid dividends and, if the applicable redemption date is prior to the fifth anniversary of the first dividend payment date, the present value, discounted at a rate of 10%, of any remaining scheduled dividends through the five year anniversary of the first dividend payment date, assuming CommScope chose to pay such dividends in cash and (ii) the consideration the holders would have received if they had converted their shares of the Convertible Preferred Stock into CommScope common stock immediately prior to the change of control event.

To the extent that CommScope does not exercise the redemption right described above, following the effective date of any such change of control event, the holders of the Convertible Preferred Stock can require CommScope to repurchase the Convertible Preferred Stock at the greater of (i) an amount in cash equal to 100% of the liquidation preference thereof plus all accrued but unpaid dividends and (ii) the consideration the holders would have received if they had converted their shares of the Convertible Preferred Stock into CommScope common stock immediately prior to the change of control event.

Voting Rights

Holders of the Convertible Preferred Stock are entitled to vote with the holders of the Company's common stock on an as-converted basis. Holders of the Convertible Preferred Stock are entitled to a separate class vote with respect to, among other things, amendments to CommScope's organizational documents that have an adverse effect on the Convertible Preferred Stock, issuances by CommScope of securities that are senior to, or equal in priority with, the Convertible Preferred Stock and issuances of shares of the Convertible Preferred Stock after the closing date of the Acquisition, other than shares issued as dividends with respect to shares of the Convertible Preferred Stock.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

14. STOCKHOLDERS' EQUITY

Equity-Based Compensation Plans

In 2019, the Company's stockholders approved the 2019 Long-Term Incentive Plan authorizing 8.0 million shares for issuance, plus additional shares underlying awards outstanding under the predecessor plans. Subsequently, in each of the years 2020, 2021 and 2022, the Company's stockholders approved the Amended and Restated 2019 Long-Term Incentive Plan (the 2019 Plan) and authorized an additional aggregate 15.8 million shares for issuance. All future equity awards will be made from the 2019 Plan. Awards under the 2019 Plan may include stock options, stock appreciation rights, restricted stock, stock units (including restricted stock units (RSUs) and deferred stock units), performance awards (represents any of the awards already listed with a performance-vesting component), other stock-based awards and cash-based awards. As of December 31, 2022, there were 3.9 million shares available for future grants under the 2019 Plan.

As of December 31, 2022, \$89.0 million of total unrecognized compensation expense related to unvested stock options, RSUs and performance share units (PSUs) is expected to be recognized over a remaining weighted average period of 1.9 years. There were no significant capitalized equity-based compensation costs at December 31, 2022.

The following table shows a summary of the equity-based compensation expense included in the Consolidated Statements of Operations:

	Year Ended December 31,		
	2022	2021	2020
Selling, general and administrative	\$ 34.6	\$ 40.7	\$ 63.0
Research and development	18.3	25.8	33.5
Cost of sales	8.2	13.1	18.5
Total equity-based compensation expense	<u>\$ 61.1</u>	<u>\$ 79.6</u>	<u>\$ 115.0</u>

The Company believes the valuation techniques and the approaches utilized to develop the underlying assumptions are appropriate in estimating the fair values of its equity-based compensation. Estimates of fair value are not intended to predict actual future events or the value ultimately realized by employees who receive equity awards. Subsequent events are not indicative of the reasonableness of the original estimates of fair value made by the Company.

Stock Options

Stock options are awards that allow the recipient to purchase shares of the Company's common stock at a fixed price. Stock options are granted at an exercise price equal to the Company's stock price at the date of grant. The Company uses the Black-Scholes model to estimate the fair value of stock options at the date of grant. These awards generally vest over five years following the grant date and have a contractual term of ten years. There were 2.3 million options outstanding as of December 31, 2022 with no intrinsic value and the majority were vested. There were no stock options granted during the years ended December 31, 2022, 2021 or 2020. The intrinsic value of options exercised during the years ended December 31, 2022, 2021 and 2020 was \$0.1 million, \$5.4 million and \$7.1 million, respectively.

Restricted Stock Units

RSUs entitle the holder to shares of common stock after a vesting period of generally three years. The fair value of the awards is determined on the grant date based on the Company's stock price.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The following table summarizes the RSU activity (in millions, except per share data):

	Restricted Stock Units	Weighted Average Grant Date Fair Value Per Share
Non-vested share units at December 31, 2021	10.4	\$ 15.04
Granted	7.3	\$ 8.05
Vested and shares issued	(5.1)	\$ 14.99
Forfeited	(1.4)	\$ 14.02
Non-vested share units at December 31, 2022	11.2	\$ 10.66

The weighted average grant date fair value per unit of these awards granted during the years ended December 31, 2022, 2021 and 2020 was \$8.05, \$20.19 and \$10.49, respectively. The total fair value of RSUs that vested during the years ended December 31, 2022, 2021 and 2020 was \$76.5 million, \$82.4 million and \$76.0 million, respectively.

Performance Share Units

PSUs are stock awards in which the number of shares ultimately received by the employee depends on achievement towards a performance measure. Certain of CommScope's PSUs have an internal performance measure and the awards vest at the end of three years. The number of shares issued under these awards can vary between 0% and 300% of the number of PSUs granted. The fair value of these awards is determined on the date of grant based on the Company's stock price.

CommScope also has PSUs with a market condition performance measure based on stock price milestones over a three-year period. The number of shares issued under these awards can vary between 0% to 100% of the number of PSUs granted. In addition, the Company has PSUs with a market condition based on the Company's total stockholder return (TSR) ranking relative to the S&P 500 TSR for a three-year period. The number of shares issued under these awards can vary between 0% to 200% of the number of PSUs granted. The Company uses a Monte Carlo simulation model to estimate the fair value of PSUs with a market condition performance measure at the date of grant. Key assumptions used in the model include the risk-free interest rate, which reflects the yield on zero-coupon U.S. treasury securities, and stock price volatility, which is derived based on the historical volatility of the Company's stock.

The following table presents the weighted average assumptions used to estimate the fair value of these awards granted:

	Year Ended December 31,		
	2022	2021	2020
Risk-free interest rate	1.7%	0.4%	0.2%
Expected volatility	61.2%	56.0%	51.7%
Weighted average fair value at grant date	\$ 11.21	\$ 11.21	\$ 4.03

The following table summarizes the PSU activity (in millions, except per share data):

	Performance Share Units	Weighted Average Grant Date Fair Value Per Share
Non-vested share units at December 31, 2021	2.1	\$ 7.69
Granted	1.4	\$ 9.51
Vested and shares issued	(0.4)	\$ 8.13
Forfeited	(0.2)	\$ 15.91
Non-vested share units at December 31, 2022	2.9	\$ 8.14

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The weighted average grant date fair value per unit of these awards granted during the years ended December 31, 2022, 2021 and 2020 was \$9.51, \$14.47 and \$4.63, respectively. The total fair value of PSUs that vested during the years ended December 31, 2022, 2021 and 2020 was \$3.5 million, \$1.0 million, and \$18.4 million, respectively.

15. COMMITMENTS AND CONTINGENCIES

The following table summarizes the activity in the product warranty accrual, included in accrued and other liabilities and other noncurrent liabilities:

	Year Ended December 31,		
	2022	2021	2020
Product warranty accrual, beginning of period	\$ 66.8	\$ 59.5	\$ 61.0
Provision for warranty claims	24.7	38.5	30.9
Warranty claims paid	(36.1)	(30.8)	(32.4)
Foreign exchange	(0.4)	(0.4)	—
Product warranty accrual, end of period	<u>\$ 55.0</u>	<u>\$ 66.8</u>	<u>\$ 59.5</u>

Third-Party Guarantees

The Company was contingently liable under open standby letters of credit issued by its banks to support performance obligations of a third-party contractor that totaled \$44.0 million as of December 31, 2022. These amounts represent an estimate of the maximum amounts the Company would expect to incur upon the contractual non-performance of the third-party contractor, but the Company also has cross-indemnities in place that may enable it to recover amounts in the event of non-performance by the third-party contractor. The Company believes the likelihood of having to perform under these guarantees is remote. There were no material amounts recorded in the consolidated financial statements related to third-party guarantee agreements as of and for the years ended December 31, 2022 or 2021. As of December 31, 2022, these instruments reduced the available borrowings under the Revolving Credit Facility.

Legal Proceedings

The Company is a party to certain intellectual property claims and also periodically receives notices asserting that its products infringe on another party's patents and other intellectual property rights. These claims and assertions, whether against the Company directly or against its customers, could require the Company to pay damages, royalties, stop offering the relevant products and/or cease other activities. The Company may also be called upon to indemnify certain customers for costs related to products sold to such customers. The outcome of these claims and notices is uncertain and a reasonable estimate of the loss from unfavorable outcomes in certain of these matters either cannot be determined or is estimated at the minimum amount of a range of estimates. The actual loss, through settlement or trial, could be material and may vary significantly from the Company's estimates. From time to time, the Company may also be involved as a plaintiff involving intellectual property claims. Gain contingencies, if any, are recognized when they are realized.

As of December 31, 2022 and 2021, the Company had liabilities of \$37.1 million and \$24.6 million, respectively, recorded in accrued and other liabilities and noncurrent liabilities on the Consolidated Balance Sheets related to certain intellectual property assertions that have been settled or are in the process of settlement. For the years ended December 31, 2022, 2021 and 2020, the Company recorded charges to cost of sales in the Consolidated Statements of Operations of \$31.0 million, \$48.6 million and \$7.8 million, respectively, related to these intellectual property assertions. The current year charges are reflected in the results of the Home, NICS and CCS segments. The Company paid \$21.0 million, \$56.1 million and \$109.0 million during the years ended December 31, 2022, 2021 and 2020, respectively, to settle intellectual property assertions.

During the year ended December 31, 2021, the Company received \$17.1 million in the settlement of a warranty indemnification matter that was assumed in the acquisition of ARRIS in 2019. The recovery was recorded as a reduction of cost of sales in the Consolidated Statements of Operations and is reflected in the results of the ANS segment.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The Company is either a plaintiff or a defendant in certain other pending legal matters in the normal course of business. Management believes none of these other pending legal matters will have a material adverse effect on the Company's business or financial condition upon final disposition.

The Company is subject to various federal, state, local and foreign laws and regulations governing the use, discharge, disposal and remediation of hazardous materials. Compliance with current laws and regulations has not had, and is not expected to have, a materially adverse effect on the Company's financial condition or results of operations.

16. INDUSTRY SEGMENTS, MAJOR CUSTOMERS, RELATED PARTY TRANSACTIONS AND GEOGRAPHIC INFORMATION

Segment Information

As of January 1, 2022, the Company reorganized its internal management and reporting structure to align its portfolio of products and solutions more closely with the markets it serves and provides better performance comparability with its competitive peer set. The reorganization changed the information regularly reviewed by the Company's chief operating decision maker for purposes of allocating resources and assessing performance. As a result, the Company is now reporting financial performance based on the following operating segments: CCS, OWN, NICS, ANS and Home. All prior period amounts below have been recast to reflect these operating segment changes.

The Connectivity and Cable Solutions (CCS) segment provides fiber optic and copper connectivity and cable solutions for use in telecommunications, cable television, residential broadband networks, data centers and business enterprises. The CCS portfolio includes network solutions for indoor and outdoor network applications. Indoor network solutions include optical fiber and twisted pair structured cable solutions, intelligent infrastructure management hardware and software and network rack and cabinet enclosures. Outdoor network solutions are used in both local-area and wide-area networks and "last mile" fiber-to-the-home installations, including deployments of fiber-to-the-node, fiber-to-the-premises and fiber-to-the-distribution point to homes, businesses and cell sites.

The Outdoor Wireless Networks (OWN) segment focuses on the macro and metro cell markets. The segment includes base station antennas, radio frequency (RF) filters, tower connectivity, microwave antennas, metro cell products, cabinets, steel, accessories and the wireless spectrum management business, Comsearch.

The Networking, Intelligent Cellular and Security Solutions (NICS) segment provides wireless networks for enterprises and service providers. Product offerings include indoor and outdoor Wi-Fi and long-term evolution (LTE) access points, access and aggregation switches; an Internet of Things suite, on-premises and cloud-based control and management systems; and software and software-as-a-service applications addressing security, location, reporting and analytics.

The Access Network Solutions (ANS) segment's product solutions include cable modem termination systems, video infrastructure, distribution and transmission equipment and cloud solutions that enable facility-based service providers to construct a state-of-the-art residential and metro distribution network.

The Home Networks (Home) segment includes subscriber-based solutions that support broadband and video applications. The broadband offerings in the Home segment include devices that provide residential connectivity to a service provider's network, such as digital subscriber line and cable modems and telephony and data gateways which incorporate routing and Wi-Fi functionality. Video offerings include set top boxes that support cable, satellite and IP television content delivery and include products such as digital video recorders, high definition set top boxes and hybrid set top devices.

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The following table provides summary financial information by reportable segment:

	December 31,	
	2022	2021
Identifiable segment-related assets:		
CCS	\$ 4,263.8	\$ 4,377.2
OWN	1,166.8	1,386.5
NICS	1,338.1	1,397.0
ANS	2,632.6	3,831.9
Home	1,379.3	1,479.5
Total identifiable segment-related assets	10,780.6	12,472.1
Reconciliation to total assets:		
Cash and cash equivalents	398.1	360.3
Deferred income tax assets	506.7	427.1
Total assets	<u>\$ 11,685.4</u>	<u>\$ 13,259.5</u>

The Company's measurement of segment performance is adjusted EBITDA (earnings before interest, income taxes, depreciation and amortization). The Company defines adjusted EBITDA as operating income (loss), adjusted to exclude depreciation, amortization of intangible assets, restructuring costs, asset impairments, equity-based compensation, transaction, transformation and integration costs and other items that the Company believes are useful to exclude in the evaluation of operating performance from period to period because these items are not representative of the Company's core business.

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Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

The following table provides net sales, adjusted EBITDA, depreciation expense and additions to property, plant and equipment by reportable segment:

	Year Ended December 31,		
	2022	2021	2020
Net sales:			
CCS	\$ 3,789.6	\$ 3,053.8	\$ 2,551.8
OWN	1,467.9	1,417.1	1,250.4
NICS	939.7	861.9	847.1
ANS	1,327.5	1,404.6	1,379.1
Home	1,703.4	1,849.3	2,407.5
Consolidated net sales	<u>\$ 9,228.1</u>	<u>\$ 8,586.7</u>	<u>\$ 8,435.9</u>
Segment adjusted EBITDA:			
CCS	\$ 643.6	\$ 448.9	\$ 447.5
OWN	269.7	266.8	277.3
NICS	51.9	(15.3)	12.8
ANS	285.2	391.1	346.3
Home	26.3	25.5	131.3
Total segment adjusted EBITDA	1,276.7	1,117.0	1,215.2
Amortization of intangible assets	(543.0)	(613.0)	(630.5)
Restructuring costs, net	(62.9)	(91.9)	(88.4)
Equity-based compensation	(61.1)	(79.6)	(115.0)
Asset impairments	(1,119.6)	(13.7)	(206.7)
Transaction, transformation and integration costs	(38.2)	(90.3)	(24.9)
Acquisition accounting adjustments	(7.3)	(11.5)	(20.6)
Patent claims and litigation settlements	(28.5)	(31.7)	(16.3)
Executive severance	—	—	(6.3)
Reserve of Russian accounts receivable	(2.7)	—	—
Depreciation	(127.2)	(136.7)	(158.3)
Consolidated operating income (loss)	<u>\$ (713.8)</u>	<u>\$ 48.6</u>	<u>\$ (51.8)</u>
Depreciation expense:			
CCS	\$ 58.8	\$ 53.6	\$ 53.9
OWN	14.3	15.4	17.2
NICS	15.0	19.2	21.0
ANS	22.5	25.8	31.1
Home	16.6	22.7	35.1
Consolidated depreciation expense	<u>\$ 127.2</u>	<u>\$ 136.7</u>	<u>\$ 158.3</u>
Additions to property, plant and equipment:			
CCS	\$ 64.6	\$ 81.5	\$ 61.8
OWN	9.9	11.0	12.8
NICS	7.0	13.4	10.1
ANS	11.1	14.6	10.3
Home	8.7	10.9	26.2
Consolidated additions to property, plant and equipment	<u>\$ 101.3</u>	<u>\$ 131.4</u>	<u>\$ 121.2</u>

CommScope Holding Company, Inc.
Notes to Consolidated Financial Statements-(Continued)
(In millions, unless otherwise noted)

Customer and Supplier Information

No direct customer accounted for 10% or more of the Company's total net sales during the years ended December 31, 2022 or 2021. Net sales to Comcast Corporation and affiliates (Comcast) accounted for 11% of the Company's net sales during the year ended December 31, 2020. Net sales to Comcast are mostly derived from the Home, ANS and CCS segments. Other than Comcast, no direct customer accounted for 10% or more of the Company's total net sales during the year ended December 31, 2020. Accounts receivable from Charter Communications, Inc. (Charter) represented approximately 12% of accounts receivable as of December 31, 2022. Other than Charter, no direct customer accounted for 10% or more of the Company's accounts receivable as of December 31, 2022. No direct customers accounted for 10% or more of the Company's accounts receivable as of December 31, 2021.

The Company relies on sole suppliers or a limited group of suppliers for certain key components, subassemblies and modules and a limited group of contract manufacturers to manufacture a significant portion of its products. Any disruption or termination of these arrangements could have a material adverse impact on the Company's results of operations.

Related Party Transactions

See Note 13 for a discussion of the Convertible Preferred Stock issued to Carlyle to finance the ARRIS acquisition. Other than transactions related to the Convertible Preferred Stock, there were no material related party transactions for the years ended December 31, 2022, 2021 or 2020.

Geographic Information

Sales to customers located outside of the U.S. comprised 38%, 42% and 39% of total net sales during the years ended December 31, 2022, 2021 and 2020, respectively. Sales by geographic region, based on the destination of product shipments or service provided, were as follows:

	Year Ended December 31, 2022					
	CCS	OWN	NICS	ANS	Home	Total
Geographic Region:						
United States (U.S.)	\$ 2,513.6	\$ 1,062.6	\$ 539.5	\$ 902.4	\$ 732.4	\$ 5,750.5
Europe, Middle East and Africa (EMEA)	571.9	218.0	250.7	124.2	430.2	1,595.0
Asia Pacific (APAC)	431.4	120.8	114.1	79.2	79.0	824.5
Caribbean and Latin America (CALA)	179.3	32.8	20.3	164.3	199.0	595.7
Canada	93.4	33.7	15.1	57.4	262.8	462.4
Consolidated net sales	<u>\$ 3,789.6</u>	<u>\$ 1,467.9</u>	<u>\$ 939.7</u>	<u>\$ 1,327.5</u>	<u>\$ 1,703.4</u>	<u>\$ 9,228.1</u>
	Year Ended December 31, 2021					
	CCS	OWN	NICS	ANS	Home	Total
Geographic Region:						
United States	\$ 1,823.6	\$ 894.3	\$ 490.4	\$ 824.5	\$ 927.7	\$ 4,960.5
Europe, Middle East and Africa	548.0	272.4	238.2	146.7	415.3	1,620.6
Asia Pacific	439.8	150.7	102.5	131.4	114.2	938.6
Caribbean and Latin America	169.1	44.6	18.3	246.8	220.2	699.0
Canada	73.3	55.1	12.5	55.2	171.9	368.0
Consolidated net sales	<u>\$ 3,053.8</u>	<u>\$ 1,417.1</u>	<u>\$ 861.9</u>	<u>\$ 1,404.6</u>	<u>\$ 1,849.3</u>	<u>\$ 8,586.7</u>

Long-lived assets, excluding intangible assets, consist substantially of property, plant and equipment and right of use assets. The Company's long-lived assets, excluding intangible assets, located in the U.S., EMEA, APAC and CALA regions represented the following percentages of such long-lived assets: 60%, 14%, 18% and 8%, respectively, as of December 31, 2022 and 63%, 13%, 18% and 6%, respectively, as of December 31, 2021.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of the Chief Executive Officer (CEO) and Chief Financial Officer (CFO), evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of the end of the period covered by this report.

Based on this evaluation, our CEO and CFO have concluded that, as of the end of the period covered by this report, these disclosure controls and procedures were effective and operating to provide reasonable assurance that information that we are required to disclose in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission, and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

The management of CommScope is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) under the Exchange Act, as a process designed by, or under the supervision of, the company's principal executive and principal financial officers and effected by the company's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that:

- Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the consolidated financial statements.

CommScope's management assessed the effectiveness of CommScope's internal control over financial reporting as of December 31, 2022. In making this assessment, CommScope's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013). Based on this assessment, management concluded that, as of December 31, 2022, CommScope's internal control over financial reporting is effective based on the COSO internal control criteria.

CommScope's independent registered public accounting firm, Ernst & Young LLP, has issued an attestation report on the effectiveness of CommScope's internal control over financial reporting, which is included in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal controls over financial reporting during the quarter ended December 31, 2022 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Inherent Limitations of Disclosure Controls and Internal Control over Financial Reporting

Because of their inherent limitations, our disclosure controls and procedures and our internal control over financial reporting may not prevent all material errors or fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. The effectiveness of our disclosure controls and procedures and our internal control over financial reporting is subject to risks, including that the controls may become inadequate because of changes in conditions or that the degree of compliance with our policies or procedures may deteriorate.

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information responsive to this item is incorporated herein by reference to our Proxy Statement for our 2023 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

Code of Ethics for Principal Executive and Senior Financial and Accounting Officers

We have adopted the CommScope Holding Company, Inc. Code of Ethics for Principal Executive and Senior Financial and Accounting Officers (the Senior Officer Code of Ethics), a code of ethics that applies to our Chief Executive Officer, Chief Financial Officer and Chief Accounting Officer. The Senior Officer Code of Ethics is publicly available on our web site at www.commscope.com. If we make an amendment to, or grant a waiver from, a provision of the Senior Officer Code of Ethics, we will disclose the nature of such waiver or amendment on our web site.

ITEM 11. EXECUTIVE COMPENSATION

The information responsive to this item is incorporated herein by reference to our Proxy Statement for our 2023 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information responsive to this item is incorporated herein by reference to our Proxy Statement for our 2023 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information responsive to this item is incorporated herein by reference to our Proxy Statement for our 2023 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information responsive to this item is incorporated herein by reference to our Proxy Statement for our 2023 annual meeting of stockholders to be filed with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed as Part of this Report:

1. *Audited Consolidated Financial Statements*

The following consolidated financial statements of CommScope Holding Company, Inc. are included under Part II, Item 8:

Reports of Independent Registered Public Accounting Firm

Consolidated Statements of Operations for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statements of Comprehensive Loss for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Balance Sheets as of December 31, 2022 and 2021

Consolidated Statements of Cash Flows for the Years Ended December 31, 2022, 2021 and 2020

Consolidated Statements of Stockholders' Equity (Deficit) for the Years Ended December 31, 2022, 2021 and 2020

Notes to Consolidated Financial Statements

2. *Financial Statement Schedules*

All schedules are omitted because they are not applicable or the required information is shown in the financial statements or notes thereto.

3. *List of Exhibits.* See Index of Exhibits included herein.

Index of Exhibits

Exhibit No.	Description
* 2.2	Bid Conduct Agreement, dated November 8, 2018, among CommScope Holding Company, Inc. and ARRIS International plc (the Bid Conduct Agreement) (Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on November 8, 2018).
* 2.3	First Amendment to Bid Conduct Agreement, dated January 2, 2019, between CommScope Holding Company, Inc. and ARRIS International plc (Incorporated by reference to Exhibit 2.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on January 3, 2019).
* 3.1	Amended and Restated Certificate of Incorporation of CommScope Holding Company, Inc. (Incorporated by reference to Exhibit 3.1 of the Registrant's Form 10-Q (File No. 001-36146), filed with the SEC on November 7, 2013).
* 3.2	Certificate of Designations Designating Series A Preferred Stock (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).
* 3.3	Certificate of Amendment of Amended and Restated Certificate of Incorporation of CommScope Holding Company, Inc. (Incorporated by reference to Exhibit 3.2 of the Registrant's Registration Statement on Form S-8 (File No. 333-256539), filed with the SEC on May 27, 2021).
* 3.4	Fifth Amended and Restated By-Laws of CommScope Holding Company, Inc. (as adopted May 7, 2021) (Incorporated by reference to Exhibit 3.1 of the Registrant's Form 10-Q (File No. 001-36146), filed with the SEC on November 4, 2021).
* 4.1	Indenture governing the 6.000% Senior Notes due 2025 by and between the CommScope Technologies Finance LLC and Wilmington Trust, National Association, as trustee, dated as of June 11, 2015 (including form of 6.000% Senior Note due 2025) (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on June 12, 2015).
* 4.2	First Supplemental Indenture, dated August 28, 2015, by and among CommScope Technologies LLC, the Guarantors party thereto and Wilmington Trust, National Association, as trustee (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on August 28, 2015).
* 4.3	Indenture governing the 5.000% Senior Notes due 2027, by and among CommScope Technologies LLC, the guarantors named therein and Wilmington Trust, National Association, as trustee and as collateral agent, dated as of March 13, 2017, (including form of 5.000% Senior Note due 2027) (Incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on March 13, 2017).
* 4.4	Indenture, dated as of February 19, 2019, by and between the Escrow Issuer and Wilmington Trust, National Association, as trustee, including the form of 8.25% Senior Note due 2027 (Incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on February 19, 2019).
* 4.5	First Supplemental Indenture, dated as of April 4, 2019, by and among CommScope, Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee (Incorporated by reference to Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).

- * 4.6 Indenture, dated as of February 19, 2019, by and between the Escrow Issuer and Wilmington Trust, National Association, as trustee and collateral agent, including the form of 5.50% Senior Secured Note due 2024 and form of 6.00% Senior Secured Note due 2026 (Incorporated by reference to Exhibit 4.3 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on February 19, 2019).
- * 4.7 First Supplemental Indenture, dated as of April 4, 2019, by and among CommScope, Inc., CommScope Holding Company, Inc., the other guarantors party thereto, Wilmington Trust, National Association, as trustee, and Wilmington Trust, National Association, as collateral agent (Incorporated by reference to Exhibit 4.4 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).
- * 4.8 Indenture, dated as of July 1, 2020, by and between Wilmington Trust, National Association, as trustee, including the form of 7.125% Senior Note due 2028 (Incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on July 2, 2020).
- * 4.9 Indenture, dated as of August 23, 2021, by and among CommScope, Inc., the guarantors party thereto and Wilmington Trust, National Association, as trustee and collateral agent, including the form of 4.750% Senior Secured Note due 2029 (Incorporated by reference to Exhibit 4.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on August 23, 2021).
- * 4.10 Description of Securities Registered Pursuant to Section 12 of the Exchange Act (Incorporated by reference to Exhibit 4.10 to the Registrant's Annual Report on Form 10-K filed with the SEC on February 20, 2020).
- * 10.1 Employment Agreement between Charles L. Treadway and CommScope, Inc., dated October 1, 2020 (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on October 1, 2020).***
- ** 10.2 Amendment to Employment Agreement between Charles L. Treadway and CommScope, Inc., dated October 4, 2022.***
- * 10.3 Employment Agreement between Claudius E. Watts IV and CommScope, Inc., dated October 1, 2020 (Incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on October 1, 2020).***
- ** 10.4 Amendment to Employment Agreement between Claudius E. Watts, IV and CommScope, Inc., dated October 4, 2022.***
- * 10.5 Form of Amended and Restated Severance Protection Agreement between CommScope, Inc. and certain executive officers entered into after 2015 (Incorporated by reference to Exhibit 10.23 of the Registrant's Annual Report on Form 10-K (File No. 001-36146), filed with the SEC on February 20, 2019).***
- ** 10.6 Form of Severance Protection Agreement between CommScope, Inc. and Kyle D. Lorentzen, Justin C. Choi and Robyn T. Mingle.***
- ** 10.7 Severance Protection Agreement between Charles L. Treadway and CommScope, Inc., dated October 4, 2022.***
- ** 10.8 Severance Protection Agreement between Claudius E. Watts and CommScope, Inc., dated October 4, 2022.***
- * 10.9 Form of Indemnification Agreement (Incorporated by reference to Exhibit 10.22 of Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-190354), filed with the SEC on September 12, 2013).***
- * 10.10 Amended and Restated CommScope Holding Company, Inc. 2011 Incentive Plan (as amended and restated effective February 19, 2013) (Incorporated by reference to Exhibit 10.26 of Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-190354), filed with the SEC on September 12, 2013).***

- * 10.11 Forms of Nonqualified Stock Option Certificate under the Amended and Restated CommScope Holding Company, Inc. 2011 Incentive Plan (Incorporated by reference to Exhibit 10.31 of Amendment No. 2 to the Registrant's Registration Statement on Form S-1 (File No. 333-190354), filed with the SEC on September 12, 2013).***
- * 10.12 CommScope Holding Company, Inc. Amended and Restated 2013 Long-Term Incentive Plan (as amended and restated effective February 21, 2017) (Incorporated by reference to Exhibit 10.28 of the Registrant's Annual Report on Form 10-K (File No. 001-36146), filed with the SEC on February 23, 2017).***
- * 10.13 Form of Non-Qualified Stock Option Certificate under the CommScope Holding Company, Inc. 2013 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 30, 2015).***
- * 10.14 CommScope Holding Company, Inc. Amendment to Outstanding Options, effective March 7, 2016 (Incorporated by reference to Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 28, 2016).***
- * 10.15 Form of Restricted Stock Unit Award Certificate under the CommScope Holding Company, Inc. 2013 Long-Term Incentive Plan (for grants in 2016 and later) (Incorporated by reference to Exhibit 10.2 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 28, 2016).***
- * 10.16 Form of Performance Share Unit Award Certificate under the CommScope Holding Company, Inc. 2013 Long-Term Incentive Plan (for grants in 2016 and later) (Incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 28, 2016).***
- * 10.17 Form of Non-Qualified Stock Option Certificate under the CommScope Holding Company, Inc. 2013 Long-Term Incentive Plan (for grants in 2016 and later) (Incorporated by reference to Exhibit 10.4 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 28, 2016).***
- * 10.18 CommScope Holding Company, Inc. Annual Incentive Plan, as amended February 17, 2016 (Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on April 28, 2016).***
- ** 10.19 CommScope Holding Company, Inc. Non-Employee Director Compensation Plan, as amended on February 19, 2019.
- ** 10.20 Form of Restricted Stock Unit Award Certificate under the CommScope Holding Company, Inc. Non-Employee Director Compensation Plan, which is operated as a subplan of the CommScope Holding Company, Inc. 2019 Long-Term Incentive Plan.
- * 10.21 Form of Non-Qualified Stock Option Certificate under the CommScope Holding Company, Inc. Amended and Restated 2013 Long-Term Incentive Plan (for grants to senior executive officers in 2019) (Incorporated by reference to Exhibit 10.5 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on August 8, 2019).***
- * 10.22 Form of Restricted Stock Unit Award Certificate under the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on October 1, 2020).***
- * 10.23 Form of Performance Share Unit Award Certificate under the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan (service and average stock price vesting) (Incorporated by reference to Exhibit 10.3 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on October 1, 2020). ***

- * 10.24 Form of Performance Share Unit Award Certificate under the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan (Incorporated by reference to Exhibit 10.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on May 5, 2022).***
- * 10.25 CommScope Holding Company, Inc. Deferred Compensation Plan (as amended and restated effective January 1, 2017) ((Incorporated by reference to Exhibit 10.41 of the Registrant's Annual Report on Form 10-K (File No. 001-36146), filed with the SEC on February 23, 2017).***
- * 10.26 CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan (Incorporated by reference to Exhibit 99.1 to the Registrant's Registration Statement on Form S-8 (File No. 333-265198), filed with the Commission on May 25, 2022).***
- * 10.27 Investment Agreement, dated November 8, 2018, by and between CommScope Holding Company, Inc. and Carlyle Partners VII S1 Holdings, L.P. (Incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K (File No. 001-36146), filed with the SEC on November 8, 2018).
- * 10.28 Registration Rights Agreement, dated as of April 4, 2019, by and between CommScope Holding Company, Inc. and Carlyle Partners VII S1 Holdings, L.P. (Incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).
- * 10.29 Revolving Credit Agreement, dated as of April 4, 2019, and as amended by that certain Amendment Agreement, dated August 11, 2021, among CommScope Holding Company, Inc., CommScope, Inc., the co-borrowers named therein, JPMorgan Chase Bank, N.A., as administrative agent and collateral agent, and the other agents and lenders party thereto (Incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).
- * 10.30 Amendment No. 2, dated October 19, 2022, to the Revolving Credit Agreement, dated as of April 4, 2019, among CommScope Holding Company, Inc., CommScope, Inc., the co-borrowers named therein, J.P. Morgan Chase Bank, N.A., as administrative agent and collateral agent, and the other agents and lenders party thereto (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed with the SEC on October 20, 2022).
- * 10.31 Term Loan Credit Agreement, dated as of April 4, 2019, and as amended by that certain Amendment Agreement, dated August 11, 2021, among CommScope, Inc., as the borrower, CommScope Holding Company, Inc., as holdings, JPMorgan Chase Bank, N.A., as administrative agent and collateral agent, and the other agents and lenders party thereto (Incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K filed with the SEC on April 4, 2019).
- * 18.1 Preferability Letter from Ernst & Young LLP, Independent Registered Public Accounting Firm (Incorporated by Reference to Exhibit 18.1 of the Registrant's Quarterly Report on Form 10-Q (File No. 001-36146), filed with the SEC on August 8, 2019).
- ** 21.1 List of Subsidiaries
- ** 23.1 Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm
- ** 31.1 Certification of Principal Executive Officer pursuant to Rule 13a-14(a).
- ** 31.2 Certification of Principal Financial Officer pursuant to Rule 13a-14(a).
- ± 32.1 Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (furnished pursuant to Item 601(b)(32)(ii) of Regulation S-K).
- † 101.INS Inline XBRL Instance Document – The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
- † 101.SCH Inline XBRL Schema Document, furnished herewith.

- † 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document.
- † 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document.
- † 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document,
- † 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document.
- 104 Cover Page Interactive Data File (embedded within the Inline XBRL document).

* Previously filed

** Filed as an exhibit to the Company's Form 10-K, filed with the Securities and Exchange Commission on February 23, 2023.

*** Management contract or compensatory plan or arrangement.

† In accordance with Rule 406T of Regulation S-T, the information in these exhibits is furnished and deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of Section 18 of the Exchange Act of 1934, and otherwise is not subject to liability under these sections.

± In accordance with Item 601(b)(32)(ii) of Regulation S-K and SEC Release No. 33-8238 and 34-47986, Final Rule: Management's Reports on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, the certification furnished in Exhibit 32.1 hereto is deemed to accompany this Form 10-K and will not be deemed "filed" for purposes of Section 18 of the Exchange Act. Such certification will not be deemed to be incorporated by reference into any filings under the Securities Act or the Exchange Act, except to the extent that the registrant specifically incorporates it by reference.

SIGNATURES

Pursuant to the requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

COMMScope Holding Company, Inc

DATE: February 22, 2023

BY: /s/ Charles L. Treadway
Charles L. Treadway
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ CHARLES L. TREADWAY</u> Charles L. Treadway	President, Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2023
<u>/s/ KYLE D. LORENTZEN</u> Kyle D. Lorentzen	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 22, 2023
<u>/s/ LAURIE S. ORACION</u> Laurie S. Oracion	Senior Vice President and Chief Accounting Officer (Principal Accounting Officer)	February 22, 2023
<u>/s/ CLAUDIUS E. WATTS IV</u> Claudius E. Watts IV	Director and Chairman of the Board	February 22, 2023
<u>/s/ MARY S. CHAN</u> Mary S. Chan	Director	February 22, 2023
<u>/s/ FRANK M. DRENDEL</u> Frank M. Drendel	Director and Chairman Emeritus	February 22, 2023
<u>/s/ STEPHEN C. GRAY</u> Stephen C. Gray	Director	February 22, 2023
<u>/s/ L. WILLIAM KRAUSE</u> L. William Krause	Director	February 22, 2023
<u>/s/ MINDY MACKENZIE</u> Mindy Mackenzie	Director	February 22, 2023
<u>/s/ JOANNE M. MAGUIRE</u> Joanne M. Maguire	Director	February 22, 2023
<u>/s/ THOMAS J. MANNING</u> Thomas J. Manning	Director	February 22, 2023
<u>/s/ PATRICK R. MCCARTER</u> Patrick R. McCarter	Director	February 22, 2023
<u>/s/ DERRICK A. ROMAN</u> Derrick A. Roman	Director	February 22, 2023
<u>/s/ TIMOTHY T. YATES</u> Timothy T. Yates	Director	February 22, 2023

Exhibit 21.1**Subsidiaries of the Registrant**

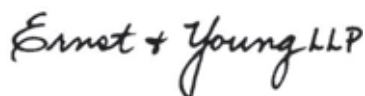
CommScope, Inc.	Delaware (USA)
CommScope, Inc. of North Carolina	North Carolina (USA)
CommScope Technologies LLC	Delaware (USA)
CommScope Connectivity LLC	Minnesota (USA)
CommScope EMEA Ltd	Ireland
ARRIS US Holdings, Inc.	Delaware (USA)
Ruckus Wireless, Inc.	Delaware (USA)
ARRIS Solutions, Inc.	Delaware (USA)
ARRIS Technology, Inc.	Delaware (USA)
ARRIS Enterprises LLC	Delaware (USA)
ARRIS Global Services, Inc.	Delaware (USA)
CommScope UK Holdings Ltd	United Kingdom
ARRIS International Ltd	United Kingdom
ARRIS Global Ltd	United Kingdom
ARRIS International IP Ltd	United Kingdom

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-3 No. 333-202490) and related Prospectus of CommScope Holding Company, Inc.;
- (2) Registration Statement (Form S-3 No. 333-230826) and related Prospectus of CommScope Holding Company, Inc.;
- (3) Registration Statement (Form S-8 No. 333-191959) pertaining to the CommScope Holding Company, Inc. 2013 Long-Term Incentive Plan, the Amended and Restated CommScope Holding Company, Inc. 2011 Incentive Plan, the Amended and Restated CommScope, Inc. 2006 Long-Term Incentive Plan, the Amended and Restated CommScope, Inc. 1997 Long-Term Incentive Plan, the Andrew Corporation Management Incentive Program, and the Options Granted to Non-Employee Directors Outside of a Plan;
- (4) Registration Statement (Form S-8 No. 333-230720) pertaining to the ARRIS International plc 2016 Stock Incentive Plan;
- (5) Registration Statement (Form S-8 No. 333-232354) pertaining to the CommScope Holding Company, Inc. 2019 Long-Term Incentive Plan;
- (6) Registration Statement (Form S-8 No. 333-238716) pertaining to the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan;
- (7) Registration Statement (Form S-8 No. 333-249204) pertaining to the Restricted Stock Units and Performance Share Units Granted as Employment Inducement Awards Outside of a Plan;
- (8) Registration Statement (Form S-8 No. 333-256539) pertaining to the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan; and
- (9) Registration Statement (Form S-8 No. 333-265198) pertaining to the CommScope Holding Company, Inc. Amended and Restated 2019 Long-Term Incentive Plan

of our reports dated February 22, 2023, with respect to the consolidated financial statements of CommScope Holding Company, Inc. and the effectiveness of internal control over financial reporting of CommScope Holding Company, Inc. included in this Annual Report (Form 10-K) of CommScope Holding Company, Inc. for the year ended December 31, 2022.

The image shows a handwritten signature in black ink that reads "Ernst & Young LLP". The signature is written in a cursive, flowing style.

Charlotte, North Carolina
February 22, 2023

MANAGEMENT CERTIFICATION

I, Charles L. Treadway, certify that:

1. I have reviewed this annual report on Form 10-K of CommScope Holding Company, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 22, 2023

/s/ Charles L. Treadway

Name: Charles L. Treadway
Title: President, Chief Executive Officer
and Director (Principal Executive
Officer)

MANAGEMENT CERTIFICATION

I, Kyle D. Lorentzen, certify that:

1. I have reviewed this annual report on Form 10-K of CommScope Holding Company, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 22, 2023

/s/ Kyle D. Lorentzen

Name: Kyle D. Lorentzen
Title: Executive Vice President and Chief
Financial Officer (Principal Financial
Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of CommScope Holding Company, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, Charles L. Treadway, President, Chief Executive Officer and Director of the Company, and Kyle D. Lorentzen, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350 as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 22, 2023

/s/ Charles L. Treadway

Charles L. Treadway
President, Chief Executive Officer and Director
(Principal Executive Officer)

/s/ Kyle D. Lorentzen

Kyle D. Lorentzen
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Board of directors

Claudius (Bud) E. Watts IV

Chairman, CommScope
Private Investor and Founding Partner
Meeting Street Capital, LLC

Charles L. Treadway^{1 2}

President and Chief Executive Officer,
CommScope

Mary S. Chan

Chair of Compensation Committee
Managing Partner, VectoIQ, LLC

Frank M. Drendel

Founder & Chairman Emeritus, CommScope

Stephen (Steve) C. Gray

Compensation Committee Member
Founder and Chairman of Gray Venture
Partners, LLC

L. William (Bill) Krause

Compensation Committee Member
and Nominating and Corporate Governance
Committee Member, Former Chairman &
CEO of 3Com Corporation

Mindy Mackenzie

Compensation Committee Member
Managing Director, Chief Performance
Officer, The Carlyle Group

Joanne M. Maguire

Chair of Nominating and Corporate
Governance Committee, Former EVP,
Lockheed Martin Corporation

Thomas J. Manning

Audit Committee Member
Executive Chairman, Cresco Labs, Inc.

Patrick R. McCarter

Nominating and Corporate Governance
Committee Member, Managing Director
and Head of the Global Technology,
Media and Telecommunications Group,
The Carlyle Group

Derrick A. Roman

Audit Committee Member
Former Partner,
PricewaterhouseCoopers LLP

Timothy T. Yates

Lead Independent Director
and Chair of Audit Committee
Former President and Chief Executive
Officer, Monster Worldwide, Inc.

Management team

Charles L. Treadway^{1 2}

President and Chief Executive Officer

Kyle D. Lorentzen^{1 2}

Executive Vice President and
Chief Financial Officer

John R. Carlson¹

Senior Vice President and
Chief Commercial Officer

Justin C. Choi^{1 2}

Senior Vice President,
Chief Legal Officer and Secretary

Robyn T. Mingle^{1 2}

Senior Vice President and
Chief Human Resources Officer

Laurie S. Oracion¹

Senior Vice President and
Chief Accounting Officer

Charles A. Gilstrap

Senior Vice President, Tax & Treasury

Joe Chow^{1 2}

Senior Vice President and
President, Home Networks

Farid Firouzbakht^{1 2}

Senior Vice President and President,
Outdoor Wireless Networks

Bart Giordano^{1 2}

Senior Vice President and President,
Networking, Intelligent Cellular and
Security Solutions

John (Ric) R. Johnsen^{1 2}

Senior Vice President and President,
Connectivity & Cable Solutions

Guy Sucharczuk^{1 2}

Senior Vice President and President,
Access Network Solutions

Praveen Jonnala

Senior Vice President and
Chief Information Officer

Boris Kokotovic²

Senior Vice President, Corporate Quality

1 Section 16 Officers

2 Ethics, Compliance & Sustainability Executive Council Members

Investor information

Annual meeting

Thursday, May 11, 2023, 1:00 p.m. ET
Virtual at ir.commscope.com

Corporate headquarters

CommScope Holding Company, Inc.
1100 CommScope Place, SE
Hickory, NC 28602
www.commscope.com
+1 828.324.2200
800.982.1708 (U.S. only)

Transfer agent and registrar

American Stock Transfer
& Trust Company, LLC
Shareholder Services Department
6201 15th Avenue
Brooklyn, NY 11219
help@astfinancial.com
+1 718.921.8124
800.937.5449 (U.S. only)
www.astfinancial.com

Investor relations

Michael (Mick) McCloskey

Vice President, Head of Investor Relations
+1 828.431.9874

Common stock

Trades on NASDAQ under
the symbol "COMM"



A copy of the Company's 2022
Annual Report on Form 10-K for the
fiscal year ended December 31, 2022,
may be obtained, free of charge,
by any shareholder by writing to
CommScope Holding Company, Inc.,
1100 CommScope Place, SE, Hickory,
NC 28602, Attention: Investor
Relations. Our Annual Report on
Form 10-K is also available and may
be accessed free of charge through
the Investor Relations section
of our Internet website at
ir.commscope.com.



COMMScope®

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respectively, of CommScope, Inc.