
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 4
TO
FORM S-1
REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933
IXIA

(Exact name of registrant as specified in its charter)

California
(State or other jurisdiction of
incorporation or organization)

3825
(Primary Standard Industrial
Classification Code Number)

95-4635982
(I.R.S. Employer
Identification Number)

26601 W. Agoura Road
Calabasas, California 91302
(818) 871-1800

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Errol Ginsberg
President and Chief Executive Officer

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Approximate date of commencement of proposed sale to the public:

As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, as amended, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, as amended, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act of 1933, as amended, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. ☐

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Subject to Completion
Preliminary Prospectus dated October 12, 2000

PROSPECTUS

5,500,000 Shares



Common Stock

This is Ixia's initial public offering.

We expect the public offering price to be between \$10.00 and \$12.00 per share. Currently, no public market exists for the shares. After pricing of the offering, we expect that the shares will be quoted on the Nasdaq National Market under the symbol "XXIA."

Investing in the common stock involves risks that are described in the "Risk Factors" section beginning on page 8 of this prospectus.

	<u>Per Share</u>	<u>Total</u>
Public offering price	\$	\$
Underwriting discount	\$	\$
Proceeds, before expenses, to Ixia	\$	\$

The underwriters may also purchase up to an additional 825,000 shares from Ixia at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus to cover over-allotments.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about _____, 2000.

Merrill Lynch & Co.
Donaldson, Lufkin & Jenrette
Dain Rauscher Wessels

The date of this prospectus is _____, 2000.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Ixia Graphics Description

Inside Front Cover

Background is divided approximately into a top one-third section which is medium blue, and lower two thirds section which is black.

Top third section has two lines of white text in the upper portion of the section. The first line of text is “High-speed, multi-port” and is flushed left. The second line of text (slightly smaller print than the first) is “network performance analysis systems” and is flushed right. In the lower left corner of the section is the Ixia logo. In the lower middle to lower right corner of the section is a small chassis and large chassis to the right of the small chassis.

In the lower two-thirds section, directly below the small chassis there is the orange text “IXIA 400”, and directly below the large chassis there is the orange text “IXIA 1600”. Below such text, there are two large interface cards with one above and overlapping the other, both with an orange background glow around them. The upper, overlapping, interface card is at a diagonal from upper right to lower left, with the orange text “Optical Interface Card” immediately to its left. The lower interface card is at a diagonal from upper left to lower right with the text “Electrical Interface Card” immediately to its right. To the left of the interface cards, and directly below the Ixia logo in the upper section, there is a column of white text with one to three words on each line which reads: “Ixia’s systems generate network and Internet protocol data traffic and analyze the performance, accuracy and reliability of advanced, high-speed optical fiber and electrical cable based networks.”

Gatefold

Background is divided into a horizontal black band section across the top, with the area below divided in equal quadrants (two upper and two lower). The two upper quadrants are medium blue on the left side and fade to light blue on the right side of the quadrant. The lower two quadrants are light blue on the left side and fade into medium blue on the right side. In the middle, where the four quadrants meet, and overlapping each, is an amorphous middle section with a background of clouds.

The black band area has two lines of orange text. The upper line of text is off-center to the left and reads “Ixia Addresses Multiple Network” and the lower line of text is off-center to the right and reads “Performance Analysis Applications.” In the lower left corner of the black band area is the Ixia logo.

The upper left quadrant has a horizontal black rectangle in the lower left corner containing the yellow text “Performance Analysis of a Network of Routers”. In this quadrant, there is a diagram with a chassis in the upper left corner. Above the upper right corner of the chassis is a black oval with the white text “IXIA 1600”. Connected to the chassis on the right there is a gray outline of an arrow pointing right. To the right of the arrow there is a vertically positioned interface card, with the text “Ixia Interface Card” immediately above the interface card. Below the interface card, to the lower right and to the lower left, there is a vertical box illustration, each with the text “Router” immediately to the right of the box’s lower right corner. There is a two-way arrow between the boxes, a two-way 90 degree angle arrow coming from the lower front of the interface card and pointing to the box on the lower left, and a two-way 90 degree angle arrow between the upper front of the interface card and the box on the lower right, with the text “Optical Interface” immediately to the right of the arrow.

The upper right quadrant has a horizontal black rectangle in the lower right corner containing the yellow text “Performance Validation of a Server Load Balancer.” Customers can insert our Gigabit Ethernet or Ethernet interface cards into our IXIA 1600 chassis to evaluate the performance of Web server load balancers at different network speeds.”. In this quadrant, there is a diagram with a chassis in the upper right corner. Above the upper right corner of the chassis is a black oval with the white text “IXIA 1600”. To the lower left of the chassis there is a horizontal orange box illustration with the text “Server Load Balancer” immediately below it. There is a 90 degree angle two-way arrow between the right side of the box and the bottom of the chassis with the text “Optical Interface” immediately above the

arrow. There are four 90 degree angle two-way arrows between the top of the box and the left of the chassis, with the text “Electrical Interface” immediately to their left.

The lower left quadrant has a horizontal black rectangle in the lower left corner containing the yellow text “Performance Verification of a Single Router”. In this quadrant, there is a diagram with a chassis in the upper left corner. Above the upper right corner of the chassis is a black oval with the white text “IXIA 1600”. To the lower right of the chassis is a vertical orange box illustration with the text “Router” immediately below it. There is a 90 degree angle two-way arrow between the right side of the chassis and the top of the box with the text “Optical Interface” immediately above the arrow. There is a 90 degree angle two-way arrow between the bottom of the chassis and the left of the box.

The lower right quadrant has a horizontal black rectangle in the lower right corner containing the yellow text “Performance Verification of a Cable Modem Network”. In this quadrant, there is a diagram with a chassis in the upper right corner. Above the upper right corner of the chassis is a black oval with the white text “IXIA 1600”. To the lower left of the chassis is a horizontal orange box illustration with the text “Cable Modem Termination System” immediately below it. There is a 90 degree angle two-way arrow between the left side of the chassis and the top of the box with the text “Electrical Interface” immediately above the arrow. Extending from the right side of the box there is a horizontal two-way arrow which extends below the chassis and ends with five dots in a row. Between the two-way arrow and the chassis there are three small horizontal orange box illustrations in a row, and each with a vertical two-way arrow between it and the chassis and a vertical two-way arrow between it and the horizontal two-way arrow. Below the row of three boxes, and below the two-way arrow, there is the text “Cable Modems”. In the lower left corner there is a horizontal two-way arrow and immediately to the right of the arrow, there is the text “represents data traffic”.

The cloud background middle section has a diagram with three rows of box illustrations. In the middle of the diagram, between the second and third rows, is the text “Internet”. The top row is in the upper right corner of the section and has four vertical box illustrations in a row which slopes downward to the right, with the text “Web Servers” above the row. The second row has (from left to right) two vertical box illustrations and one horizontal box illustration connected together by a line. Each of the boxes in the top row is connected by a line to the horizontal box illustration in the second row, which has the text “Server Load Balancer” immediately above it. The first box in the second row has the text “Router” immediately to its left. Between, and to the left of, the second and the third rows is a vertical box illustration with the text “Router” immediately to its left and this box is connected to the first box in the second and third rows by lines. The third row has six box illustrations, from left to right, two vertical box illustrations, one horizontal box illustration and three small horizontal box illustrations. The first three boxes are connected by a line. The first box has the text “Router” below it and the first and second boxes are connected to the second box of the second row by lines. The third box has the text “Cable Modem Termination System” below it, and to the right of the third box there is a line which extends right and ends with a row of five dots. Above the line are the three smaller boxes, which are connected to the line and which have the text “Multiple Cable Modems” below the line below them. Between the second and third of these smaller boxes, there is a break in the line with forward tilting slashes on each side of the break.

Below the cloud background middle section, there is the following block of text which overlaps the two lower quadrants:

“This diagram shows some of the equipment that comprises the Internet. The equipment includes:

- routers that distribute data traffic,
- Web servers that host and transmit Web site information and content,
- server load balancers that distribute traffic among multiple Web servers,
- cable modems that connect users to the Internet, and
- cable modem termination systems that aggregate cable modem traffic.

Our systems connect through our interface cards to networks or network equipment using either optical interfaces, which use optical fiber, or electrical interfaces, which use electrical cable”.

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You should rely only on the information contained in this prospectus. We have not, and the underwriters have not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sales of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date. “Ixia,” “we,” “us” and “our” refer to Ixia and its subsidiaries and not to the underwriters.

IXIATM is a trademark and the Ixia logo is a registered trademark of Ixia. All other trade names, trademarks and product names used in this prospectus are the property of their respective holders.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus. You should read the entire prospectus carefully, including "Risk Factors" beginning on page 8 and the financial statements, related notes and other financial data, included elsewhere in this prospectus before making an investment decision.

Ixia

We are a provider of high-speed, multi-port network performance analysis systems. These systems allow our customers to measure the performance of their data communications equipment and networks by simulating a large-scale network environment. Each of our systems consists of a chassis and one or more of a variety of interface cards that reside within the chassis and connect to the equipment or network being tested. These interface cards simulate the information that networks carry by generating, receiving and analyzing different types of data traffic, including Internet Protocol, or IP, traffic.

Our systems analyze different types of networks, including advanced optical networks that carry data traffic over optical fiber, as well as electrical networks that carry data traffic over electrical cable. These networks include:

- Packet Over SONET networks, which transmit units of information, called packets, over high-speed optical networks; and
- Gigabit Ethernet networks, which are high-speed local area networks used typically within a single building or a group of buildings.

Our systems are designed to meet the needs of network equipment manufacturers, Internet and network service providers, communications chip manufacturers and network users such as large corporations. Since our inception, we have sold our systems to over 170 customers. Based on revenues for the 12 months ended June 30, 2000, our largest customers by category include:

- Leading network equipment manufacturers such as Cisco Systems, Extreme Networks and Nortel Networks;
- Internet and network service providers such as AT&T and UUNET Technologies;
- Communications chip manufacturers such as Broadcom and Level One Communications, which is now part of Intel; and
- Network users such as Lockheed Martin and Bank of America.

We generated net revenues of \$4.9 million in 1998, \$24.5 million in 1999 and \$28.3 million in the six months ended June 30, 2000. To date, we have sold our systems primarily to network equipment manufacturers.

The popularity of the Internet and the number of Internet-based applications and services have fueled dramatic growth in the volume of data traffic. According to Ryan Hankin Kent, Inc., a leading communications market research firm, Internet traffic is expected to increase from 350,000 terabytes, or trillions of bytes, per month at the end of 1999 to more than 15 million terabytes per month in 2003, representing a compound annual average growth rate of over 150%. To accommodate the growth in traffic, investments in network equipment and systems have accelerated and increasingly complex network configurations have emerged. Consequently, performance analysis has become more difficult.

In addition, due to the demand of network users for consistent and high levels of performance from their Internet and network service providers, these service providers must ensure that the equipment they deploy can deliver the required performance. As a result, network equipment manufacturers, Internet and network service providers, communications chip manufacturers and network users are each demanding increasingly sophisticated network performance analysis systems.

To address our customers' increasing demands, our systems provide the following key benefits:

- *High Performance.* Our systems generate and receive data traffic at wire speed, which is the maximum rate that data traffic can be transmitted over the network. Our systems analyze the performance of the network in real-time, that is, as the transmission is actually occurring. By analyzing each discrete packet of information on a packet-by-packet basis, our systems allow our customers to precisely measure the performance of their networks.
- *Highly Scalable.* Each of our interface cards provides one or more ports through which our systems generate and receive data traffic. Our customers can easily increase port density, which is the number of ports in an individual chassis, by inserting additional interface cards. By connecting multiple chassis and synchronizing up to thousands of ports to operate simultaneously, our customers can simulate large scale networks. We believe that our systems offer our customers the highest port density and therefore the most scalable systems available.
- *Highly Modular.* Our modular systems allow our customers to quickly and easily create complex and custom test configurations. The modularity of our systems also allows our customers to integrate new technologies into our existing systems by inserting new interface cards as we release them.
- *Flexibility.* Our customers can easily reconfigure our systems through software changes to address different protocols and applications without changing hardware or replacing interface cards.
- *Ease of Use.* Our systems can be installed easily and operated with minimal training and set-up. Our customers configure and control our systems through a graphical user interface that features a familiar Microsoft Windows point-and-click environment and allows users to interact easily and intuitively with our systems. Through this interface, our customers can conduct a wide range of tests and analyses by accessing the pre-designed test configurations included in our systems. They can also design customized tests using industry standard programming languages.

Our goal is to be the industry leader in multi-port traffic generation and performance analysis systems for the high-speed data communications market. To pursue our goal, we plan to:

- Continue to expand into high-growth markets such as advanced optical networks that route data traffic throughout the Internet and emerging networks that allow high-speed access to the Internet, known as broadband access networks;
- Maintain our focus on technology leadership by developing new systems and system applications that address the needs of evolving technology and industry requirements;
- Expand and further penetrate our customer base by developing and offering systems that meet customers' needs and by providing superior customer support; and
- Expand our domestic and international sales and marketing efforts and promote our brand name.

Corporate Information

Ixia was incorporated in California in May 1997. Our principal executive offices are located at 26601 W. Agoura Road, Calabasas, California 91302, and our telephone number is (818) 871-1800. Our Web site is located at www.ixiacom.com. Information contained on our Web site does not constitute part of this prospectus.

The Offering

Common stock offered by Ixia 5,500,000 shares

Common stock to be outstanding after this
offering 52,912,293 shares

Use of proceeds For general corporate purposes. For additional information,
see "Use of Proceeds" on page 20.

Nasdaq National Market symbol XXIA

Unless we specifically state otherwise, the information in this prospectus does not take into account the sale of up to 825,000 shares of common stock which the underwriters have the option to purchase solely to cover over-allotments. If the underwriters exercise their over-allotment option in full, 53,737,293 shares of common stock will be outstanding after the offering.

The number of shares of common stock that will be outstanding after the offering is based on the number of shares outstanding as of September 30, 2000 and excludes:

- 10,617,707 shares of common stock issuable upon exercise of options outstanding as of September 30, 2000 under our 1997 stock option plan with a weighted average exercise price of \$2.25 per share;
- an additional 3,820,000 shares of common stock reserved for issuance under our 1997 stock option plan as of September 30, 2000;
- 80,000 shares of common stock issuable upon exercise of warrants with an exercise price of \$7.00 per share;
- 300,000 shares of common stock reserved for issuance under our employee stock purchase plan, subject to annual automatic increases; and
- 200,000 shares of common stock reserved for issuance under our director stock option plan.

All share and per share information in this prospectus reflects our March 1998 five-for-one stock split and our March 2000 three-for-one stock split.

Summary Consolidated Financial Data

The following summary consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” beginning on page 26 and our consolidated financial statements and the notes to those consolidated financial statements beginning on page F-1 in this prospectus. The statement of operations data set forth below for the period from May 27, 1997, our inception, through December 31, 1997 and for the years ended December 31, 1998 and 1999 are derived from, and are qualified by reference to, our audited consolidated financial statements included elsewhere in this prospectus. The statement of operations data set forth below for the six months ended June 30, 1999 and 2000 and the balance sheet data as of June 30, 2000 are derived from, and are qualified by reference to, our unaudited condensed consolidated financial statements included elsewhere in this prospectus.

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31,		Six Months Ended June 30,	
		1998	1999	1999	2000
				(unaudited)	
Statement of Operations Data (in thousands, except per share data):					
Net revenues	\$ —	\$ 4,916	\$24,499	\$ 8,214	\$28,268
Cost of revenues ⁽¹⁾	—	1,309	4,944	1,412	5,626
Gross profit	—	3,607	19,555	6,802	22,642
Operating expenses:					
Research and development	513	1,580	2,780	1,182	2,744
Sales and marketing	—	940	4,443	1,531	4,372
General and administrative	110	509	1,660	588	1,733
Stock-based compensation ⁽²⁾	—	154	1,847	407	6,250
Total operating expenses	623	3,183	10,730	3,708	15,099
Income (loss) from operations	(623)	424	8,825	3,094	7,543
Interest income, net	7	14	88	18	221
Income (loss) before income taxes	(616)	438	8,913	3,112	7,764
Income tax expense (benefit)	(294)	118	4,103	1,362	5,477
Net income(loss)	\$ (322)	\$ 320	\$ 4,810	\$ 1,750	\$ 2,287
Earnings (loss) per share:					
Basic	\$ (0.01)	\$ 0.01	\$ 0.11	\$ 0.04	\$ 0.05
Diluted	\$ (0.01)	\$ 0.01	\$ 0.10	\$ 0.04	\$ 0.04
Weighted average number of shares outstanding:					
Basic	43,041	43,200	43,574	43,218	45,236
Diluted	43,041	45,619	48,896	46,340	52,989
⁽¹⁾ Stock-based compensation included in cost of revenues					
	\$ —	\$ 8	\$ 38	\$ 10	\$ 386
⁽²⁾ Stock-based compensation:					
Research and development	\$ —	\$ 92	\$ 669	\$ 94	\$ 2,597
Sales and marketing	—	62	449	124	1,771
General and administrative	—	—	729	189	1,882
	\$ —	\$ 154	\$ 1,847	\$ 407	\$ 6,250

	June 30, 2000	
	Actual	As Adjusted ⁽¹⁾
	(unaudited)	
Balance Sheet Data (in thousands, except share and per share data):		
Cash and cash equivalents	\$ 8,952	\$63,917
Working capital	15,072	70,037
Total assets	25,119	80,084
Total shareholders' equity	17,647	72,612

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- ⁽¹⁾ As adjusted to reflect the sale of 5,500,000 shares of common stock offered hereby at the assumed initial public offering price of \$11.00 per share after deducting the underwriting discount and estimated offering expenses payable by us.

RISK FACTORS

You should carefully consider the risks described below before making a decision to buy our common stock. If any of the following risks actually occur, our business could be harmed, the trading price of our common stock could decline and you may lose all or part of your investment. You should also refer to the other information contained in this prospectus, including our consolidated financial statements and the related notes.

Our quarterly and annual operating results may fluctuate significantly as a result of new product introductions and other factors which could cause our stock price to decline significantly

Our quarterly and annual operating results may fluctuate significantly due to a variety of factors, most of which are outside of our control. Some of the factors that could cause our quarterly and annual operating results to fluctuate include the other risks discussed in this “Risk Factors” section.

We may experience a shortfall or delay in generating or recognizing revenues for a number of reasons. Orders on hand at the beginning of a quarter and orders generated in a quarter do not always result in the shipment of products and the recognition of revenues for that quarter. Failure to ship products by the end of the quarter in which they are ordered may adversely affect our operating results for that quarter. Our customer agreements typically provide that the customer may delay scheduled delivery dates and cancel orders within specified time frames without penalty. Because we incur operating expenses based on anticipated revenues trends and a high percentage of our expenses are fixed in the short term, any delay in generating or recognizing forecasted revenues could significantly harm our quarterly results of operations.

Additionally, our operating results may vary as a result of the timing of our release of new products. The introduction of a new product in any quarter may cause an increase in revenues in that quarter that may not be sustainable in subsequent quarters.

If our operating results fall below market expectations, the trading price of our common stock could decline significantly.

If we are unable to successfully introduce new products to keep pace with the rapid technological changes that characterize our market, our results of operations will be significantly harmed

The market for our products is characterized by:

- rapid technological change such as the recent development of optical fiber and wireless technologies;
- frequent new product introductions such as higher speed and more complex routers;
- evolving industry standards such as new Internet protocols;
- changing customer needs such as the increase in the levels of service agreed to between network service providers and their customers; and
- short product life cycles as a result of rapid changes in our customers’ products.

We expect that new technologies will continue to emerge as the need for higher and more cost-effective bandwidth increases. Our performance will depend on our successful development, introduction and market acceptance of new and enhanced performance analysis products that address these new technologies and changes in customer requirements. If we experience any delay in the development or introduction of new products or enhancements to our existing products, our operating results may suffer. For instance, undetected software or hardware errors, which frequently occur when new products are first introduced, could result in the delay or loss of market acceptance of our products and the loss of credibility with our customers. In addition, if we are not able to develop, or license from third parties, the underlying core technologies necessary to create new products and enhancements, our existing products are likely to become technologically obsolete over time and our operating results will suffer. If the rate of

development of new technologies and transmission protocols by our customers is delayed, the growth of the market for our products and therefore our sales and operating results may be harmed.

Our ability to successfully introduce new products in a timely fashion will depend on several factors, including our ability to:

- anticipate technological changes and industry trends;
- properly identify customer needs;
- innovate and develop new technologies and applications;
- hire and retain necessary technical personnel;
- successfully commercialize new technologies in a timely manner;
- timely obtain key components for the manufacture of new products;
- manufacture and deliver our products in sufficient volumes and on time;
- price our products competitively; and
- differentiate our offerings from our competitors' offerings.

The development of new, technologically advanced products is a complex and uncertain process requiring high levels of innovation and highly skilled engineering and development personnel, as well as the accurate anticipation of technology and market trends. We cannot assure you that we will be able to identify, develop, manufacture, market or support new or enhanced products successfully, if at all, or on a timely or cost-effective basis. Further, we cannot assure you that our new products will gain market acceptance or that we will be able to respond effectively to technological changes, emerging industry standards or product announcements by our competitors. If we fail to respond to technological change and the needs of our markets, we will lose revenues and our competitive position will suffer.

We depend on sales of a narrow range of products and if customers do not purchase our products, our revenues and results of operations would be significantly harmed

Our business and products are concentrated in the market for systems that analyze and measure the performance of network equipment and systems. This market is in an early stage of development and there is uncertainty regarding its size and scope. Our performance will depend on increased sales of our existing systems and the successful development, introduction and market acceptance of new and enhanced products. We cannot assure you that we will be successful in increasing these sales or in developing and introducing new products. Our failure to do so would significantly harm our revenues and results of operations.

Some key components in our products come from sole or limited sources of supply, which exposes us to potential supply shortages that could disrupt the manufacture and sale of our products

We and our contract manufacturers currently purchase a number of key components used to manufacture our products from sole or limited sources of supply for which alternative sources may not be available. From time to time, we have experienced shortages of key components, including chips, oscillators and optical modules. We and our contract manufacturers have no guaranteed or long-term supply arrangements for these or other components, including field programmable gate arrays, or FPGA's, which are integrated circuits that can be repeatedly reprogrammed to perform different sets of functions as required. Additionally, there is currently a worldwide shortage of the high-speed lasers required for the production of our proposed OC-192c Packet Over SONET interface card. Financial or other difficulties faced by our suppliers or significant changes in market demand for necessary components could limit the availability to us and our contract manufacturers of these components. Any interruption or delay in the supply of any of these components could significantly harm our ability to meet scheduled product deliveries to our customers and cause us to lose sales.

In addition, the purchase of these components on a sole source basis subjects us to risks of price increases and potential quality assurance problems. Consolidation involving suppliers could further reduce the number of alternatives available to us and affect the cost of components. An increase in the cost of components could make our products less competitive and result in lower margins.

There are no substitute supplies available for many of these components, including field programmable gate arrays. All of these components are critical to the production of our products, and competition exists with other manufacturers for these key components. In the event that we can no longer obtain materials from a sole source supplier, we might not be able to qualify or identify alternative suppliers in a timely fashion, or at all.

Competition in our market could significantly harm our results of operations

The market for our products is highly competitive. We face competition primarily from test equipment manufacturers such as Agilent Technologies, Netcom Systems and Adtech. We also compete with start-up companies such as Antara which are focused on network performance analysis and measurement. Additionally, some of our network equipment manufacturer customers have developed, or may develop, in-house performance analysis products for their own use or for sale to others. For example, Cisco Systems, our largest customer, has used internally developed test products for a number of years. Although Cisco Systems has purchased our products in increasing amounts through June 30, 2000, we cannot assure you that it will continue to do so.

As we broaden our product offerings, we may move into new markets and face additional competition. Moreover, our competitors may have more experience operating in these new markets and be better established with the customers in these new markets.

Some of our competitors and potential competitors have greater brand name recognition and greater financial, technical, marketing, sales and distribution capabilities than we do. Moreover, our competitors may consolidate with each other, or with other companies, giving them even greater capabilities with which to compete against us. For example, Spirent, which owns Adtech, has acquired Netcom Systems.

Increased competition in the network performance analysis and measurement market could result in increased pressure on us to reduce prices and could result in a reduction in our revenues and/or a decrease in our margins, each of which could significantly harm our results of operations. In addition, increased competition could prevent us from increasing our market share, or cause us to lose our existing market share, either of which would harm our revenues and profitability.

We cannot predict whether our current or future competitors will develop or market technologies and products that offer higher performance or more features or are more cost-effective than our current or future products. To remain competitive, we must continue to develop cost-effective products and product enhancements which offer higher performance and more functionality. Our failure to do so will harm our revenues and results of operations.

If we do not diversify our customer base, we may not be able to grow our business or increase our profitability

Our growth depends in part on our ability to diversify our customer base by increasing sales to Internet and network service providers, communications chip manufacturers and network users. To effectively compete for the business of these customers, we must develop new products and enhancements to existing products and expand our sales, marketing and customer support capabilities, which will result in increases in operating costs. If we cannot offset these increases in costs with an increase in our revenues, our net income and our stock price may fall. Some of our existing and potential competitors have existing relationships with many Internet and network service providers, communications chip manufacturers and network users. We cannot assure you that we will be successful in increasing our sales presence in these markets. Any failure by us to increase sales in these markets would adversely affect our growth.

Because we depend on a limited number of network equipment manufacturers for a majority of our revenues, any cancellation, reduction or delay in purchases by these customers could significantly harm our revenues and results of operations

Historically, a small number of network equipment manufacturing customers has accounted for a significant portion of our net revenues. Sales to our five largest customers represented 62.0% of our net revenues in 1998, 51.0% of our net revenues in 1999 and 53.1% of our net revenues in the six months ended June 30, 2000. Sales to Cisco Systems, our largest customer, accounted for 31.6% of our net revenues in 1998, 30.8% of our net revenues in 1999 and 34.0% of our net revenues in the six months ended June 30, 2000. We expect that significant customer concentration will continue for the foreseeable future and that our operating results will continue to depend to a significant extent upon revenues from a small number of customers.

Our dependence on large orders from a limited number of network equipment manufacturers makes our relationships with these manufacturers critical to the success of our business. We cannot assure you that we will be able to retain our largest customers, that we will be able to increase our sales to our other existing customers or that we will be able to attract additional customers. From time to time, we have experienced delays and reductions in orders from some of our major customers. In addition, our customers have sought price concessions from us and may continue to do so. We do not have long-term contracts with our customers, and our major customers can stop purchasing our products at any time without penalty and are free to purchase products from our competitors. The loss of one or more of our largest customers, any reduction or delay in sales to these customers, our inability to successfully develop and maintain relationships with existing and new customers or requirements that we make price concessions could significantly harm our revenues and results of operations.

As our customers consolidate, they may reduce purchases of our products and demand more favorable terms and conditions from us, which would harm our revenues and profitability

Consolidation of our customers could reduce the number of customers to whom our products could be sold. Some of our customers have recently merged. These merged customers could obtain products from a source other than us or demand more favorable terms and conditions from us, which would harm our revenues and profitability. In addition, our network equipment manufacturer customers may merge with or acquire our competitors and discontinue their relationships with us.

If we are unable to expand our sales and distribution channels or are unable to successfully manage our expanded sales organization, our revenues and results of operations will be harmed

Historically, we have relied primarily on a limited direct sales organization, supported by third-party manufacturers' representatives and distributors, to sell our products. Our distribution strategy focuses primarily on developing and expanding our direct sales organization and our network of manufacturers' representatives and distributors. We may not be able to successfully expand our sales and distribution channels, and the cost of any expansion may exceed the revenues that we generate. To the extent that we are successful in expanding our sales and distribution channels, we cannot assure you that we will be able to compete successfully against the significantly larger and better-funded sales and marketing operations of many of our current or potential competitors. We have granted exclusive rights to substantially all of our distributors and manufacturers' representatives to market our products in their specified territories. Our distributors and manufacturers' representatives may not market our products effectively or devote the resources necessary to provide us with effective sales, marketing and technical support. Our inability to effectively manage the expansion of our sales and support staff, or to maintain existing or establish new relationships with successful manufacturers' representatives and distributors, would harm our revenues and results of operations.

If we are unable to expand our international sales and distribution channels or manage them effectively, our results of operations would be harmed

Historically, a significant portion of our sales have been made to customers in the United States. Sales in the United States accounted for 86.9% of our net revenues in 1999 and 86.2% of our net revenues during the six months ended June 30, 2000. In the past, we have depended on distributors for the substantial majority of our international sales. The loss of one or more of our international distributors or their failure to sell our products would limit our ability to sustain and grow our revenues in international markets. We intend to expand or enter into additional international markets, including Europe and the Asia Pacific region, by adding distributors and international sales and support personnel. Our failure in these efforts could significantly harm our results of operations and decrease the value of our stock. We only have limited international sales experience and believe that the growth of our sales outside of the United States will be subject to a number of additional risks and uncertainties, including:

- adoption of different local technical and regulatory standards;
- the need to maintain and establish new relationships with distributors and the sales performance of these distributors, who may not be as effective or loyal as our employees;
- the costs and complexity of staffing and managing more widely dispersed foreign sales activities, including the ability to identify, attract and retain qualified managers and sales personnel, overcoming cultural, linguistic and nationalistic barriers and adapting to foreign business practices;
- longer payment cycles of foreign customers compared with customers in the United States;
- seasonal reductions in business activities in some parts of the world, such as during the summer months in Europe;
- legal uncertainties regarding liability, export and import restrictions, tariffs and other trade barriers;
- potential political and economic instability; and
- inadequate protection of intellectual property in some countries.

Any of these factors could significantly harm our international sales or significantly impair our ability to expand into international markets.

Our international sales currently are U.S. dollar-denominated. As a result, an increase in the value of the U.S. dollar relative to foreign currencies could make our products less cost-effective in international markets.

If we fail to accurately forecast our manufacturing requirements, we could incur additional costs and experience manufacturing delays

We provide our contract manufacturers with rolling forecasts based on anticipated product orders to determine our manufacturing requirements. Some of the components used in our products have significant lead times or lead times which may unexpectedly increase depending on factors such as the specific supplier, contract terms and the demand for components at a given time. Because of these long lead times, we are often forced to forecast and order products before we know what our specific manufacturing requirements will be. If we overestimate our product orders, our contract manufacturers may have excess inventory of completed products which we would be obligated to purchase. This will lead to increased costs and the risk of obsolescence. If we underestimate our product orders, our contract manufacturers may have inadequate inventory, which could result in delays in shipments, the loss or deferral of revenues and higher costs of sales. It may also add costs to our products to expedite delivery of our products to customers or those components with long lead times to our contract manufacturers. We cannot assure you that we will be able to accurately forecast our product orders and may in the future carry excess or obsolete inventory, be unable to fulfill customer demand, or both, thereby harming our revenues, results of operations and customer relationships.

Failure by our contract manufacturers to provide us with adequate supplies of high-quality products could harm our revenues, results of operations, competitive position and reputation

We currently rely on a limited number of contract manufacturers to manufacture and assemble our products. We may experience delays in receiving product shipments from contract manufacturers or other problems, such as inferior quality and insufficient quantity of product. We cannot assure you that we will be able to effectively manage our contract manufacturers or that these manufacturers will meet our future requirements for timely delivery of products of sufficient quality and quantity. We intend to introduce new products and product enhancements, which will require that we rapidly achieve volume production by effectively coordinating with our suppliers and contract manufacturers. We do not have any long-term contracts with our contract manufacturers. The inability of our contract manufacturers to provide us with adequate supplies of high-quality products or the loss of any of our contract manufacturers would cause a delay in our ability to fulfill customer orders while we obtain a replacement manufacturer and would harm our revenues, results of operations, competitive position and reputation.

We may not be able to expand our contract manufacturing capacity or our internal testing or quality assurance functions as required to keep up with demand for our products. Any such failure would in turn hinder our growth. If we do not expand these capacities and functions effectively or in a timely manner, we may experience disruptions in product flow which could limit our revenues, adversely affect our competitive position and reputation and result in additional cost, cancellation of orders or both.

Because of intense competition for technical personnel, we may not be able to recruit or retain necessary personnel on a cost-effective basis

Our success will depend in large part upon our ability to identify, hire, retain and motivate highly skilled employees. We plan to significantly increase the number of our research and development, marketing, sales, customer support and operations employees. Competition for highly skilled employees in our industry is intense. In addition, employees may leave our company and subsequently compete against us. Our failure to attract and retain these qualified employees could significantly harm our ability to develop new products and maintain customer relationships. The loss of the services of any of our qualified employees, the inability to attract or retain qualified personnel in the future or delays in hiring required personnel could hinder the development and introduction of new and enhanced products and harm our ability to sell our products. Moreover, companies in our industry whose employees accept positions with competitors frequently claim that those competitors have engaged in unfair hiring practices. We may be subject to such claims as we seek to retain or hire qualified personnel, some of whom may currently be working for our competitors. Some of these claims may result in material litigation. We could incur substantial costs in defending ourselves against these claims, regardless of their merits. Such claims could also discourage potential employees who currently work for our competitors from joining us.

As a result of a lawsuit by one of our competitors, our Vice President, Marketing may be prevented from continuing his employment with us

In June 2000, one of our competitors, Netcom Systems, filed a lawsuit against Eran Karoly, our Vice President, Marketing, who had previously worked for Netcom Systems. In the lawsuit, Netcom Systems alleges that in the course of his employment, Mr. Karoly has misappropriated Netcom Systems' trade secrets, engaged in unfair competition and breached his agreements with Netcom Systems. If Netcom Systems were to prevail in its lawsuit against Mr. Karoly, we could be prevented from employing Mr. Karoly in business development and marketing work for a period of 24 months. We cannot assure you that the lawsuit will not harm our results of operations or competitive position. For more information on the lawsuit, see "Business — Legal Proceedings" on page 45.

The loss of any of our key personnel could significantly harm our results of operations and competitive position

Our success depends to a significant degree upon the continuing contributions of our key management, technical, marketing and sales employees, particularly Errol Ginsberg, our President and Chief Executive Officer. There can be no assurance that we will be successful in retaining our key employees or that we can attract or retain additional skilled personnel as required. Failure to retain key personnel could significantly harm our results of operations and competitive position.

Continued rapid growth will strain our operations and require us to incur costs to maintain and upgrade our management and operational resources

We have experienced and are continuing to experience a period of rapid growth. Unless we manage our growth effectively, we may have difficulty in operating our business. As a result, we may inaccurately forecast sales and materials requirements, fail to integrate new personnel or fail to maintain adequate internal controls, which may result in fluctuations in our operating results and cause the price of our stock to decline. We plan to continue to expand our operations significantly. This anticipated growth will continue to place a significant strain on our management and operational resources. In order to manage our growth effectively, we must implement and improve our operational systems, procedures and controls on a timely basis. If we cannot manage growth effectively, our profitability could be significantly harmed.

Our products may contain defects which may cause us to incur significant costs, divert our attention from product development efforts and result in a loss of customers

Our existing products and any new or enhanced products we introduce may contain undetected software or hardware defects when they are first introduced or as new versions are released. These problems may cause us to incur significant damages or warranty and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relation problems or loss of customers and reputation, all of which would harm our results of operations. A successful claim against us for an amount exceeding the limit on our product liability insurance policy would force us to use our own resources, to the extent available, to pay the claim, which could result in an increase in our expenses and a reduction of our working capital available for other uses, thereby harming our profitability and capital resources.

Our failure to protect our intellectual property may significantly harm our results of operations and reputation

Our success and ability to compete is dependent in part on our ability to protect and maintain our proprietary rights to our intellectual property. We currently rely on a combination of trade secret, trademark and copyright laws to establish and protect our intellectual property. We also expect to rely on patents to protect some of our proprietary technology. To date, we have relied primarily on trade secret laws to protect our proprietary processes and know-how. Although we have filed applications for two U.S. patents, we cannot assure you that either of these applications will issue into patents or that, if issued, the patents will be upheld. We also cannot assure you that such patents, if issued, will be effective in protecting our proprietary technology.

We generally enter into confidentiality agreements with our officers, employees and consultants. We also generally limit access to and distribution of our source code and further limit the disclosure and use of our other proprietary information. However, these measures provide only limited protection of our intellectual property rights. In addition, we may not have signed agreements containing adequate protective provisions in every case, and the contractual provisions that are in place may not provide us with adequate protection in all circumstances. Further, we have not included copyright notices on all of our copyrightable intellectual property. Any infringement of our proprietary rights could result in significant litigation costs,

and any failure to adequately protect our proprietary rights could result in our competitors offering similar products, potentially resulting in loss of one or more competitive advantages and decreased revenues.

Despite our efforts to protect our proprietary rights, existing trade secret, copyright, patent and trademark laws afford us only limited protection. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States. Others may attempt to copy or reverse engineer aspects of our products or to obtain and use information that we regard as proprietary. Accordingly, we may not be able to prevent misappropriation of our technologies or to deter others from developing similar technologies. Further, monitoring the unauthorized use of our products and our proprietary rights is difficult. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could result in substantial costs and diversion of resources and could significantly harm our results of operations and reputation.

Claims that we infringe third-party intellectual property rights could result in significant expenses or restrictions on our ability to sell our products

From time to time, other parties may assert patent, copyright, trademark and other intellectual property rights to technologies and in various jurisdictions that are important to our business. We cannot provide assurance that others will not claim that we are infringing their intellectual property rights or that we do not in fact infringe those intellectual property rights. We have not conducted a search to determine whether the technology we have in our products infringes or misappropriates intellectual property held by third parties. In addition, because patent applications in the United States are not publicly disclosed until the patent is issued, applications may have been filed which could relate to our products.

Any claims asserting that our products infringe or may infringe proprietary rights of third parties, if determined adversely to us, could significantly harm our results of operations. Any claims, with or without merit, could:

- be time-consuming;
- result in costly litigation;
- divert the efforts of our technical and management personnel;
- require us to develop alternative technology, thereby causing product shipment delays and the loss or deferral of revenues;
- require us to cease selling the products containing the infringing intellectual property;
- require us to pay substantial damage awards;
- damage our reputation; or
- require us to enter into royalty or licensing agreements which, if required, may not be available on terms acceptable to us, if at all.

In the event a claim against us were successful and we could not obtain a license to the relevant technology on acceptable terms or license a substitute technology or redesign our products to avoid infringement, our revenues, results of operations and competitive position would be harmed.

If we fail to maintain our relationships with industry experts, our products may lose industry and market recognition and sales could decline

Our relationships with industry experts in the field of performance analysis and measurement of networks and network equipment are critical for maintaining our industry credibility and for developing new products and testing methodologies in a timely fashion. These experts have established standard testing methodologies that evaluate new network equipment products and technologies. We provide these experts and their testing labs with our products and engineering assistance to perform tests on these new

network equipment products and technologies. These industry experts refer to our products in their publications which has given our products industry recognition. In addition, these labs offer us the opportunity to test our products on the newest network equipment and technologies, thereby assisting us in developing new products that are designed to meet evolving technological needs. We cannot assure you that we will be able to maintain our relationships with industry experts or that our competitors will not obtain similar or superior relationships with industry experts. If we are unable to maintain our relationships with industry experts, our products may lose industry and market recognition which could harm our reputation and competitive position and cause our sales to decline.

Any acquisitions that we may undertake could be difficult to integrate, disrupt our business, dilute shareholder value and significantly harm our operating results

We expect to review opportunities to acquire other businesses or technologies that would complement our current products, expand the breadth of our markets, enhance our technical capabilities or otherwise offer growth opportunities. While we have no current agreements or negotiations underway, we may acquire businesses, products or technologies in the future. If we make any acquisitions, we could issue stock that would dilute existing shareholders' percentage ownership, incur substantial debt or assume contingent liabilities. We have no experience in acquiring other businesses and technologies and believe potential acquisitions could involve the following risks:

- problems assimilating the acquired operations, technologies or products;
- unanticipated costs associated with the acquisition;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers, contract manufacturers, customers and industry experts;
- risks associated with entering markets in which we have no or limited prior experience; and
- potential loss of the acquired organization's or our own key employees.

We cannot assure you that we would be successful in overcoming problems in connection with such acquisitions, and our inability to do so could significantly harm our revenues and results of operations.

Our headquarters, many of our customers and some of our contract manufacturers and suppliers are located in California where natural disasters may occur

Currently, our corporate headquarters, many of our customers and some of our contract manufacturers and suppliers are located in California. California historically has been vulnerable to natural disasters and other risks, such as earthquakes, fires and floods, which at times have disrupted the local economy and posed physical risks to our property. We and some of our customers, contract manufacturers and suppliers do not have redundant, multiple site capacity. In the event of a natural disaster, our ability to conduct business could be significantly disrupted, thereby harming our results of operations.

Our principal shareholders will continue to own a large percentage of our voting stock after this offering, which will allow them to control substantially all matters requiring shareholder approval

Upon completion of this offering, our principal shareholder will beneficially own 25,425,000 shares or, based on the number of shares of our common stock outstanding as of September 30, 2000, approximately 48.1% of our outstanding shares of common stock, or approximately 47.3%, assuming the full exercise of the underwriters' over-allotment option. Upon completion of this offering, our directors and officers and entities affiliated with them will beneficially own 12,326,374 shares or, based on the number of shares of our common stock outstanding as of September 30, 2000, approximately 23.2% of our shares of common stock, or approximately 22.8%, assuming the full exercise of the underwriters' over-allotment option. If these shareholders act together, they would be able to elect at least a majority of our board of directors and to control all other matters requiring approval by shareholders, including the approval of mergers or other business combination transactions, going private transactions and other extraordinary transactions, and the terms of any of these transactions. In addition, through cumulative voting, our

principal shareholder by itself will be able to elect two of our five directors. This concentration of ownership could have the effect of delaying or preventing a change in our control or otherwise discouraging a potential acquirer from attempting to obtain control of us, which in turn could have an adverse effect on the market price of our common stock or prevent our shareholders from realizing a premium over the market price for their shares of common stock.

Our management will have broad discretion over the use of proceeds from this offering and may not obtain a significant return on the use of these proceeds

We have not determined any specific purpose for the net proceeds of this offering. Our management will have broad discretion in determining how to spend the net proceeds from this offering and may spend the proceeds in a manner that our shareholders may not deem desirable. We cannot assure you that the use of the net proceeds of this offering will yield favorable returns or results.

The sale of a substantial number of shares of our common stock in the public market after this offering may depress the market price of our stock

Sales of substantial amounts of our common stock in the public market following this offering, or the perception that substantial sales may be made could cause the market price of our common stock to decline. In addition to the adverse effect a price decline could have on holders of our common stock, such a decline would likely impede our ability to raise capital through the issuance of additional equity securities. Upon completion of this offering, based on the number of shares of our common stock outstanding as of September 30, 2000, we will have 52,912,293 shares of common stock outstanding or 53,737,293 shares outstanding if the underwriters' over-allotment option is exercised in full. Of these, at least 2,655,000 shares will become available for sale 181 days after the date of this prospectus upon the expiration of lock-up agreements. Merrill Lynch, Pierce, Fenner & Smith Incorporated, however, may waive the lock-up restrictions at its sole discretion without notice. In addition, 44,757,293 additional shares will become eligible for sale at various times following the expiration of the lock-up agreements, subject to the restrictions imposed by Rule 144 and Rule 701 and, in the case of our principal shareholder, additional contractual restrictions. Of these shares, we have granted registration rights with respect to 25,425,000 shares of common stock held by our principal shareholder. For more information, see "Shares Eligible for Future Sale" on page 63.

You will experience immediate and substantial dilution in the net tangible book value of the stock you purchase

The initial public offering price of our common stock will be substantially higher than the pro forma net tangible book value per share of the outstanding common stock immediately after the offering. Based on an assumed initial public offering price of \$11.00 per share and our net tangible book value as of June 30, 2000, if you purchase our common stock in this offering you will suffer immediate dilution of approximately \$9.61 in pro forma net tangible book value per share, or \$9.47 if all options and warrants to purchase our common stock outstanding as of September 30, 2000 are exercised. Net tangible book value per share represents the amount of our total tangible assets less our total liabilities, divided by the number of shares of our common stock outstanding immediately after this offering. If additional shares are sold by the underwriters following exercise of their over-allotment option, there will be further dilution. We have outstanding a large number of stock options with exercise prices significantly below the initial public offering price of the shares. To the extent additional options are granted or shares issued, there will be further dilution.

Provisions of our articles of incorporation, bylaws and an agreement with our principal shareholder may make it difficult for a third party to acquire us, despite the possible benefits to our shareholders

Following the offering, our board of directors will have the authority to issue up to 1,000,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the shareholders. The rights

of the holders of our common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that we may issue. The issuance of preferred stock could have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock. Furthermore, some provisions of our articles of incorporation and bylaws could delay or make more difficult a merger, tender offer or proxy contest involving us.

Technology Capital Group S.A., our principal shareholder, and Stéphane Ratel, the principal shareholder of Technology Capital Group, and our principal beneficial shareholder, have agreed to some restrictions on the sale of their shares. Technology Capital Group has agreed that for a period of 360 days after the date of this prospectus, it will not sell or otherwise dispose of its shares of our common stock in private transactions without our prior consent. In addition, Mr. Ratel has agreed that during the same 360-day period he will not sell or otherwise dispose of his shares of Technology Capital Group without our prior consent. These consent requirements may discourage third parties from attempting to acquire the shares of our common stock held beneficially by Mr. Ratel during that period.

Technology Capital Group, but not Mr. Ratel, has also agreed that for an additional period of three years or until any earlier time that it owns less than 25% of the outstanding shares of our common stock, it will provide us with at least 30 days advance notice before agreeing to a sale or other disposition of one percent or more of our outstanding shares in a private transaction. This notice requirement may delay a third party's acquisition of the shares of our common stock held by Technology Capital Group and also provide us with an opportunity to propose other buyers for the shares who may be more acceptable to us, to propose to repurchase the shares proposed to be sold or to propose to register the shares for sale in an underwritten public offering. This notice requirement may also discourage third parties from attempting to acquire the shares of our common stock held by Technology Capital Group during that period. Mr. Ratel has not agreed to comparable restrictions with respect to his shares of Technology Capital Group. For more information, see "Related Party Transactions — Agreement with Principal Shareholder" on page 59.

These provisions of our articles of incorporation and bylaws and this agreement may have the effect of delaying, deferring or preventing a change in our control despite possible benefits to our shareholders, may discourage bids at a premium over the market price of our common stock and may harm the market price of our common stock and the voting and other rights of our shareholders.

Our stock price may be volatile and you may be unable to resell your shares at or above the initial public offering price

There previously has not been a public market for our common stock. We cannot predict the extent to which investor interest in us will lead to the development of a trading market or how active that market might become. The initial public offering price for our common stock will be determined by negotiations between us and the representatives of the underwriters and may not be indicative of prices that will prevail in the trading market. For a discussion of the factors to be considered in determining the initial public offering price, see "Underwriting" on page 65.

Following this offering, the price for our shares of common stock could be highly volatile and subject to wide fluctuations in response to factors, including the following:

- actual or anticipated variations in our operating results;
- announcements of technological innovations or new products by us or by our competitors or customers;
- the loss of significant customers;
- changes in financial estimates or recommendations by stock market analysts regarding us or our competitors;
- additions or departures of key personnel; and
- changes in general market and economic conditions.

In addition, the stock market in general, and the Nasdaq National Market and stocks of technology companies in particular, have often experienced extreme price and volume fluctuations. This volatility is often unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may decrease the market price of our common stock, regardless of our actual operating performance. If our share price is volatile, we may be the target of securities litigation, which is costly and time-consuming to defend. Historically, following periods of volatility in the market price of a company's securities, securities class action litigation has often been initiated against that company. Litigation of this type could result in substantial costs and a diversion of management's attention and resources, which would harm our business.

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "project," "predict," "potential" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. These risks, uncertainties and other factors may cause our actual results, performances or achievements to be materially different from those expressed or implied by our forward-looking statements. Our forward-looking statements in this prospectus include, but are not limited to, statements relating to:

- our business strategy;
- the market opportunity for our systems, including anticipated growth of our industry and expected demand for our products;
- our plans for hiring additional personnel;
- our estimates regarding our capital requirements and needs for additional financing; and
- any of our other plans, objectives, expectations and intentions contained in this prospectus that are not historical facts.

Factors that may cause our actual results to differ materially from our forward-looking statements include, among others, changes in general economic and business conditions and the risks and other factors set forth in "Risk Factors" beginning on page 8.

You should read this prospectus completely and with the understanding that our actual results may be materially different from what we expect. We will not update these forward-looking statements, even though our situation may change in the future. We qualify all of our forward-looking statements by these cautionary statements.

In this prospectus, we refer to statistics concerning Internet traffic that we obtained from publicly available materials prepared by Ryan Hankin Kent, Inc. and to statistics concerning network equipment that we obtained from publicly available materials prepared by International Data Corporation. These statistics are based on a number of assumptions. If these assumptions turn out to be incorrect, actual results may vary from the statistics we have included in this prospectus. We did not retain these organizations to provide this information and also have not sought the consent of these organizations to refer to their data in this prospectus.

USE OF PROCEEDS

We estimate our net proceeds from our sale of the 5,500,000 shares of common stock to be approximately \$55.0 million, or approximately \$63.4 million if the underwriters exercise their over-allotment option in full, at the assumed initial public offering price of \$11.00 per share, in each case after deducting the estimated underwriting discount and estimated offering expenses.

The principal purposes of this offering are to increase our equity capital and to create a public market for our common stock. We believe this will facilitate our future access to the public equity markets and enhance our ability to use our common stock as consideration for acquisitions and as a means of attracting and retaining key employees.

We intend to use the net proceeds of this offering for general corporate purposes. We may also use a portion of the net proceeds to fund acquisitions or licenses of products or technologies, or acquisitions of businesses, that are related or complementary to our business. However, we have no current agreements or commitments and are not currently engaged in any negotiations with respect to any such transactions. We will retain broad discretion in the allocation and uses of the net proceeds of this offering. Pending use of the net proceeds for the foregoing purposes, we intend to invest the net proceeds from this offering in short-term, investment grade, interest bearing securities.

DIVIDEND POLICY

We have never declared or paid dividends on our common stock. We currently intend to retain earnings to finance the growth and development of our business and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. Any determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors the board of directors deems relevant.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of June 30, 2000:

- on an actual basis; and
- on an as adjusted basis to give effect to the sale by us of shares of common stock in this offering at an assumed initial public offering price of \$11.00 per share after deducting the underwriting discount and estimated offering expenses, and our receipt and application of the net proceeds.

	June 30, 2000	
	Actual	As Adjusted
	(in thousands, except share and per share data)	
Cash and cash equivalents	\$ 8,952	\$ 63,917
Shareholders' equity:		
Preferred stock, no par value; 1,000,000 shares authorized and none outstanding	—	—
Common stock, no par value; 75,000,000 shares authorized, 46,746,079 shares issued and outstanding, actual, and 52,246,079 shares issued and outstanding, as adjusted	910	55,875
Additional paid-in capital	34,288	34,288
Deferred stock-based compensation	(24,305)	(24,305)
Notes receivable from shareholders	(341)	(341)
Retained earnings	7,095	7,095
Total capitalization	<u>\$ 17,647</u>	<u>\$ 72,612</u>

The actual and as adjusted information set forth in the table excludes:

- 10,617,707 shares of common stock issuable upon the exercise of options outstanding as of September 30, 2000 under our 1997 stock option plan, with a weighted average exercise price of \$2.25 per share;
- an additional 3,820,000 shares of common stock reserved for issuance under our 1997 stock option plan as of September 30, 2000;
- 80,000 shares of common stock issuable upon exercise of warrants with an exercise price of \$7.00 per share;
- 300,000 shares of common stock reserved for issuance under our employee stock purchase plan, subject to annual automatic increases;
- 200,000 shares of common stock reserved for issuance under our director stock option plan; and
- an additional 125,000,000 shares of common stock authorized for issuance under our amended articles of incorporation after June 30, 2000.

For further information regarding our stock option and purchase plans, see “Management — Benefit Plans” on page 51.

DILUTION

The net tangible book value of our common stock as of June 30, 2000, was approximately \$17,647,000, or \$0.38 per share of common stock. Net tangible book value per share represents the amount of our total tangible assets, less our total liabilities, divided by the total number of shares of common stock outstanding. After giving effect to the issuance and sale by us of 5,500,000 shares of common stock offered by this prospectus at an assumed initial public offering price of \$11.00 per share and after deducting the underwriting discount and estimated offering expenses, our pro forma net tangible book value as of June 30, 2000 would have been \$72,612,000, or \$1.39 per share. This represents an immediate increase in the pro forma net tangible book value of \$1.01 per share to existing shareholders and an immediate dilution of \$9.61 per share to new investors in this offering. The following table illustrates this per share dilution:

Assumed initial public offering price per share	\$11.00
Net tangible book value per share as of June 30, 2000	\$0.38
Increase in net tangible book value per share attributable to new investors ..	<u>1.01</u>
Pro forma net tangible book value per share after this offering	<u>1.39</u>
Dilution per share to new investors	<u><u>\$ 9.61</u></u>

The following table sets forth on a pro forma basis as of June 30, 2000:

- the number of shares of common stock purchased from us;
- the total consideration paid to us;
- the average price per share paid by existing shareholders; and
- the average price per share paid by new shareholders before deducting the underwriting discount and estimated offering expenses payable by us:

	<u>Shares Purchased</u>		<u>Total Consideration</u>		<u>Average Price</u>
	<u>Number</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	<u>Per Share</u>
	(in thousands, except percent and per share data)				
Existing shareholders	46,746	89.5%	\$ 2,210	3.5%	\$ 0.05
New shareholders	<u>5,500</u>	<u>10.5</u>	<u>60,500</u>	<u>96.5</u>	<u>11.00</u>
Total	<u>52,246</u>	<u>100.0%</u>	<u>\$62,710</u>	<u>100.0%</u>	

The foregoing discussion and tables assume no exercise of any stock options or warrants outstanding. As of September 30, 2000, there were options and warrants outstanding to purchase a total of approximately 10,697,707 shares of common stock with a weighted average exercise price of \$2.28 per share.

The following table sets forth on a pro forma basis, assuming full exercise of all outstanding options and warrants for the purchase of our common stock, as of September 30, 2000:

- the number of shares of common stock purchased from us;
- the total consideration paid to us;
- the average price per share paid by existing shareholders; and

- the average price per share paid by new shareholders before deducting the underwriting discount and estimated offering expenses payable by us:

	<u>Shares Purchased</u>		<u>Total Consideration</u>		<u>Average Price Per Share</u>
	<u>Number</u>	<u>Percent</u>	<u>Amount</u>	<u>Percent</u>	
	(in thousands, except percent and per share data)				
Existing shareholders	58,110	91.4%	\$26,736	30.6%	\$ 0.46
New shareholders	<u>5,500</u>	<u>8.6</u>	<u>60,500</u>	<u>69.4</u>	11.00
Total	63,610	100.0%	\$87,236	100.0%	

An additional 4,320,000 shares of common stock were available as of September 30, 2000 for future issuance under our stock option and purchase plans. For further information regarding our stock option and purchase plans, including provisions for the automatic increase in reserved shares, see “Management — Benefit Plans” on page 51. To the extent that additional shares reserved for issuance under our plans are issued, there will be further dilution to the new shareholders.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the following selected consolidated financial data in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and the notes to those consolidated financial statements included elsewhere in this prospectus. The statement of operations data set forth below for the period from May 27, 1997, our inception, through December 31, 1997 and for the years ended December 31, 1998 and 1999 and the balance sheet data as of December 31, 1998 and 1999 are derived from, and are qualified by reference to, our audited consolidated financial statements included elsewhere in this prospectus. The balance sheet data as of December 31, 1997 are derived from our consolidated financial statements not included in this prospectus. The statement of operations data set forth below for the six month periods ended June 30, 1999 and 2000 and the balance sheet data as of June 30, 2000 are derived from, and are qualified by reference to, our unaudited consolidated financial statements included elsewhere in this prospectus. The unaudited consolidated financial statements include all normal recurring adjustments that we consider necessary for a fair presentation of our financial position and results of operations. The results of operations for the six months ended June 30, 2000 are not necessarily indicative of the results that may be expected for the full year ending December 31, 2000, or any other future period.

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31, 1998	1999	Six Months Ended June 30, 1999	2000 (unaudited)
Statement of Operations Data (in thousands, except per share data):					
Net revenues	\$ —	\$ 4,916	\$24,499	\$ 8,214	\$28,268
Cost of revenues ⁽¹⁾	—	1,309	4,944	1,412	5,626
Gross profit	—	3,607	19,555	6,802	22,642
Operating expenses:					
Research and development	513	1,580	2,780	1,182	2,744
Sales and marketing	—	940	4,443	1,531	4,372
General and administrative	110	509	1,660	588	1,733
Stock-based compensation ⁽²⁾	—	154	1,847	407	6,250
Total operating expenses	623	3,183	10,730	3,708	15,099
Income (loss) from operations	(623)	424	8,825	3,094	7,543
Interest income, net	7	14	88	18	221
Income (loss) before income taxes	(616)	438	8,913	3,112	7,764
Income tax expense (benefit)	(294)	118	4,103	1,362	5,477
Net income (loss)	\$ (322)	\$ 320	\$ 4,810	\$ 1,750	\$ 2,287
Earnings (loss) per share:					
Basic	\$ (0.01)	\$ 0.01	\$ 0.11	\$ 0.04	\$ 0.05
Diluted	\$ (0.01)	\$ 0.01	\$ 0.10	\$ 0.04	\$ 0.04
Weighted average number of shares outstanding:					
Basic	43,041	43,200	43,574	43,218	45,236
Diluted	43,041	45,619	48,896	46,340	52,989
⁽¹⁾ Stock-based compensation included in cost of revenues	\$ —	\$ 8	\$ 38	\$ 10	\$ 386
⁽²⁾ Stock-based compensation:					
Research and development	\$ —	\$ 92	\$ 669	\$ 94	\$ 2,597
Sales and marketing	—	62	449	124	1,771
General and administrative	—	—	729	189	1,882
	\$ —	\$ 154	\$ 1,847	\$ 407	\$ 6,250

	December 31,			June 30,
	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>
				(unaudited)
Balance Sheet Data (in thousands):				
Cash and cash equivalents	\$304	\$1,124	\$ 8,733	\$ 8,952
Working capital	691	1,232	7,500	15,072
Total assets	669	3,266	15,822	25,119
Total shareholders' equity	578	1,760	8,610	17,647

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of many factors, including those set forth under "Risk Factors" beginning on page 8 and elsewhere in this prospectus. The following discussion should be read together with our consolidated financial statements and the notes to those consolidated financial statements included elsewhere in this prospectus.

Overview

We develop, market and sell high-speed, multi-port network performance analysis systems for advanced optical communications equipment and networks, as well as electrical communications equipment and networks. Our products address a broad range of network equipment and systems that are used throughout the Internet and local, metropolitan and wide area networks. Our products allow customers to generate network and Internet protocol traffic and analyze the performance, accuracy and reliability of equipment and systems that they either manufacture for sale to others or purchase for use in their own networks. Our customers include manufacturers of network equipment, Internet and network service providers, communications chip manufacturers and network users.

Our product offerings include a variety of interface cards, chassis that can hold up to 16 interface cards each and related software products. Our interface cards can generate traffic over a variety of optical and electrical interfaces such as Packet Over SONET and Gigabit Ethernet. The following table sets forth, for the periods indicated, our net revenues by principal product category in absolute dollars and as a percentage of total net revenues:

<u>Products</u>	<u>Year Ended December 31,</u>				<u>Six Months Ended</u>	
	<u>1998</u>		<u>1999</u>		<u>June 30, 2000</u>	
	<u>(in thousands, except percentages)</u>					
Optical interface cards.....	\$2,060	41.9%	\$12,672	51.7%	\$17,134	60.6%
Electrical interface cards.....	2,248	45.7	8,757	35.8	8,268	29.3
Chassis, software and other products.....	608	12.4	3,070	12.5	2,866	10.1
Total	<u>\$4,916</u>	<u>100.0%</u>	<u>\$24,499</u>	<u>100.0%</u>	<u>\$28,268</u>	<u>100.0%</u>

We were incorporated in May 1997. From inception through March 1998, our operating activities consisted primarily of research and development, staffing and establishing relationships with potential customers. During this development period, we funded operations by raising approximately \$1.6 million in initial equity contributions and \$500,000 through a short-term loan from a major shareholder that was repaid in September 1999. We commenced product shipments in April 1998 and, since then, we have been able to fund operations from internal cash flows.

Sales to our five largest customers collectively accounted for approximately \$12.5 million or 51.0% of our net revenues in 1999 and \$15.0 million or 53.1% of our net revenues for the six months ended June 30, 2000. To date, we have sold our systems primarily to network equipment manufacturers. While we expect that we will continue to have some customer concentration for the foreseeable future, we have sold our systems to a wide variety of customers. Through June 30, 2000, we had shipped our systems to over 170 customers. To the extent we develop a broader and more diverse customer base, we anticipate that our reliance on any one customer will diminish.

Net revenues. Our revenues consist primarily of product sales. The hardware and software components of our products are sold as an integrated system. The software component of our products does not require significant modification or customization, and our sales do not involve any significant future obligations or customer acceptance terms. Accordingly, revenue from product sales is recognized upon shipment. We warrant the software component of our products for one year after sale. At the time of sale we defer that portion of our revenues that relates to our post-contract support and recognize it ratably

over the 12-month service period. Revenues from maintenance contracts are deferred and recognized ratably over the term of the contracts.

Cost of Revenues. Our cost of revenues consists of materials, payments to third party manufacturers, salaries and related expenses for manufacturing personnel and the warranty cost of hardware to be replaced during the one-year warranty period. We outsource the majority of our manufacturing operations, and we conduct final assembly, supply chain management, quality assurance, documentation control and shipping at our facility. Accordingly, a significant portion of our cost of revenues consists of payments to our contract manufacturers. In addition, cost of revenues includes a non-cash component related to the amortization of deferred stock-based compensation allocated to manufacturing personnel.

Gross Margins. Excluding the effects of stock-based compensation, the gross margins of our various interface cards have generally been consistent and have exceeded the gross margins of our chassis. In general, our gross margins are primarily affected by the following factors:

- demand for our products;
- new product introductions by us and by our competitors;
- changes in our pricing policies and those of our competitors;
- the mix of our products sold;
- the mix of sales channels through which our products are sold; and
- the pricing we are able to obtain from our component suppliers and contract manufacturers.

Operating Expenses. We generally recognize our operating expenses as we incur them in three general operational categories: research and development, sales and marketing, and general and administrative. Our operating expenses also include a non-cash component related to the amortization of deferred stock-based compensation allocated to research and development, sales and marketing and general and administrative personnel.

Research and development expenses consist primarily of salaries and related personnel and consulting costs related to the design, development, testing and enhancements of our systems. We expense our research and development costs as they are incurred. We also capitalize and depreciate over a two-year period some costs of our systems used for internal purposes. We expect research and development expenses to increase as we seek to attain our strategic product development objectives and to meet changing customer requirements and technological advances.

Sales and marketing expenses consist primarily of salaries, commissions and related expenses for personnel engaged in sales and marketing and customer support functions, as well as costs associated with promotional and other marketing activities. We expect sales and marketing expenses to increase substantially as we hire additional sales and marketing personnel and independent sales representatives, initiate additional marketing programs and establish new sales offices in domestic and international locations. We also expect to significantly expand our technical support staff to strengthen our relationships with our customers.

General and administrative expenses consist primarily of salaries and related expenses for executive, finance, human resources, information technology and administrative personnel, as well as recruiting and professional fees, insurance costs and other general corporate expenses, including rent. We expect general and administrative expenses to increase as we add personnel and incur additional costs related to the growth of our business and operation as a public company.

In connection with the grant of stock options and the sale of restricted stock, we recorded deferred stock-based compensation of \$422,000 in 1998, \$6.6 million in 1999 and \$26.0 million in the six months ended June 30, 2000. These amounts represent the difference between the deemed fair value of our common stock for accounting purposes and (1) the exercise price of the options at the date of grant or

(2) the purchase price of the restricted stock. Deferred stock-based compensation is presented as a reduction of shareholders' equity, with amortization recorded over the vesting period, which is typically four years. We amortized \$162,000 of deferred stock-based compensation in 1998, \$1.9 million in 1999 and \$6.6 million for the six months ended June 30, 2000. Based on the unvested options and stock subject to repurchase as of June 30, 2000, we expect to record additional stock-based compensation expense relating to deferred stock-based compensation approximately as follows: \$7.9 million during the remaining six months of 2000, \$9.4 million during 2001, \$4.7 million during 2002 and \$2.3 million during 2003 and thereafter. The amount of deferred stock-based compensation expense to be recorded in future periods could decrease if options and stock subject to repurchase for which unearned compensation has been recorded are forfeited or repurchased.

Results of Operations

The following table sets forth certain statement of operations data as a percentage of net revenues for the periods indicated:

	Year Ended December 31,		Six Months Ended June 30,	
	1998	1999	1999	2000
Statement of Operations Data:				
Net revenues	100.0%	100.0%	100.0%	100.0%
Cost of revenues	26.6	20.2	17.2	19.9
Gross profit	73.4	79.8	82.8	80.1
Operating expenses:				
Research and development	32.1	11.3	14.4	9.7
Sales and marketing	19.1	18.1	18.6	15.5
General and administrative	10.4	6.8	7.2	6.1
Stock-based compensation	3.1	7.5	4.9	22.1
Total operating expenses	64.7	43.8	45.1	53.4
Income from operations	8.6	36.0	37.7	26.7
Interest income, net	0.3	0.4	0.2	0.8
Income before income taxes	8.9	36.4	37.9	27.5
Income tax expense	2.4	16.8	16.6	19.4
Net income	6.5%	19.6%	21.3%	8.1%

From our inception through December 31, 1997, we generated no revenues.

Comparison of Six Months Ended June 30, 1999 and June 30, 2000

Net Revenues. Net revenues increased 244.1% from \$8.2 million for the six months ended June 30, 1999 to \$28.3 million for the six months ended June 30, 2000. Of this increase in net revenues, approximately half came from expanded sales of existing products and approximately half came from sales of new products, including primarily new versions of our Packet Over SONET interface cards and, to a lesser extent, new versions of our Gigabit Ethernet interface cards. Sales to our five largest customers collectively accounted for \$15.0 million or 53.1% of net revenues for the six months ended June 30, 2000 compared to \$4.3 million or 52.3% for the six months ended June 30, 1999.

Gross Profit. Gross profit increased 232.9% from \$6.8 million for the six months ended June 30, 1999 to \$22.6 million for the six months ended June 30, 2000. As a percentage of net revenues, gross profit decreased from 82.8% for the six months ended June 30, 1999 to 80.1% for the six months ended June 30, 2000. Of this 2.7 percentage point drop in gross margin, approximately half is attributable to stock-based compensation related to individuals engaged in operations activities. The balance is attributable to changes in a variety of factors, including selling prices, product mix and component costs, none of which was individually significant.

Research and Development Expenses. Research and development expenses increased from \$1.2 million for the six months ended June 30, 1999 to \$2.7 million for the six months ended June 30, 2000. This increase was primarily related to higher compensation expense and related benefit costs due to the addition of engineering personnel. Research and development expenses decreased as a percentage of net revenues from 14.4% for the six months ended June 30, 1999 to 9.7% for the six months ended June 30, 2000 due to the significant increase in sales. Including stock-based compensation related to individuals engaged in research and development activities, research and development expense increased from \$1.3 million in the six months ended June 30, 1999 to \$5.3 million in the six months ended June 30, 2000.

Sales and Marketing Expenses. Sales and marketing expenses increased from \$1.5 million for the six months ended June 30, 1999 to \$4.4 million for the six months ended June 30, 2000. This increase was primarily due to increases in commissions and increases in the number of direct sales and marketing personnel. Sales and marketing expenses decreased as a percentage of net revenues from 18.6% for the six months ended June 30, 1999 to 15.5% for the six months ended June 30, 2000 due to a significant increase in sales. Including stock-based compensation related to individuals engaged in sales and marketing activities, sales and marketing expense increased from \$1.7 million in the six months ended June 30, 1999 to \$6.1 million in the six months ended June 30, 2000.

General and Administrative Expenses. General and administrative expenses increased from \$588,000 for the six months ended June 30, 1999 to \$1.7 million for the six months ended June 30, 2000. This increase was related to higher compensation expense resulting from increased staffing and increased expenses for professional services, primarily legal, recruiting and accounting. General and administrative expenses decreased as a percentage of net revenues from 7.2% for the six months ended June 30, 1999 to 6.1% for the six months ended June 30, 2000 due to a significant increase in sales. Including stock-based compensation related to individuals engaged in general and administrative activities, general and administrative expense increased from \$777,000 in the six months ended June 30, 1999 to \$3.6 million in the six months ended June 30, 2000.

Stock-based Compensation. For the six months ended June 30, 1999 we recorded deferred compensation of \$1.2 million relating to stock and option awards compared to \$26.0 million recorded for the six months ended June 30, 2000. These amounts are being amortized over the vesting periods of the stock and option awards. Stock-based compensation increased from \$407,000 for the six months ended June 30, 1999 to \$6.3 million for the six months ended June 30, 2000.

Interest Income, Net. Interest income, net increased from \$18,000 for the six months ended June 30, 1999 to \$221,000 for the six months ended June 30, 2000. This increase was the result of an increase in cash and cash equivalents. We have incurred minimal interest expense.

Income Tax Expense. Income tax expense increased from \$1.4 million for the six months ended June 30, 1999, or an effective rate of 43.8%, to \$5.5 million for the six months ended June 30, 2000, or an effective tax rate of 70.5%. The difference between the effective rate and the statutory rate was primarily due to the impact of non-deductible stock-based compensation charges and state taxes offset by research and development credits. Excluding the impact of stock-based compensation, the effective rates would have been 38.9% for the six months ended June 30, 1999 and 39.0% for the six months ended June 30, 2000.

Comparison of the Period from May 27, 1997 (Inception) through December 31, 1997 and Years Ended December 31, 1998 and 1999

Net Revenues. For the period from May 27, 1997 through December 31, 1997, we were a development stage company and did not ship product or generate revenues. We commenced product shipments in April 1998 and had net revenues of \$4.9 million in 1998 and \$24.5 million in 1999. The 398.4% increase from 1998 to 1999 reflects increased unit sales across our product lines, the introduction of new product lines, sales to new customers and a full year of product sales in 1999. Sales to our five

largest customers collectively accounted for \$3.0 million or 62.0% of net revenues in 1998 compared to \$12.5 million or 51.0% of net revenues in 1999.

Gross Profit. Gross profit increased 442.1% from \$3.6 million in 1998 to \$19.6 million in 1999. Our gross margin increased from 73.4% in 1998 to 79.8% in 1999. This increase in gross margin primarily reflects purchasing and volume manufacturing efficiencies as production and sales volumes increased.

Research and Development Expenses. Research and development expenses increased from \$513,000 in the period from our inception in May 1997 through December 31, 1997 to \$1.6 million in 1998 and to \$2.8 million in 1999. The increases in both 1998 and 1999 were primarily related to higher compensation expense and related costs due to the addition of engineering personnel. Research and development expenses declined as a percentage of net revenues from 32.1% in 1998 to 11.3% in 1999, reflecting the substantial increase in net revenues in 1999 over 1998. Including stock-based compensation related to individuals engaged in research and development activities, research and development expense increased from \$1.7 million in 1998 to \$3.4 million in 1999.

Sales and Marketing Expenses. We did not incur any sales and marketing expenses in the period from our inception in May 1997 through December 31, 1997. In 1998, we incurred sales and marketing expenses of \$940,000 as we began sales and marketing activities. These expenses increased to \$4.4 million in 1999, primarily due to increases in the number of direct sales and marketing personnel and in the commissions paid to independent sales representatives. As a percentage of net revenues, these expenses remained relatively stable at 19.1% in 1998 and 18.1% in 1999. Including stock-based compensation related to individuals engaged in sales and marketing activities, sales and marketing expense increased from \$1.0 million in 1998 to \$4.9 million in 1999.

General and Administrative Expenses. General and administrative expenses increased from \$110,000 in the period from our inception in May 1997 through December 31, 1997 to \$509,000 in 1998 and to \$1.7 million in 1999. The increase in 1998 was primarily related to an increase in the number of administrative personnel. The substantial increase in 1999 was related to higher compensation expense resulting from increased staffing and increased expenses for professional services, primarily legal, recruiting and accounting. General and administrative expenses declined as a percentage of net revenues from 10.4% in 1998 to 6.8% in 1999. Including stock-based compensation related to individuals engaged in general and administrative activities, general and administrative expense increased from \$509,000 in 1998 to \$2.4 million in 1999.

Stock-based Compensation. We did not record any deferred stock-based compensation for the period from our inception in May 1997 through December 31, 1997. In 1998 we recorded deferred stock-based compensation of \$422,000 relating to stock and option awards compared to \$6.6 million recorded in 1999. These amounts are being amortized over the vesting periods of the options and stock subject to repurchase. Stock-based compensation increased from \$154,000 in 1998 to \$1.8 million in 1999.

Interest Income, Net. Interest income, net increased from \$7,000 in the period from our inception in May 1997 through December 31, 1997 to \$14,000 in 1998 and to \$88,000 in 1999. This increase was the result of an increase in cash and cash equivalents. We have incurred minimal interest expense.

Income Tax Expense. For the period from our inception in May 1997 through December 31, 1997, we recorded an income tax benefit of \$294,000. This amount reflects the net federal and state statutory rate net of research and development credits. Income tax expense increased from \$118,000 in 1998 to \$4.1 million in 1999. The income tax expense was based on an annual effective tax rate of 26.9% in 1998 and 46.0% in 1999. The annual effective tax rate in 1998 and 1999 differs from the statutory rate primarily due to stock-based compensation and state taxes offset by research and development tax credits. Excluding the effects of deferred stock-based compensation, the effective tax rate in 1998 would have been 14.8% and the effective tax rate in 1999 would have been 38.2%.

Quarterly Results of Operations

The following table presents unaudited quarterly statement of operations data for the ten quarters ended June 30, 2000 expressed in dollars and as a percentage of net revenues. We have prepared this information using our unaudited interim financial statements that, in our opinion, have been prepared on a basis consistent with our annual financial statements. We believe this information reflects all normal non-recurring adjustments necessary for a fair presentation of such information in accordance with accounting principles generally accepted in the United States. The results for any quarter may not be indicative of results for any future period.

	Three Months Ended									
	Mar. 31, 1998	Jun. 30, 1998	Sep. 30, 1998	Dec. 31, 1998	Mar. 31, 1999	Jun. 30, 1999	Sep. 30, 1999	Dec. 31, 1999	Mar. 31, 2000	Jun. 30, 2000
	(in thousands, except for percentages)									
Statement of Operations Data:										
Net revenues	\$ —	\$ 918	\$1,734	\$2,264	\$3,062	\$5,152	\$7,128	\$9,157	\$11,193	\$17,075
Cost of revenues	—	140	455	714	489	923	1,532	2,000	2,141	3,485
Gross profit	—	778	1,279	1,550	2,573	4,229	5,596	7,157	9,052	13,590
Operating expenses:										
Research and development	361	368	338	513	539	643	664	934	1,083	1,661
Sales and marketing	21	145	290	484	506	1,025	1,345	1,567	1,631	2,741
General and administrative	39	123	162	185	239	349	429	643	652	1,081
Stock-based compensation	18	36	45	55	86	321	457	983	2,236	4,014
Total operating expenses	439	672	835	1,237	1,370	2,338	2,895	4,127	5,602	9,497
Income (loss) from operations	(439)	106	444	313	1,203	1,891	2,701	3,030	3,450	4,093
Interest income, net	—	6	4	4	7	11	28	42	97	124
Income (loss) before income taxes	(439)	112	448	317	1,210	1,902	2,729	3,072	3,547	4,217
Income tax expense (benefit)	(118)	30	121	85	486	876	1,257	1,484	2,200	3,277
Net income (loss)	<u>\$(321)</u>	<u>\$ 82</u>	<u>\$ 327</u>	<u>\$ 232</u>	<u>\$ 724</u>	<u>\$1,026</u>	<u>\$1,472</u>	<u>\$1,588</u>	<u>\$ 1,347</u>	<u>\$ 940</u>
As a Percentage of Net Revenues:										
Net revenues	—	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	—	15.3	26.2	31.5	16.0	17.9	21.5	21.8	19.1	20.4
Gross profit	—	84.7	73.8	68.5	84.0	82.1	78.5	78.2	80.9	79.6
Operating expenses:										
Research and development	—	40.1	19.5	22.7	17.6	12.5	9.3	10.2	9.7	9.7
Sales and marketing	—	15.8	16.7	21.4	16.5	19.9	18.9	17.1	14.6	16.1
General and administrative	—	13.4	9.3	8.2	7.8	6.8	6.0	7.0	5.8	6.3
Stock-based compensation	—	3.9	2.6	2.4	2.8	6.2	6.4	10.7	20.0	23.5
Total operating expenses	—	73.2	48.2	54.6	44.7	45.4	40.6	45.1	50.0	55.6
Income from operations	—	11.5	25.6	13.8	39.3	36.7	37.9	33.1	30.8	24.0
Interest income, net	—	0.7	0.2	0.2	0.2	0.2	0.4	0.5	0.9	0.7
Income before income taxes	—	12.2	25.8	14.0	39.5	36.9	38.3	33.5	31.7	24.7
Income tax expense	—	3.3	7.0	3.8	15.9	17.0	17.6	16.2	19.7	19.2
Net income	—	8.9%	18.9%	10.2%	23.6%	19.9%	20.7%	17.3%	12.0%	5.5%

Net revenues have increased in each of the last nine quarters as a result of increased sales of new and existing products to an expanding customer base. In the quarter ended June 30, 2000, net revenues increased by \$5.9 million, or 52.6%, in comparison to the quarter ended March 31, 2000. This increase was primarily due to the initial launch of our Packet over SONET OC-48c interface cards. Gross margins were relatively stable in the 80% range in the last six quarters, reflecting a consistent mix of revenues from chassis, interface cards and software. Quarterly increases in operating expenses reflect the continued expansion of our operations throughout the ten-quarter period.

Our quarterly and annual operating results may fluctuate significantly due to a variety of factors, most of which are outside of our control, as discussed in “Risk Factors — Our quarterly and annual operating results may fluctuate significantly as a result of new product introductions and other factors which could cause our stock price to decline significantly” on page 8.

Most of our expenses, such as employee compensation and lease payments for facilities and equipment, are relatively fixed in the near term. In addition, our expense levels are based in part on our expectations regarding future revenues. As a result, if our actual revenues fall short of our expectations, our operating results could vary significantly from quarter to quarter. Due to these factors, you should not rely on our quarterly revenues and operating results to predict our future performance.

Liquidity and Capital Resources

To date, we have funded our operations primarily from:

- \$1.9 million in equity contributions;
- the issuance of a \$500,000 note to a shareholder that was repaid in September 1999; and
- cash flow from operations since our initial product launch in the second quarter of 1998.

As of June 30, 2000, we had cash and cash equivalents of \$9.0 million.

Net cash provided by operating activities was \$45,000 in 1998, \$9.0 million in 1999 and \$1.7 million for the six months ended June 30, 2000. Net cash generated in 1998, 1999 and in the six months ended June 30, 2000 was primarily provided by the growth in net income offset by non-cash expenses and an increase in working capital requirements. Additionally, for 1999, \$4.5 million of the \$9.0 million provided by operations relates to the timing of payments for our 1999 estimated income tax liability. Due to the method in which estimated income tax payments are made, in 1999 we paid only \$66,000 in estimated taxes during the year and, as of December 31, 1999, we had \$4.5 million in accrued income taxes payable. During March 2000, we made an estimated income tax payment of \$4.6 million relating to the 1999 liability. Had this payment been made in 1999, net cash provided by operations would have been \$4.4 million in 1999 and \$6.3 million in the six months ended June 30, 2000.

Cash used in investing activities was \$425,000 in 1998, \$1.0 million in 1999 and \$1.6 million in the six months ended June 30, 2000. Cash used in investing activities consisted exclusively of capital expenditures related to the acquisition of property and equipment.

Financing activities provided net cash of \$1.2 million in 1998, used net cash of \$336,000 in 1999 and provided net cash of \$127,000 in the first six months of 2000. Financing activities in 1998, 1999 and the first six months of 2000 consisted of a \$700,000 capital contribution and proceeds from a \$500,000 note issued to a shareholder which has been repaid and proceeds from the sale of common stock and stock option exercises.

We had no material commitments for capital expenditures as of June 30, 2000, but we expect such expenditures to total \$3.1 million in 2000, of which \$1.6 million was spent in the six months ended June 30, 2000. These expenditures will be incurred primarily for the acquisition of property and equipment. As of June 30, 2000, we also had total minimum lease obligations of \$6.2 million through May 31, 2007 under non-cancelable operating leases. We do not have any capital leases.

We believe that our existing balances of cash and cash equivalents, together with the net proceeds of this offering and cash flow expected to be generated from our operations, will be sufficient to meet our cash needs for working capital and capital expenditures for at least the next 12 months, although we could be required, or could elect, to seek additional funding prior to that time. Our capital requirements will depend on many factors, including the growth rate of our net revenues, our profitability, our capital expenditures, working capital requirements, the timing and extent of spending to support product development efforts and the expansion of our sales, marketing and technical support efforts.

Qualitative and Quantitative Disclosures about Market Risk

We do not hold financial instruments for trading or speculative purposes. Our financial instruments have short maturities and therefore are not subject to significant interest rate risk. We generally place funds that are in excess of our current needs in high credit quality instruments with maturities of less than

one year, such as money market accounts and certificates of deposit. We do not have any financial liabilities that are subject to interest rate risk. We do not expect any material loss from our investments and therefore believe that our potential interest rate exposure is not material. We do not use any derivatives or similar instruments to manage our interest rate risk.

Year 2000 Compliance

We have not experienced, and do not expect to experience, any significant problems associated with year 2000 issues. We did not incur material expenditures to test, repair or replace equipment. In addition, to our knowledge, our suppliers and other third parties with whom we conduct business have not experienced material year 2000 problems to date.

Recent Accounting Pronouncements

In December 1999, the SEC issued Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements," which provides guidance on the recognition, presentation and disclosure of revenue in financial statements filed with the SEC. SAB 101 outlines the basic criteria that must be met to recognize revenue and provides guidance for disclosures related to revenue recognition policies. Adoption of SAB 101 is required in the fourth quarter of 2000. We have historically recognized and currently recognize revenue under the guidelines as currently provided by SAB 101.

In March 2000, the Financial Accounting Standards Board issued Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation — an interpretation of APB Opinion 25." Interpretation No. 44 became effective on July 1, 2000, except for the provisions relating to repricings and the definition of an employee, which apply to awards issued after December 31, 1998. Interpretation No. 44 clarifies the application of APB Opinion 25 for various matters, specifically:

- the definition of an employee for purposes of applying APB Opinion 25;
- the criteria for determining whether a plan qualifies as a noncompensatory plan;
- the accounting consequence of various modifications to the terms of a previously fixed stock option or award; and
- the accounting for an exchange of stock compensation awards in a business combination.

We do not anticipate that the adoption of Interpretation No. 44 will have a material impact on our financial position or results of operations.

BUSINESS

Overview

We are a provider of systems that allow our customers to measure the performance of their data communications equipment and networks. Our systems generate and analyze data traffic, including Voice over IP traffic, which sends voice communication over data networks using a protocol known as the Internet Protocol, or IP. The networks our systems analyze include advanced optical networks, such as Packet Over SONET networks, which transmit packets of information over high-speed optical networks. Other networks include Gigabit Ethernet networks, which carry data traffic over optical fiber as well as over electrical cable and are typically used within a single building or a group of buildings. In the six months ended June 30, 2000, optical interface cards accounted for 60.6% of our net revenues. Our systems are highly modular, scalable and easy to use.

Since our inception, we have sold our systems to over 170 customers. Based on revenues for the 12 months ended June 30, 2000, our largest customers by category include:

- Leading network equipment manufacturers such as Cisco Systems, Extreme Networks and Nortel Networks;
- Internet and network service providers such as AT&T and UUNET Technologies;
- Communications chip manufacturers such as Broadcom and Level One Communications, which is now part of Intel; and
- Network users such as Lockheed Martin and Bank of America.

We intend to expand our business by focusing on high-growth markets such as advanced optical networks which route data traffic throughout the Internet, as well as networks that provide high-speed access to the Internet, known as broadband access networks. We intend to maintain our focus on technology leadership, expanding and further penetrating our customer base and expanding our international presence.

Industry Background

The popularity of the Internet and the number of Internet-based applications and services have fueled dramatic growth in the volume of data traffic. According to Ryan Hankin Kent, Inc., a leading communications market research firm, Internet traffic is expected to increase from 350,000 terabytes, or trillions of bytes, per month at the end of 1999 to over 15,000,000 terabytes per month during 2003, representing a compound annual average growth rate of over 150%. To accommodate the growth in traffic, investments in network equipment such as multi-port switches and routers that carry and route data traffic throughout networks have accelerated. Likewise, increasingly complex networks have emerged, including local, metropolitan and wide area networks. A local area network is a data communications network composed of interconnected computers within a single building or group of buildings. Metropolitan area networks are local area networks that are joined together in close proximity, such as within a city. Wide area networks typically interconnect metropolitan area networks or remote computers across long distances.

As a result of the development of these complex networks, performance analysis has become more difficult, requiring increasingly sophisticated network performance analysis systems. We believe that the market for network performance analysis systems will be driven by several specific market trends, including the further deployment of Packet Over SONET and Gigabit Ethernet networks and the associated increased requirements for switching and routing equipment. For example, International Data Corporation, a data communications market research firm, estimates that high-speed router shipments will increase from 3.8 million units in 1999 to 16.1 million units in 2003, representing a compound annual average growth rate of 44%.

The Increasing Need for Network Analysis and Measurement

The performance of the Internet and other networks such as local, metropolitan and wide area networks and the analysis and measurement of their performance are important to the following groups:

- *Network Users.* Network users such as large corporations increasingly use specialized systems in order to verify that they are receiving the level of service that they have contracted to receive from Internet and network service providers. They also increasingly use these systems to measure the performance of equipment before deployment in the network.
- *Internet and Network Service Providers.* Internet and network service providers seek to provide network users with the high quality network services they demand. Failure to provide satisfactory service can be costly and may result in the loss of customers. To ensure these desired service levels are met, Internet and network service providers must verify the performance of network equipment and systems prior to deployment and during operation. In addition, as more complex network and transmission protocols are developed and implemented, the need to measure system performance will continue to increase.
- *Equipment Manufacturers.* To meet the higher standards specified by network operators and end users, equipment manufacturers who provide infrastructure equipment and systems must ensure the quality of their products during development and manufacturing and prior to shipping. Failure to ensure the consistent performance of their products may result in the loss of customers, increased research and development costs, customer service charges and losses resulting from the return of products.
- *Communications Chip Manufacturers.* Communications chip manufacturers require equipment to evaluate and analyze the performance of their chips during the design and development phase.

The following characteristics are used to evaluate the performance of network infrastructure equipment and systems:

- *Throughput* is the maximum rate at which a network device or network can transmit distinct units of data, called packets, without loss of packets;
- *Latency* is the time that it takes a packet to travel through a network device or network;
- *Loss* is the percentage of packets lost during transmission through a network device or network;
- *Jitter* is the variation in the time intervals between packets transmitted through a network device or network;
- *Integrity checking* confirms that the user information transmitted through a network device or network has not been corrupted; and
- *Sequence checking* verifies that packets are received in the same order in which they were sent through a network device or network.

Characteristics Demanded of Network Performance Analysis and Measurement Equipment

Performance requirements of network equipment and systems are becoming increasingly demanding. As a result, precise performance verification is becoming more important throughout the design, development, production, deployment and operation of network equipment and systems. Because this performance verification must take place across multiple layers of the network infrastructure and across all optical and electrical technologies, network performance verification systems are required to be highly flexible and modular. In order to address multi-port switches and routers, performance verification systems must also be highly scalable and capable of generating and analyzing large amounts of data at high speeds over increasingly complex configurations. The rapid evolution of complex network technologies and protocols, including the emergence of new, highly complex protocols such as Packet Over SONET

and Gigabit Ethernet, has also resulted in the need for performance verification systems that are easy to use with minimal training and set-up.

The Ixia Solution

We are a provider of multi-port traffic generation and performance analysis systems for the high-speed data communications market, including the Internet infrastructure and local, metropolitan and wide area networks. Our systems address the need for accurate and reliable performance verification of optical and electrical networks. The optical and electrical interfaces these networks use include Packet Over SONET OC-48c, OC-12c and OC-3c, Gigabit Ethernet and 10/100 megabits per second Ethernet. Our systems meet the requirements of a wide variety of customers, including network equipment manufacturers, Internet and network service providers, communications chip manufacturers and network users.

Our systems provide the following key benefits to our customers:

High Performance. Our systems generate and receive data traffic at wire speed, which is the maximum rate that data traffic can be transmitted over the network. Our systems provide accurate analysis across multiple layers of the overall network and of individual network components in real-time, that is, as the transmission is actually occurring. By analyzing each discrete packet of information on a packet-by-packet basis, our systems allow our customers to precisely measure the performance of their networks and individual network components. This precision allows customers to accurately measure critical quality of service parameters such as throughput, latency, loss and jitter and check data integrity and packet sequence throughout the network, as well as to locate various network problems. Our systems also allow users to precisely repeat complex test scenarios in order to evaluate the impact of changes made to network equipment and systems.

Highly Scalable. Each of our interface cards provides one or more ports through which our systems generate and receive data traffic. Our customers can easily increase port density, which is the number of ports in an individual chassis, by inserting additional interface cards. By connecting multiple chassis and synchronizing up to thousands of ports to operate simultaneously, our customers can simulate large-scale networks. We believe that our systems offer our customers the highest port density and therefore the most scalable systems available. In addition, our client server architecture allows multiple users in the same or different geographic locations to simultaneously access and operate different interface cards contained in the same chassis without affecting one another.

Highly Modular. Our hardware products consist of stackable and portable chassis which can be configured with any mix of up to 16 of our optical and electrical interface cards. This modular design allows our customers to quickly and easily create complex and custom test configurations. Our systems also allow for the convenient integration of additional network technologies into existing systems through the addition of specific interface cards.

Flexibility. Our customers can easily reconfigure our systems to address changing technologies, protocols and applications without changing system hardware or replacing interface cards. For example, a customer can reconfigure our systems through software changes downloaded from our Web site. A customer might download these changes to test new network protocols or types of equipment.

Ease of Use. We have designed our systems so that users can install and operate them with minimal training and set-up. Our systems are easy to use and offer our customers a wide range of readily accessible pre-designed test configurations. These tests include industry standard and application-specific tests. Users can easily configure and operate our systems to generate and analyze data traffic over any combination of interface cards or ports through our graphical user interface that features a familiar Microsoft Windows point-and-click environment. Our systems also support the commonly used tool command programming language, or Tcl, software which allows users to create custom and automated testing applications tailored to meet their specific requirements.

Strategy

Our objective is to be the industry leader in multi-port traffic generation and performance analysis systems for the high-speed data communications market, including the Internet infrastructure and local, metropolitan and wide area networks. Key elements of our strategy to achieve this objective include the following:

Continue to Expand into High-Growth Markets. We plan to further expand into high-growth markets such as advanced optical networks that route data traffic throughout the Internet and emerging networks that allow high-speed access to the Internet, known as broadband access networks. We believe that we can leverage our core competencies in high-speed transmission protocols into leadership positions as these technologies are extended across multiple markets and applications.

Maintain Focus on Technology Leadership. We intend to continue to focus on research and development in order to maintain our technology leadership position and to offer performance analysis systems that address new and evolving network technologies. We intend to maintain an active role in industry standards committees such as the Internet Engineering Task Force and to continue our active involvement in industry forums such as the Gigabit Ethernet Alliance. We also plan to continue to work closely with customers who are developing emerging network technologies, including Cisco Systems, Extreme Networks, Alteon WebSystems, Nortel Networks and Juniper Networks, as well as leading edge start-up companies, to enhance the performance and functionality of our existing systems and to design future products that specifically address our customers' needs as they evolve.

Expand and Further Penetrate Customer Base. We plan to strengthen and further penetrate our existing customer relationships, particularly those with network equipment manufacturers and Internet and network service providers, and to pursue sales to new customers. For example, AT&T and UUNET Technologies currently use our systems to verify the performance and reliability of network equipment before deployment. We believe we have the potential to increase sales to Internet and network service providers as they increasingly require performance measurement and analysis systems that allow them to monitor the in-service performance of their networks. We plan to strengthen our customer relationships and to expand our customer base by:

- developing and offering new and innovative systems that meet our existing and potential customers' needs;
- expanding our sales and marketing efforts; and
- building our reputation and brand name recognition.

We also plan to continue our focus on customer support by maintaining and expanding the capabilities of our highly qualified and specialized internal customer engineering group. This group of technically trained professionals provides our customers with extensive support and assistance, including assistance with customized requirements and on-site training and support.

Expand International Market Presence. We plan to pursue sales in key international markets, including Europe and the Asia Pacific region. In order to pursue sales in these markets, we intend to continue to develop and expand our relationships with key customers and distributors. In March 2000, we established a European sales support subsidiary based in the United Kingdom.

Products

Our product line is made up of network traffic generation and performance analysis systems that simulate large-scale networks. Our systems consist of interchangeable optical and electrical interface cards, multi-slot chassis, which are metal cases that incorporate a computer, a power supply and a backplane, which is a hardware component used to connect the interface cards to the computer. The interface cards generate, receive and analyze data traffic. The software for these systems includes management software and application-specific test suites.

The operator can utilize our analysis systems in either test labs or within networks. Our systems are operated through standard computer peripheral devices. These devices include a monitor, keyboard and mouse. The operator of our systems sets up test parameters for the performance analysis by inputting data using the keyboard and mouse. The operator observes the results of the performance analysis using the monitor.

The operator configures our systems based on the specific interfaces of the network equipment being tested. For example, if the operator wanted to analyze the performance of a router with Ethernet interfaces, the operator would insert Ethernet interface cards into our system.

Chassis

Our primary chassis, the IXIA 1600 and the IXIA 400, are highly scalable and can be configured with any combination of optical and electrical interface cards. Any mix of up to 256 IXIA 1600s and IXIA 400s can be linked together and time-synchronized to support a diverse range of complex test configurations. The IXIA 1600 is a 19-inch rack-mountable 16-slot chassis, and the IXIA 400 is a compact portable four-slot chassis.

Interface Cards

Each one of our optical and electrical interface cards contains from one to four independent traffic generation and analysis ports. These ports operate at wire speed, the maximum rate that data traffic can be transmitted over the network. Each port on each interface card has a unique transmit stream engine that is used to generate packets of information and a real-time receive analysis engine capable of analyzing the packets as they are being received. The transmit stream engine generates millions of Internet protocol data packets at wire speed that are transmitted through the network and received by the analysis engine. The analysis engine then measures throughput, latency, loss and jitter, and checks data integrity and packet sequence on a packet-by-packet basis. These measurements can be performed on different types of data traffic such as Web traffic and Voice over IP. In addition, our systems measure the effectiveness of networks in prioritizing different types of traffic.

The following tables describe our optical and electrical interface cards. In the “Optical Interface Cards” table, the “Fiber Type” column distinguishes between optical interface cards capable of transmitting data traffic over distances typically longer than one kilometer, known as single-mode cards, and optical interface cards used for transmitting data traffic over distances typically shorter than one kilometer, known as multi-mode cards. In both the “Optical Interface Cards” table and the “Electrical Interface Cards” table, the “Transmission Speed” column identifies the speed at which data is sent out of and received by each port on the interface cards, and the “Number of Ports per Interface Card” column identifies how many ports are contained on a single card.

Optical Interface Cards

Our Product Names	Fiber Type	Transmission Speed	Number of Ports per Interface Card
Packet Over SONET/SDH			
OC-12c/3c	Multi-mode	622/155 Mbps	2
OC-12cSM/3cSM	Single-mode	622/155 Mbps	2
OC-48c	Single-mode	2.488 Gbps	1
Gigabit Ethernet			
1000LX3	Single-mode	1.25 Gbps	2
1000LX	Single-mode	1.25 Gbps	2
1000SX3	Multi-mode	1.25 Gbps	2
1000SX	Multi-mode	1.25 Gbps	2
1000GBIC (with modular fiber-type transceivers)	Multi-mode Single-mode	1.25 Gbps	2
Ethernet and Fast Ethernet			
100FX	Multi-mode	100 Mbps	4

Electrical Interface Cards

Our Product Names	Transmission Speed	Number of Ports per Interface Card
Gigabit Ethernet		
1000T	1.25 Gbps	2
Ethernet and Fast Ethernet		
100TX3	10/100 Mbps	4
100TX	10/100 Mbps	4

System Management Software

Our systems are managed through graphical user interfaces which consist of two proprietary applications and the commonly used tool command language, or Tcl, programming environment. Our graphical user interfaces allow users to configure our hardware chassis and interface cards in order to generate and analyze traffic. In addition, our graphical user interfaces allow our users to execute a variety of industry standard and application-specific tests written by us. Tcl allows users to create custom and automated test applications tailored to meet their specific requirements.

Application Specific Test Suites

We have a large suite of software applications that measure equipment and network performance, including throughput, latency, loss, jitter, integrity checking and sequence checking. These measurements allow network equipment manufacturers and Internet and network service providers to evaluate the performance of the equipment before and after the equipment is deployed in a network. These performance measurements also allow network users and Internet and network service providers to validate network performance and to verify that the requirements of service level agreements, or SLAs, are being met. Our application-specific test suites include the following:

Internet Backbone Router Tester. Our Internet Backbone Router Tester offers a complete system for validation of advanced routers that route data traffic throughout the Internet and are being deployed by Internet service providers. It provides the ability to generate and receive data traffic at wire speed. The Internet Backbone Router Tester provides an integrated mix of Packet Over SONET and Gigabit Ethernet interfaces. Utilizing routing protocol emulation software based on BGP-4, a standard industry routing

protocol, our tester can simulate the data traffic of millions of users to automatically configure the routing table within a single router or within a network of routers. Our system thereby provides performance and reliability testing of the router or network of routers in realistic conditions.

Cable Modem Automated Test Suite. Our Cable Modem Automated Test Suite addresses many of the verification requirements of cable modem and cable modem termination system vendors to obtain Data Over Cable Service Interface Specifications, or DOCSIS, certification for their equipment from CableLabs, a cable industry organization, and from EuroDOCSIS, the European cable standards organization.

Benchmarking Methodology for Network Interconnect Devices (RFC-2544) Test Suite. Our RFC-2544 Test Suite offers the complete benchmarking validation tests defined by the Internet Engineering Task Force's Request for Comments 2544. These tests include throughput, latency and loss tests. These tests can be readily applied to any device or network utilizing any mix of Packet Over SONET, Gigabit Ethernet or 10/100 megabits per second Ethernet interfaces. These tests provide the basic industry accepted benchmarking metrics to qualify a router or switch before network deployment.

LAN Switching Devices (RFC-2285) Test Suite. Our RFC-2285 Test Suite complements our RFC-2544 Test Suite by offering a number of additional tests to qualify the behavior of switching devices for local area networks. These tests can be readily applied to any device or network utilizing any mix of Gigabit Ethernet and 10/100 megabits per second Ethernet interfaces.

Quality of Service (QoS) Test Suite. Our Quality of Service, or QoS, Test Suite offers a comprehensive set of tools designed to verify how effectively a router distinguishes between different types of data traffic and then routes the traffic through the network based on those distinctions. The QoS routing technique assigns a higher priority to some traffic types and a lower priority to other traffic types, which enables a user to determine the quality of service of a given traffic type. This test suite supports many combinations of Packet Over SONET, Gigabit Ethernet and 10/100 megabits per second Ethernet interfaces.

IP Multicast Test Suite. IP Multicast is a protocol that allows a single computer to distribute data traffic to multiple recipients. For example, a single Web server could transmit an audio or video broadcast to millions of users simultaneously. Our IP Multicast Test Suite provides a comprehensive set of tests designed to evaluate the behavior of Internet protocol multicast routers, switches and networks. This test suite supports Packet Over SONET, Gigabit Ethernet and 10/100 megabits per second Ethernet interfaces.

Products in Development

We are currently developing a number of new products which we plan to introduce to the market within the next several months. These products include:

Packet Over SONET OC-192c. Our OC-192c Packet Over SONET interface card will operate at a transmission speed of 9.952 gigabits per second.

IXIA 100 Quality of Service (QoS) Performance Tester. The IXIA 100 Quality of Service Performance Tester will feature an integrated global positioning system, or GPS, receiver that provides a precise time stamp for each packet carried by the network. We expect Internet service providers will deploy IXIA 100's in multiple locations in their networks. Although IXIA 100 units may be at various geographic locations, they can be time synchronized by utilizing the GPS-provided time stamp. By doing so, they will be able to accurately validate network performance and measure the quality of service parameters specified in service level agreements with their customers.

Server Load Balancer Test Suite. The Server Load Balancer Test Suite will measure the performance of Web server load balancers which distribute traffic among multiple Web servers.

We may delay or cancel our introduction of these, or any other, new products to the market as a result of a number of factors, some of which are beyond our control. For more information regarding these factors, see “Risk Factors — If we are unable to successfully introduce new products to keep pace with rapid technological changes that characterize our market, our results of operations will be significantly harmed” on page 8 and “Business — Research and Development” on page 44.

Technology

The design of all of our systems requires a combination of sophisticated technical competencies, including design of field programmable gate arrays, or FPGA’s, which are integrated circuits that can be repeatedly reprogrammed to perform different sets of functions as required. The design of all of our systems also requires high-speed digital hardware design, software engineering and optical and mechanical engineering. We have built an organization of professional staff with skills in all of these areas. The integration of these technical competencies enables us to design and manufacture performance analysis systems with optical and electrical interfaces and easy-to-use user interface software meeting the needs of our customers.

Complex Logic Design. Our systems use field programmable gate arrays that are programmed by the host personal computer and therefore can be reconfigured for different applications. Our newest products have clock frequencies, which are the timing signals that synchronize all components within our system, of up to 200 megahertz, and logic densities, which are the number of individual switching components, or gates, of up to one million gates per chip. Our customers can download new features and enhancements from our Web site using a Web browser that runs on our system, thereby allowing rapid updates of the system. Almost all of our logic is designed in VHDL hardware description language, which is a unique programming language tailored to the development of logic chips. This language enables the easy migration of the hardware design to application specific integrated circuits as volumes warrant. We develop VHDL code in a modular fashion for reuse in logic design, which comprises a critical portion of our intellectual property. This reusable technology allows us to reduce the time-to-market for our new and enhanced products.

Software Technology. We devote substantial engineering resources to the development of software technology for use in our product lines. We have developed software to control our systems, analyze data collected by our systems, and monitor, maintain and self-test our hardware and field programmable gate array subsystems. A majority of our software technology and expertise is focused on the use of object-oriented development techniques to design software subsystems that can be reused across multiple product lines. These objects are client and server independent allowing for distributed network applications. This software architecture allows all of the software tools developed for our existing products to be utilized in all of our new products with very little modification. Another important component of our software technology is our graphical user interface design. Customer experience with our test products has enabled us to design a simple yet effective method to display complex configurations in clear and concise graphical user interfaces for intuitive use by engineers.

Customers

During the period from our inception in May 1997 through June 30, 2000, we shipped our systems to over 170 customers. No customer other than Cisco Systems accounted for more than 10% of our net revenues in 1999 or the six months ended June 30, 2000. Our five largest customers collectively accounted for 51.0% of our net revenues in 1999 and 53.1% of our net revenues in the six months ended June 30, 2000. To date, we have sold our systems primarily to network equipment manufacturers.

We have no long term contracts with any of our customers, and they may reduce or discontinue their purchases at any time.

Customers who purchased more than \$100,000 of our products during the 12-month period ended June 30, 2000 include:

3COM	Ericsson	NBase Communications
Alcatel	Extreme Networks	Network Peripherals
Alidian Networks	Force 10 Networks	Nishan Systems
Allied Telesyn International	GTE	Nokia
Alteon WebSystems	Hewlett Packard	Nortel Networks
AT&T	IBM	Northchurch
Bank of America	Intel	ONI Systems
Broadband Access Systems	IronBridge Networks	Redback Networks
Broadcom	Juniper Networks	River Delta Networks
Cabletron Systems	Lockheed Martin	Telseon
Cisco Systems	Lucent Technologies	TeraBeam Networks
Compaq Computer	MCI	TurboNet Communications
Converse	MMC Networks	UUNET Technologies
Ellacoya Networks	Motorola	

Competition

The market for network performance measurement and analysis systems for use in the high-speed data communications industry is highly competitive, and we expect this competition to increase in the future. We currently compete with test equipment manufacturers such as Agilent Technologies, Netcom Systems and Adtech. Netcom Systems and Adtech are both within the Spirent group of companies. We also compete with start-up companies, such as Antara, which are focused on network performance measurement. In addition, we compete with network equipment manufacturers that have developed or may develop in-house performance analysis products for their own use or for sale to others.

We believe that the principal competitive factors in our market include:

- timeliness of new product introductions;
- product quality, reliability and performance;
- ease of installation, integration and use;
- breadth of product offerings and features;
- price and overall cost of product ownership;
- customer service and technical support; and
- company reputation and size.

We believe that we compete favorably in the key competitive factors that impact our markets, including technical expertise, new product introductions and product features, services and support. We intend to remain competitive through ongoing research and development efforts to enhance existing systems and to develop new systems. We will also seek to expand our market presence through marketing and sales efforts. However, our market is still evolving and we may not be able to compete successfully against current or future competitors.

We expect competition to increase significantly from existing providers of network performance measurement and analysis products and from companies that may enter our existing or future markets. These companies may develop similar or substitute solutions that may be more cost-effective or provide better performance or functionality than our systems. Also, as we broaden our product offerings, we may move into new markets in which we will have to compete against companies already established in those markets. Some of our existing and potential competitors have longer operating histories, significantly greater financial, marketing, service, support, technical and other resources, significantly greater name recognition and a larger installed base of customers than we do. In addition, many of our competitors have

well established relationships with our current and potential customers and have extensive knowledge of our industry. It is possible that new competitors or alliances among competitors will emerge and rapidly acquire market share. Moreover, our competitors may consolidate with each other, or with other companies, giving them even greater capabilities with which to compete against us.

To be successful, we must continue to respond promptly and effectively to the challenges of changing customer requirements, technological advances and competitors' innovations. Accordingly, we cannot predict what our relative competitive position will be as the market evolves for network performance measurement and analysis systems. For more information regarding some of the risks of competition, see "Risk Factors — Competition in our market could significantly harm our results of operations" on page 10.

Sales, Marketing and Technical Support

Sales. Our direct sales force and manufacturers' representatives market and sell our systems primarily in the United States. Our distributors market and sell our systems primarily outside of the United States. Our net revenues from international product shipments were \$565,000 in 1998, \$3.2 million in 1999 and \$3.9 million in the six months ended June 30, 2000. Our direct sales force maintains close contact with our customers and provides technical support to our manufacturers' representatives and distributors.

Marketing. We have a number of marketing programs to support the sale and distribution of our systems and to inform existing and potential customers and our manufacturers' representatives and distributors about the capabilities and benefits of our systems. Our marketing efforts also include promoting our business in the following ways:

- participating in industry trade shows and technical conferences;
- advertising in trade journals; and
- communicating through our corporate Web site.

Technical Support. We maintain a technically knowledgeable and responsive customer service and support staff that is critical to our development of long-term customer relationships. This highly qualified and specialized internal customer engineering group:

- offers our customers customized solutions for their performance validation needs;
- develops custom applications at our company headquarters;
- can be deployed to customer sites on short notice; and
- provides our customers with the training necessary to optimally utilize our systems.

Manufacturing

Our manufacturing operations consist primarily of materials planning and procurement, quality control, logistics, final assembly and testing and distribution. We outsource the manufacture and assembly of printed circuit boards to third party contract manufacturers and assembly companies. This manufacturing process enables us to operate without substantial space and personnel dedicated to manufacturing operations. As a result, we can conserve a significant portion of the working capital and capital expenditures that would be required for funding inventory and manufacturing processes.

We are dependent upon sole or limited source suppliers for key components and parts used in our systems, including field programmable gate arrays, chips, oscillators and optical modules. Additionally, there is currently a worldwide shortage of the high-speed lasers required for the production of our proposed OC-192c Packet Over SONET interface card. We and our contract manufacturers purchase components through purchase orders and have no guaranteed or long-term supply arrangements with our respective suppliers. In addition, the availability of many components is dependent in part on our ability and the

ability of our contract manufacturers and assembly companies to provide suppliers with accurate forecasts of future requirements. Any extended interruption in the supply of any of the key components currently obtained from a sole or limited source, delay in transitioning to a replacement supplier's product or replacement component into our systems, could disrupt our operations and significantly harm our business in any given period. For more information regarding risks associated with our contract manufacturing arrangements, see "Risk Factors — Some key components in our products come from sole or limited sources of supply, which exposes us to potential supply shortages that could disrupt the manufacture and sale of our products" on page 9 and "Risk Factors — Failure by our contract manufacturers to provide us with adequate supplies of high-quality products could harm our revenues, results of operations, competitive position and reputation" on page 13.

Lead times for materials and components ordered by us and by our contract manufacturers vary and depend on factors such as the specific supplier, contract terms and demand for a component at a given time. We and our contract manufacturers acquire materials, complete standard subassemblies and assemble fully-configured systems based on sales forecasts and historical purchasing patterns. If orders do not match forecasts or substantially deviate from historical patterns, we and our contract manufacturers may have excess or inadequate inventory of materials and components, as discussed in "Risk Factors — If we fail to accurately forecast our manufacturing requirements, we could incur additional costs and experience manufacturing delays" on page 12.

Research and Development

We believe that research and development is critical to our business. We focus our research and development efforts on developing new products and on further enhancing existing products. Our development efforts include anticipating and addressing the performance analysis needs of network equipment manufacturers, Internet and network service providers, communications chip manufacturers and network users and focusing on emerging high growth network technologies.

Our future success depends on our ability to continue to enhance our existing products and to develop products that address the needs of our customers. We closely monitor changing customer needs by communicating and working directly with our customers and distributors. We also receive input from active participation in industry groups responsible for establishing technical standards.

Development schedules for technology products are inherently difficult to predict, and we cannot assure you that we will introduce any proposed new products in a timely fashion. Also, we cannot assure you that our product development efforts will result in commercially successful products or that our products will not contain software errors or other performance problems or be rendered obsolete by changing technology or new product announcements by other companies. For information regarding some of the risks associated with our research and development, see "Risk Factors — If we are unable to successfully introduce new products to keep pace with the rapid technological changes that characterize our market, our results of operations will be significantly harmed" on page 8.

We plan to continue to make significant investments in research and development. Our research and development expenditures, excluding stock-based compensation, were \$513,000 in 1997, \$1.6 million in 1998, \$2.8 million in 1999 and \$2.7 million in the six months ended June 30, 2000.

Intellectual Property and Proprietary Rights

Our success and ability to compete is dependent in part upon our ability to protect and maintain our proprietary rights to our intellectual property. We currently rely on a combination of trademark, trade secret and copyright laws and restrictions on disclosure to establish and protect our intellectual property. We also expect to rely on patents to protect some of our proprietary technology. We have filed applications for two U.S. patents but cannot assure you that the applications will issue into patents or that the patents will be upheld if they are issued. We also cannot assure you that such patents, if issued, will be effective in protecting our proprietary technology. We have registered our Ixia logo and other Ixia trademarks in the

United States and have filed for registration of one of our trademarks in other jurisdictions. We are also in the process of filing applications for registration of additional Ixia trademarks.

We generally enter into confidentiality agreements with our officers, employees and consultants. We also generally limit access to and distribution of our source code and further limit the disclosure and use of other proprietary information. However, these measures provide only limited protection of our intellectual property rights. In addition, we may not have signed agreements containing adequate protective provisions in every case, and the contractual provisions that are in place may not provide us with adequate protection in all circumstances. Further, we have not included copyright notices on all of our copyrightable intellectual property.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain or use technology that we regard as proprietary. We cannot assure you that the steps taken by us to protect our proprietary rights will be adequate to prevent misappropriation of our technology or that our competitors will not independently develop technologies that are similar or superior to our technology. In addition, the laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States. Any infringement of our proprietary rights could result in significant litigation costs, and any failure to adequately protect our proprietary rights could result in our competitors offering similar products, potentially resulting in loss of competitive advantage and decreased revenues. Litigation may be necessary to enforce our intellectual property rights or to determine the validity and scope of the proprietary rights of others. Litigation of this type could result in substantial costs and diversion of resources and could significantly harm our business.

The data communications industry is characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. From time to time, third parties may assert patent, copyright, trademark and other intellectual property rights to technologies that are important to our business. We have not conducted a search to determine whether the technology we have in our products infringes or misappropriates intellectual property held by third parties. In addition, because patent applications in the United States are not publicly disclosed until the patent is issued, applications may have been filed which could relate to our products. Any claims asserting that our systems infringe or may infringe proprietary rights of third parties, if determined adversely to us, could significantly harm our business.

For information regarding some of the risks associated with our intellectual property and proprietary rights, see “Risk Factors — Our failure to protect our intellectual property may significantly harm our results of operations and reputation” on page 14 and “Risk Factors — Claims that we infringe third-party intellectual property rights could result in significant expenses or restrictions on our ability to sell our products” on page 15.

Legal Proceedings

From time to time, we may be subject to disputes and potential claims by third parties that are incidental to the conduct of our business. Additionally, our employees may be subject to disputes and potential claims by third parties with whom they have a prior employment relationship. On June 21, 2000, one of our competitors, Netcom Systems, filed an action in the Los Angeles County Superior Court against Eran Karoly, our Vice President, Marketing and a former employee of Netcom Systems. In the action, Netcom Systems alleges principally that Mr. Karoly misappropriated trade secrets and wrongfully solicited employees of Netcom Systems. Netcom Systems is seeking, among other things, recovery of damages and an injunction preventing Mr. Karoly and any persons acting in concert with him from disclosing or using its alleged trade secrets, soliciting its employees and performing business development or marketing work for Ixia for a period of 24 months. We were not named as a defendant in the action but are mentioned in the pleadings as the current employer of Mr. Karoly and as the competitor for whose benefit the alleged wrongful conduct has occurred. On June 27, 2000 and September 8, 2000 the court denied Netcom Systems’ applications for a temporary restraining order. On October 2, 2000 the court denied Netcom Systems’ motion for a preliminary injunction to enjoin Mr. Karoly, among other things,

from working for us pending the outcome of the lawsuit. Mr. Karoly denies Netcom Systems' allegations and, based on our preliminary investigation, we believe that he has substantial defenses. Subject to certain limitations, we have agreed to defend and indemnify Mr. Karoly in this action. We cannot assure you that the results of the claims, including the costs of litigation, will not harm our results of operations or competitive position.

Facilities

Our corporate headquarters are located in Calabasas, California, where currently we lease approximately 45,000 square feet of an approximately 50,000 square-foot facility which houses our research and development, sales and marketing, finance and administration and manufacturing operations for which we currently pay \$90,000 per month. We expect that in the future we will pay some additional amount per month as a result of our lease of the remainder of the facility and usual and customary adjustments. The lease expires in May 2007. We also lease office space for our sales offices in Santa Clara, California and Richardson, Texas and for our sales support office in the United Kingdom. We believe that our current facilities will be adequate to meet our needs for at least the next 12 months, and that we will be able to obtain additional space when and as needed on acceptable terms.

Employees

As of September 30, 2000, we had 128 full-time employees. We also from time to time hire temporary and part-time employees and independent contractors. Our future performance depends, to a significant degree, on our continued ability to attract and retain highly skilled and qualified technical, sales and marketing and senior management personnel. Our employees are not represented by any labor unions. We consider our relations with our employees to be good.

MANAGEMENT

The executive officers, directors and key employees of Ixia as of September 30, 2000 and their positions with Ixia and ages are as follows:

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Errol Ginsberg.....	44	President, Chief Executive Officer and Director
Thomas B. Miller	45	Chief Financial Officer
Paul Mallinder	42	Vice President, Worldwide Sales
Eran Karoly	37	Vice President, Marketing
Joseph A. Noble	49	Vice President, North American Sales
Mark MacWhirter	42	Vice President, Software Development
Cliff Hannel	38	Senior Director of Engineering
Joel Weissberger	50	Director of Hardware Engineering
Walid Chamoun	38	Director of Manufacturing
Jean-Claude Asscher	72	Chairman of the Board
Robert W. Bass.....	54	Director
Howard Oringer	58	Director
Jon F. Rager	60	Director

Mr. Asscher, Mr. Bass and Mr. Oringer are members of our audit committee. Mr. Oringer and Mr. Rager are members of our compensation committee.

Mr. Ginsberg has served as our Chief Executive Officer since September 2000, as a director since May 1997 and as our President since June 1997. From February 1996 to March 1997, Mr. Ginsberg served as Vice President, Engineering of NetVantage, Inc., a network equipment manufacturer. From November 1994 to February 1996, he served as an engineering consultant to Netcom Systems, Inc., a test equipment manufacturer.

Mr. Miller has served as our Chief Financial Officer since March 2000. From March 1997 to October 1999, Mr. Miller was employed by CoCensys, a biotech research and development company, where he served as Director of Finance and Controller. From September 1996 to February 1997, Mr. Miller served as a consultant to various companies. From May 1995 to August 1996, he served as Controller, Financial Operations of Emulex Corporation, a manufacturer of network products.

Mr. Mallinder joined Ixia as Director of Marketing in October 1998. He served as Vice President, Sales and Marketing from February 1999 to April 2000 when he assumed his present position as Vice President, Worldwide Sales. From June 1998 to September 1998, Mr. Mallinder served as Director of Product Marketing for OneBox Networks, a network equipment manufacturer. From February 1989 to January 1998, Mr. Mallinder was employed by ECI Telematics, a network equipment manufacturer, and its predecessor, where he served as a network consultant from January 1992 to May 1996, as Director, Product Marketing from May 1996 to January 1998 and as Associate Vice President of Marketing from January 1998 to May 1998.

Mr. Karoly joined Ixia as Vice President, Marketing in April 2000. From October 1998 until March 2000, he served as Product Marketing Manager for Netcom Systems. From November 1995 to September 1998, Mr. Karoly was employed by ECI Telematics where he served as Product Marketing Manager from November 1995 to January 1998 and as Director, Product Marketing from January 1998 to September 1998. From October 1994 until October 1995, Mr. Karoly served as Project Manager for ECI Telecom, a network equipment manufacturer.

Mr. Noble joined Ixia as Vice President, Sales in March 1999. He assumed his present position as Vice President, North American Sales in April 2000. From January 1998 to March 1999, Mr. Noble served as Regional Sales Manager, Southern Region, for Box Hill Systems, a provider of data storage and storage area network systems. From March 1991 to January 1998, Mr. Noble served as Marketing

Director of Lampi LLC, a lighting manufacturer, where he was responsible for worldwide sales and marketing.

Mr. MacWhirter joined Ixia as Vice President, Software Development in August 1999. From December 1994 to August 1999, Mr. MacWhirter served as President of LearningCurve, Inc., a software consulting company. From August 1997 to August 1999, Mr. MacWhirter served as a consultant to Ixia in his capacity as President of LearningCurve.

Mr. Hannel joined Ixia as Senior Director of Engineering in May 2000. From August 1996 to May 2000, he served as Vice President, Product Development of Internet Dynamics, a developer of network security software. From May 1995 to August 1996, Mr. Hannel served as a Senior Project Manager for Alpharel, Inc., a developer of client and server document management systems.

Mr. Weissberger has served as our Director of Hardware Engineering since June 1997. From April 1996 to June 1997, Mr. Weissberger served as an engineering consultant for NetVantage, Inc. From May 1990 to April 1996, he served as a contracting engineer for Jet Propulsion Laboratory.

Mr. Chamoun joined Ixia as Director of Manufacturing in February 2000. From February 1991 to November 1999, Mr. Chamoun was employed by ACT Networks, a network equipment manufacturer, where he served as Manufacturing Manager from July 1995 to June 1997, as Director of Manufacturing from June 1997 to November 1998 and as Vice President of Manufacturing from November 1998 to November 1999.

Mr. Asscher has been a director of Ixia since May 1997 and Chairman of the Board since June 1997. He has been the President and principal shareholder of Tekelec-Airtronic, S.A., a French electronics company, since he founded that company in 1961. Mr. Asscher is Chairman of the Board of Tekelec, a telecommunications equipment manufacturer.

Mr. Bass has been a director of Ixia since August 2000. Since December 1991, Mr. Bass has been employed by Xircom, Inc., a provider of mobile information access solutions, where he has most recently served as Vice President, Worldwide Operations from October 1995 to January 1997 and as Senior Vice President, Worldwide Operations since January 1997.

Mr. Oringer has been a director of Ixia since May 1997. Since November 1994, Mr. Oringer has served as Managing Director of Communications Capital Group, a business consulting firm. From August 1996 until December 1996, Mr. Oringer also served as a consultant to Tekelec. Mr. Oringer also serves as a member of the Board of Directors of Tekelec, Verilink Corporation, Digital Microwave Corporation and Vertel Corp.

Mr. Rager has been a director of Ixia since May 1997 and served as our Chief Financial Officer from June 1997 until March 2000. Mr. Rager also serves as a director of Tekelec. Since 1976, Mr. Rager has been a practicing accountant with, and President of, Rager Bell Daskocil & Meyer CPAs and its predecessors.

There is no family relationship between any of our directors or executive officers and any of our other directors or executive officers.

Board of Directors and Committees of the Board

Our bylaws require that our board of directors consist of four to seven directors. The number of directors is currently fixed at five. Directors are elected annually and serve until their successors are duly elected and qualified or until their earlier resignation, removal or death.

The audit committee consists of Jean-Claude Asscher, committee chairman, Robert W. Bass and Howard Oringer. The audit committee will review our records and affairs to determine our financial condition, oversees the adequacy of our system of internal accounting controls and reviews our accounting methods.

The compensation committee consists of Jon F. Rager, committee chairman, and Howard Oringer. The compensation committee determines compensation for our officers and administers our 1997 stock option plan and our employee stock purchase plan.

Director Compensation

Employees of Ixia do not receive any compensation for serving on the board of directors. Non-employee directors receive an annual retainer of \$3,000 for serving on the Board or \$6,000 if they are serving as Chairman of the Board.

All of our directors may be reimbursed for reasonable travel expenses incurred in attending board meetings. Our non-employee directors will also participate in our 2000 director stock option plan. For more information regarding this plan, see "Management — Benefit Plans — Director Stock Option Plan" on page 53.

On August 2, 2000, Mr. Bass received warrants to purchase 80,000 shares of common stock with an exercise price of \$7.00 per share. The warrants vest in four equal installments on a quarterly basis commencing September 30, 2000.

Executive Compensation

Summary Compensation Table

The following table sets forth selected information for 1999 concerning compensation paid, or accrued by Ixia, to or on behalf of our President and Chief Executive Officer, each of our other two most highly compensated executive officers for 1999 whose aggregate salary and bonus exceeded \$100,000 and one additional executive officer as of December 31, 1999:

Name and Principal Position	Annual Compensation		Long-Term Compensation Awards
	Salary(\$)(1)	Bonus(\$)	Securities Underlying Options(#)
Errol Ginsberg(2) President and Chief Executive Officer	\$192,304	\$290,000	—
Paul Mallinder(3) Vice President, Worldwide Sales	153,466	207,000	300,000
Joseph A. Noble(4) Vice President, North American Sales	229,376(5)	—	450,000
Mark MacWhirter(6) Vice President, Software Development	—	—	—

(1) Includes amounts, if any, deferred at the election of the named officer under our 401(k) plan.

(2) Mr. Ginsberg has served as our President since June 1997 and became our Chief Executive Officer in September 2000.

(3) Mr. Mallinder became an executive officer in February 1999 and served as Vice President, Sales and Marketing from February 1999 to April 2000 when he became our Vice President, Worldwide Sales.

(4) Mr. Noble commenced his employment with and became an executive officer of Ixia in March 1999 and served as Vice President, Sales from March 1999 to April 2000 when he became our Vice President, North American Sales.

(5) Includes sales commissions of \$168,644 in lieu of participation in our bonus plans.

(6) Mr. MacWhirter commenced his employment with and became an executive officer of Ixia in August 1999 at an annual salary rate of \$184,000.

Option Grants in 1999

The following table sets forth selected information concerning stock option grants in 1999 to the executive officers named in the Summary Compensation Table:

Name	Individual Grants(1)				Potential Realization Value at Assumed Annual Rates of Stock Price Appreciation for Option Term(4)	
	Number of Securities Underlying Options Granted (#)	% of Total Options Granted to Employees in 1999(2)	Exercise Price (\$/Share) (3)	Expiration Date	5%	10%
Errol Ginsberg	—	—	—	—	—	—
Paul Mallinder	75,000	2.3%	\$0.17	01/10/09	\$1,343,838	\$ 2,139,838
	225,000	6.8	0.28	05/15/09	4,031,514	6,419,513
Joseph A. Noble	450,000	13.6	0.23	03/31/09	8,063,028	12,839,025
Mark MacWhirter	—	—	—	—	—	—

- (1) The options in this table were granted under our 1997 stock option plan and vest and become exercisable as to 25% of the shares covered thereby on the one-year anniversary of the date of grant and as to the remaining 75% of the shares covered thereby in 12 equal quarterly installments beginning on the last day of the first full calendar quarter following the one-year anniversary of the date of grant. In the event of a change in control prior to March 31, 2001, Mr. Noble's options will vest as to 50% of the shares as to which the options are then unvested. The options in this table were granted for terms of ten years subject to earlier termination under specified circumstances relating to termination of employment.
- (2) In 1999, we granted options to employees to purchase an aggregate of 3,300,000 shares.
- (3) The exercise price on the date of grant was equal to 100% of the fair market value on the date of grant, as determined by the board of directors.
- (4) Assumes a per share fair market value equal to the assumed initial public offering price of \$11.00. The dollar amounts under these columns represent the potential realizable value of each grant assuming that the market value of our stock appreciates from the date of grant to the expiration of the option at annualized rates of 5% and 10%. These assumed rates of appreciation have been specified by the Securities and Exchange Commission for illustrative purposes only and are not intended to forecast future financial performance or possible future appreciation in the price of our stock. The actual amount the executive officer may realize will depend on the extent to which the stock price exceeds the exercise price of the options on the date the option is exercised.

Aggregate Option Exercises in 1999 and Option Values at December 31, 1999

The executive officers named in the Summary Compensation Table did not exercise any stock options in 1999. The following table sets forth selected information concerning unexercised options held as of December 31, 1999 by those executive officers:

Name	Number of Securities Underlying Unexercised Options at 12/31/99		Value of Unexercised In-the-Money Options at 12/31/99(\$)(1)	
	Exercisable	Unexercisable	Exercisable	Unexercisable
Errol Ginsberg	—	—	—	—
Paul Mallinder	56,250	468,750	\$609,373	\$5,051,874
Joseph A. Noble	—	450,000	—	4,845,015
Mark MacWhirter	75,000	300,000	821,250	3,215,010

- (1) Assumes a per share fair market value equal to the assumed initial public offering price of \$11.00 per share.

Change-in-Control Arrangements

Under our officer severance plan, all of our current executive officers are entitled to receive severance benefits following the termination of their employment if the termination is non-temporary, involuntary and without cause. In addition, if we experience a “change in control,” as that term is defined by the plan, an eligible officer will receive benefits under the severance plan if the officer terminates his or her employment either for any reason within one year following the change in control or for “good reason,” as that term is defined by the plan, within two years following the change in control. Good reason includes the assignment to the officer of duties significantly inconsistent with his or her prior position or a reduction in his or her compensation or benefits.

Each eligible officer’s severance pay equals the product of:

- his or her highest annual compensation (i.e., base salary plus bonus); and
- a percentage determined in accordance with the following table:

<u>Length of Employment Period</u>	<u>Highest Office Held at or Prior to Termination</u>			
	<u>Vice President</u>	<u>Senior Vice President/ Executive Vice President</u>	<u>Chief Financial Officer/ Chief Operating Officer</u>	<u>Chief Executive Officer/ President</u>
Less than One Year	50%	55%	60%	65%
Between One and Three Years	75%	80%	85%	100%
Between Three and Five Years	100%	105%	110%	200%
More than Five Years	125%	130%	140%	300%

Based on these factors, the amounts that would be payable under the severance plan to the executive officers named in the Summary Compensation Table on page 49, if their employment were terminated as of September 15, 2000 under circumstances entitling them to severance benefits under the severance plan would be as follows: Mr. Ginsberg — \$1,080,000, Mr. Mallinder — \$305,250, Mr. Noble — \$189,708 and Mr. MacWhirter — \$151,424. Severance benefits also include the continuation, at our expense, of health care insurance for a period of 18 months following termination of employment. In the event that an officer’s severance benefits upon termination will exceed three times the officer’s base compensation for purposes of Section 280G of the Internal Revenue Code of 1986, as amended, the benefits will automatically be reduced by the minimum amount necessary to ensure that the benefits do not exceed the amount determined pursuant to Section 280G.

In connection with the commencement of Joseph A. Noble’s employment with us in March 1999, we granted to him stock options to purchase 450,000 shares of our common stock. The stock options vest over four years provided Mr. Noble is employed by us on the vesting dates. The options will also vest as to one-half of the shares as to which they are then unvested in the event that more than 80% of our common stock outstanding as of March 1999 is sold to a third party or we sell all or substantially all of our assets or merge or consolidate with another company and are not the surviving company.

Benefit Plans

1997 Stock Option Plan

Our 1997 stock option plan was adopted by our board of directors in November 1997 and approved by our shareholders in May 1998. A total of 17,000,000 shares of common stock has been reserved for issuance under the plan. The plan provides for the granting to employees of incentive stock options within the meaning of Section 422 of the Internal Revenue Code of 1986, as amended, and for the granting to employees and consultants of nonstatutory stock options.

The plan is administered by the board of directors or a committee appointed by the board of directors. The administrator has the power to determine the terms of the options granted, including the exercise price, the number of shares subject to the option and the exercisability thereof.

The administrator establishes the option exercise price which must be at least the fair market value of the common stock on the date of the grant or 110% of fair market value with respect to optionees who own at least 10% of the outstanding common stock. In the absence of a public market for our common stock, fair market value is determined by the administrator in its sole discretion, exercised in good faith. If there is a public market for the common stock, fair market value is the closing sales price on the date of grant or the first preceding day on which there was such a reported price. If closing sales prices are not reported, the fair market value is the average of the closing bid and asked prices on the date of grant or the first preceding day on which there were such reported prices.

Options granted under the plan are generally not transferable by the optionee except by will or the laws of descent and distribution, and each option is exercisable, during the lifetime of the optionee, only by the optionee. Options generally must be exercised within 30 days after the optionee's termination for cause, three months following the end of the optionee's status as an employee or consultant, other than for cause or for death or disability, or within six months after the optionee's termination by disability or death. However, in no event may an option be exercised later than the earlier of the expiration of the term of the option or ten years from the date of the grant of the option or, where an optionee owns stock representing more than 10% of the voting power, five years from the date of the grant of the option.

The maximum number of shares of common stock which may be awarded as options under the plan during any calendar year to any optionee is 1,500,000 shares. Any incentive stock options granted to an optionee which, when combined with all other incentive stock options becoming exercisable for the first time in any calendar year that are held by that person, would have an aggregate fair market value in excess of \$100,000, shall automatically be treated as nonstatutory stock options.

The plan may be amended, altered, suspended or terminated by the administrator at any time, but no such amendment, alteration, suspension or termination may adversely affect the terms of any option previously granted without the consent of the affected optionee. Unless terminated sooner, the plan will terminate automatically in November 2007.

As of September 30, 2000, options to purchase 10,617,707 shares of common stock were outstanding and exercisable at a weighted average price of \$2.25 per share. As of September 30, 2000, 2,562,293 shares had been issued upon exercise of options under the plan and 3,820,000 shares were available for future option grants.

In 2000, through September 30, we granted options to purchase 6,285,200 shares of common stock at a weighted average exercise price of \$3.67 per share. These grants included options to purchase an aggregate of 20,100 shares at an exercise price of \$0.37 per share and 110,000 shares at an exercise price of \$7.00 per share to one of our four named executive officers, and options to purchase an aggregate of 750,000 shares at an exercise price of \$0.37 per share to our other executive officers.

Employee Stock Purchase Plan

Our employee stock purchase plan was adopted by our board of directors in September 2000 and approved by our shareholders in September 2000. The plan will become effective upon the closing of our initial public offering. We have reserved a total of 300,000 shares of common stock for issuance under the plan, together with an automatic annual increase in the number of shares reserved under the plan on May 1, 2001 and each May 1 thereafter equal to the lesser of:

- 200,000 shares;
- 1% of our outstanding shares of common stock on the last day of our prior fiscal year; or
- an amount determined by our board.

The plan will be administered by our board of directors and is intended to qualify under Section 423 of the Internal Revenue Code. Our employees, including our officers and employee directors, are eligible to participate in the plan if they are customarily employed for at least 20 hours per week and for more than five months in any calendar year. The plan permits eligible employees to purchase common

stock through payroll deductions, which may not exceed 15% of an employee's compensation, defined as Form W-2 compensation plus contributions to our 401(k) plan, or \$25,000 per annum.

Unless our board of directors determines otherwise, the plan will be implemented in a series of overlapping 24-month offering periods with new offering periods commencing on May 1 and November 1 of each year. The initial offering period under the plan will commence on November 1, 2000, and subsequent offering periods will begin on the first trading day on or after May 1 and November 1 of each year. Each offering period will be divided into four consecutive six-month purchase periods. All participants in an offering period will be granted an option on the first day of the offering period, and the option will be automatically exercised on the last day of each purchase period throughout the offering period. The purchase price of our common stock for each purchase period within an offering period will be 85% of the lesser of the fair market value per share on the first trading day of the offering period or on the last trading day of the applicable purchase period, whichever is lower. If the fair market value of our common stock on any purchase date is lower than the fair market value on the start date of the offering period, then all participants in the offering period will be automatically withdrawn from the offering period following the purchase date and will be re-enrolled in the immediately following offering period. Fair market value on a trading day is the closing sales price on such day or the first preceding day on which there was such a reported price. If closing sales prices are not reported, the fair market value is the average of the closing bid and asked prices on such day or the first preceding day on which there were such reported prices. In the absence of a public market for our common stock, fair market value is determined in good faith by our board of directors.

Under the plan, no employee may be granted an option if immediately after the grant, the employee would own stock and/or hold outstanding options to purchase stock equaling five percent or more of the total voting power or value of all classes of our stock or that of our subsidiaries. In addition, no employee may purchase in any purchase period shares having a fair market value, based on the fair market value of our common stock on the first trading day of the offering period, of more than \$12,500.

Employees may end their participation in an offering period at any time, and their participation ends automatically on termination of employment with our company.

The plan will terminate in September 2010, unless our board of directors terminates it sooner.

Director Stock Option Plan

Our director stock option plan was adopted by our board of directors in September 2000 and approved by our shareholders in September 2000. We have reserved a total of 200,000 shares of common stock for issuance under the plan.

The option grants under the plan are automatic and non-discretionary, and the exercise price of the options is 100% of the fair market value of our common stock on the grant date. Fair market value is the closing sales price on the date of grant or the first preceding day on which there was such a reported price. If closing sales prices are not reported, the fair market value is the average of the closing bid and asked prices on the date of grant or the first preceding day on which there were such reported prices. In the absence of a public market for our common stock, fair market value is determined in good faith by our board of directors.

The plan provides for an initial grant to a non-employee director of an option to purchase 10,000 shares of common stock upon the director's initial election or appointment to the board. The plan also provides for each non-employee director to be granted an option to purchase 5,000 shares of common stock upon the director's re-election to the board at an annual meeting of shareholders, provided the director has served as a non-employee director for at least six months preceding the date of the annual meeting. The grants become exercisable in four equal quarterly installments commencing on the last day of the calendar quarter in which the option is granted. The term of the options granted under the director stock option plan is seven years.

The plan will terminate in September 2010, unless our board of directors terminates it sooner.

401(k) Retirement Plan

Effective as of June 1997, we adopted a tax-qualified employee savings and retirement plan, or 401(k) plan, that covers all of our employees. Pursuant to our 401(k) plan, participants may elect to reduce their current compensation, on a pre-tax basis, by up to 15% of their taxable compensation or of the statutorily prescribed annual limit, whichever is lower, and have the amount of the reduction contributed to the 401(k) plan. The 401(k) plan permits us, in our sole discretion, to make additional employer contributions to the 401(k) plan of up to 6% of an employee's compensation. Our contributions vest 25% per year over four years. Our 401(k) plan is intended to qualify under Section 401(k) of the Internal Revenue Code. As such, contributions by employees or by us to the 401(k) plan, and the income earned on plan contributions, are not taxable to employees until withdrawn from the 401(k) plan, and we can deduct our contributions, if any, at the time they are made. We made contributions to our 401(k) plan of \$18,000 in 1998 and \$59,000 in 1999.

2000 Bonus Plan

On September 1, 2000, our board of directors approved our 2000 Bonus Plan. Under the 2000 Bonus Plan, all of our non-commissioned employees are eligible to receive bonuses of between 10% and 150% of their salaries depending on their position and based upon our achievement of specified net revenues thresholds. The executive officers named in the Summary Compensation Table on page 49 are eligible to receive bonuses of between 40% and 150% of their salaries.

Limitation, Liability and Indemnification Matters

Our articles of incorporation limit the liability of our directors to the maximum extent permitted by California law. California law provides that the directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except liability for any of the following:

- acts or omissions not in good faith or that involve intentional misconduct or a knowing and culpable violation of law;
- acts or omissions that a director believes to be contrary to the best interest of the corporation or its shareholders;
- acts or omissions that show a reckless disregard for the director's duty to the corporation or its shareholders in circumstances in which the director was aware, or should have been aware, in the ordinary course of performing his duties, of a risk of serious injury to the corporation or its shareholders;
- acts or omissions that constitute an unexcused pattern of inattention that amounts to an abdication of a director's duty to the corporation or its shareholders;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our articles of incorporation and bylaws provide that we will indemnify our directors and executive officers, and that we may indemnify our other officers and employees and other agents, to the fullest extent permitted by law. Our bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his actions in such capacity, regardless of whether the bylaws would permit indemnification.

We have entered into with our executive officers and directors agreements to indemnify them, in addition to the indemnification provided for in our bylaws. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by any such person in any action or proceedings arising out of such person's services as our director or executive officer or at our request. We also maintain directors' and officers' liability insurance.

PRINCIPAL SHAREHOLDERS

The following table shows information regarding beneficial ownership of our common stock as of September 30, 2000, assuming (1) 47,412,293 shares outstanding as of September 30, 2000 and 52,912,293 shares outstanding immediately following this offering, and (2) no exercise of the underwriters' over-allotment option, by:

- each person known by us to be the beneficial owner of more than five percent of our common stock;
- each of our directors;
- each of the executive officers listed in the Summary Compensation Table under "Management — Executive Compensation" on page 49; and
- all of our directors and executive officers as a group.

Each person has the sole power to vote or dispose of shares of our common stock, subject to applicable community property laws and except as described in the footnotes to the table and for the lock-up agreements described under "Related Party Transactions — Agreement with Principal Shareholder" on page 59 and "Underwriting — No Sales of Similar Securities" on page 66. In computing the number of shares beneficially owned by an individual and the percentage ownership of that individual, shares of common stock subject to options owned by that individual that can be exercised within 60 days after September 30, 2000 are deemed outstanding for that individual, but not for any other persons.

<u>Name of Beneficial Owner</u>	<u>Number of Shares of Common Stock Beneficially Owned</u>	<u>Percent of Common Stock Beneficially Owned</u>	
		<u>Before Offering</u>	<u>After Offering</u>
Stéphane Ratel(1)	25,425,000	53.6%	48.1%
Errol Ginsberg	9,595,500(2)	20.2	18.1
Joel Weissberger	4,800,000(3)	10.1	9.1
Jon F. Rager	897,500(4)	1.9	1.7
Howard Oringer	675,000(5)	1.4	1.3
Mark MacWhirter	468,750(6)	1.0	*
Jean-Claude Asscher	269,000(7)	*	*
Paul Mallinder	196,874(8)	*	*
Joseph A. Noble	168,750(9)	*	*
Robert W. Bass	5,000(10)	*	*
Executive officers and directors as a group (10 persons)	12,326,374(11)	25.9	23.2

* Less than one percent.

- (1) Mr. Ratel is the principal beneficial owner of Technology Capital Group S.A., an investment company organized under the laws of Luxembourg. Technology Capital Group S.A., is the record owner of 25,425,000 shares of our common stock, which it acquired from Natinco, S.A. in a private transaction in March 2000. Natinco, S.A. acquired the shares in private transactions as follows:

- 13,725,000 of the shares were acquired from Jean-Claude Asscher in June 1998;
- 2,700,000 of the shares were acquired from Mr. Asscher in November 1999; and
- 9,000,000 of the shares were acquired from Mr. Asscher's adult children in November 1999.

Mr. Ratel's business address is c/o Technology Capital Group S.A., 5, boulevard de la Foire, L-1528 Luxembourg, Grand-Duchy of Luxembourg.

- (2) Includes:

- 8,199,500 shares held by The Errol Ginsberg and Annette R. Michelson Family Trust, of which Mr. Ginsberg and Annette R. Michelson are trustees;

- 600,000 shares held by The Errol Ginsberg 1999 QuickGRAT, of which Mr. Ginsberg is the sole trustee;
- 600,000 shares held by The Annette R. Michelson 1999 QuickGRAT, of which Ms. Michelson is the sole trustee;
- 98,000 shares held by The Genia Katz 2000 QuickGRAT, of which Mr. Ginsberg is the sole trustee; and
- 98,000 shares held by The Roleen Postan 2000 QuickGRAT, of which Mr. Ginsberg is the sole trustee.

Ms. Michelson is the wife of Mr. Ginsberg. Of the shares held by the Family Trust, 225,000 shares were subject to repurchase as of September 30, 2000 under specified circumstances upon a termination of Mr. Ginsberg's employment. For more information regarding our repurchase rights, see "Related Party Transactions" on page 58. Mr. Ginsberg's business address is c/o Ixia, 26601 W. Agoura Road, Calabasas, California 91302.

- (3) Includes 112,500 shares subject to repurchase as of September 30, 2000 under specified circumstances upon a termination of employment. For more information regarding our repurchase rights, see "Related Party Transactions" on page 58. Mr. Weissberger's business address is c/o Ixia, 26601 W. Agoura Road, Calabasas, California 91302.
- (4) These shares are held by The Rager Family Trust, of which Mr. Rager and his wife are co-trustees.
- (5) These shares are held by the Oringer Family LLC, of which Mr. Oringer is Executive Managing Member.
- (6) Includes 93,750 shares subject to options held by Mr. MacWhirter which are exercisable or become exercisable within 60 days after September 30, 2000. Also includes 225,000 shares subject to repurchase rights under specified circumstances upon a termination of employment. For more information regarding our purchase rights, see "Related Party Transactions" on page 58.
- (7) Does not include an aggregate of 1,980,000 shares held by Mr. Asscher's adult children.
- (8) Includes 107,813 shares subject to options held by Mr. Mallinder which are exercisable or become exercisable within 60 days after September 30, 2000.
- (9) Includes 56,250 shares subject to options held by Mr. Noble which are exercisable or become exercisable within 60 days after September 30, 2000.
- (10) Includes 5,000 shares subject to warrants held by Mr. Bass which are exercisable or become exercisable within 60 days after September 30, 2000.
- (11) Includes:
 - 262,813 shares subject to options and warrants held by current officers and directors as a group which are exercisable or become exercisable within 60 days after September 30, 2000; and
 - a total of 450,000 shares held by executive officers which were subject to repurchase as of September 30, 2000 under specified circumstances upon a termination of employment. For more information regarding our repurchase rights, see "Related Party Transactions" on page 58 and footnote 2 above in this table.

RELATED PARTY TRANSACTIONS

Common Stock Issuances

In June 1997, we issued 9,000,000 shares of common stock to Errol Ginsberg, our Chief Executive Officer and President, and 4,500,000 shares of common stock to Joel Weissberger, one of our principal shareholders, in exchange for their assignment to Ixia of all of their right, title and interest in and to our original technology and proprietary rights and aggregate cash consideration of \$100.

In June 1997, we also issued the following shares of common stock at a price of approximately \$0.01 per share:

- 27,450,000 shares to Jean-Claude Asscher, our Chairman, for an aggregate cash purchase price of \$277,272;
- 900,000 shares to an affiliate of Jon F. Rager, one of our directors, for an aggregate cash purchase price of approximately \$9,090; and
- 675,000 shares to an affiliate of Howard Oringer, one of our directors, for an aggregate cash purchase price of approximately \$6,818.

In June 1999, we issued 225,000 shares of common stock to Jean-Claude Asscher, our Chairman, at a price of approximately \$0.28 per share for an aggregate purchase price of \$63,750. Mr. Asscher paid the full amount of the purchase price for the shares by delivering to us a full recourse promissory note. The note bore interest at the rate of 8% per annum, was collateralized by the shares of stock purchased by Mr. Asscher and was payable in June 2002. Mr. Asscher paid the note in full in September 1999.

Sales of Shares Subject to Repurchase Rights

In August 1999, we sold 600,000 shares of common stock to Mr. Ginsberg at a price of approximately \$0.28 per share for an aggregate purchase price of \$170,000. In August 1999, we also sold 300,000 shares of common stock to Mr. Weissberger at a price of approximately \$0.28 per share for an aggregate purchase price of \$85,000. Each of Mr. Ginsberg and Mr. Weissberger paid the full amount of the purchase price for his shares by delivering to us a full recourse promissory note. Each note bears interest at the rate of 8% per annum, is collateralized by the shares of common stock purchased by the shareholder and is payable in August 2002. As of August 20, 2000, the aggregate amount of principal and interest outstanding under Mr. Ginsberg's note was \$183,600 and under Mr. Weissberger's note was \$91,800.

In September 1999, we sold 300,000 shares of common stock to Mark MacWhirter, our Vice President, Software Development, at a price of approximately \$0.28 per share for an aggregate cash purchase price of \$85,000.

The shares purchased by Mr. Ginsberg, Mr. Weissberger and Mr. MacWhirter, described above, vest over time and are subject to repurchase rights held by us. The shares purchased by Mr. Ginsberg and Mr. Weissberger vest in eight equal quarterly installments beginning in September 1999. The shares purchased by Mr. MacWhirter vested as to 75,000 shares in September 2000 and vest as to the remaining 225,000 shares in 12 equal quarterly installments beginning in December 2000. The shares held by each shareholder continue to vest as long as the shareholder continues to serve as our employee. If before the vesting of all of a shareholder's shares, we terminate the shareholder's employment for cause or the shareholder terminates his employment other than for good reason, as those terms are defined in their agreements with us, we can repurchase the unvested shares at their original purchase price. If before the vesting of all of the shares we terminate the shareholder's employment other than for cause or the shareholder terminates his employment for good reason, all of the shares will vest on the date of the termination of his employment.

Agreement with Principal Shareholder

We have entered into an agreement with our principal shareholder, Technology Capital Group S.A., and Stéphane Ratel, who is the principal shareholder of Technology Capital Group, pursuant to which Technology Capital Group S.A. has agreed:

- for a period of 180 days after the date of this prospectus, not to:
 - offer, pledge, sell or contract to sell any shares of our common stock;
 - sell any option or contract to purchase any shares of our common stock;
 - purchase any option or contract to sell any shares of our common stock;
 - grant any option, right or warrant for the sale of any shares of our common stock;
 - lend or otherwise dispose of or transfer any shares of our common stock;
 - request or demand that we file a registration statement related to our common stock; or
 - enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any shares of our common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise;
- for an additional period of 180 days following the end of the initial 180-day period, not to sell shares except as may be permitted under Rule 144 of the Securities Act of 1933, as amended; and
- for a period of either three years following the end of the second 180 day period, or the time when it owns less than 25% of our outstanding shares of common stock, to give us 30 days notice prior to entering into any binding agreement to engage in any transaction of the types prohibited during Technology Capital Group’s initial 180-day lock-up period as described in the above bullet points with respect to one percent or more of our outstanding shares of capital stock.

Under this agreement, Mr. Ratel has agreed that for a period of 360 days after the date of this prospectus he will not engage in any transaction of the types prohibited during Technology Capital Group’s initial 180-day lock-up period as described in the first bullet point above with respect to his shares of capital stock of Technology Capital Group. Mr. Ratel has not agreed to any restriction comparable to that described in the third bullet point above.

In exchange for these agreements, we have granted to Technology Capital Group demand registration rights to effect registrations for three offerings of shares of our common stock which it owns and unlimited piggyback registration rights with respect to the registration of those shares. For more information regarding these registration rights, please see “Shares Eligible for Future Sale — Registration Rights” on page 64.

Equipment Lease

We lease some of our computer equipment from Synchronous Network Solutions, Inc. pursuant to an Equipment Lease Agreement dated October 1, 1997. Tekelec-Airtronic, S. A. is the principal shareholder of Synchronous Network Solutions, Inc., and Jean-Claude Asscher, our Chairman, is the President and principal shareholder of Tekelec-Airtronic S.A. Jon F. Rager, one of our directors, is the Chief Financial Officer of Synchronous Network Solutions, Inc. We made aggregate rental payments under the lease of \$4,373 in 1997, \$22,159 in 1998 and \$28,582 in 1999. The lease expired on October 1, 2000.

Sales of Systems

We sell our systems to several companies which until May 2000 were affiliates of Tekelec-Airtronic, S.A. Jean-Claude Asscher, our Chairman, is the President and principal shareholder of Tekelec-Airtronic, S.A. Our aggregate sales to these companies were \$47,039 in 1999. As of December 31, 1999, these companies owed us approximately \$8,517 for purchases of our systems.

We also sell our systems to Tekelec, Ltd., a subsidiary of Tekelec and a distributor of our products. Mr. Asscher is the Chairman of the Board and a principal shareholder of Tekelec, and Howard Oringer and Jon F. Rager are directors of Tekelec. Our aggregate sales to Tekelec, Ltd. were \$95,050 in 1998 and \$388,461 in 1999. As of December 31, 1999, Tekelec, Ltd. owed us approximately \$19,125 for purchases of our systems.

Note Issued to Director

On June 1, 1998, we received \$500,000 from Mr. Asscher in exchange for a note. We used the proceeds for general corporate purposes and repaid the note in full in September 1999. We paid no interest on the note.

Guarantee

In October 1999, we guaranteed the obligations of Natinco, S.A., a Luxembourg investment company, to UBS AG in the maximum principal amount of \$1,000,000 plus accrued interest. The guarantee was cancelled in December 1999. Natinco, S.A. was one of our principal shareholders at the time we entered into the guarantee.

Loan to Officer

In July 2000, in connection with the exercise by Mark MacWhirter, our Vice President, Software Development, of options to purchase 75,000 shares of our common stock for a total purchase price of \$3,750, we advanced to Mr. MacWhirter the amount of \$78,433 for the payment of related taxes. We made this loan pursuant to a full recourse promissory note that bears interest at the rate of 8% per annum and is collateralized by the 75,000 shares purchased by Mr. MacWhirter. The note is payable in July 2003, except that Mr. MacWhirter is required to apply against the note one-half of all proceeds received from any sale of the shares pledged as collateral for the note until the note is paid in full.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 200,000,000 shares of common stock and 1,000,000 shares of preferred stock. The following is a summary of the material terms of our common stock and preferred stock. Please see our articles of incorporation and bylaws, filed as exhibits to the registration statement of which this prospectus is a part, for more detailed information.

Common Stock

Currently, our authorized common stock consists of 200,000,000 shares of common stock. As of September 30, 2000, there were outstanding 47,412,293 shares of common stock held of record by 62 holders. As of September 30, 2000, 10,697,707 shares of common stock were issuable upon the exercise of outstanding options and warrants and an additional 3,820,000 shares of common stock were reserved for issuance under our 1997 stock option plan. We currently also have 200,000 shares of common stock reserved for issuance under our director stock option plan and 300,000 shares of common stock reserved for issuance under our employee stock purchase plan, subject to annual automatic increases. Upon the closing of this offering, we expect to have 52,912,293 shares of common stock issued and outstanding.

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders, including the election of directors. However, upon a shareholder giving notice prior to the voting as required by law, shareholders may cumulate their votes in the election of directors. This means that the shareholders would be entitled to a number of votes equal to the number of their shares multiplied by the number of directors to be elected. A shareholder would then be entitled to cast all of the shareholder's votes for any director or for any two or more directors as the shareholder would choose.

Subject to the rights, preferences, privileges and restrictions applicable to any outstanding preferred stock, holders of common stock are entitled to receive dividends when, as, and if declared by the board of directors out of legally available funds. Upon liquidation or dissolution, the holders of common stock will be entitled to share ratably in the assets legally available for the distribution to shareholders after payment of liabilities and subject to the prior rights of any holders of preferred stock then outstanding. The holders of common stock have no conversion, sinking fund, redemption, preemptive or subscription rights. The rights, preferences and privileges of holders of common stock are subject to the rights of the holders of shares of any series of preferred stock that may be issued in the future.

Preferred Stock

Our articles of incorporation provide that we may issue up to 1,000,000 shares of preferred stock in one or more series as may be determined by our board of directors who may, at the time of issuance, establish the number of shares to be included in each such series, fix the dividend rights, dividend rates, any conversion rights or right of exchange, any voting rights, rights and terms of redemption, including sinking fund provisions, the redemption price or prices, the liquidation preferences, and any other rights, preferences, privileges, and restrictions of any series of preferred stock of each such series, and increase or decrease the number of shares of any such series without any further vote or action by the shareholders. The board of directors may authorize, without shareholder approval, the issuance of preferred stock with voting and conversion rights that could harm the voting power and other rights of holders of common stock. Preferred stock could be issued quickly with terms calculated to delay or prevent a change in our control or to make the removal of management more difficult. This could have the effect of decreasing the market price of the common stock.

Anti-takeover Effects of Provisions of our Articles of Incorporation and Bylaws and an Agreement with our Principal Shareholder

Some provisions of our articles of incorporation may have the effect of delaying or preventing changes in control or management of Ixia, which could have an adverse effect on the market price of our common stock. These include:

- authorizing the board to issue additional preferred stock;
- limiting the persons who may call special meetings of shareholders to our board of directors, our chairman of the board, our president and holders of shares entitled to cast not less than 10% of the votes at the meeting; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by shareholders at shareholder meetings.

Some provisions of our agreement with Technology Capital Group S.A., our principal shareholder, and Stéphane Ratel, the principal shareholder of Technology Capital Group, may also have the effect of delaying, deferring or preventing changes in control or management of Ixia. For more information, see “Related Party Transactions — Agreement with Principal Shareholder” on page 59.

Listing

Our common stock has been approved for quotation on the Nasdaq National Market under the symbol “XXIA.”

Transfer Agent and Registrar

The transfer agent and registrar of our common stock is U.S. Stock Transfer Corporation, 1745 Gardena Avenue, Suite 200, Glendale, California 91204. Its telephone number is (818) 502-1404.

SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of the offering and based on shares outstanding at September 30, 2000, we will have outstanding 52,912,293 shares of common stock, or 53,737,293 shares if the underwriters' over-allotment option is exercised in full, in each case excluding 10,697,707 shares underlying options and warrants, based on options and warrants outstanding at September 30, 2000. Of the outstanding shares, all of the shares sold in this offering (5,500,000 shares, or 6,325,000 shares if the underwriters' over-allotment option is exercised in full) will be freely tradable without restriction or further registration under the Securities Act except for any shares purchased by an "affiliate," which will be subject to the limitations of Rule 144 of the Securities Act. As defined in Rule 144, an "affiliate" of an issuer is a person that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the issuer. The remaining outstanding shares of common stock will be "restricted securities" as defined in Rule 144 and may not be resold in the absence of registration under the Securities Act or pursuant to an exemption from such registration, including exemptions provided by Rule 144. Immediately following this offering and based on shares outstanding at September 30, 2000, our existing shareholders will own 47,412,293 restricted shares, representing approximately 89.6% of the then outstanding shares of common stock, 88.2% if the underwriters' over-allotment option is exercised in full. On September 30, 2000, our executive officers and directors beneficially owned 12,326,374 shares.

Lock-up Agreements

We and our executive officers and directors, and most of our existing shareholders and optionholders, have agreed not to offer, pledge, sell, contract to sell or otherwise dispose of any common stock or any securities convertible into or exchangeable for common stock for a period of 180 days after the date of this prospectus without the prior written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated, subject to some exceptions as described in "Underwriting — No Sales of Similar Securities" on page 66. Our principal shareholder, Technology Capital Group S.A., has also agreed to further restrict its sale of shares of our common stock in accordance with the terms of the agreement described in "Related Party Transactions — Agreement with Principal Shareholder" on page 59.

Rule 144

In general, under Rule 144, beginning 90 days after the date of this prospectus, a person who has beneficially owned and fully paid for restricted shares for at least one year, including persons who are affiliates, would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the then outstanding shares of our common stock, or approximately 529,123 shares immediately after this offering; or
- the reported average weekly trading volume of our common stock during the four calendar weeks preceding a sale by such person.

Sales under Rule 144 are also subject to manner-of-sale provisions, notice requirements and the availability of current public information.

Rule 144(k)

Under Rule 144(k), a person who has not been one of our affiliates during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years, is free to sell such shares without regard to the volume, manner-of-sale or other limitations contained in Rule 144. Subject to the 180-day lock-up agreements, upon completion of this offering, holders of 2,655,000 shares of our common stock will be eligible to freely sell those shares under Rule 144(k).

Prior to this offering, there has been no public market for our common stock and we can make no predictions about the effect, if any, that market sales of shares or the availability of shares for sale will have on the market price of our common stock prevailing from time to time. Future sales of substantial

amounts of our common stock in the public market, or the perception that such sales may occur, may cause the market price of our common stock to decline.

Options and Warrants

As of September 30, 2000, options and warrants to purchase 10,697,707 shares of our common stock were outstanding. We intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of our common stock reserved for issuance under our stock option and stock purchase plans and warrant agreement. The filing of this registration statement will allow these shares, other than those held by members of management who are deemed to be affiliates, to be eligible for sale without restriction, subject to the lock-up period related to this offering. After the effective date of the registration statement on Form S-8 and, if applicable, the expiration of the lock-up period related to this offering, shares purchased upon exercise of options granted pursuant to the stock option plan or currently outstanding warrants generally will be available for resale in the public market by non-affiliates without restriction. Sales by our affiliates of shares registered on the registration statement on Form S-8 are subject to all of the Rule 144 restrictions except for the one-year minimum holding period requirement.

In addition to possibly being able to sell option and warrant shares without restriction under a Form S-8 registration statement when effective, persons other than our affiliates are allowed under Rule 701 under the Securities Act to sell shares of our common stock issued upon exercise of stock options and warrants beginning 90 days after the date of this prospectus, subject only to the manner of sale provisions of Rule 144 and to the lock-up period related to this offering. Our affiliates may also begin selling option and warrant shares beginning 90 days after the date of this prospectus but are subject to all of the Rule 144 restrictions except for the one-year holding period requirement and for the 180-day lock-up period related to this offering.

Registration Rights

We have entered into an agreement with our principal shareholder, Technology Capital Group S.A., pursuant to which, beginning on March 15, 2002, Technology Capital Group will be entitled to demand the registration of all or a portion of its shares of our common stock. Under the agreement we will be required to effect up to three registrations pursuant to this demand right. In addition, after the closing of this offering, if we propose to register any securities under the Securities Act on Form S-1, S-2 or S-3, Technology Capital Group will be entitled to include its shares in the registration subject to quantitative limitations imposed by any underwriters. Under the agreement we will pay Technology Capital Group's expenses, except underwriting and legal expenses, in connection with the registration rights. Registration of any of the shares of our common stock held by Technology Capital Group would result in such shares becoming freely tradeable immediately upon effectiveness of the registration. The registration rights will expire after eight years or earlier if Technology Capital Group can resell all of its shares under Rule 144 during any 90-day period.

UNDERWRITING

General

Merrill Lynch, Pierce, Fenner & Smith Incorporated, Donaldson, Lufkin & Jenrette Securities Corporation and Dain Rauscher Incorporated, are acting as representatives of the underwriters named below. Subject to the terms and conditions described in a purchase agreement among us and the underwriters, we have agreed to sell to the underwriters, and the underwriters severally have agreed to purchase from us, the number of shares listed opposite their names below.

<u>Underwriter</u>	<u>Number of Shares</u>
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Donaldson, Lufkin & Jenrette Securities Corporation	
Dain Rauscher Incorporated	
Total	<u>5,500,000</u>

The underwriters have agreed to purchase all of the shares sold under the purchase agreement if any of these shares are purchased. If an underwriter defaults, the purchase agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the purchase agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the purchase agreements, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the initial public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of \$ per share. The underwriters may allow, and the dealers may reallow, a discount not in excess of \$ per share to other dealers. After the initial public offering, the public offering price, concession and discount may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	<u>Per Share</u>	<u>Without Option</u>	<u>With Option</u>
Public offering price	\$	\$	\$
Underwriting discount	\$	\$	\$
Proceeds, before expenses, to Ixia	\$	\$	\$

The expenses of the offering, not including the underwriting discount, are estimated at approximately \$1,300,000 and are payable by us.

Over-Allotment Option

We have granted an option to the underwriters to purchase up to 825,000 additional shares at the public offering price less the underwriting discount. The underwriters may exercise this option for 30 days from the date of this prospectus solely to cover any over-allotments. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the purchase agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

Reserved Shares

At our request, the underwriters have reserved for sale, at the initial public offering price, up to 8% of the shares offered by this prospectus for sale to some of our business associates and related persons. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not orally confirmed for purchase within one day of the pricing of this offering will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus.

No Sales of Similar Securities

We and our executive officers and directors and most of our existing shareholders and option holders have agreed not to sell or transfer any common stock for 180 days after the date of this prospectus without first obtaining the written consent of Merrill Lynch. Specifically, we and these other individuals have agreed not to directly or indirectly:

- offer, pledge, sell or contract to sell any common stock;
- sell any option or contract to purchase any common stock;
- purchase any option or contract to sell any common stock;
- grant any option, right or warrant for the sale of any common stock;
- lend or otherwise dispose of or transfer any common stock;
- request or demand that we file a registration statement related to the common stock; or
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. The lock-up provision will not apply to specified limited transactions including the following, so long as the acquirer agrees to hold acquired shares of common stock subject to the lock-up provision:

- the acquisition of shares upon an option holder's exercise of an option;
- the transfer of shares during a shareholder's lifetime or on death, by will or intestacy, to his or her immediate family or to a trust, the beneficiaries of which are the shareholder and/or a member of his or her immediate family; and
- our issuance of shares of common stock in connection with the acquisition of a business.

Additionally, the lock-up provisions will not apply to our issuance of shares upon exercise of outstanding options or warrants or to our issuance of shares or grant of options pursuant to existing employee benefit plans but will apply to sales of shares issued under those plans to individuals who have previously signed lock-up agreements. Additionally, during the 180-day lock-up period, we intend to require that any holders of shares issued or options granted under our existing employee benefit plans during that period enter into lock-up agreements. We expect these agreements will have the same terms as the lock-up agreements entered into by our existing shareholders and option holders in connection with the offering. As of September 30, 2000, 10,617,707 shares of common stock were issuable upon the exercise of

outstanding options and an additional 3,820,000 shares of common stock were reserved for issuance under our 1997 stock option plan. We currently also have 200,000 shares of common stock reserved for issuance under our director stock option plan and 300,000 shares of common stock reserved for issuance under our employee stock purchase plan, subject to annual automatic increases.

Quotation on the Nasdaq National Market

Our common stock has been approved for quotation on the Nasdaq National Market under the symbol "XXIA."

Before this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations among us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are:

- the valuation multiples of publicly traded companies that the representatives believe to be comparable to us;
- our financial information;
- the history of, and the prospects for, our company and the industry in which we compete;
- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues;
- the present state of our development; and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

The underwriters do not expect to sell more than 5% of the shares being offered in this offering to accounts over which they exercise discretionary authority.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the common shares is completed, SEC rules may limit the underwriters from bidding for or purchasing our common shares. However, the representatives may engage in transactions that stabilize the price of the common shares, such as bids or purchases that peg, fix or maintain that price.

The underwriters may purchase and sell the common shares in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares in the offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. "Naked" short sales are any sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common shares in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of common shares made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of the common shares or preventing or retarding a decline in the market price of the common shares. As a result, the price of the common shares may be higher than the price that might otherwise exist in the open market.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common shares. In addition, neither we nor any of the representatives make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Internet Offering

Merrill Lynch will be facilitating Internet distribution for this offering to some of its Internet subscription customers. Merrill Lynch intends to allocate a limited number of shares for sale to its online brokerage customers. An electronic prospectus is available on the Web site maintained by Merrill Lynch. Other than the prospectus in electronic format, the information on the Merrill Lynch Web site relating to this offering is not a part of this prospectus.

LEGAL MATTERS

Bryan Cave LLP, Santa Monica, California, will pass upon the validity of our common stock and certain other legal matters related to this offering. Ronald W. Buckly, who is of counsel to Bryan Cave LLP, is our Corporate Secretary and beneficially owns 898,000 shares of our outstanding common stock, 84,375 of which are subject to vesting requirements related to his continuing to serve as our Corporate Secretary. Skadden, Arps, Slate, Meagher & Flom LLP, Los Angeles, California, will pass upon certain legal matters in connection with this offering for the underwriters. In addition, several members and employees of Bryan Cave LLP have expressed an interest in purchasing a total of approximately 6,500 shares of our common stock in this offering through our directed share program.

EXPERTS

The financial statements as of December 31, 1998 and 1999, and for the period from May 27, 1997 (inception) through December 1997 and for the years ended December 31, 1998 and 1999, included in this prospectus, have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1, of which this prospectus is a part, with the Securities and Exchange Commission under the Securities Act with respect to the common stock offered in this offering. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, parts of which are omitted as permitted by the rules and regulations of the Commission. Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete. For further information pertaining to us and our common stock, we refer you to our registration statement and the exhibits thereto, which can be obtained from the Web site identified below and copies of which may be inspected without charge at the principal office of the Commission, 450 Fifth Street, N.W., Washington, D.C. 20549, and at the regional offices of the Commission located at Seven World Trade Center, Suite 1300, New York, New York 10048 and

Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661. Copies of all or any part of the registration statement may be obtained at prescribed rates from the Commission. Please call the Commission at 1-800-SEC-0330 for further information on the operation of the public reference rooms. The Commission maintains a World Wide Web site on the Internet at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission.

Upon completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy and information statements and other information with the Commission. Such periodic reports, proxy and information statements and other information will be available for inspection and copying at the regional offices, public reference facilities and Web site of the Commission referred to above.

We intend to furnish our shareholders with annual reports containing audited financial statements and an opinion thereon expressed by independent certified public accountants. We also intend to furnish other reports as we may determine or as required by law.

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Shareholders of Ixia:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, shareholders' equity, and cash flows present fairly, in all material respects, the financial position of Ixia and its subsidiary (the "Company") as of December 31, 1998 and 1999, and the results of its operations and its cash flows for the period from May 27, 1997 (inception) through December 31, 1997 and for the years ended December 31, 1998 and 1999, in conformity with accounting principles generally accepted in the United States. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States, which require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Woodland Hills, California

May 12, 2000, except for Note 11,

as to which the date is September 1, 2000

IXIA
CONSOLIDATED BALANCE SHEETS
(in thousands)

	<u>December 31, 1998</u>	<u>December 31, 1999</u>	<u>June 30, 2000</u> (unaudited)
Assets			
Current assets:			
Cash and cash equivalents	\$1,124	\$ 8,733	\$ 8,952
Accounts receivable, net	1,126	4,357	8,519
Inventories	404	746	3,056
Deferred income taxes	64	585	1,414
Prepaid expenses and other current assets	<u>20</u>	<u>291</u>	<u>603</u>
Total current assets	2,738	14,712	22,544
Property and equipment, net	383	952	2,155
Deferred income taxes	126	27	112
Other assets	<u>19</u>	<u>131</u>	<u>308</u>
Total assets	<u><u>\$3,266</u></u>	<u><u>\$15,822</u></u>	<u><u>\$ 25,119</u></u>
Liabilities and Shareholders' Equity			
Current liabilities:			
Accounts payable	\$ 492	\$ 1,087	\$ 3,232
Accrued expenses	427	1,382	2,408
Deferred revenue	73	270	360
Income taxes payable	14	4,473	1,472
Related-party note	<u>500</u>	<u>—</u>	<u>—</u>
Total liabilities	1,506	7,212	7,472
Shareholders' equity:			
Preferred stock, no par value; 1,000 shares authorized and none outstanding	—	—	—
Common stock, no par value; 75,000 shares authorized, 43,200, 45,626 and 46,746 shares issued and outstanding as of December 31, 1998 and 1999 and June 30, 2000, respectively	300	783	910
Additional paid-in capital	1,722	8,294	34,288
Deferred stock-based compensation	(260)	(4,947)	(24,305)
Notes receivable from shareholders	—	(328)	(341)
Retained earnings (deficit)	<u>(2)</u>	<u>4,808</u>	<u>7,095</u>
Total shareholders' equity	1,760	8,610	17,647
Total liabilities and shareholders' equity	<u><u>\$3,266</u></u>	<u><u>\$15,822</u></u>	<u><u>\$ 25,119</u></u>

The accompanying notes are an integral part of these financial statements.

IXIA
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31, 1998	Year Ended December 31, 1999	Six Months Ended June 30, <u>1999</u> <u>2000</u>	
				(unaudited)	
Net revenues	\$ —	\$ 4,916	\$24,499	\$ 8,214	\$28,268
Cost of revenues ⁽¹⁾	<u>—</u>	<u>1,309</u>	<u>4,944</u>	<u>1,412</u>	<u>5,626</u>
Gross profit	—	3,607	19,555	6,802	22,642
Operating expenses:					
Research and development	513	1,580	2,780	1,182	2,744
Sales and marketing	—	940	4,443	1,531	4,372
General and administrative	110	509	1,660	588	1,733
Stock-based compensation ⁽²⁾	<u>—</u>	<u>154</u>	<u>1,847</u>	<u>407</u>	<u>6,250</u>
Total operating expenses . .	<u>623</u>	<u>3,183</u>	<u>10,730</u>	<u>3,708</u>	<u>15,099</u>
Income (loss) from operations	(623)	424	8,825	3,094	7,543
Interest income, net	<u>7</u>	<u>14</u>	<u>88</u>	<u>18</u>	<u>221</u>
Income (loss) before income taxes	(616)	438	8,913	3,112	7,764
Income tax expense (benefit)	<u>(294)</u>	<u>118</u>	<u>4,103</u>	<u>1,362</u>	<u>5,477</u>
Net income (loss)	<u>\$ (322)</u>	<u>\$ 320</u>	<u>\$ 4,810</u>	<u>\$ 1,750</u>	<u>\$ 2,287</u>
Earnings (loss) per share:					
Basic	\$ (0.01)	\$ 0.01	\$ 0.11	\$ 0.04	\$ 0.05
Diluted	\$ (0.01)	\$ 0.01	\$ 0.10	\$ 0.04	\$ 0.04
Weighted average number of shares outstanding:					
Basic	43,041	43,200	43,574	43,218	45,236
Diluted	43,041	45,619	48,896	46,340	52,989
<hr/>					
⁽¹⁾ Stock-based compensation included in cost of revenues . .	<u>\$ —</u>	<u>\$ 8</u>	<u>\$ 38</u>	<u>\$ 10</u>	<u>\$ 386</u>
⁽²⁾ Stock-based compensation:					
Research and development . .	\$ —	\$ 92	\$ 669	\$ 94	\$ 2,597
Sales and marketing	—	62	449	124	1,771
General and administrative . .	<u>—</u>	<u>—</u>	<u>729</u>	<u>189</u>	<u>1,882</u>
	<u>\$ —</u>	<u>\$ 154</u>	<u>\$ 1,847</u>	<u>\$ 407</u>	<u>\$ 6,250</u>

The accompanying notes are an integral part of these financial statements.

IXIA
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(in thousands)

	<u>Common Stock</u>		<u>Additional</u>	<u>Deferred</u>	<u>Notes</u>	<u>Retained</u>	
	<u>Shares</u>	<u>Amount</u>	<u>Paid-In</u>	<u>Stock-based</u>	<u>Receivable</u>	<u>Earnings</u>	<u>Total</u>
			<u>Capital</u>	<u>Compensation</u>	<u>From</u>	<u>(Deficit)</u>	
					<u>Shareholders</u>		
Balance as of May 27, 1997 (Inception)	—	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Issuance of common stock	43,200	300					300
Additional contribution of capital			600				600
Net loss						(322)	(322)
Balance as of December 31, 1997	43,200	300	600	—	—	(322)	578
Additional contribution of capital			700				700
Deferred stock-based compensation . . .			422	(422)			—
Amortization of deferred stock-based compensation				162			162
Net income						320	320
Balance as of December 31, 1998	43,200	300	1,722	(260)	—	(2)	1,760
Exercise of stock options	776	15					15
Issuance of common stock	1,650	468			(319)		149
Deferred stock-based compensation . . .			6,572	(6,572)			—
Amortization of deferred stock-based compensation				1,885			1,885
Interest receivable from shareholder . . .					(9)		(9)
Net income						4,810	4,810
Balance as of December 31, 1999	45,626	783	8,294	(4,947)	(328)	4,808	8,610
Exercise of stock options	1,120	127					127
Deferred stock-based compensation . . .			25,994	(25,994)			
Amortization of deferred stock-based compensation				6,636			6,636
Interest receivable from shareholders					(13)		(13)
Net income						2,287	2,287
Balance as of June 30, 2000 (unaudited)	<u>46,746</u>	<u>\$910</u>	<u>\$34,288</u>	<u>\$(24,305)</u>	<u>\$(341)</u>	<u>\$7,095</u>	<u>\$17,647</u>

The accompanying notes are an integral part of these financial statements.

IXIA
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31, 1998	Year Ended December 31, 1999	Six Months Ended June 30, <u>1999</u> <u>2000</u>	
				(unaudited)	
Cash flows from operating activities:					
Net income (loss)	\$ (322)	\$ 320	\$ 4,810	\$ 1,750	\$ 2,287
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Depreciation	9	105	452	163	430
Stock-based compensation	—	162	1,885	417	6,636
Interest receivable from shareholders ...	—	—	(9)	—	(13)
Deferred income tax (benefit) provision ..	(294)	104	(422)	(203)	(914)
Changes in operating assets and liabilities:					
Accounts receivable, net	—	(1,126)	(3,231)	(1,473)	(4,162)
Inventories	—	(404)	(342)	(426)	(2,310)
Prepaid expenses and other current assets	(1)	(18)	(271)	(48)	(312)
Other assets	(7)	(12)	(112)	(5)	(177)
Accounts payable	72	419	595	211	2,145
Accrued expenses	19	408	955	468	1,026
Deferred revenue	—	73	197	86	90
Income taxes payable	—	14	4,459	1,522	(3,001)
Net cash provided by (used in) operating activities	(524)	45	8,966	2,462	1,725
Cash used in investing activities:					
Purchases of property and equipment	(72)	(425)	(1,021)	(284)	(1,633)
Cash used in investing activities	(72)	(425)	(1,021)	(284)	(1,633)
Cash flows from financing activities:					
Issuance of common stock	300	—	149	—	—
Exercise of stock options	—	—	15	—	127
Contributed capital from shareholder	600	700	—	—	—
Proceeds (repayment) of related-party note ..	—	500	(500)	—	—
Net cash provided by (used in) financing activities	900	1,200	(336)	—	127
Net increase in cash and cash equivalents	304	820	7,609	2,178	219
Cash and cash equivalents at beginning of period	—	304	1,124	1,124	8,733
Cash and cash equivalents at end of period ..	<u>\$ 304</u>	<u>\$ 1,124</u>	<u>\$ 8,733</u>	<u>\$ 3,302</u>	<u>\$ 8,952</u>
Supplemental disclosures of cash flow information:					
Cash paid during the period for:					
Income taxes	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 66</u>	<u>\$ 41</u>	<u>\$ 9,392</u>
Supplemental disclosure of noncash transactions:					
Issuance of shareholder notes receivable ...	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 319</u>	<u>\$ 64</u>	<u>\$ —</u>

The accompanying notes are an integral part of these financial statements.

IXIA
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Business and Summary of Significant Accounting Policies

Business

Ixia (the “Company”) was incorporated on May 27, 1997 as a California corporation. The Company designs and markets high-speed, multi-port network performance analysis systems that generate and analyze data traffic over optical and electrical networks. Through March 1998, the Company was considered to be in the development stage and was principally engaged in research and development, raising capital and forming its management team. During April 1998, the Company ceased to be in the development stage. As of June 30, 2000, the Company is majority owned (54%) by Technology Capital Group (“TCG”), a Luxembourg private investment company. TCG acquired its interest in a private transaction from a former shareholder in March 2000.

Use of Estimates

In the normal course of preparing financial statements in conformity with accounting principles generally accepted in the United States, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Consolidation

All subsidiaries are consolidated. All intercompany transactions and accounts are eliminated.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less to be cash equivalents. Cash and cash equivalents are carried at cost, which approximates fair value.

Fair Value of Financial Instruments

The Company’s financial instruments, including cash and cash equivalents, certificates of deposit, accounts receivable, accounts payable and other liabilities are carried at cost, which approximates their fair values because of the short-term maturity of these instruments and the relative stability of interest rates.

Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market. Appropriate consideration is given to obsolescence and other factors in evaluating net realizable value.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method based upon the estimated useful lives of the assets, ranging from two to seven years. Useful lives are evaluated regularly by management in order to determine recoverability in light of current technological conditions. Repairs and maintenance are charged to expense as incurred while renewals and improvements are capitalized. Upon the sale or retirement of property and equipment, the accounts are relieved of the cost and the related accumulated depreciation, with any resulting gain or loss included in the Statement of Operations.

IXIA

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Business and Summary of Significant Accounting Policies (continued)

Long-Lived Assets

The Company identifies and records impairment losses on long-lived assets when events and circumstances indicate that such assets might be impaired. In the event the expected undiscounted future cash flow attributable to the asset is less than the carrying amount of the asset, an impairment loss equal to the excess of the asset's carrying value over its fair value is recorded. To date, no such impairment has been recorded.

Hardware Product Warranty Costs

The Company generally warrants its products for one year after sale and provides for estimated future warranty costs at the time revenue is recognized. Accrued hardware product warranty costs are included as a component of accrued expenses on the accompanying balance sheet.

Revenue Recognition

The software component of the Company's products is an integral part of its functionality. As such, the Company applies the provisions of the American Institute of Certified Public Accountants ("AICPA") Statement of Position ("SOP") 97-2, "Software Revenue Recognition." The Company's products are fully functional at the time of shipment. The software component of the Company's product does not require significant production, modification or customization. As such, revenue from product sales is recognized upon shipment provided that (1) a purchase order has been received or a contract has been executed; (2) title has transferred; (3) the fee is fixed and determinable; and (4) collectibility is deemed probable. Revenue associated with multiple-element arrangements (products and post-contract customer support ("PCS")) are allocated to each element based on vendor-specific objective evidence of fair value. Revenue related to future PCS is initially deferred and subsequently recognized ratably over the term of the service period. Extended warranty and other service revenues are recognized ratably over the respective service periods. Such service revenue has not been significant to date.

Research and Development

Costs incurred in the research and development of products are expensed as incurred. Costs incurred to establish the technological feasibility of a software product are considered research and development costs and are expensed as incurred. Once technological feasibility is established, all development costs incurred until general product release are subject to capitalization. To date, the establishment of technological feasibility of the Company's products and general release have substantially coincided. As a result, the costs qualifying for such capitalization have not been significant and the Company has not capitalized any of these software development costs.

Software Developed for Internal Use

The Company capitalizes costs of software, consulting services, hardware and payroll-related costs incurred to purchase or develop internal-use software. The Company expenses costs incurred during preliminary project assessment, research and development, re-engineering, training and application maintenance phases. To date, capitalized internal use software costs have not been significant.

Advertising

Advertising costs are expensed as incurred. Advertising costs were \$52,000 and \$256,000 for the years ended December 31, 1998 and 1999, respectively. The Company incurred no advertising costs for the period ended December 31, 1997.

IXIA

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Business and Summary of Significant Accounting Policies (continued)

Stock-Based Compensation

The Company applies Accounting Principles Board (“APB”) Opinion No. 25, “Accounting for Stock Issued to Employees,” and related interpretations in accounting for its stock and stock options issued. Accordingly, any compensation expense is recognized over the vesting period and represents the difference between the deemed fair value for accounting purposes of the underlying stock and the purchase price or the exercise price at the date of grant. The Company has provided additional disclosures (Note 6) required by Statement of Financial Accounting Standards (“SFAS”) No. 123, “Accounting for Stock-Based Compensation.” The Company accounts for stock issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force (“EITF”) 96-18.

Income Taxes

The Company accounts for income taxes using the liability method. Deferred taxes are determined based on the differences between the financial statement and tax bases of assets and liabilities, using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

Earnings Per Share

Earnings per share are computed using the weighted average number of shares outstanding and dilutive common stock equivalents (options and restricted stock) in accordance with SFAS No. 128, “Earnings per Share.”

Comprehensive Income

Effective January 1, 1998, the Company adopted the provisions of SFAS No. 130, “Reporting Comprehensive Income.” SFAS No. 130 establishes standards for reporting comprehensive income and its components in financial statements. Comprehensive income, as defined, includes all changes in equity (net assets) during a period from non-owner sources. To date, the Company has not had any transactions that are required to be reported in comprehensive income/(loss), other than net income/(loss).

Unaudited Interim Financial Information

The interim financial information as of June 30, 2000 and for the six months ended June 30, 1999 and 2000 are unaudited and have been prepared on the same basis as the audited financial statements. In the opinion of management, such unaudited financial information includes all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of the interim information. Operating results for the six months ended June 30, 2000 are not necessarily indicative of the results for the year ending December 31, 2000.

Segments

Effective January 1, 1998, the Company adopted the provisions of SFAS No. 131, “Disclosures about Segments of an Enterprise and Related Information.” SFAS No. 131 establishes standards for the way companies report information about operating segments in annual financial statements. It also establishes standards for related disclosures about products and services, geographic areas and major customers. The Company has determined that it did not have any separately reportable business segments as of, and for the periods ended, December 31, 1997, 1998 and 1999. All of the Company’s long-lived assets were located in the United States as of December 31, 1998 and 1999.

IXIA

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

1. Business and Summary of Significant Accounting Policies (continued)

Recent Accounting Pronouncements

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" ("SAB 101"), which provides additional guidance in applying generally accepted accounting principles to revenue recognition in the financial statements. Adoption of SAB 101 is required in the fourth quarter of 2000. The Company's revenue recognition policies comply with SAB 101.

In March 2000, the Financial Accounting Standards Board issued Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation — an Interpretation of APB Opinion No. 25" ("FIN 44"). FIN 44 applies prospectively to new awards, exchanges of awards in a business combination, modifications to outstanding awards, and changes to grantee status that occur on or after July 1, 2000, except for the provisions related to repricings and the definition of an employee, which apply to awards issued after December 15, 1998. The provisions related to modifications to fixed stock option awards to add a reload feature are effective for awards modified after January 12, 2000. The Company does not expect the adoption of FIN 44 to have a material impact on its financial statements.

2. Concentrations

Credit Risk:

Financial instruments which subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents and trade accounts receivable. The Company maintains its cash and cash equivalents with reputable financial institutions, and at times, cash balances may be in excess of the FDIC insurance limits. The Company extends differing levels of credit to customers, does not require collateral deposits, and maintains reserves for potential credit losses based upon the expected collectibility of accounts receivable. Credit losses to date have been within management's expectations and have not been significant.

Customers comprising at least 10% of net revenues are as follows (in thousands except percentages):

	Year Ended December 31,				Six Months Ended June 30,	
	1998		1999		2000	
	Amount	% of Net Revenues	Amount	% of Net Revenues	Amount	% of Net Revenues
Customer A	\$1,522	32%	\$7,549	31%	\$9,612	34%
Customer B	493	10	—	—	—	—

As of December 31, 1998 and 1999 and June 30, 2000, the Company had receivable balances from Customer A approximating 24%, 16% and 24%, of total accounts receivable, respectively.

International Revenues:

Net revenues from international product shipments were \$565,000 in 1998, \$3.2 million in 1999, and \$3.9 million for the six months ended June 30, 2000.

Sources of Supply:

The Company currently buys a number of key components of its products from a limited number of suppliers. Although there are a limited number of manufacturers of these components, management believes that other suppliers could provide similar integrated circuits on comparable terms. A change in

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2. Concentrations (continued)

suppliers, however, could cause a delay in manufacturing and a possible loss of sales, which could affect operating results adversely.

3. Selected Balance Sheet Data (in thousands)

Accounts Receivable, Net

Accounts receivable, net consists of the following:

	December 31, 1998	December 31, 1999	June 30, 2000 (unaudited)
Trade accounts receivable	\$ 1,151	\$ 4,446	\$ 8,737
Allowance for doubtful accounts	(25)	(89)	(218)
	<u>\$ 1,126</u>	<u>\$ 4,357</u>	<u>\$ 8,519</u>

Inventories

Inventories consist of the following:

	December 31, 1998	December 31, 1999	June 30, 2000 (unaudited)
Raw materials	\$ 119	\$ 546	\$ 2,417
Work in process	141	179	152
Finished goods	153	66	682
Reserve for obsolescence	(9)	(45)	(195)
	<u>\$ 404</u>	<u>\$ 746</u>	<u>\$ 3,056</u>

Property and Equipment, Net

Property and equipment, net consists of the following:

	December 31, 1998	December 31, 1999	June 30, 2000 (unaudited)
Computer equipment	\$ 97	\$ 232	\$ 431
Computer software	47	155	197
Demonstration equipment	332	1,021	1,686
Furniture and other equipment	21	110	837
	<u>497</u>	<u>1,518</u>	<u>3,151</u>
Accumulated depreciation	(114)	(566)	(996)
	<u>\$ 383</u>	<u>\$ 952</u>	<u>\$ 2,155</u>

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

3. Selected Balance Sheet Data (continued)

Accrued Expenses

Accrued expenses consist of the following:

	December 31, 1998	December 31, 1999	June 30, 2000 (unaudited)
Accrued payroll	\$ 34	\$ 95	\$ 156
Accrued commissions	71	393	614
Accrued bonuses	161	414	751
Accrued warranty	25	140	282
Other	136	340	605
	<u>\$427</u>	<u>\$1,382</u>	<u>\$2,408</u>

4. Income Taxes

Income tax expense (benefit) consists of the following (in thousands):

	Years Ended December 31,			Six Months Ended June 30, 2000 (unaudited)
	1997	1998	1999	
Current:				
Federal	\$ —	\$ 13	\$3,685	\$5,035
State	—	1	840	1,356
Deferred:				
Federal	(229)	134	(445)	(748)
State	(65)	(30)	23	(166)
	<u>\$(294)</u>	<u>\$118</u>	<u>\$4,103</u>	<u>\$5,477</u>

The net effective income tax rate differs from the federal statutory income tax rate as follows (in thousands):

	Years Ended December 31,			Six Months Ended June 30, 2000 (unaudited)
	1997	1998	1999	
Federal statutory expense (benefit)	\$(202)	\$ 149	\$3,030	\$2,640
State taxes, net of federal benefit	(34)	25	520	452
Research and development credits	(58)	(125)	(156)	(158)
Nondeductible stock-based compensation	—	53	702	2,502
Other	—	16	7	41
Actual income tax expense (benefit)	<u>\$(294)</u>	<u>\$ 118</u>	<u>\$4,103</u>	<u>\$5,477</u>
Net effective income tax rate	(47.7)%	26.9%	46.0%	70.5%

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. Income Taxes (continued)

The primary components of temporary differences that gave rise to deferred taxes as of December 31, 1998 and 1999 and June 30, 2000 are as follows (in thousands):

	<u>December 31,</u>		<u>June 30,</u>
	<u>1998</u>	<u>1999</u>	<u>2000</u>
			(unaudited)
Deferred tax assets:			
State income taxes	\$ —	\$261	\$ 452
Allowance for doubtful accounts	11	38	93
Depreciation and amortization	—	29	120
Research and development credit carryforward	99	—	—
Warranty accrual	11	60	121
Deferred revenue	31	116	154
Stock-based compensation	12	58	216
Bonus accruals	—	—	322
Other	26	50	48
Total deferred tax assets	<u>\$190</u>	<u>\$612</u>	<u>\$1,526</u>

Realization of the December 31, 1999 deferred tax assets of \$612,000 is dependent on the Company generating sufficient taxable income in the future. Although realization is not assured, the Company believes it is more likely than not that the deferred tax assets will be realized. The amount of the deferred tax assets considered realizable, however, could be reduced in the future if estimates of future taxable income are reduced.

5. Commitments and Contingencies

Leases

The Company leases its facility and certain computer equipment under noncancelable operating leases for varying periods through January 2005, excluding options to renew. The following are the future minimum commitments under these leases (in thousands):

<u>Years Ending</u> <u>December 31,</u>	
2000	\$ 424
2001	486
2002	461
2003	475
2004	489
Thereafter	61
	<u>\$2,396</u>

Rent expense for the period from May 27, 1997 (inception) through December 31, 1997 and the years ended December 31, 1998 and 1999 was \$19,000, \$67,000 and \$171,000, respectively.

In March 2000, the Company amended its facility operating lease to include additional square footage and to extend the term of the lease. In connection with the amended lease agreement, monthly payments increased from \$29,000 to \$68,000 and the lease term was extended through May 2007.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

5. Commitments and Contingencies (continued)

Litigation

From time to time, certain legal actions may arise in the ordinary course of the Company's business. To date, such legal actions have not had a material adverse effect on the Company's financial position, results of operations or cash flows.

6. Shareholders' Equity

Contribution of Capital

During the period from May 27, 1997 (inception) through December 31, 1997 and during the year ended December 31, 1998, the Company's then principal shareholder contributed additional cash to the Company of \$600,000 and \$700,000, respectively. The contributions were non-reciprocal in nature and were recorded in shareholders' equity as a component of additional paid-in capital.

Stock Splits

In January 1998, the Board of Directors authorized a five-for-one split of the Company's common stock, effected in the form of a stock dividend paid to shareholders of record on March 16, 1998.

In February 2000, the Board of Directors authorized a three-for-one split of the Company's common stock, effected in the form of a stock dividend paid to shareholders of record on March 21, 2000.

The share information in the accompanying financial statements and related notes for all periods prior to these stock splits have been adjusted to reflect the stock splits on a retroactive basis.

Common Stock

In June 1999, the Company issued 225,000 shares of common stock to a director in exchange for services and \$64,000. The deemed fair value of these shares for accounting purposes was determined to be \$243,000, of which the intrinsic value of \$179,000 was recognized as stock-based compensation expense for the year ended December 31, 1999.

In August 1999, the Company issued 900,000 shares of common stock to its two employee founders in exchange for services and notes receivable totaling \$255,000. The shares are subject to a lapsing repurchase right which allows the Company at its option to repurchase any unvested shares at the original purchase price of \$0.28 per share. The shares vest in eight equal quarterly installments commencing on September 30, 1999, subject to acceleration provisions for certain employment termination situations. The deemed fair value of these shares for accounting purposes was determined to be \$1,287,000, resulting in deferred stock-based compensation totaling \$1,032,000, of which approximately \$323,000 was recognized as stock-based compensation expense for the year ended December 31, 1999. As of December 31, 1999, 675,000 of these shares were unvested.

In September 1999, the Company issued 225,000 shares of common stock to a non-employee shareholder in exchange for services and note receivable totaling \$64,000. The shares are subject to a lapsing repurchase right which allows the Company at its option to repurchase any unvested shares at the original purchase price of \$0.28 per share. The shares vest in eight equal quarterly installments commencing on September 30, 1999, subject to acceleration provisions for certain service termination situations. As of December 31, 1999, the deemed fair value of the unvested shares for accounting purposes was estimated to be \$1,006,000, resulting in deferred stock-based compensation of \$1,002,000, of which approximately \$275,000 was recognized as stock-based compensation expense for the year ended December 31, 1999. This stock award is a variable award. For the six months ended June 30, 2000, an

IXIA

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Shareholders' Equity (continued)

additional \$900,000 of deferred stock-based compensation was recorded related to this issuance. As of December 31, 1999, 169,000 of these shares were unvested.

In September 1999, the Company issued 300,000 shares of common stock to an employee in exchange for \$85,000. The shares are subject to a lapsing repurchase right which allows the Company at its option to repurchase any unvested shares at the original purchase price of \$0.28 per share. 75,000 of the shares vest on September 30, 2000 with the remaining shares vesting in twelve equal quarterly installments commencing on December 31, 2000. The deemed fair value of these shares for accounting purposes was determined to be \$462,000, resulting in deferred stock-based compensation totaling \$377,000, of which stock-based compensation expense for the year ended December 31, 1999 was \$98,000. As of December 31, 1999, all of these shares were unvested.

For the six months ended June 30, 2000, stock-based compensation expense related to the stock issuances described above was \$1,383,000.

Notes Receivable from Shareholders

As of December 31, 1999, the Company held promissory notes from the Company's two employee founders and a non-employee shareholder totaling \$319,000 for the issuance of 1,125,000 shares of common stock. The notes bear interest at 8% per annum and are due at various dates through September 2002. The notes, which are classified as a component of shareholders' equity, are full recourse and are collateralized by the related shares of the Company. For the year ended December 31, 1999 and the six months ended June 30, 2000, the Company recorded interest income of approximately \$9,000 and \$13,000, respectively, relating to these notes receivable.

Stock Options

The Company's 1997 Stock Option Plan, as amended in July 1999 (the "1997 Plan"), provides for the issuance of stock-based awards to qualified employees, directors and consultants of the Company. The stock-based awards may include incentive stock options or nonqualified stock options. Options become exercisable over a vesting period as determined by the Board of Directors and expire over terms not exceeding 10 years from the date of grant. The exercise price for options granted under the 1997 Plan may not be granted at less than 100% of the fair market value of the Company's common stock on the date of grant (110% if granted to an employee who owns more than 10% of the voting price of the outstanding stock).

Options generally vest 25% on the first anniversary of the grant date with the remaining options vesting in 12 equal quarterly installments with the first installment vesting on the last day of the first full calendar quarter following the first anniversary. In the event the holder ceases to be employed by the Company, all unvested options are forfeited and all vested options may be exercised within a period of up to 30 days after optionee's termination for cause, up to three months after termination other than for cause or death or disability, or up to six months after termination by disability or death. If an optionee ceases to serve as an employee, as defined by the 1997 Plan, any options exercised are subject to repurchase at the option of the Company at the higher of the original exercise price or fair market value at the termination date. The Company's repurchase right terminates upon the earlier of (1) the first public offering of common stock or (2) a merger or consolidation of the Company, as defined in the 1997 Plan. As of June 30, 2000, the Company has reserved 15,000,000 shares of its common stock for issuance under the 1997 Plan, 4,338,000 of which are available for future grant.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Shareholders' Equity (continued)

The following table summarizes information relating to stock option activity under the 1997 Plan for the period from May 27, 1997 (inception) through December 31, 1997, for the years ended December 31, 1998 and 1999, and for the six months ended June 30, 2000 (in thousands, except per share data):

	Outstanding Options Number of Shares	Weighted Average Exercise Price Per Share
Options outstanding as of May 27, 1997 (inception)	—	\$ —
Granted	1,125	0.01
Exercised	—	—
Canceled	—	—
Options outstanding as of December 31, 1997	1,125	0.01
Granted	2,690	0.07
Exercised	—	—
Canceled	—	—
Options outstanding as of December 31, 1998	3,815	0.05
Granted	3,300	0.29
Exercised	776	0.02
Canceled	91	0.28
Options outstanding as of December 31, 1999	6,248	0.18
Granted	3,720	1.05
Exercised	1,120	0.11
Canceled	82	0.34
Options outstanding as of June 30, 2000	<u>8,766</u>	\$0.55

Options granted for the years ended December 31, 1998 and 1999, and for the six months ended June 30, 2000 resulted in total deferred stock-based compensation of \$422,000, \$3,982,000 and \$25,094,000, respectively, and were recorded as deferred compensation in shareholders' equity. There was no deferred stock-based compensation recognized for the period ended December 31, 1997. The deferred stock-based compensation represented the difference between the deemed fair value of the Company's common-stock for accounting purposes and the exercise price of these options at the date of grant. The deferred stock-based compensation is recognized as stock-based compensation expense in the statements of operations over the related vesting periods of the options.

For the years ended December 31, 1998 and 1999, and for the six months ended June 30, 1999 and 2000, stock-based compensation expense related to stock option grants included in the accompanying statements of operations amounted to \$162,000, \$1,010,000, \$238,000 and \$5,253,000, respectively. There was no stock-based compensation expense for the period ended December 31, 1997. Annual amortization of deferred stock-based compensation as of December 31, 1999 is approximately \$3,073,000, \$1,275,000, \$465,000 and \$134,000 for the years ending December 31, 2000, 2001, 2002 and 2003, respectively.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Shareholders' Equity (continued)

Additional information with respect to stock options outstanding as of December 31, 1999 is as follows (in thousands, except per share data):

Range of Exercise Price	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Outstanding	Weighted Average Exercise Price
\$0.01 to \$0.02	1,453	8.00	\$0.01	312	\$0.02
0.05 to 0.07	837	7.33	0.06	363	0.06
0.13 to 0.17	823	8.77	0.16	219	0.16
0.23 to 0.33	<u>3,135</u>	9.50	0.29	<u>4</u>	0.29
\$0.01 to 0.33	<u>6,248</u>	8.72	\$0.18	<u>898</u>	\$0.07

The deemed fair value for accounting purposes of options granted was \$0.01, \$0.25 and \$1.69 per share for the period from May 27, 1997 (inception) through December 31, 1997 and for the years ended December 31, 1998 and 1999, respectively. There were no options exercised subject to repurchase as of December 31, 1999.

The Company calculated the fair value of each option grant on the respective dates of grant using the Black-Scholes option pricing model as prescribed by SFAS No. 123 using the following assumptions:

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31, 1998	Year Ended December 31, 1999
Expected lives (in years)	10	10	10
Risk-free interest rates	5.00%	5.75%	6.00%
Dividend yield	0%	0%	0%
Expected volatility	0%	0%	0%

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. Shareholders' Equity (continued)

Had compensation costs been determined based upon the Black-Scholes methodology prescribed under SFAS No. 123, the Company's net income (loss) and basic and diluted net income (loss) per share would approximate the following pro forma amounts (in thousands, except per share data):

	<u>As Reported</u>	<u>Pro Forma</u>
For the period ended December 31, 1997:		
Net loss	\$ (322)	\$ (323)
Basic and diluted net loss per share	\$(0.01)	\$(0.01)
For the year ended December 31, 1998:		
Net income	\$ 320	\$ 297
Earnings per share — Basic	\$ 0.01	\$ 0.01
Earnings per share — Diluted	\$ 0.01	\$ 0.01
For the year ended December 31, 1999:		
Net income	\$4,810	\$4,664
Earnings per share — Basic	\$ 0.11	\$ 0.11
Earnings per share — Diluted	\$ 0.10	\$ 0.10
For the six months ended June 30, 1999:		
Net income	\$1,750	\$1,733
Earnings per share — Basic	\$ 0.04	\$ 0.04
Earnings per share — Diluted	\$ 0.04	\$ 0.04
For the six months ended June 30, 2000:		
Net income	\$2,287	\$2,169
Earnings per share — Basic	\$ 0.05	\$ 0.05
Earnings per share — Diluted	\$ 0.04	\$ 0.04

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

7. Earnings Per Share

The following table sets forth the computation of basic and diluted net income (loss) per share for the periods indicated (in thousands, except per share data):

	May 27, 1997 (Inception) Through December 31, 1997	Year Ended December 31,		Six Months Ended June 30,	
		1998	1999	1999	2000
				(unaudited)	
<i>Basic presentation</i>					
Numerator:					
Net income (loss)	\$ (322)	\$ 320	\$ 4,810	\$ 1,750	\$ 2,287
Denominator:					
Weighted average common shares	43,041	43,200	44,029	43,218	46,169
Adjustment for common shares subject to repurchase	—	—	(455)	—	(933)
Adjusted weighted average common shares	<u>43,041</u>	<u>43,200</u>	<u>43,574</u>	<u>43,218</u>	<u>45,236</u>
Basic net income (loss) per share	<u>\$ (0.01)</u>	<u>\$ 0.01</u>	<u>\$ 0.11</u>	<u>\$ 0.04</u>	<u>\$ 0.05</u>
<i>Diluted presentation</i>					
Denominator:					
Shares used above	43,041	43,200	44,029	43,218	46,169
Weighted average effect of dilutive securities:					
Stock options	—	2,419	4,412	3,122	5,887
Common shares subject to repurchase	<u>—</u>	<u>—</u>	<u>455</u>	<u>—</u>	<u>933</u>
Denominator for diluted calculation	<u>43,041</u>	<u>45,619</u>	<u>48,896</u>	<u>46,340</u>	<u>52,989</u>
Diluted net income (loss) per share	<u>\$ (0.01)</u>	<u>\$ 0.01</u>	<u>\$ 0.10</u>	<u>\$ 0.04</u>	<u>\$ 0.04</u>

The diluted per share computations for the period ended December 31, 1997, exclude 1,125,000 options which were antidilutive. There were no shares excluded from the diluted earnings computation for the years ended December 31, 1998 and 1999, and the six month periods ended June 30, 1999 and 2000.

8. Retirement Plan

Effective June 1997, the Company adopted a 401(k) Retirement Plan (the "Plan") under which eligible employees may authorize up to 15% of their compensation to be invested in employee elected investment funds. As determined annually by the Board of Directors, the Company may contribute matching funds of up to 6% of the employee's compensation which vest over a four-year period. For the period from May 27, 1997 (inception) through December 31, 1997, the Company made no contributions to the Plan. For the years ended December 31, 1998 and 1999, the Company expensed and made contributions to the Plan in the amount of approximately \$18,000 and \$59,000, respectively.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. Related Party Transactions

In June 1998, the Company received \$500,000 from a director/shareholder of the Company in exchange for a note. In September 1999, the Company repaid the note in full.

For the years ended December 31, 1998 and 1999, respectively, the Company recorded \$95,000 and \$436,000 of revenues to companies in which a director/shareholder of the Company is a major shareholder. Related party accounts receivable as of December 31, 1998 and 1999 were \$81,000 and \$28,000, respectively.

10. Legal Proceedings

An employee of the Company is a named defendant in an action taken by the employee's former employer Netcom Systems ("Netcom") alleging that the employee misappropriated trade secrets and wrongfully solicited Netcom's employees. Netcom is seeking damages and an injunction. The courts have twice denied Netcom's application for a temporary restraining order. The Company, while it is not a named defendant in this matter, may under certain circumstances (as set forth in an agreement with the employee) be required to indemnify the employee for any damages and related costs which result from this action. While the ultimate outcome of this matter cannot be determined at this time, it is the opinion of the Company's management, based upon the information available at this time, that the outcome of this matter will not have a material adverse effect on the financial condition or results of operations of the Company.

11. Subsequent Events

On July 29, 2000, the Board of Directors authorized the filing of a registration statement with the Securities and Exchange Commission ("SEC") that would permit the Company to sell shares of the Company's common stock in connection with a proposed initial public offering. In addition, the Board of Directors reserved an additional 500,000 shares of common stock for future stock and option awards and approved an increase in the number of common shares authorized for issuance from 75 million to 200 million.

From July 1, 2000 to September 1, 2000, the Company granted 1,840,000 options to purchase common shares at exercise prices ranging from \$3.50 to \$9.00 per share. In connection with these grants, the Company will record deferred stock-based compensation of approximately \$6,088,000, which will be amortized over the respective four-year vesting period.

During August of 2000, the Company issued warrants to purchase 80,000 shares of common stock to a director. The warrants have an exercise price of \$7.00 and vest in four equal quarterly installments commencing September 30, 2000. The Company will record deferred stock-based compensation of approximately \$217,000 which will be amortized ratably over the vesting period.

Also in August of 2000, the Company's Board of Directors reserved an additional 2 million shares of common stock for issuance under the Company's 1997 stock option plan.

On September 1, 2000, the Company's Board of Directors approved the Company's 2000 Bonus Plan (the "Bonus Plan") and its Officer Severance Plan (the "Severance Plan"). The Bonus Plan is based on the Company's achievement of certain revenue thresholds. All non-commissioned employees are eligible to receive bonuses of between 10% and 150% of their salaries. Under the Severance Plan, executive officers are entitled under certain circumstances to receive severance benefits following the termination of their employment.



Through and including _____, 2000 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligations to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

5,500,000 Shares



Common Stock

PROSPECTUS

Merrill Lynch & Co.

Donaldson, Lufkin & Jenrette

Dain Rauscher Wessels

, 2000

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following sets forth the expenses and costs (other than underwriting discounts and commissions) expected to be incurred in connection with the issuance and distribution of our common stock registered hereby. All amounts are estimates except for the registration fee and the NASD filing fee.

SEC registration fee	\$ 20,038
NASD filing fee	7,590
Nasdaq/NMS application fee	95,000
Printing and engraving expenses	325,000
Registrar and transfer agent fees	3,000
Legal fees and expenses	400,000
Accounting fees and expenses	375,000
Miscellaneous	<u>74,372</u>
Total	<u><u>\$1,300,000</u></u>

Item 14. Indemnification of Directors and Officers

Section 317 of the California Corporations Code provides that a corporation may indemnify corporate “agents” (including directors, officers and employees of the corporation) against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with defending non-derivative actions if such person acted in good faith and in a manner such person reasonably believed to be in the best interests of the corporation and, in the case of a criminal proceeding, had no reasonable cause to believe the conduct of such person was unlawful, and against expenses actually and reasonably incurred in connection with defending derivative actions if such person acted in good faith and in a manner such person believed to be in the best interests of the corporation and its shareholders. Indemnification is obligatory to the extent that an agent of a corporation has been successful on the merits in defense of any such proceeding against such agent, but otherwise may be made only upon a determination in each instance either by a majority vote of a quorum of the Board of Directors (other than directors involved in such proceeding), by independent legal counsel if such a quorum of directors is not obtainable, by the shareholders (other than shareholders to be indemnified), or by the court, that indemnification is proper because the agent has met the applicable statutory standards of conduct. Corporations may also advance expenses incurred in defending proceedings against corporate agents, upon receipt of an undertaking that the agent will reimburse the corporation unless it is ultimately determined that the agent is entitled to be indemnified against expenses reasonably incurred.

The indemnification provided by Section 317 of the California Corporations Code is not deemed to be exclusive of any other rights to which agents of Ixia seeking indemnification may be entitled under any bylaw, agreement, vote of shareholders or disinterested directors, or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, to the extent such additional rights are authorized in the articles of the corporation. Article V of our Amended and Restated Articles of Incorporation authorizes Ixia to provide for indemnification of our agents for breach of duty to Ixia and its shareholders, through bylaw provisions or through agreements with such agents, or both, in excess of the indemnification otherwise permitted by Section 317, subject to the limits on such excess indemnification set forth in Section 204 of the California General Corporation Law.

Article VI of the Registrant’s bylaws provides for the indemnification of all past and current directors and executive officers to the maximum extent and in the manner permitted by Section 317. Additionally, the Registrant has entered into with its executive officers and directors Indemnity Agreements under which the Company has undertaken to indemnify them to the fullest extent permitted

by its Articles of Incorporation, bylaws and applicable law against all expenses, liability and loss (which are not paid by insurance or otherwise by the Company) reasonably incurred or suffered by such agent in connection with the defense of any action or proceeding to which the director or officer was or is a party or is threatened to be made a party by reason of conduct in his capacity as an officer or director, or in which the agent is or may be involved by reason of the fact that he is or was serving as an officer or director of the Company, not including actions brought for violation of Section 16 of the Securities Exchange Act of 1934 or for failure to qualify for an exemption under Section 4 of the Securities Act of 1933.

We also provide our directors and executive officers liability insurance for certain losses arising from claims or charges made against them while acting in their capacities as our directors or executive officers.

The Underwriting Agreement, the form of which has been filed as Exhibit 1.1 to this Registration Statement, will provide for indemnification for specified matters by the underwriters of the Registrant, its directors, its officers who sign the registration statement and the Registrant's controlling persons for certain liabilities, including liabilities arising under the Securities Act.

Item 15. Recent Sales of Unregistered Securities

The Registrant has issued unregistered securities to a limited number of persons, as described below. None of these transactions involved any underwriters or any public offerings and registrant believes that each of these transactions was exempt from the registration requirements of the Securities Act by virtue of Section 4(2) thereof, Regulation D promulgated thereunder or Rule 701 pursuant to compensatory benefit plans and contracts related to compensation as provided under Rule 701. The recipients of the shares of common stock in these transactions represented their intention to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were affixed to the share certificates issued in these transactions. All recipients had adequate access to information about registrant through their relationship with registrant.

In June 1997, the Registrant sold an aggregate of 43,200,000 shares of its common stock to Jean-Claude Asscher, its Chairman, Errol Ginsberg, its President and Chief Executive Officer, an affiliate of Howard Oringer, one of its directors, an affiliate of Jon F. Rager, one of its directors, Joel Weissberger, one of its founders, and Ronald W. Buckley, its Corporate Secretary. The total consideration received by the Registrant was approximately \$300,000 and, in the case of Messrs. Ginsberg and Weissberger, all of their right, title and interest in and to the Registrant's original technology and proprietary rights.

In June 1999, the Registrant sold 225,000 shares of its common stock to Jean-Claude Asscher, its Chairman, for total consideration of \$63,750 paid in the form of a full recourse promissory note bearing interest at the rate of 8% per annum.

In August 1999, the Registrant sold an aggregate of 600,000 shares of its common stock to Errol Ginsberg, its Chief Executive Officer and President, for total consideration of \$170,000 paid in the form of a full recourse promissory note bearing interest at the rate of 8% per annum and 300,000 shares of its common stock to Joel Weissberger, one of its founders, for total consideration of \$85,000 paid in the form of a full recourse promissory note bearing interest at the rate of 8% per annum.

In September 1999, the Registrant sold 225,000 shares of its common stock to Ronald W. Buckley, its Corporate Secretary, for total consideration of \$63,750 paid in the form of a full recourse promissory note bearing interest at the rate of 8% per annum and 300,000 shares of its common stock to Mark MacWhirter, its Vice President, Software Development, for total consideration of \$85,000.

In August 2000, the Registrant granted warrants to purchase 80,000 shares of its common stock at an exercise price of \$7.00 per share to Robert W. Bass, one of its directors.

From November 1, 1997 to September 30, 2000, the Registrant granted stock options pursuant to the Registrant's 1997 stock option plan to purchase an aggregate of 13,399,700 shares of common stock at

exercise prices ranging from \$0.01 to \$10.00 per share to its employees, officers and consultants, including Thomas B. Miller, its Chief Financial Officer, Paul Mallinder, its Vice President, Worldwide Sales, Eran Karoly, its Vice President, Marketing, and Joseph A. Noble, its Vice President, North American Sales. From August 25, 1999 to September 30, 2000, options to acquire 2,562,293 shares of common stock were exercised at exercise prices ranging from \$0.01 to \$0.33 per share for an aggregate consideration of approximately \$231,590.

Item 16. Exhibits and Financial Statement Schedules

The exhibits and financial statements schedules filed as part of this registration statement are as follows:

(a) Exhibits.

- 1.1* Form of Underwriting Agreement
- 3.1* Amended and Restated Articles of Incorporation, as amended
- 3.2* Bylaws, as amended
- 4.1* Specimen Certificate evidencing shares of Common Stock
- 5.1* Opinion of Bryan Cave LLP regarding legality of the common stock
- 10.1* 1997 Stock Option Plan, as amended
- 10.1.1* Amendment No. 4 to 1997 Stock Option Plan
- 10.2* Director Stock Option Plan
- 10.3* Employee Stock Purchase Plan
- 10.4* Officer Severance Plan
- 10.5* Form of Indemnity Agreement between Ixia and its directors and executive officers
- 10.6* Promissory Note dated June 1, 1998, in the principal amount of \$500,000 issued by Ixia in favor of Jean-Claude Asscher
- 10.7* Guarantee dated October 25, 1999 issued by Ixia in favor of UBS AG
- 10.8* Master Equipment Lease Agreement dated October 1, 1997 between Ixia and Synchronous Network Solutions, Inc.
- 10.9* Subscription Agreement dated June 2, 1997 between Ixia and Errol Ginsberg
- 10.10* Subscription Agreement dated June 3, 1997 between Ixia and Joel Weissberger
- 10.11* Subscription Agreement dated August 20, 1999 between Ixia and Errol Ginsberg
- 10.12* Subscription Agreement dated August 20, 1999 between Ixia and Joel Weissberger
- 10.13* Subscription Agreement dated September 8, 1999 between Ixia and Mark MacWhirter
- 10.14* Office Lease Agreement dated November 5, 1999 between Malibu Canyon Office Partners, LLC and Ixia and First Amendment to Office Lease dated as of March 22, 2000
- 10.15* Warrants dated August 2, 2000 to Purchase 80,000 Shares of Common Stock issued to Robert W. Bass
- 10.16* 2000 Bonus Plan
- 10.17* Registration Rights and Stock Transfer Restriction Agreement dated as of September 15, 2000 among Ixia, Technology Capital Group S.A. and Stéphane Ratel
- 10.18* Promissory Note dated July 7, 2000, in the principal amount of \$78,433.33 issued by Mark MacWhirter in favor of Ixia
- 10.19* Agreement dated as of September 26, 2000 between Ixia and Eran Karoly
- 23.1* Consent of Bryan Cave LLP (included in Exhibit 5.1)
- 23.2 Consent of PricewaterhouseCoopers LLP
- 24.1* Power of Attorney for Messrs. Ginsberg, Miller, Asscher, Oringer and Rager
- 24.2* Power of Attorney for Mr. Bass
- 27.1* Financial Data Schedule

* Previously filed.

(b) Financial Statement Schedules.

Financial Statement Schedules have been omitted because of the absence of conditions under which they would be required or because the required information has been included in the financial statements.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the provisions of Item 14 of this registration statement, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question of whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in the form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Amendment No. 4 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Calabasas, State of California on October 12, 2000.

IXIA

By: /s/ ERROL GINSBERG
Errol Ginsberg
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 4 to Registration Statement has been signed by the following persons in the capacities indicated on the date set forth opposite their names.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ ERROL GINSBERG</u> Errol Ginsberg	President, Chief Executive Officer and Director (Principal Executive Officer)	October 12, 2000
<u>/s/ THOMAS B. MILLER*</u> Thomas B. Miller	Chief Financial Officer (Principal Financial and Accounting Officer)	October 12, 2000
<u>/s/ JEAN-CLAUDE ASSCHER*</u> Jean-Claude Asscher	Chairman of the Board of Directors	October 12, 2000
<u>/s/ ROBERT W. BASS*</u> Robert W. Bass	Director	October 12, 2000
<u>/s/ HOWARD ORINGER*</u> Howard Oringer	Director	October 12, 2000
<u>/s/ JON F. RAGER*</u> Jon F. Rager	Director	October 12, 2000

*By: /s/ ERROL GINSBERG
Errol Ginsberg
Attorney-in-Fact

EXHIBIT INDEX

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