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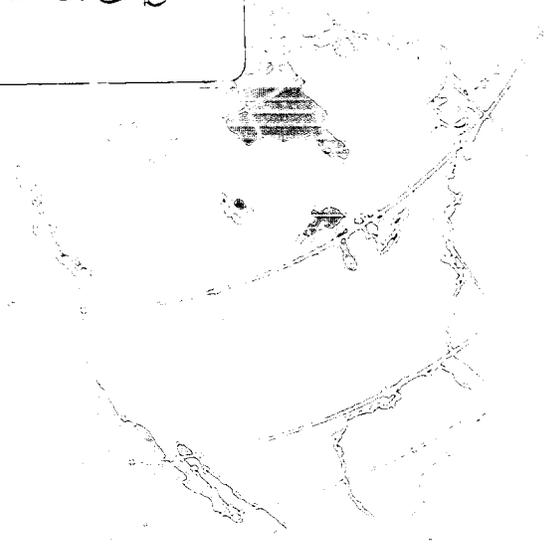
Power & Communications for a Connected World

2001 Annual Report

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# Power and Communications

With the continued scaling of the transistor to smaller geometries and the resultant increase in digital processing power, new applications are emerging to increase productivity in the workplace and enhance the consumer experience of technology. Examples include computer networking in the home, collaborative gaming using game consoles networked through Ethernet ports, transmission of video images over cellular phones using a USB connection, "Voice over IP" telephony enabling calls to be placed over the Internet and a host of wireless applications for consumer convenience.

Micrel is uniquely positioned to address these emerging applications. In addition to its strong heritage in Analog and high speed communications technology, the Company acquired Kendin Communications in May 2001. Kendin is a leader in Ethernet technology for the small office/home office (SOHO) networking market and is currently developing managed switch products to expand into the Enterprise segment of the networking market. The simplicity and low cost of Ethernet have made it the technology of choice for Local Area Networks (LANs). With the development of data rate support up to 10 Gigabits per second, Ethernet is now anticipated to be used throughout Metropolitan Area Networks (MANs). Micrel has defined its AnyNet™ strategy to provide communications solutions from the desktop to the Internet using technology developed in both its Kendin and High Bandwidth (HBW) divisions. Kendin will provide switching products to aggregate data traffic from 10/100 Megabits per second (Mbps) up to 10 Gigabits per second (Gbps) and the HBW division provides the physical media devices to implement a fiber optic module capable of transmitting the data over optical fiber at 10 Gbps.

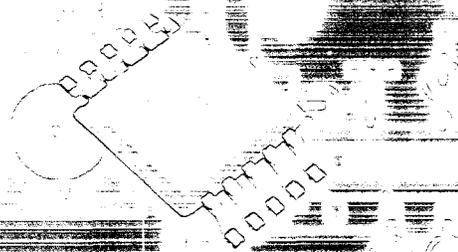
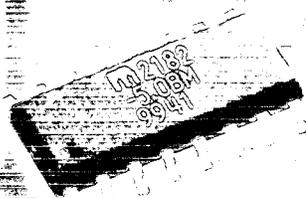
All electronics systems require power management. This is particularly critical in portable systems to maximize battery life and minimize heat in these space constrained applications. Even in AC wall-powered systems heat can be a major problem and high efficiency switching regulators are a must to achieve voltage conversion and regulation. The scaling of the transistor to allow the

integration of more transistors on a chip is driving the operating voltages of digital circuits lower and their current demands higher. New generations of switching and linear regulators have been developed by Micrel to address this trend. Examples include the MIC49150, the industry's first high-current drop-out regulator, capable of regulating voltages less than one volt and the MIC9130 switching controller, which can provide a regulated 2.5 volt supply from an unregulated standard 48 volt line at efficiencies greater than 90%.

To further enhance system performance, customers are also using thermal management and "hot swap" techniques. By accurately monitoring "hot spots" in the system and turning on cooling fans only when needed, customers can extend the performance of their products. Micrel introduced the industry's smallest, most accurate temperature sensor to support this requirement. Many of today's business systems require 24/7 operation. Micrel has developed a family of "hot swap" power controllers to support this need by enabling the removal and insertion of replacement boards while the system is running, in systems ranging from PC servers to telecommunications switches.

Radio Frequency (RF) technology is now being deployed in consumer applications ranging from remote keyless entry for automobiles to remote controls for TV set-top boxes. Micrel's QwikRadio™ products offer the highest level of integration and lowest cost in the industry for these low data rate applications. During the year, Micrel expanded its RF portfolio to include a family of transceivers for higher data rates to address emerging applications such as wireless game controllers, wireless keyboards and industrial automation.

During 2001, Micrel continued to invest heavily in the development of new products and technology to support the new applications described above. The Company released 91 new products, an increase of 12% over 2000, including a number of industry firsts. As the anticipated industry recovery begins in 2002, Micrel is uniquely well positioned to provide the power and communications solutions for the connected world.



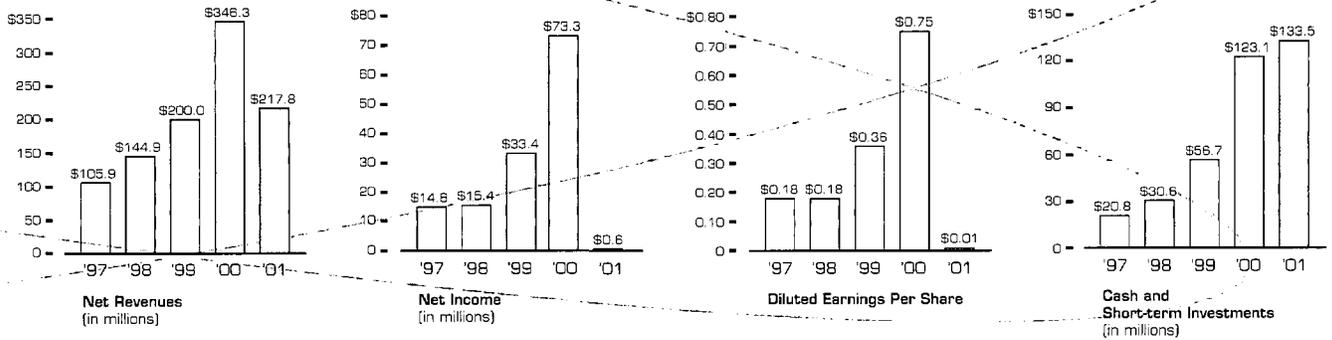
# Financial Highlights

For the Fiscal Years Ended December 31 (Dollars in millions, except per share amounts)

	2001 (1,2)	2000 (1,2)	1999 (1,2)	1998 (1,2)	1997 (1,2)
Net revenues	\$217.8	\$346.3	\$200.0	\$144.9	\$105.2
Operating income	(11.1) (3)	103.7	48.8	23.6 (4)	20.9
Net income	0.6 (3)	73.3	33.4	15.4 (4)	14.8
Diluted earnings per share	0.01 (3)	0.75	0.36	0.18 (4)	0.18
Cash and short-term investments	133.5	123.1	56.7	30.6	20.8
Working capital	196.9	172.8	91.6	55.2	40.9
Total assets	354.8	359.7	214.2	152.2	89.4
Retained earnings	163.7	163.2	89.2	55.8	40.4

Notes:

- (1) Financial results for all years have been restated to include the results of Kendin Communications which was acquired on May 30, 2001 and has been accounted for as a pooling of interests. See Form 10-K, Note 2.
- (2) Financial results for all years have been restated to include amortization of non-cash, stock compensation expense and related tax effects as announced January 28, 2002. See Form 10-K, Item 1, Recent Developments.
- (3) Financial results for the year ended December 31, 2001 include one-time expenses totaling \$8.9 million associated with the acquisition of Kendin Communications.
- (4) Financial results for the year ended December 31, 1998 include the write-off of approximately \$7.0 million in excess inventory and a one-time charge of approximately \$3.7 million related to purchased in-process technology associated with the purchase of Synergy Semiconductor.



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# To Our Shareholders

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The year 2001 was a challenging year for the semiconductor industry. After record sales growth in 2000, worldwide semiconductor shipments in 2001 declined at the most precipitous rate in the industry's history. As the year began, the combination of the slowing global economy, the collapse of the dot com bubble, and inventory accumulation by wireline communication customers and contract manufacturing firms, led to what Micrel characterized as the "perfect storm". The perceived overabundance of semiconductors and uncertain demand for their end products led our customers to move to a just-in-time order pattern as they worked to reduce inventories. In the first half of 2001 virtually every semiconductor company experienced significant order cancellations, weak order rates and rapidly shrinking backlogs as lead times plunged. Semiconductor suppliers rapidly cut output, bringing supply into balance with demand around the end of the third quarter. In the aftermath of the "perfect storm", industry participants are operating in an environment characterized by short lead times, increased pricing pressure and extremely limited visibility into end market demand.

Micrel was not immune to these market forces. Total revenues of \$218 million declined 37% from \$346 million in 2000. Revenues declined across all end markets

and channels of sale demonstrating how broadbased this downturn has been. Micrel prides itself on being one of the most consistent companies in the semiconductor industry. In the past 23 years, the Company has only experienced two years of declining revenue, 2001 being one. Despite adverse conditions in 2001, Micrel's five-year compound average growth in revenue remains one of the best in the industry at 27%.

Micrel distinguished itself by remaining profitable for the year on both a GAAP and pro forma basis. Our manufacturing operations made significant improvements in cycle time, yield and efficiency throughout 2001, driving to world-class levels in the face of sharply reduced volumes. Aggressive cost controls and manufacturing improvements enabled the Company to remain profitable during this difficult year. The Company has never lost money in its history on an annual basis, with 2001 marking the 23rd consecutive year of profitability for Micrel.

Despite the negative market environment, Micrel recorded many achievements in 2001. We continued to invest steadily in new product development resulting in the introduction of 91 new "Best-in-Class" products during the year, a 12% increase over 2000. We continued to expand our high performance analog product portfolio by introducing the world's smallest, most accurate temperature sensing device, our RF transmitter to join our family of QwikRadio™ receivers, and a family of high performance hot swap power controllers targeted at the server, network and telecom equipment markets. We strengthened our product offering for wireless and handheld devices with the introduction of a proprietary

Universal Serial Bus (USB) transceiver and electro-luminescent (EL) display drivers for backlighting displays. We continued to develop leading edge products targeted at the high-speed communications market. In 2001 we completed our AnyRate™ chipset enabling Metropolitan Area Network (MAN) equipment manufacturers to build one line card to handle traffic operating at any data rate and any protocol from 28Mbps to 2.7Gbps. We also introduced the smallest fiber optic module chipset for OC-3 to OC-48 optical, Gigabit Ethernet and Fiber Channel networks.

The Kendin acquisition in May brought a talented technical team to Micrel and an exciting product portfolio that immediately established Micrel as a player in the large, fast-growing Ethernet market. Kendin has developed industry-leading mixed-signal technology, which it is applying to the Fast Ethernet, Gigabit Ethernet and 10 Gigabit Ethernet physical layer and switching chip markets. Kendin operations contributed significantly to Micrel's top and bottom line in 2001.

We are pleased with Micrel's performance during this difficult period. Micrel is a stronger Company now than it was when we entered this downturn. The Company has a more diversified portfolio of high performance products, has a more efficient and competitive manufacturing operation and the comfort and flexibility arising from greater financial resources. We are confident that Micrel will return to above average revenue growth and strong profitability as the semiconductor industry emerges from the current downturn.

Although the near term outlook is uncertain, we are very optimistic about the semiconductor industry going forward. We believe that technology does drive growth and that the industry's constant innovation makes the semiconductor industry the best growth industry in the world. We believe that growth will return for the semiconductor industry and Micrel in 2002.

Sincerely,



Ray Zinn  
President & CEO

# Wireless Communications

## Powering the Wireless World

In the fast paced wireless world, each generation of cell phones offers new features that enhance ease-of-use and productivity. The present cell phone demand of over 400 million phones per year is driven not only by new subscribers, but is also maintained by the vast number of consumers who want to upgrade to the latest feature-rich phones. The onset of high bandwidth cellular phone standards, such as W-CDMA, cdma2000 and GPRS, will further push cellular and PDA functionality by enabling super high-speed data communication via palm-top devices. Micrel is well-positioned to serve both cellular handset and wireless infrastructure sides of this high volume, lucrative market.

Just as notebook PCs moved from gray-scale to color screens several years ago, cellular phones and PDAs are making a similar transition. Phones are migrating from traditional green backlit displays to more visually pleasing blue displays and full-color displays. Micrel offers solutions to light up all three display types. The Company's electroluminescent lamp drivers, including the MIC4826 and MIC4827, drive green displays with a brighter, more uniform light than other solutions. The MIC2142 simply and efficiently drives blue and color displays. More products in this family are soon to be introduced.

With the arrival of second and third generation (G2, G2.5 and G3) phone technologies, such as W-CDMA, wireless data rates are increasing dramatically from a few thousand bits per second to hundreds of thousands of bits per second. This new high-speed data communication ability will finally make internet connectivity practical for hand-held wireless applications.

The higher data speeds will enable pictures and live video to be transmitted via a cell phone—another reason why color displays will be the wave of the future for cell phones. Rather than using a telephone line and analog modem to connect a PC to the internet, a cellular phone will be able to act as a high-speed wireless modem. Micrel's MIC2550 USB Transceiver IC makes this application a reality by providing the USB interface from cell phones to PCs.

The higher performance of wireless applications increases the demands on batteries. Because talk time cannot be sacrificed, power management has become ever more critical. To maximize battery life, Micrel has developed leading solutions to safely and precisely charge Lithium-Ion batteries with such devices as the MIC79050. Within the system, battery voltage needs to be monitored to ensure power integrity. The MIC2778 accurately monitors battery voltage, saves space with its IttyBitty™ SOT23-5 package, and draws less than half the current of competitive solutions.

Battery voltage needs to be stepped down to lower levels to power low-voltage micro-controllers, digital signal processors (DSPs), and radio-frequency (RF) circuitry throughout the cell phone. To meet this requirement, Micrel has developed a new family of low-dropout (LDO) regulators, the MIC5255 and MIC5256, which feature the industry's best performance in terms of dropout voltage, transient response, and noise. These products help to increase battery life, while saving space by being housed in the Company's IttyBitty™ SOT23 package. Micrel is focused on maintaining its leadership in portable power management, with many more products soon to come.

Reliably powering equipment in the wireless network infrastructure is critically important. Line cards within these systems must be plugged and unplugged while the system is running. Without electronic protection, this "hot-swapping" can damage delicate IC components housed on the line card, or cause fault conditions that can bring down the whole system. Fault conditions and system crashes must be prevented. Micrel has long been an industry leader in hot-swap solutions. The newly released MIC2588, for example, provides in-rush current protection and a multitude of other safety features in a space saving SO-8 package.

When safe connection of a line card has been made after "hot swap," accurate voltage conversion needs to be achieved and maintained in each line card in the system. The new MIC9130 and MIC9131 step down the raw voltage that powers base stations—usually 48V—to useable levels required by digital ICs—usually 3.3V.

The high integration of the MIC9130 and MIC9131 saves space by reducing the number of external components, and high-speed operation provides industry leading efficiency and performance. Further step down voltage conversion is possible with Micrel's family of low drop-out regulators—Micrel's MIC37000 family are the simplest solutions for powering 2.5V, 1.8V, and 1.65V FPGAs, DSPs, and microcontrollers.

The industry's leading manufacturers of fixed and portable wireless systems have come to respect and rely on Micrel's expertise in power management. From leading edge solutions to evaluation boards and reference designs, Micrel is dedicated to making the wireless design task easier. The Company is dedicating a significant amount of resources to continue development of small, simple, and efficient power management solutions for wireless applications of all kinds, fixed as well as portable.



Micrel's product portfolio for the computing marketplace continues to expand and diversify as computers take on new forms and proliferate throughout offices, homes, recreational and entertainment centers. The Company continues to focus on new, high-growth, high-profit margin segments while benefiting from a strong, established business base.

The personal computer industry is the single largest consumer of semiconductor devices in terms of dollars. New opportunities are emerging as special purpose devices—personal video recorders, music servers, video game consoles and more—are spun out of the traditional PC market.

For their primary computing platform, more users are selecting notebook PCs that require sophisticated components for power and thermal management. More homes are being equipped with broadband internet access, fueling the demand for home networks and associated hubs, switches, modems, and routers.

The Universal Serial Bus (USB) has succeeded in replacing the ubiquitous serial bus formerly found on virtually every computer made. USB connectivity, historically a key area for Micrel's power switch product line, has become a standard in new PCs and is migrating to gaming consoles and other platforms. The higher speed offered by USB 2.0 and "Wake-On-USB" will extend and future-proof the Company's USB products.

"Wake-On-USB" allows peripherals to wake the system from a sleep state, improving energy efficiency. Micrel's latest family of USB power switches simplifies the development of USB equipped PCs by integrating the logic needed to wake the PC from a USB peripheral. Micrel introduced the industry's first USB power switch ICs to address the new "Wake-On-USB" requirements.

Computers, gaming systems, and set-top boxes can run very hot because the high performance specialty ICs within them, such as field-programmable gate arrays (FPGAs) and application-specific integrated circuits (ASICs), consume relatively large amounts of power. Squeezing maximum performance from these systems while protecting them from overheating calls for thermal supervisors, devices capable of measuring the internal temperature of complex ICs.

Micrel's thermal supervisors meet the challenging task of measuring and reporting temperature and activating an alarm signal if overheating occurs. Proprietary technology

and state-of-the-art processes enable the Company to offer thermal supervisors that are smaller, cheaper, easier to use, and more accurate than existing implementations. Micrel's flagship product is the MIC280, the world's smallest CPU thermal supervisor.

Many ICs require power supplies of less than two volts and some less than one volt. Micrel was the first supplier in the industry to address the need for voltage supervisor products to address applications operating at voltages as low as 0.3V. The Company's MIC277X ultra-low voltage supervisors monitor power supplies for under-voltage conditions and trigger reset or fault signals when needed. The fact that they are adjustable insures that they will be useful in new applications for years to come as system manufacturers continue to reduce the operating voltages of their products.

Higher performing servers will soon reach the market to fuel the growth of the internet and the convergence of video, music, gaming, and data services. Servers now take the form of plug-in cards—"blades"—that slide into a system's backplane. They are no longer stand-alone boxes that mount in a frame or rack. This smaller form-factor reduces the cost of individual servers and increases density, with more servers in the same amount of space.

To meet the demand of 24/7 operation, the ability to insert and remove cards while the system is running—"hot swapping"—is essential. For applications where reliability and hot swap capability are a necessity, Micrel developed the MIC2582 and MIC2583. These programmable devices control inrush current, provide fault detection, act as electronic circuit breakers, and generate reset signals, all while the host system continues to operate without interruption.

Micrel's acquisition of Kendin Communications further expanded the Company's presence in computing markets. Micrel-Kendin's integrated physical-layer interface (PHY), media access control (MAC), and switch products are used in many networking devices in small office/home office (SOHO) networks, such as cable, DSL and wireless routers and gateways. An increasing number of desktop computers, notebook PCs and video game consoles feature network connectivity, requiring MAC and PHY functionality. Almost five million DSL lines have been deployed worldwide. That number is expected to grow to 37 million lines by 2006, according to Cahners In-Stat Group.

# WAN—Wide Area Networks

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Anticipating an upturn in the Wide Area Network (WAN) industry in the second half of 2002, Micrel continued product development at a rapid pace, focusing on future high-growth end markets, such as Metropolitan Area Networks. Among many products now entering service are advanced versions of Micrel's High-Bandwidth ICs, which solve critical timing and optical transmission problems in telecommunications equipment such as routers. During the 2001 calendar year, Micrel introduced 40 new products for the communications markets, a company record.

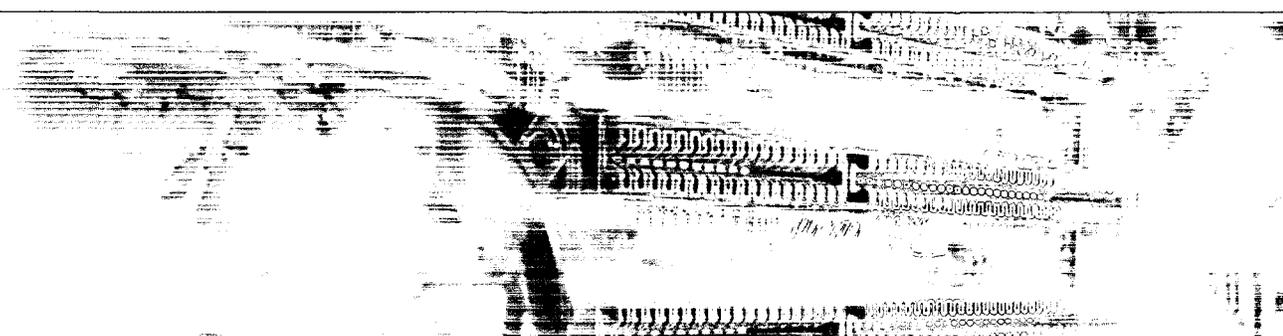
A number of industry first's were realized during 2001. Key among them is Micrel's AnyRate™ chip set for Metropolitan Area Networks. This chip-set consists of three products: the SY87721 Clock Recovery and Clock Multiplication Unit, the SY87729 Fractional N Synthesizer, and the SY87724 Multiplexer and DeMultiplexer. These products operate in the data transmission path, performing critical timing functions for the transmission and reception of data. The AnyRate™ Chip Set allows manufacturers of equipment for Metropolitan Area Networks to dynamically allocate bandwidth for customers in one chip-set, eliminating multiple line cards, reducing the user's cost and saving design engineering time and valuable board space.

The AnyRate™ chip-set works at any data rate between 28Mbps and 2.7Gbps. Users merely have to program the AnyRate™ chip-set to lock on a specific data rate, and the chip set will receive and transmit data at that

precise rate. The 2.7Gbps maximum data rate is very important to WAN system manufacturers because it is compatible with DWDM systems that operate at the industry standard SDH/SONET specification of OC-48 and STM-16 with Forward Error Correction. (DWDM is a way of transmitting multiple channels of data over the same fiber.)

Micrel's AnyGate™ product family streamlines the users' hardware design engineering process, allowing for unparalleled flexibility and simplifying designs. The flexibility results from customers being able to change logic standards without having to redesign their system. The simplification results from reducing the number of components designers must use. Micrel recently added to its pioneering AnyGate™ line of products with the SY55855, SY55857, and SY55858. The SY55855 allows users to connect with any input and receive industry-standard LVDS signals. The SY55857 allows users to connect with any input and receive industry-standard PECL, and the SY55858 allows users to connect with any differential input in a 2x2 crosspoint switch and receive industry standard CML.

Micrel continued to develop its family of fiber optic module components to build upon its leadership in this market. In 2001, the Company introduced the smallest fiber optic module chipset for OC-48 Metropolitan Area Networking. The chipset consists of the SY88952 3.2 Gbps laser diode driver and the SY88983 3.2 Gbps post amplifier, offering the industry's lowest power and smallest size. Applications include OC-3-OC-48 optical networking, Gigabit Ethernet, Fiber Channel, and 10 Gigabit Ethernet.



# Local Area Networks

## Ethernet Everywhere—Innovative Technology Leads to Resounding Growth

The simplicity and low cost of Ethernet have made the technology the premier means of implementing local area networks (LANs) that power corporations worldwide. There are hundreds of millions of Ethernet ports installed worldwide, and now the technology is finding its way into small office/home office (SOHO) and residential applications.

Ethernet will soon be used throughout Metropolitan Area Networks (MAN) and Wide Area Networks (WAN). The Micrel-Kendin Operation is positioned to take full advantage of this growth in Ethernet applications. The Company's AnyNet™ strategy provides network users with end-to-end connectivity from a single supplier. Complementary HBW (High Bandwidth Division) components allow connections from 10Mbps up to 10Gbps over copper or fiber plants.

Micrel-Kendin Operations started with Ethernet and Fast Ethernet products and holds eight patents in algorithmic signal processing; five more patents are pending. The Company's unique mixed signal architecture allows for dynamic adjustments to line conditions while significantly reducing the power and circuitry required. Others in the industry use bulky samplers and signal processors to achieve the same goal. The net difference is that the Micrel-Kendin solution uses less silicon to provide the same functionality. Less silicon translates into reduced power consumption. The Company's physical layer (PHY) components such as the KS8721 use an analog section that completely eliminates the need for analog-to-digital converters and DSPs.

Micrel-Kendin has shipped a total of approximately 30 million Ethernet ports. The Company introduced the industry's first highly integrated 3-port switch (KS8993) for VoIP (Voice over IP) applications, and a SOHO 5-port switch (KS8995), containing on-chip frame buffers, MAC, PHY and switch controllers. The KS8995 can be used as a standalone 5-port switch, and in broadband multi-port routers, SOHO gateway/router VPNs (Virtual Private Network)/Firewall appliances and in VoIP for IP phone applications. This product enjoys wide acceptance and has helped make Micrel-Kendin the market leader in the integrated SOHO solutions. Despite a downturn in the network communications sector in 2001, Micrel-Kendin has enjoyed a nearly two-fold revenue increase from CY2000 to CY2001.

Micrel-Kendin also introduced the industry's first 8-port (KS8997) and 9-port (KS8999) fully integrated unmanaged SOHO switches in 2001. The KS8997 and the KS8999 are based on proven design methodology, using third generation switching technology and patented mixed-signal PHY from the Company's popular 3-port and 5-port integrated switch family.

The new class of switches offers advanced features such as port-based VLANs (Virtual LANs) and QoS (Quality of Service). VLANs allow users to establish segregated VLAN groups for security between groups and applications, while QoS allows the switch to prioritize different classes of voice, video and data traffic. In 2002, Micrel-Kendin will provide next-generation managed switch functionality that will bring more intelligence to the network and allow easier monitoring of traffic.

In 2001, Micrel-Kendin introduced its first Gigabit product, the KS9020 Gigabit MAC (Media Access Controller), along with a suite of supporting software drivers. The Gigabit MAC performs data framing and integrity checking while providing other pre-processing functions that improve overall system performance. The Gigabit MAC also plays a major role in forming and disassembling the Ethernet packets transferred and received over LANs. The device is designed for multiple uses, including Network Interface Cards, Gigabit Ethernet switch ports, Gigabit Uplinks, and in backbone applications.

The Gigabit MAC is one of the key components capable of bringing Gigabit speeds to the desktop. With the amount of traffic on the internet projected to double every 100 days, Gigabit Ethernet components like the Gigabit MAC will be required to provide 'fat' data pipes to prevent bandwidth congestion. In 2002, Micrel-Kendin will extend its success in 10/100Mbps MACs, PHYs and switches by introducing their Gigabit equivalents.

As with any technology, the usage becomes the driver. Micrel-Kendin's switches, MACs and PHYs are used in a large number of products such as desktop and notebook computers, media converters, network printers, set-top boxes, game consoles, IP phones and SOHO switches, routers and firewalls, to name but a few. Ethernet has been used traditionally in corporate data networks, but now it is also moving media along with data. Voice and video are quickly being integrated into data networks.

Workstations and PCs have had media rich applications for years and now have the means to share it with the world. Stand-alone devices such as VoIP telephones are being put into large-scale use in corporate offices. Directly networked cameras, monitors and control systems are the wave of the future. All of these end applications require a network infrastructure that can switch the data packets to and from service providers or locally to different devices. Micrel-Kendin will continue providing the technology to give manufacturers of communications systems the advantage in exploiting these new and developing markets.

# RF & Linear

## RF

Micrel has increased its investment in RF (Radio Frequency) products and has expanded its line of QwikRadio™ RF devices to include single-chip transmitters for the first time. These devices represent the highest level of integration in the industry; providing low cost, low power consumption, and solutions that are easy to design and manufacture. These parts have found ready acceptance in a wide variety of applications, from automobile remote keyless entry (RKE) to household remote controls.

The QwikRadio market place is comprised of an almost limitless number of applications that send data at relatively low rates over distances ranging from a few feet to many hundreds of feet. Many of these applications previously used wires or IR (infrared) for interconnections. There are growing trends to move remote-control and low-data-rate applications from wired to wireless and from infrared to RF connectivity. The trend away from IR is being driven largely by the satellite set-top box market that started offering RF remote controls as an option. An increasing number of set-top boxes is being sold with RF remote controls, and other consumer products are expected to follow suit. Micrel is ideally poised to benefit from these trends.

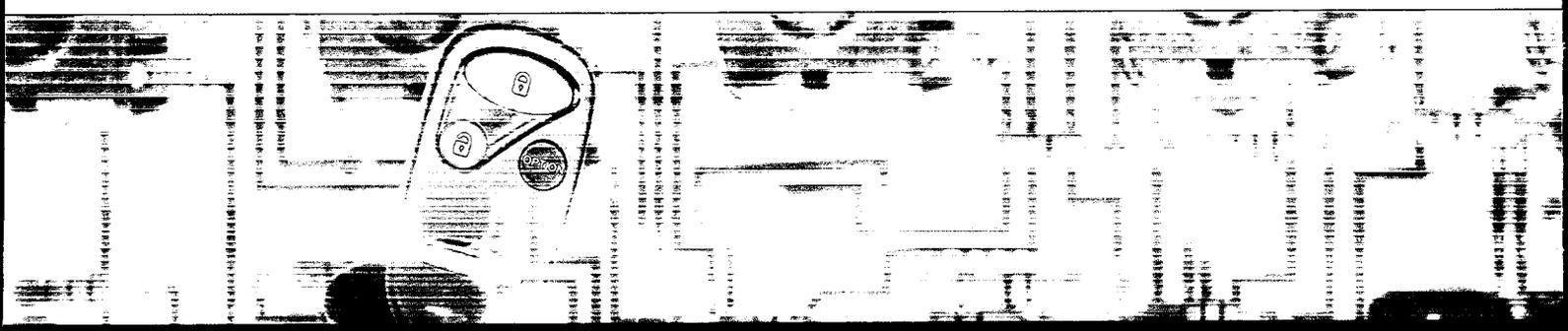
Micrel has further expanded its RF product offerings by acquiring exclusive rights to a family of transceivers from Bluechip Communications AS. The transceivers enable Micrel to address the needs of low to medium-rate, two-way data-communications. Typical applications range from video game controllers to home and industrial automation. These products mark the start of a longer-term relationship with Bluechip Communications that will lead to an expanded family of lower cost and higher performance transceivers in the future.

## Linear

Micrel has a strong history of excellence in analog products and will continue to expand its families of linear devices in the coming year. Investment in core power product lines has been maintained while nurturing new lines of linear ICs. These lines include high-speed operational amplifiers (op amps), low power op amps, voltage monitors and temperature sensors. Every analog product is designed and manufactured with the goal of offering the very best performance at competitive prices.

Micrel's new high speed op amps are up to ten-times faster in operation than similar devices from other sources, and the Company's new low-power devices are ten-times lower in power consumption. In a case where less is more, Micrel's temperature sensor ICs achieve single-wire sensing where all others require two wires, which means that Micrel's devices can be housed in much smaller packaging.

Micrel offers all analog products in industry-leading packaging of the smallest possible size. The Company established a reputation as a prime source of tiny IC packaging when it was the first to adopt IttyBitty™ SOT23 packaging, which is about the size of a flake of pepper. Many new devices are now manufactured in Teeny™ SC70 packaging 40% smaller than the SOT23 package. Products are planned for the near future in even smaller packaging.



UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**FORM 10-K**

- ANNUAL REPORT PURSUANT TO SECTION 13 or 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended December 31, 2001.
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission File Number 0-25236

**MICREL, INCORPORATED**  
(Exact name of Registrant as specified in its charter)

California 94-2526744  
(State or other jurisdiction of incorporation or Organization) (I.R.S. Employer Identification No.)

2180 Fortune Drive, San Jose, CA 95131  
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (408) 944-0800

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act: Common Stock, no par value

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

As of March 15, 2002, the aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately \$1,704,855,144 based upon the closing sales price of the Common Stock as reported on the Nasdaq Stock Market® on such date. Shares of Common Stock held by officers, directors and holders of more than ten percent of the outstanding Common Stock have been excluded from this calculation because such persons may be deemed to be affiliates. The determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 15, 2002, the Registrant had outstanding 93,177,492 shares of Common Stock.

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**DOCUMENTS INCORPORATED BY REFERENCE:**

Portions of the Registrant's Proxy Statement for its Annual Meeting of Shareholders to be held on May 23, 2002 are incorporated by reference in Part III of this Report.

This Report on Form 10-K includes 68 pages with the Index to Exhibits located on page 66.

MICREL, INCORPORATED

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## PART I

### ITEM 1. BUSINESS

#### Recent Developments

On January 28, 2002, Micrel, Incorporated (the "Company" or "Micrel") announced that it would restate its consolidated financial statements for the years ended December 31, 1998, 1999, and 2000, and the quarters ended March 31, 2001, June 30, 2001, and September 30, 2001. This restatement relates to the Company's past method of setting the exercise price of certain employee stock options which results in stock compensation expenses and related payroll and income tax effects that had not been recorded in previously issued financial statements. It should be noted that Micrel sought outside professional advice prior to implementation of the option grant method that resulted in the unintentional consequence of stock compensation charges. Information regarding the effect of the restatement on the Company's financial position and results of operations is provided in Note 2 of Notes to Consolidated Financial Statements included in the Company's Annual Report on Form 10-K/A for the year ended December 31, 2000, the Quarterly Reports on Form 10-Q/A for the quarters ended March 31, June 30 and September 30, 2001 and the Current Report on Form 8-K/A filed on April 1, 2002.

#### General

The Company was incorporated in California in July 1978. References to the "Company" and "Micrel" refer to Micrel, Incorporated and subsidiaries, which also does business as Micrel Semiconductor. The Company's principal executive offices are located at 2180 Fortune Drive, San Jose, California 95131. The Company's telephone number is (408) 944-0800.

Micrel designs, develops, manufactures and markets a range of high-performance analog power integrated circuits and mixed-signal and digital integrated circuits. The Company currently ships over 1,400 standard products and has derived the majority of its product revenue for the year ended December 31, 2001 from sales of standard analog integrated circuits for power management. These analog power circuits are used in a wide variety of electronic products, including those in the computer, telecommunications and industrial markets. For the years ended December 31, 2001, 2000, and 1999, the Company's standard products accounted for 84%, 79%, and 78%, respectively, of the Company's net revenues. In addition, the Company manufactures custom analog and mixed-signal circuits and provides wafer foundry services for a diverse range of customers who produce electronic systems for communications, consumer and military applications. With the Company's acquisition of Synergy Semiconductor ("Synergy") in November 1998, the Company broadened its standard product offerings to include high performance bipolar integrated circuits sold to customers within the communications, industrial and computing markets. This product portfolio is comprised of more than 200 products including communication transceivers, clock generators, distribution/clock recovery circuits as well as high-speed logic and memory. In April 2000, Micrel completed its acquisition of Electronic Technology Corporation ("ETC"), a company specializing in mixed signal and analog design with a complete portfolio of voltage supervisor and microprocessor reset circuits. These products are highly complementary with the Company's power products portfolio since they accurately monitor the power supplies of critical system components (e.g. microprocessors) and signal the microprocessor to reset if the voltage to the device falls out of the specified operating range. In May 2001, Micrel completed its acquisition of Kendin Communications, Inc. ("Kendin"), a privately held fabless semiconductor company that designs, develops and markets high performance integrated circuits for the communications and networking markets. This acquisition enabled Micrel to enter the high growth Ethernet market with a family of Ethernet Switch products targeting the SOHO (Small Office, Home Office) and Enterprise networking markets. This

product portfolio consists of transceiver and switch devices that support various Ethernet protocols supporting communication transmission speeds from 10 megabits per second to 100 megabits per second. Micrel's Kendin operations are developing products to serve the gigabit Ethernet communication protocol. The Kendin transaction has been accounted for as a pooling of interests, and accordingly all financial statements presented have been restated to include the Kendin results.

Continuing trends in the communications, networking and computing markets have created demand for power analog circuits, which control, regulate, convert and route voltage and current in electronic systems. This demand for power analog circuits has been fueled by the growth of battery powered cellular telephones and computing devices and the emergence of lower voltage microprocessors and Personal Computer Memory Card International Association ("PCMCIA") standards for peripheral devices. The Company sells a wide range of regulators, references and switches designed for cellular telephones and laptop computers. Micrel was one of the first companies to offer analog products for the PCMCIA Card and universal serial bus ("USB") market. In addition to USB power switches the Company now offers a family of transceiver products to support USB connectivity from a PC to a USB equipped peripheral at data rates up to 12 Megabits per second. The Company recently introduced a family of Hot Swap Power controllers for the Compact Peripheral Control Interface ("CompactPCI") bus standard used extensively in PC servers, networking equipment and industrial control applications. These devices support 24 hours a day, 7 days per week operations by enabling customers to remove and insert printed circuit boards during system operation. Future families of hot swap controllers are being developed to address the higher voltage requirements of the telecommunications market. The Company also offers standard analog products that address other markets, including power supplies and industrial, defense, avionics and automotive electronics.

In addition to power and thermal management products, Micrel also offers a family of highly integrated RF products. These QwikRadio™ products enable customers to develop wireless control systems significantly improving the consumer experience of their products. Applications for the QwikRadio™ products include remote keyless entry for automobiles, TV remote controls, wireless game controllers, keyboards and mice.

The Company's standard mixed-signal and digital integrated circuits are used primarily for enterprise switch networks, storage area networks and metropolitan area networks. With the demand for bandwidth in these networks continuing to increase, Micrel has developed a family of fiber optic module components to support higher data rates. With form factor and size reductions critical to the continued growth of this technology, Micrel has utilized its own process technology and innovative packaging to address these challenges.

With the acquisition of Altos Semiconductor ("Altos") in November 1999, Micrel entered the thermal management market. These mixed signal devices accurately measure the temperature at various "hot spots" in electronic systems and initiate system cooling by turning on fans or if necessary initiate a controlled system shutdown. The continuing trend to provide more processing power in smaller form factors (e.g. notebook PCs, Personal Digital Assistants ("PDAs")) creates demand for thermal management devices.

In addition to standard analog and mixed signal products, Micrel offers customers various combinations of design, process and foundry services. Through interaction with customers in its custom and foundry business, we have been able to enhance our design and process technology capabilities, which in turn provides engineering and marketing benefits to its standard products business.

The supply of semiconductors can quickly and unexpectedly match or exceed demand because customer end demand can change very quickly and semiconductor suppliers can rapidly increase production output. This can lead to a sudden oversupply situation and a subsequent reduction in order rates as customers adjust their inventories to true demand rates. Customers continuously adjust their inventories resulting in frequent changes in demand for our products.

The semiconductor industry experienced such a change in the supply and demand situation during 2000 and 2001. In the fourth quarter of 2000 and during 2001, customers in the high speed communications end market, and the contract manufacturing firms that serve this market, adjusted their demand on component suppliers as they coped with high levels of inventory and sharply reduced demand for their end products. In addition, the slowing of global economic growth during 2001 led to lower order rates from customers serving the telecommunications, industrial and computer end markets as they adjusted to lower demand for their products. The rapid build-up of semiconductor inventories in global sales channels caused lead times for components to fall precipitously during 2001. Due to the combination of excess supply, reduced demand and lower lead times, new orders rates declined and a significant amount of previously placed orders were cancelled during the first half of 2001. The corresponding reduction in backlog has left the Company, like most semiconductor suppliers, with extremely limited visibility into future customer demand. Customers appear to be placing orders on an "as needed" basis due to short supplier lead times combined with the uncertain macroeconomic outlook. The low backlog and uncertainty of customer demand significantly limits our ability to predict future levels of sales and profitability.

## Industry Background

### *Analog Circuit, Mixed-Signal and Digital Integrated Circuits Markets*

Integrated circuits may be divided into three general categories — digital, analog (also known as "linear") and mixed-signal. Digital circuits, such as memories and microprocessors, process information in the form of on-off electronic signals and are capable of implementing only two values, "1" or "0." Analog circuits, such as regulators, converters and amplifiers, process information in the form of continuously varying voltages and currents that have an infinite number of values or states. Analog circuits condition, process, and measure or control real world variables such as current, sound, temperature, pressure or speed. Mixed-signal integrated circuits combine analog and digital functions on one chip.

Analog circuits are used in virtually every electronic system, and the largest markets for such circuits are computers, telecommunications and data communications, industrial equipment, and military, consumer and automotive electronics. Because of their numerous applications, analog circuits have a wide range of operating specifications and functions. For each application, different users may have unique requirements for circuits with specific resolution, processing linearity, speed, power and signal amplitude capability. Such differentiation results in a high degree of market fragmentation, which provides smaller companies an opportunity to compete successfully against larger suppliers in certain market segments.

Mixed-signal and digital integrated circuits may be divided into six general categories, LSI/MSI logic, data processing, signal processing, memory, FPGA and application specific.

Mixed-signal and digital integrated circuits are used in computer and communication systems and in industrial products. The primary markets for such circuits are consumer, communications, personal computer systems, and industrial. The primary advantages of the Company's bipolar integrated circuits are high speed and low noise.

As compared with the digital integrated circuit industry, the analog integrated circuit industry has the following important characteristics:

- *Dependence on Individual Design Teams.* The design of analog circuits involves the complex and critical placement of various circuits. Analog circuit design has traditionally been highly dependent on the skills and experience of individual design engineers.
- *Interdependence of Design and Process.* Analog designers, especially at companies having their own wafer fabrication facility ("fab"), are able to select from several wafer fabrication processes in order to achieve higher performance and greater functionality from their designs.
- *Longer Product Cycles and More Stable Pricing.* Analog circuits generally have longer product cycles as compared to digital circuits. As a result, analog circuit pricing has historically been more stable than most digital circuit pricing.

Analog, mixed-signal and digital integrated circuits are sold to customers as either standard products or custom products. Standard analog products are available to customers "off-the-shelf" and are often sold in large volumes to a wide variety of customers in different industries. Custom products are designed to an individual customer's specifications.

#### *Recent Trends in Analog Power Management, Mixed-Signal and Digital Integrated Circuits*

Most electronic systems utilize analog circuits to perform power management functions ("power analog circuits") such as the control, regulation, conversion and routing of voltages and current. The computer and communications markets have emerged as two of the largest markets for power analog circuits. In particular, the recent growth and proliferation of portable, battery powered devices, such as cellular telephones and laptop computers, continue to increase demand and create new technological challenges for power analog circuits.

Cellular telephones, which are composed of components and subsystems that utilize several different voltage levels, require multiple power analog circuits to precisely regulate and control voltage. Manufacturers continue to pack more processing power and functionality into smaller form factors placing severe demands on the battery. To maintain or extend talk times demands high performance power management products. With the introduction of new color displays, "boost" voltage regulators are now required to step up the battery voltage to the higher voltage required to backlight the display with white or blue LEDs (Light Emitting Diodes). Several manufacturers are also adding USB connectivity to their cellular phones to enable efficient downloads from their PCs or PDAs and Micrel offers a family of USB transceivers to support this emerging trend.

The trend toward the use of lower voltage digital processing devices (microprocessors, digital signal processors ("DSPs") and field programmable gate arrays ("FPGA"s)) at the core of the latest generation of electronic systems has also increased market demand and created new requirements for power analog circuits. These devices require lower voltage, higher current power supplies and this power must be delivered with high efficiency to prolong battery life in portable systems and reduce heat in mains powered systems. These trends are driving the demand for higher efficiency switching regulators and higher current LDO regulators. Another recent trend is the emergence of PCMCIA standards that require a voltage protection capability, thereby creating new specifications for higher performance power analog switches.

The rapid adoption of the Internet for information exchange, in business and consumer markets, has led to a significant increase in the need for broadband communications technology. In addition, the use of more media-rich technologies on the Internet, like graphics and movies with high bandwidth requirements, has led to a growing need to increase the speed and capacity of the Internet infrastructure. One major trend within the communications industry is the worldwide adoption and deployment of high-speed fiber optic networks. Such networks require the use of high-speed optical modules and this is driving the demand for ultra-high speed laser drivers, signal conditioning, clock recovery and post processing in order to attain data rates in excess of 10 Gigabits per second.

In the networking market, Ethernet has been widely adopted as the communication standard. Ethernet ports are now being provided on equipment ranging from PCs and PC peripherals such as printers to Games consoles. This is driving rapid growth in the SOHO market to connect multiple PCs and Peripherals with the home or office. With its acquisition of Kendin Communications, Micrel has entered this market with leadership products and technology. With the continued development of the Ethernet standard to Gigabit and now 10 Gigabit data rates it is now starting to challenge the SONET standard in the Metropolitan Area Network. Product development is underway at Micrel's Kendin operations to support these higher data rates.

### Micrel's Strategy

Micrel seeks to capitalize on the growth opportunities within the high-performance analog and mixed-signal semiconductor market. The Company's core competencies are its analog design and process technology, its large, in-house wafer fabrication capability and its manufacturing expertise. The Company also seeks to capitalize on the growth opportunities within the high performance bipolar semiconductor market. The Company has expanded upon its core competencies through the addition of Synergy's expertise in the synchronous optical network ("SONET") and fiber channel arenas. The Synergy design team, process technology and wafer fabrication facility complement the historical Micrel core strengths. The Company intends to build a leadership position in its targeted markets by pursuing the following strategies:

- *Focus on Standard Products for High Growth Markets.* Currently, Micrel ships over 1,400 standard products, with net revenues from standard products generating 84% of the Company's net revenues for the year ended December 31, 2001. Micrel believes that its long-term growth will depend substantially on its ability to increase standard products sales in its existing markets and to penetrate new standard products markets. The Company, however, will pursue additional custom and foundry business as opportunities arise.
- *Target Power Analog, High-Speed Mixed-signal and Digital Markets.* Micrel has leveraged its expertise in power analog circuits by addressing market opportunities in cellular telephones, battery powered computers and desktop personal computers. A majority of the Company's standard products net revenues for the year ended December 31, 2001 were derived from products relating to power management. Through the acquisitions of Synergy Semiconductor, Altos Semiconductor, ETC and Kendin the Company has gained expertise in high-speed, mixed-signal and system-level digital integrated circuits, required to address the high bandwidth and local area network communication markets as well as increase its penetration of the power and thermal management markets.

- *Maintain Technological Leadership.* The Company seeks to utilize its design strengths and its process expertise to enhance what the Company believes are its competitive advantages in LDO regulators, ECL logic products, high-speed communications devices, PCMCIA and USB devices. In order to maintain its technology leadership, the Company has developed plans for successive generations of products with increased functionality. The Company now has its sub-micron bipolar process in production and has recently released the first product, a 10 Gigabit line receiver on its high speed silicon germanium process.
- *Develop/Acquire New Complementary Businesses.* The Company seeks to identify complementary business opportunities building on its core strengths in the analog and mixed signal area. During the past year the Company has significantly expanded its product scope through the acquisition of Kendin's high performance transceiver and switch products that address local area network communication applications. The Company has also expanded its product portfolio to include hot swap power controllers, thermal management products and voltage supervisors. This enables Micrel to provide a more complete solution to its customers and facilitates the Company's growth.
- *Capitalize on In-house Wafer Fab Facilities.* The Company believes that its six-inch in-house wafer fab facilities provide a significant competitive advantage because they facilitate close collaboration between design and process engineers in the development of the Company's products.
- *Maintain a Strategic Level of Custom and Foundry Products Revenue.* Micrel believes that its custom and foundry products business complements its standard products business by generating a broader revenue base and lowering overall per unit manufacturing costs through greater utilization of its manufacturing facilities. Through interaction with customers, Micrel has been able to enhance its design and process technology capabilities.

## Products and Markets

### Overview

The following table sets forth the net revenues attributable to the Company's two segments, standard products and custom and foundry products expressed in dollars and as a percentage of total net revenues.

#### Net Revenues by Segment (Dollars in thousands)

	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
<b>Net Revenues:</b>			
Standard Products.....	\$ 183,103	\$ 275,306	\$ 155,979
Custom and Foundry Products.....	<u>34,705</u>	<u>71,029</u>	<u>44,037</u>
Total net revenues .....	<u>\$ 217,808</u>	<u>\$ 346,335</u>	<u>\$ 200,016</u>
<b>As a Percentage of Total Net Revenues:</b>			
Standard Products.....	84%	79%	78%
Custom and Foundry Products.....	<u>16</u>	<u>21</u>	<u>22</u>
Total net revenues .....	<u>100%</u>	<u>100%</u>	<u>100%</u>

For a discussion of the changes in net revenues from period to period, see "Management's Discussion and Analysis of Financial Condition and Results of Operations."

## *Standard Products*

In recent years, the Company has directed a majority of its development, sales and marketing efforts towards standard products in an effort to address the larger markets for these products and to broaden its customer base. The Company offers power analog circuits that address certain high growth markets including cellular telephones, battery powered computers and desktop personal computers. The Company's remaining power management standard products address other markets, including power supplies and industrial, defense, avionics, and automotive electronics. The Company offers a variety of standard products that serve the communications market including high-speed mixed-signal and digital integrated circuits sold to customers within the networking, communications and computing markets.

*Portable Battery Powered Computer Market.* The Company makes power analog circuits for laptop, palmtop computers and PDAs. Products in this growing segment are differentiated on the basis of power efficiency, weight, small size and battery life.

*Cellular Telephone Market.* Micrel offers a range of power control and regulating analog circuits to address the demand for cellular telephones with longer battery lives. Micrel supplies a range of high performance LDO regulators and higher efficiency switching regulators that convert, regulate, switch and control the DC voltages used in cellular telephones. Micrel's SuperBeta PNP™ LDO and CMOS regulators enable cellular telephones to continue to operate effectively until the battery is almost completely exhausted. Micrel products are designed to reduce board space and decrease system cost. The introduction of new, large display technologies to the cellular handset has created a demand for new "boost" converters to provide higher voltages from single cell lithium batteries. This includes products for both electro-luminescent and color LCD displays. In addition, Micrel offers switch mode power supply ("SMPS") regulators that convert AC to useable DC power in battery chargers and cellular base stations.

*Universal Serial Bus Market.* Universal Serial Bus ("USB") is a novel method of connecting computer peripherals to a host computer that improves upon the bandwidth and ease-of-use of previously used computer interconnect solutions. In addition to implementing data communications between the connected devices, USB also provides a power source capable of powering the peripheral. Micrel believes that it is the leader in the design and manufacture of circuits that safely control the delivery of this power source. Micrel's latest generation of USB devices are the first to support the new Advanced Control and Power Interface ("ACPI") standard for lower power consumption. Micrel has also added to its USB product portfolio recently with the introduction of a family of USB transceivers to support connectivity from the PC host to a USB peripheral at data rates up to 12 Megabits per second.

*PCMCIA Card and Socket Markets.* The Personal Computer Memory Card International Association, of which Micrel is a member, has established standards for personal computer cards that are the size of credit cards and for sockets that allow insertion of such cards into personal computers. Micrel believes that it is a leader in the design and manufacture of integrated circuits that enable PC Card sockets to have such compatibility.

*Power Supply Market.* Most electronic equipment includes a power supply that converts and regulates the electrical power source into usable current for the equipment. During 2001 Micrel introduced a new family of high voltage switching controllers for the telecommunications market capable of supporting extreme transient line voltages up to 180V. Applications for this family include ADSL line cards, high voltage DC-DC modules and Voice over IP (VOIP) phones and related networking equipment. In addition to SMPS controllers and single chip SMPS regulators, Micrel offers a full line of MOSFET drivers, voltage references, LDOs and Super LDOs.

*Automotive Electronics Market.* Micrel's LDO products, including the line of monolithic SuperBeta PNP™ LDO regulators, have been designed in for such automotive controller applications and safety features as automotive airbags and antilock brake systems. For each of the years ended December 31, 2001, 2000, and 1999, the automotive electronics market represented less than 2% of net revenues.

*General Purpose Analog.* Micrel sells a variety of general purpose analog products including high speed, low power op-amps, comparators, fan controllers and intelligent protected power switches. The Company also has available for sale a broad portfolio of voltage supervisors and microprocessor reset circuits provided by its acquisition of ETC. All of these general purpose devices were focused on low voltage and low current applications.

*Thermal Management.* Micrel's thermal management products, based on the technology acquired from Altos Semiconductor, address the need to accurately measure temperature in several system locations and control cooling fans. The ability to measure temperature accurately allows customers to optimize system performance and is critical to both the reliability and operating life of today's electronic systems. Micrel's thermal management technology enables high accuracy at low system cost by sensing the temperature at each location using only one pin connection.

*Hot Swap Controllers.* Micrel's hot swap power controllers support the requirement for 24/7 operation in servers and communications equipment. These products allow customers to upgrade or replace system boards without having to power down the system. This family offers the industry's most integrated hot swap solution for CompactPCI™ applications. These devices build on Micrel's expertise in power control and distribution and target the PC server and industrial computing market segments. A dual channel hot swap controller was recently introduced to support Intel's Itanium™ 64-bit microprocessor for the latest generation of PC servers. During the year the Company also introduced its first products for the higher voltage telecommunications and networking equipment markets.

*Radio Frequency Data Communications.* Micrel's QwikRadio™ family of radio frequency ("RF") receivers are designed for use in any system requiring a cost effective, low data-rate wireless link. Typical examples include garage door openers, wireless computer peripherals, lighting and fan controls, utility metering, automotive keyless entry and security systems. The Company also introduced the MICRF500, its first RF transceiver product capable of supporting data rates up to 115 Kilobits per second. This device is particularly well suited for home and industrial automation products as well as wireless game controllers and PC peripherals.

*Networking and High-Speed Communications Circuits Market.* The Company's Synergy subsidiary has directed a majority of its development, sales and marketing efforts towards high-speed media interface for SONET/synchronous digital hierarchy ("SDH") markets. The Synergy subsidiary also develops and produces communications products targeted at fiber optic modules and wave division multiplex ("WDM"), dense wave division multiplex ("DWDM") modules as well as clock recovery, clock distribution and level translation circuits. Micrel entered the Ethernet networking market with its acquisition of Kendin Communications in May 2001. Micrel's networking products transmit, receive and switch data in local area networks utilizing Ethernet data transmission protocols. Micrel offers a broad range of physical layer (PHY), Media Access Controllers (MACs) and switch products for the 10/100 Megabit Ethernet standard. The primary applications for the switch products are home and small office computer networks, VOIP phones and media converters, used to convert signals transmitted optically over fiber to standard cable (copper) and vice versa. Single 10/100 Megabit PHYs are also used in set-top boxes, cable modems, game consoles, printers, copiers and a host of other PC peripherals. Micrel's Kendin operations also recently introduced a Gigabit MAC and is currently developing a family of switch and PHY products for Gigabit Ethernet together with several products in support of the emerging 10 Gigabit Ethernet standard.

The Company's future success will depend in part upon the timely completion, introduction, and market acceptance of new standard products. As compared with the Company's custom and foundry products business, the standard products business is characterized by generally shorter product lifecycles, greater pricing pressure, larger competitors and more rapid technological change. Generally, the standard products market is a rapidly changing market in which the Company faces the risk that its product offerings will quickly become obsolete. The success of new standard products depends on a variety of factors, including product selection, successful and timely completion of product development, achievement of acceptable manufacturing yields by the Company's foundry and the Company's ability to offer products at competitive prices.

Micrel's new products are generally incorporated into a customer's products or systems at the design stage. The value of any design win largely depends upon the commercial success of the customer's product and on the extent to which the design of the customer's electronic system accommodates incorporation of components manufactured by the Company's competitors. In addition, products or systems may be subsequently redesigned so that they no longer require the Company's products. No assurance can be given that the Company will achieve design wins or that any design win will result in future revenues. The failure of the Company to achieve design wins would materially and adversely affect the Company's financial condition, results of operations and cash flows.

#### *Custom and Foundry Products*

Micrel offers customers various combinations of design, process and foundry services in order to provide them with the following alternatives:

*Full Service Custom.* Based on a customer's specification, Micrel designs and then manufactures integrated circuits for the customer.

*Custom and Semi-Custom.* Based on a customer's high level or partial circuit design, Micrel uses varying levels of its design and process technologies to complete the design and then manufactures integrated circuits for the customer.

*R&D Foundry.* Micrel modifies a process or develops a new process for a customer. Using that process and mask sets provided by the customer, Micrel manufactures fabricated wafers for the customer.

*Foundry.* Micrel duplicates a customer's process to manufacture fabricated wafers designed by the customer.

Micrel's full service custom, custom and semi-custom products primarily address high bandwidth communications, consumer, automotive and military applications and use both analog and digital technologies. The military applications include communications and transport aircraft.

With respect to R&D foundry and other foundry products, Micrel provides wafers to a variety of companies. The Company believes that the custom and foundry business reduces somewhat the Company's sensitivity to fluctuations in its standard products markets as the Company's foundry customers are often in different markets that are not affected by the same business cycles.

## Sales, Distribution and Marketing

The Company sells its products through a worldwide network of independent sales representative firms and distributor firms and through a direct sales staff. In the year ended December 31, 2001, sales through North American distributor firms accounted for 12% of the Company's net revenues.

The Company sells its products in Europe through a direct sales staff in England as well as independent sales representative firms, independent distributors and independent stocking representative firms. Asian sales are handled through independent stocking representative firms with Micrel sales offices in Korea, Japan and Taiwan. The stocking representative firms may buy and stock the Company's products for resale or may act as the Company's agent in arranging for direct sales from the Company to an OEM customer.

Sales to customers in North America, Asia and Europe accounted for 39%, 50% and 11%, respectively, of the Company's net revenues for the year ended December 31, 2001 compared to 58%, 32% and 10%, respectively, of the Company's net revenues for the year ended December 31, 2000 and 52%, 37% and 11%, respectively, of the Company's net revenues for 1999. The Company's standard products are sold throughout the world, while its custom and foundry products are primarily sold to North American customers. The Company's net revenues by country, including the United States, is included in Note 12 of Notes to Consolidated Financial Statements.

The Company's international sales are primarily denominated in U.S. currency. Consequently, changes in exchange rates that strengthen the U.S. dollar could increase the price in local currencies of the Company's products in foreign markets and make the Company's products relatively more expensive than competitors' products that are denominated in local currencies, leading to a reduction in sales or profitability in those foreign markets. The Company has not taken any protective measures against exchange rate fluctuations, such as purchasing hedging instruments with respect to such fluctuations.

## Customers

For the year ended December 31, 2001 one customer, Galaxy, accounted for 11% of the Company's net revenues. For the year ended December 31, 2000 one customer, Future Electronics (a distributor), accounted for 10% of the Company's net revenues. For the year ended December 31, 1999 no customer accounted for 10% or more of the Company's net revenues.

## Design and Process Technology

Micrel's analog proprietary design technology depends on the skills of its analog design team. The Company has experienced analog design engineers who utilize an extensive macro library of analog and mixed-signal circuits and computer simulation models.

Micrel can produce integrated circuits using a variety of manufacturing processes, some of which are proprietary and provide enhanced product features. Designers at companies that do not have in-house fabs or have a limited selection of available processes often have to compromise design methodology in order to match process parameters.

Micrel produces high-speed communication transceivers, clock generation/distribution circuits, clock recovery circuits as well as high-speed logic and memory using the Company's proprietary All Spacer Separated Element Transistor ("ASSET") process.

The Company utilizes the following process technologies:

- *Bipolar* — Bipolar technology is one of the oldest technologies. It is utilized where precision analog elements are required.
- *High Speed Bipolar* — This is a variation of bipolar technology that is specially optimized for very fast transistors and is used where high-speed switching or signal conditioning is required.
- *SuperBeta PNP* <sup>TM</sup> — The Company's proprietary SuperBeta PNP <sup>TM</sup> process technology allows power transistors to be driven with much lower current as compared to conventional PNP Bipolar technology, which gives such transistors a competitive advantage.
- *CMOS* — CMOS technology is the technology most widely used in digital applications. It has the advantages of low power consumption and high packing density.
- *BiCMOS* — Bipolar/CMOS ("BiCMOS") merges the Bipolar and CMOS technologies and offers the benefits of both technologies. This process, however, adds more expense to a product.
- *BCD* — Bipolar/CMOS/DMOS ("BCD") merges three technologies, Bipolar, CMOS and DMOS. DMOS is best suited for handling high current and is used in the output section of the circuit. BCD combines the high speed, ruggedness and power of DMOS and the benefits of BiCMOS.
- *ASSET* — ASSET technology is the Company's proprietary high-speed Bipolar process developed by the Company's Synergy subsidiary. This technology allows high speed with low jitter and is ideally suited for high-speed mixed-signal designs.

The Company continues to develop each of these technologies to improve both the performance and cost of its new products. Micrel is also developing new process technologies to support its own product development and the needs of its foundry customers. For example, a new Silicon Germanium process is currently in development to meet the needs of the next generation communication products operating at 10Gbps. Silicon Germanium is ideally suited for these products given its combination of high speed with low power consumption.

The Company utilizes third party wafer fabrication foundries for advanced CMOS fabrication processes that are not available in-house. Currently all of Micrel's Kendin operations networking products are fabricated at third party foundry suppliers.

## Research and Development

The ability of the Company to compete will substantially depend on its ability to define, design, develop and introduce on a timely basis new products offering design or technology innovations. Research and development in the analog integrated circuit industry is characterized primarily by circuit design and product engineering that enables new functionality or improved performance. Research and development in the high-speed communications circuit industry is characterized primarily by innovative process technologies, novel design techniques and high-speed test methodology. The Company's research and development efforts are also directed at its process technologies and focus on cost reductions to existing manufacturing processes and the development of new process capabilities to manufacture new products and add new features to existing products. With respect to more established products, the Company's research and development efforts also include product redesign, shrinkage of device size and the reduction of mask steps in order to improve die yields per wafer and reduce per device costs.

The Company's analog design engineers principally focus on developing next generation standard products. The Company's new product development strategy emphasizes a broad line of standard products that are based on customer input and requests. The Company often develops new standard analog products with the cooperation of customers in order to better ensure market acceptance. The Company is currently developing products to expand its line of USB and PCMCIA switches, SMPS regulators, LDOs, MOSFET drivers and RF transmitters and receivers. New development areas in analog standard products include high speed, low power operational amplifiers, thermal management devices, hot swap power controllers, display drivers and voltage supervisors.

The Company's mixed-signal design engineers principally focus in two areas. The first is high speed, low noise media driving and clock/data recovery devices used in communication and advanced computer systems. New product development in this area includes high speed Current Mode Logic ("CML") for optical networking, high speed, precision timing devices for next generation 64-bit servers, fiber optic module components for 10Gbps (OC-192) optical networking, and communications transceivers for OC-48 and 10 Gigabit Ethernet applications. The second area of focus is Ethernet based local area network devices. New product development in this area includes three and five port switches for the SOHO market, switch products for internet protocol telephony, and switch products for business enterprises. The Company has also developed a media access controller for the gigabit Ethernet market and has begun development of transceiver and switch products for gigabit Ethernet applications.

In 2001, 2000, and 1999 the Company spent \$51.3 million \$42.2 million, and \$29.6 million, respectively, on research and development. The Company expects that it will continue to spend substantial funds on research and development activities. The Company is currently developing, and may in the future develop, certain types of standard products with which the Company has only limited experience. Certain of these new standard products will be targeted at emerging market segments in which the Company has not previously participated. Additionally, there can be no assurance that the Company will be able to identify new standard product opportunities successfully and develop and bring to market such new products or that the Company will be able to respond effectively to new technological changes or new product announcements by others.

## Patents and Intellectual Property Protection

The Company seeks patent protection for those inventions and technologies for which such protection is suitable and is likely to provide competitive advantage to the Company. The Company currently holds 63 United States patents on semiconductor devices and methods, with various expiration dates through 2020. The Company has applications for 39 United States patents pending. The Company holds 71 issued foreign patents and has applications for 18 foreign patents pending. There can be no assurance that any patent owned by the Company will not be invalidated, circumvented or challenged, that the rights granted thereunder will provide competitive advantages to the Company or that any of the Company's pending or future patent applications will issue or will be issued with the scope of the claims sought by the Company.

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. To the extent that the Company becomes involved in such intellectual property litigation, it could result in substantial costs and diversion of resources to the Company and could have a material adverse effect on the Company's financial condition, results of operations, or cash flows. See Item 3, Legal Proceedings, of this report on Form 10-K.

## Supply of Materials and Purchased Components

Micrel currently purchases certain components from a limited group of vendors. The packaging of the Company's products which is performed by, and certain of the raw materials included in such products are obtained from, a limited group of suppliers. Micrel's Kendin operations wafer supply is dependent upon a single large third party wafer foundry supplier. Although the Company seeks to reduce its dependence on its sole and limited source suppliers, disruption or termination of any of these sources could occur and such disruptions could have an adverse effect on the Company's financial condition, results of operations, or cash flows. The Company has rarely experienced delays in obtaining raw materials, which have adversely affected production.

## Manufacturing

The Company produces the majority of its wafers at the Company's wafer fabrication facilities located in San Jose and Santa Clara, California while a small percentage of wafer fabrication is subcontracted to outside foundries, including 100% of Micrel's Kendin operations wafer requirements. The San Jose facility includes a 57,000 square foot office and manufacturing facility containing a 24,800 square foot clean room facility, which provides production processes. The San Jose facility is classified as a Class 10 facility, which means that the facility achieves a clean room level of fewer than 10 foreign particles larger than 0.5 microns in size in each cubic foot of space. The facility uses six-inch wafer technology. The Company leases approximately 63,000 square feet of additional adjacent space in San Jose that is used as a testing facility.

In November 1998, in connection with its acquisition of Synergy, the Company acquired a 70,000 square foot office and manufacturing facility in Santa Clara, California containing a 9,000 square foot clean room facility, which provides production processes. The Santa Clara facility was upgraded from a Class 10 facility to Class 1 in 1999. The facility uses six-inch wafer technology. The Company is currently in the process of expanding these clean room facilities with an additional 5,000 square foot Class 1 clean room expected to be placed in use in 2002.

The fabrication of integrated circuits is a highly complex and precise process. Minute impurities, contaminants in the manufacturing environment, difficulties in the fabrication process, defects in the masks used to print circuits on a wafer, manufacturing equipment failure, wafer breakage or other factors can cause a substantial percentage of wafers to be rejected or numerous die on each wafer to be nonfunctional. There can be no assurance that the Company in general will be able to maintain acceptable manufacturing yields in the future.

Generally, each die on the Company's wafers is electrically tested for performance, and most of the wafers are subsequently sent to independent assembly and final test contract facilities in Malaysia and certain other Asian countries. At such facilities, the wafers are separated into individual circuits and packaged. The Company's reliance on independent assemblers may subject the Company to longer manufacturing cycle times. The Company from time to time has experienced competition with respect to these contractors from other manufacturers seeking assembly of circuits by independent contractors. Although the Company currently believes that alternate foreign assembly sources could be obtained without significant interruption, there can be no assurance that such alternate sources could be obtained quickly.

The Company manufactures the majority of its products at two wafer fabrication facilities. Given the nature of the Company's products, it would be difficult to arrange for independent manufacturing facilities to supply such products. Any prolonged inability to utilize the Company's manufacturing facilities as a result of fire, utility interruptions, natural disaster or otherwise, would have a material adverse effect on the Company's financial condition, results of operations or cash flows.

## **Competition**

The semiconductor industry is highly competitive and subject to rapid technological change. Significant competitive factors in the market for standard products include product features, performance, price, the timing of product introductions, the emergence of new technological standards, quality and customer support. The Company believes that it competes favorably in all these areas.

Because the standard products market for analog integrated circuits is diverse and highly fragmented, the Company encounters different competitors in its various market areas. The Company's principal analog circuit competitors include Linear Technology Corporation, Maxim Integrated Products, Inc., and National Semiconductor Corporation in one or more of its product areas. Other competitors include Texas Instruments, Motorola, On Semiconductor, and certain Japanese manufacturers. Each of these companies has substantially greater technical, financial and marketing resources and greater name recognition than the Company. Due to the increasing demands for analog circuits, the Company expects intensified competition from existing analog circuit suppliers and the entry of new competitors. The Company's principal competitors for products targeted at the high bandwidth communications market are On Semiconductor, Applied Micro Circuits Corp., Maximum Integrated Products, Inc., Vitesse Semiconductor Corporation and Conexant. The primary competitors for the Micrel's Kendin operations networking products are Broadcom Corporation, Marvell Technology Group Ltd. and a number of smaller Taiwanese companies.

With respect to the custom and foundry products business, significant competitive factors include product quality and reliability, established relationships between customers and suppliers, timely delivery of products and price. The Company believes that it competes favorably in all these areas.

## Backlog

At December 31, 2001, the Company's backlog was approximately \$20 million, all of which was scheduled to be shipped during the first six months of 2002. At December 31, 2000, the Company's backlog was approximately \$87 million. Orders in backlog are subject to cancellation or rescheduling by the customer, generally with a cancellation charge in the case of custom and foundry products. The Company's backlog consists of distributor and customer released orders required to be shipped within the next six months. Shipments to United States, Canadian and certain other international distributors are not recognized as revenue by the Company until the product is sold from the distributor stock and through to the end-users. Because of possible changes in product delivery schedules and cancellation of product orders and because an increasing percentage of the Company's sales are shipped in the same quarter that the orders are received, the Company's backlog at any particular date is not necessarily indicative of actual sales for any succeeding period.

## Environmental Matters

Federal, state and local regulations impose various environmental controls on the storage, handling, discharge and disposal of chemicals and gases used in the Company's manufacturing process. The Company believes that its activities conform to present environmental regulations. Increasing public attention has, however, been focused on the environmental impact of semiconductor operations. While the Company has not experienced any materially adverse effects on its operations from environmental regulations, there can be no assurance that changes in such regulations will not impose the need for additional capital equipment or other requirements or restrict the Company's ability to expand its operations. Any failure by the Company to restrict the discharge of hazardous substances adequately could subject the Company to future liabilities or could cause its manufacturing operations to be suspended.

## Employees

As of December 31, 2001, the Company had 895 full-time employees. The Company's employees are not represented by any collective bargaining agreements, and the Company has never experienced a work stoppage. The Company believes that its employee relations are good.

## ITEM 2. PROPERTIES

The Company's main executive, administrative, and technical offices are located in a 57,000 square foot facility in San Jose, California under a lease agreement that expires in April 2011. The majority of the Company's manufacturing operations are also located in San Jose, California in another 57,000 square foot facility and an adjacent 63,000 square foot facility under lease agreements that expire in May 2005. The Company fabricates the majority of its wafers at this location in a 24,800 square foot clean room facility, which provides all production processes. In addition to wafer fabrication, the Company also uses this location as a testing facility.

Additional administrative, technical, and wafer production facilities are maintained at a 70,000 square foot facility in Santa Clara, California which was acquired in connection with the Company's purchase of Synergy Semiconductor. This facility is under a lease agreement that expires in 2006. The Company fabricates mixed-signal and digital integrated circuit wafers at this location in a 9,000 square foot clean room facility, which provides all production processes.

Associated with the acquisition of Kendin, the Company also maintains additional administrative and technical offices at a 10,936 square foot facility located in Mountain View, California under a lease agreement that expires in March 2003.

Associated with the acquisition of ETC, the company maintains a 12,175 square foot design facility in Huxley, Iowa. This facility is owned by the Company.

The Company also leases small sales and technical facilities located in Medford, NJ; Coppell, TX; Seattle, WA; Irvine, CA; Raleigh, NC; Seoul, Korea; Taipei, Taiwan; Tokyo, Japan; Newbury, U.K.; Livingston, Scotland; and Frankfurt, Germany.

The Company believes that its existing and planned facilities are adequate for its current manufacturing needs. The Company believes that if it should need additional space, such space would be available at commercially reasonable terms.

### ITEM 3. LEGAL PROCEEDINGS

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. To the extent that the Company becomes involved in such intellectual property litigation, it could result in substantial costs and diversion of resources to the Company and could have a material adverse effect on the Company's financial condition or results of operations.

On July 2, 1999, National Semiconductor Corporation ("National"), a competitor of the Company, filed a complaint against the Company, entitled National Semiconductor Corporation v. Micrel Semiconductor, Inc. in the United States District Court, Northern District of California, in San Jose, California, alleging that the Company infringes five National Semiconductor patents. The complaint in the lawsuit seeks unspecified compensatory damages for infringement, and treble damages as well as permanent injunctive relief against further infringement of the National patents at issue. The Company intends to continue defending itself against these claims. The litigation is currently in the motion and discovery phase. An initial trial date has been set by the Court for September 16, 2002.

On February 26, 1999, the Lemelson Medical, Education & Research Foundation (the "Lemelson Partnership") filed a complaint which was served on the Company on June 15, 1999, entitled Lemelson Medical, Education & Research Foundation, Limited Partnership v. Lucent Technologies Inc., et al. in the United States District Court in Phoenix, Arizona, against eighty-eight defendants, including the Company, alleging infringement of Lemelson Foundation patents. The complaint in the lawsuit seeks unspecified compensatory damages, treble damages and attorneys' fees, as well as injunctive relief against further infringement of the Lemelson patents at issue. The Company intends to continue to defend itself against these claims. The case is currently in the discovery and motion phase and no trial date has been set.

On May 9, 1994, Linear Technology Corporation ("Linear" or "LTC"), a competitor of the Company, filed a complaint against the Company, entitled Linear Technology Corporation v. Micrel, Incorporated, in the United States District Court in San Jose, California, alleging patent and copyright infringement and unfair competition. All claims, except the patent infringement claim, have been settled or dismissed. In this lawsuit, Linear claims that two of the Company's products infringed one of Linear's patents. The complaint in the lawsuit seeks unspecified compensatory damages, treble damages and attorneys' fees as well as preliminary and permanent injunctive relief against infringement of the Linear patent at issue. On August 20, 1999, the United States District Court in San Jose adjudicated in favor of the Company in this patent infringement suit brought by the plaintiff. The plaintiff alleged in the suit that the Company had infringed upon U.S. Patent No. 4,755,741, which covers design techniques used to increase the efficiency of

switching regulators. The United States District Court in San Jose found the patent to be invalid under the "on sale bar" defense as the plaintiff had placed integrated circuits containing the alleged invention on sale more than a year before filing its patent application. The United States District Court in San Jose dismissed the plaintiff's complaint on the merits of the case and awarded the Company its legal costs. A notice of appeal of the Judgment was filed by Linear with the United States Court of Appeal for the Federal Circuit ("CAFC") on September 17, 1999. After briefing and oral argument by both companies, on December 28, 2001 the CAFC reversed the District Court's judgment of invalidity and remanded the case to the District Court. The Company intends to continue to vigorously defend itself against the claims set forth in the lawsuit.

On June 16, 1999, Paul Boon ("Boon" or "plaintiff"), an ex-employee of the Company, filed a complaint in the Superior Court of California entitled Paul Boon v. Micrel Incorporated, dba Micrel Semiconductor, alleging breach of employment contract, discrimination based upon age, and wrongful termination in violation of public policy. On October 12, 2000, Boon filed an amended complaint alleging breach of an implied covenant of good faith and fair dealing, and breach of written agreement, in addition to the original causes of action. On February 23, 2001, a jury decided that the Company had breached an employment contract with plaintiff and awarded plaintiff \$1.3 million. On April 13, 2001, the Company filed a motion for judgement notwithstanding the verdict or alternatively, a motion for new trial. On May 18, 2001, the Court granted the Company's motion, issuing an order that vacated and set aside the judgement in favor of Boon, and ordered a new trial on all issues. A new trial date was set for July 16, 2001. Prior to the beginning of trial, the parties settled the matter. On July 27, 2001, the case was dismissed by the Court.

The Company believes that the ultimate outcome of the legal actions discussed above will not result in a material adverse effect on the Company's financial condition, results of operation or cash flows. However, litigation is subject to inherent uncertainties, and no assurance can be given that the Company will prevail in these lawsuits. Accordingly, the pending lawsuits as well as potential future litigation with other companies, could result in substantial costs and diversion of resources and could have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Certain additional claims and lawsuits have arisen against the Company in its normal course of business. The Company believes that these claims and lawsuits will not have a material adverse effect on the Company's financial condition, results of operation or cash flows.

In the event of an adverse ruling in any intellectual property litigation that now exists or might arise in the future, the Company might be required to discontinue the use of certain processes, cease the manufacture, use and sale of infringing products, expend significant resources to develop non-infringing technology or obtain licenses to the infringing technology. There can be no assurance, however, that under such circumstances, a license would be available under reasonable terms or at all. In the event of a successful claim against the Company and the Company's failure to develop or license substitute technology on commercially reasonable terms, the Company's financial condition, results of operations, or cash flows could be adversely affected.

#### ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

In the fourth quarter of 2001, no matters were submitted to a vote of security holders.

## PART II

### ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY AND RELATED SHAREHOLDER MATTERS

The Company's Common Stock is listed on the Nasdaq Stock Market under the Symbol "MCRL". The range of daily closing sales prices per share for the Company's Common Stock from January 1, 2000 to December 31, 2001 was:

<b>Year Ended December 31, 2001:</b>	<b><u>High</u></b>	<b><u>Low</u></b>
Fourth quarter	\$ 32.81	\$ 18.15
Third quarter	\$ 36.10	\$ 19.29
Second quarter	\$ 40.47	\$ 23.50
First quarter	\$ 48.94	\$ 26.94

<b>Year Ended December 31, 2000:</b>	<b><u>High</u></b>	<b><u>Low</u></b>
Fourth quarter	\$ 67.00	\$ 28.75
Third quarter	\$ 76.44	\$ 41.44
Second quarter	\$ 53.81	\$ 29.78
First quarter	\$ 62.06	\$ 27.19

The reported last sale price of the Company's Common Stock on the Nasdaq Stock Market on December 31, 2001 was \$24.30. The approximate number of holders of record of the shares of the Company's Common Stock was 200 as of March 15, 2002. This number does not include shareholders whose shares are held in trust by other entities. The actual number of shareholders is greater than this number of holders of record. The Company estimates that the number of beneficial shareholders of the shares of the Company's Common Stock as of March 15, 2002 was approximately 10,000.

The Company has authorized Common Stock, no par value and Preferred Stock, no par value. The Company has not issued any Preferred Stock.

The Company has not paid any cash dividends on its capital stock. The Company currently intends to retain its earnings to fund the development and growth of its business and, therefore, does not anticipate paying any cash dividends in the foreseeable future. In addition, the Company's existing credit facilities prohibit the payment of cash or stock dividends on the Company's capital stock without the lender's prior written consent. See Item 7 - "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" and Note 5 of Notes to Consolidated Financial Statements contained in Item 8.

**Unregistered Sales of Securities.** In April 2000, in connection with the acquisition of ETC, the Company issued 152,234 shares of Common Stock in exchange for the outstanding shares of capital stock of ETC. The issuance was exempt from registration pursuant to Section 4(2) of the Securities Act of 1933, as amended. In May 2001, in connection with the acquisition of Kendin, the Company issued 6,138,635 shares of Common Stock in exchange for the outstanding shares of capital stock of Kendin. The issuance was exempt from registration pursuant to Section 4(2) of the Securities Act of 1933, as amended.

## ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes thereto.

	Years Ended December 31,				
	2001	2000	1999	1998	1997
	(in thousands, except per share amounts)				
<b>Income Statement Data:</b>					
Net revenues	\$ 217,808	\$ 346,335	\$ 200,016	\$ 144,935	\$ 105,170
Cost of revenues*	<u>126,242</u>	<u>149,083</u>	<u>89,572</u>	<u>72,953</u>	<u>50,284</u>
Gross profit	<u>91,566</u>	<u>197,252</u>	<u>110,444</u>	<u>71,982</u>	<u>54,886</u>
Operating expenses:					
Research and development	51,306	42,201	29,563	21,373	16,032
Selling, general and administrative	32,862	45,319	29,399	22,562	17,763
Amortization of deferred stock compensation*	9,572	6,060	2,109	753	197
Non-recurring acquisition expenses*	8,994	—	—	—	—
Purchased in-process technology	—	—	603	3,737	—
Total operating expenses	<u>102,634</u>	<u>93,580</u>	<u>61,674</u>	<u>48,425</u>	<u>33,992</u>
Income (loss) from operations	(11,068)	103,672	48,770	23,557	20,894
Other income, net	<u>6,086</u>	<u>4,739</u>	<u>692</u>	<u>1,138</u>	<u>974</u>
Income (loss) before income taxes	(4,982)	108,411	49,462	24,695	21,868
Provision (benefit) for income taxes	<u>(5,534)</u>	<u>35,104</u>	<u>16,019</u>	<u>9,304</u>	<u>7,068</u>
Net income	<u>\$ 552</u>	<u>\$ 73,307</u>	<u>\$ 33,443</u>	<u>\$ 15,391</u>	<u>\$ 14,800</u>
Net income per share:					
Basic	<u>\$ 0.01</u>	<u>\$ 0.82</u>	<u>\$ 0.39</u>	<u>\$ 0.19</u>	<u>\$ 0.19</u>
Diluted	<u>\$ 0.01</u>	<u>\$ 0.75</u>	<u>\$ 0.36</u>	<u>\$ 0.18</u>	<u>\$ 0.18</u>
Shares used in computing per share amounts:					
Basic	<u>91,888</u>	<u>89,242</u>	<u>85,762</u>	<u>82,258</u>	<u>77,640</u>
Diluted	<u>98,092</u>	<u>98,186</u>	<u>92,906</u>	<u>85,878</u>	<u>84,527</u>
* Amortization of deferred stock compensation related to:					
Cost of revenues	<u>\$ 3,141</u>	<u>\$ 2,202</u>	<u>\$ 926</u>	<u>\$ 275</u>	<u>\$ 64</u>
Operating expenses:					
Research and development	\$ 5,047	\$ 3,347	\$ 1,444	\$ 467	\$ 68
Selling, general and administrative	<u>4,525</u>	<u>2,713</u>	<u>665</u>	<u>286</u>	<u>129</u>
Amortization of deferred stock compensation	9,572	6,060	2,109	753	197
Non-recurring acquisition expenses	<u>2,007</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
Total operating expenses	<u>\$ 11,579</u>	<u>\$ 6,060</u>	<u>\$ 2,109</u>	<u>\$ 753</u>	<u>\$ 197</u>

	December 31,				
	2001	2000	1999	1998	1997
	(in thousands)				
<b>Balance Sheet Data:</b>					
Working capital	\$ 196,940	\$ 172,768	\$ 91,629	\$ 55,206	\$ 40,939
Total assets	354,813	359,748	214,171	152,207	89,432
Long-term debt	1,299	5,327	8,854	14,007	552
Total shareholders' equity	313,330	281,835	157,258	100,693	70,526

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

### Recent Developments

On January 28, 2002, Micrel announced that it would restate its consolidated financial statements for the years ended December 31, 1998, 1999, and 2000, and the quarters ended March 31, 2001, June 30, 2001, and September 30, 2001. This restatement relates to the Company's past method of setting the exercise price of certain employee stock options which results in stock compensation expenses and related payroll and income tax effects that had not been recorded in previously issued financial statements. It should be noted that Micrel sought outside professional advice prior to implementation of the option grant method that resulted in the unintentional consequence of stock compensation charges. Information regarding the effect of the restatement on the Company's financial position and results of operations is provided in Note 2 of Notes to Consolidated Financial Statements included in the Company's Annual Report on Form 10-K/A for the year ended December 31, 2000, the Quarterly Reports on Form 10-Q/A for the quarters ended March 31, June 30 and September 30, 2001 and the Current Report on Form 8-K/A filed on April 1, 2002.

### Overview

Micrel designs, develops, manufactures and markets a range of high performance standard analog, high-speed mixed-signal and digital integrated circuits. These circuits are used in a wide variety of electronics products, including those in the high bandwidth communications, computer, telecommunications and industrial markets. In addition to standard products, the Company manufactures custom analog and mixed-signal circuits and provides wafer foundry services.

On May 30, 2001, the Company completed the acquisition of Kendin, a privately held fabless semiconductor company that designs, develops and markets high performance integrated circuits for the communications and networking markets. Under the terms of the merger agreement, the Company issued 6,138,635 shares of Common Stock and options to purchase 645,097 shares of Common Stock in exchange for all outstanding Kendin securities and options to purchase Kendin securities. The transaction has been accounted for as a pooling of interests, and accordingly all financial statements presented have been restated to include the Kendin results. Associated with the acquisition the Company recorded \$8.9 million in non-recurring acquisition expenses in the quarter ended June 30, 2001. The non-recurring expenses consisted of \$6.9 million in transaction costs and \$2.0 million in stock compensation charges.

The Company derives a substantial portion of its net revenues from standard products. For 2001, 2000, and 1999 the Company's standard products sales accounted for 84%, 79%, and 78%, respectively, of the Company's net revenues. The Company believes that a substantial portion of its net revenues in the future will depend upon standard products sales, although such sales as a proportion of net revenues may vary as the Company adjusts product output levels to correspond with varying economic conditions and demand levels in the markets which it serves. The standard products business is characterized by short-term orders and shipment schedules, and customer orders typically can be canceled or rescheduled without significant penalty to the customer. Since most standard products backlog is cancelable without significant penalty, the Company typically plans its production and inventory levels based on internal forecasts of customer demand, which is highly unpredictable and can fluctuate substantially. In addition, the Company is limited in its ability to reduce costs quickly in response to any revenue shortfalls.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

The Company may experience significant fluctuations in its results of operations. Factors that affect the Company's results of operations include the volume and timing of orders received, changes in the mix of products sold, the utilization level of manufacturing capacity, competitive pricing pressures, the successful development of new products, and the Company's ability to ramp up manufacturing capacity to meet demand. These and other factors are described in further detail later in this discussion. As a result of the foregoing or other factors, there can be no assurance that the Company will not experience material fluctuations in future operating results on a quarterly or annual basis, which could materially and adversely affect the Company's business, financial condition, results of operations or cash flows.

### Critical Accounting Policies

The financial statements included in this Form 10-K and discussed within this Management's Discussion and Analysis of Financial Condition and Results of Operations have been prepared in accordance with accounting principles generally accepted in the United States. Preparation of these financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgements. Management bases its estimates and judgements on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. For a detailed discussion of the Company's significant accounting policies, see Note 1 of Notes to Consolidated Financial Statements in Item 14 of this Form 10-K. The Company considers certain accounting policies related to revenue recognition, inventory valuation, income taxes, and litigation to be critical to the fair presentation of its financial statements.

*Revenue Recognition.* The Company defers recognition of revenue derived from sales to domestic, Canadian, and certain other international distributors until such distributors resell the Company's products to their customers. Sales to stocking representatives and O.E.M. customers are recognized upon shipment. The Company estimates returns and warranty costs and provides an allowance as revenue is recognized. Actual future returns could exceed the returns allowance established.

*Inventory Valuation.* The Company has taken adjustments to write-down the cost of obsolete and excess inventory to the estimated market value based on historical and forecasted demand for its products. If actual future demand for the Company's products is less than currently forecasted, additional inventory adjustments may be required.

*Income Taxes.* As of December 31, 2001, the Company has net deferred tax assets of \$24.5 million, resulting from temporary timing differences between book and tax valuation of assets and liabilities. The Company believes that future taxable income levels will be sufficient to realize the tax benefits of these deferred tax assets.

*Litigation.* The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. The Company is currently involved in such intellectual property litigation. See Item 3, Legal Proceedings, of this report on Form 10-K.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)**

**Results of Operations**

The following table sets forth certain operating data as a percentage of total net revenues for the periods indicated.

	<u>Years Ended</u> <u>December 31,</u>	
	<u>2001</u>	<u>2000</u>
Net revenues.....	100.0%	100.0%
Cost of revenues.....	<u>58.0</u>	<u>43.0</u>
Gross profit.....	<u>42.0</u>	<u>57.0</u>
Operating expenses:		
Research and development.....	23.6	12.2
Selling, general and administrative.....	15.1	13.1
Amortization of deferred stock compensation.....	4.4	1.8
Non-recurring acquisition expenses.....	<u>4.0</u>	<u>—</u>
Total operating expenses.....	<u>47.1</u>	<u>27.1</u>
Income (loss) from operations.....	(5.1)	29.9
Other income, net.....	<u>2.8</u>	<u>1.4</u>
Income (loss) before income taxes.....	(2.3)	31.3
Provision (benefit) for income taxes.....	<u>(2.6)</u>	<u>10.1</u>
Net income.....	<u>0.3%</u>	<u>21.2%</u>

*Net Revenues.* Net revenues decreased 37% to \$217.8 million for the year ended December 31, 2001 from \$346.3 million in 2000 due primarily to lower standard product revenues and lower custom and foundry revenues. Standard product revenues decreased to \$183.1 million, which represented 84% of net revenues for the year ended December 31, 2001, compared to \$275.3 million and 79% of net revenues for 2000. This decrease resulted from decreased unit shipments across all significant product lines and end markets except Ethernet communications, combined with decreases in average selling prices. Sales of standard products were led by low dropout regulators, Ethernet communications products, high bandwidth communications products and computer peripheral products. Such products were sold to manufacturers in the computing, Ethernet communications, high bandwidth communications, telecommunications, and industrial markets. Custom and foundry revenues decreased to \$34.7 million, which represented 16% of net revenues for the year ended December 31, 2001, compared to \$71.0 million and 21% of net revenues for 2000. Such decreases were due primarily to decreased sales of custom high bandwidth communications products and to a lesser extent decreased foundry sales.

The supply of semiconductors can quickly and unexpectedly match or exceed demand because customer end demand can change very quickly and semiconductor suppliers can rapidly increase production output. This can lead to a sudden oversupply situation and a subsequent reduction in order rates and revenues as customers adjust their inventories to true demand rates. Customers continuously adjust their inventories resulting in frequent changes in demand for our products.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

The semiconductor industry experienced such a change in the supply and demand situation during 2000 and 2001. In the fourth quarter of 2000 and during 2001, customers in the high speed communications end market, and the contract manufacturing firms that serve this market, adjusted their demand on component suppliers as they coped with high levels of inventory and sharply reduced demand for their end products. In addition, the slowing of global economic growth during 2001 led to lower order rates from customers serving the telecommunications, industrial and computer end markets as they adjusted to lower demand for their products. The decline in new order rates resulted in a sequential decline in the Company's revenues for the first three quarters of 2001. The rapid build-up of semiconductor inventories in global sales channels caused lead times for components to fall precipitously during 2001. The perceived overabundance of semiconductors combined with uncertain demand for their end products led the Company's customers to move to a just-in-time order pattern as they worked to reduce inventories. Due to the combination of excess supply, reduced demand and lower lead times, new orders rates declined and a significant amount of previously placed orders were cancelled during the first half of 2001. The corresponding reduction in backlog has left the Company, like most semiconductor suppliers, with extremely limited visibility into future customer demand. Customers appear to be placing orders on an "as needed" basis due to short supplier lead times combined with the uncertain macroeconomic outlook. The low backlog and uncertainty of customer demand significantly limits our ability to predict future levels of sales and profitability.

For the year ended December 31, 2000, net revenues increased 73% to \$346.3 million from \$200.0 million in 1999 due primarily to higher standard product revenues and, to a lesser extent, higher custom and foundry revenues. Standard product revenues increased to \$275.3 million, which represented 79% of net revenues for the year ended December 31, 2000, compared to \$156.0 million and 78% of net revenues for 1999. Such increases resulted from increased unit shipments combined with an increase in average selling prices. Sales of standard products were led by the increased sales of low dropout regulators, high bandwidth communications products and computer peripheral products. Such products were sold to manufacturers in the high bandwidth communications, telecommunications, and industrial markets. Custom and foundry revenues increased to \$71.0 million, which represented 21% of net revenues for the year ended December 31, 2000, compared to \$44.0 million and 22% of net revenues for 1999. Such increases were due primarily to increased sales of custom high bandwidth communications products and to a lesser extent increased foundry sales.

International sales represented 61%, 42%, and 48% of net revenues for the years ended December 31, 2001, 2000 and 1999, respectively. On a dollar basis, international sales decreased 9% to \$132.6 million for the year ended December 31, 2001 from \$145.9 million for the comparable period in 2000. The dollar decrease in international sales resulted from decreased unit shipments to manufacturers of personal computers and communications products primarily in Europe and to a lesser extent Asia.

The Company's international sales are denominated in U.S. currency. Consequently, changes in exchange rates that strengthen the U.S. dollar could increase the price in local currencies of the Company's products in foreign markets and make the Company's products relatively more expensive than competitors' products that are denominated in local currencies, leading to a reduction in sales or profitability in those foreign markets. The Company has not taken any protective measures against exchange rate fluctuations, such as purchasing hedging instruments with respect to such fluctuations.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

*Gross Profit.* Gross profit is affected by a variety of factors including the volume of product sales, product mix, manufacturing utilization, product yields and average selling prices. The Company's gross margin decreased to 42% for the year ended December 31, 2001 from 57% for the year ended December 31, 2000. The decrease in gross margin primarily reflected decreased capacity utilization, a reduced mix of higher margin standard products and custom products and a decrease in average selling prices compared to the same periods in 2000.

For the year ended December 31, 2000, the Company's gross margin increased to 57% from 55% for the year ended December 31, 1999. The improvement in gross margin reflected higher average selling prices, an increased mix of higher gross margin products and increases in manufacturing efficiency due to greater capacity utilization.

Manufacturing yields, which affect gross margin, may from time to time decline because the fabrication of integrated circuits is a highly complex and precise process. Factors such as minute impurities and difficulties in the fabrication process can cause a substantial percentage of wafers to be rejected or numerous die on each wafer to be nonfunctional. There can be no assurance that the Company in general will be able to maintain acceptable manufacturing yields in the future.

*Research and Development Expenses.* Research and development expenses include costs associated with the development of new processes and the definition, design and development of new products. The Company also expenses prototype wafers and new production mask sets related to new products as research and development costs until products based on new designs are fully characterized by the Company and are demonstrated to support published data sheets and satisfy reliability tests.

As a percentage of net revenues, research and development expenses represented 24% and 12% for the years ended December 31, 2001 and 2000. On a dollar basis, research and development expenses increased \$9.1 million or 22% to \$51.3 million for the year ended December 31, 2001 from \$42.2 million in 2000. The dollar increases were primarily due to increased engineering staffing costs and increased prototype fabrication costs and new process development costs. The Company believes that the development and introduction of new products is critical to its future success and expects to continue its investment in research and development activities in the future.

For the years ended December 31, 2000 and 1999, research and development expenses represented 12% and 15% of net revenues, respectively. On a dollar basis, research and development expenses increased \$12.6 million or 43% to \$42.2 million for the year ended December 31, 2000 from \$29.6 million in 1999. The dollar increases were primarily due to increased engineering staffing costs and increased prototype material costs.

*Selling, General and Administrative Expenses.* As a percentage of net revenues, selling, general and administrative expenses represented 15% and 13% for the years ended December 31, 2001 and 2000, respectively. On a dollar basis, selling, general and administrative expenses decreased \$12.5 million or 27% to \$32.9 million for the year ended December 31, 2001 from \$45.3 million for the comparable period in 2000. The dollar decreases were principally attributable to decreased sales commissions and decreased profit sharing accruals.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

For the years ended December 31, 2000 and 1999, selling, general and administrative expenses represented 13% and 15% of net revenues, respectively. On a dollar basis, selling, general and administrative expenses increased \$15.9 million or 54% to \$45.3 million for the year ended December 31, 2000 from \$29.4 million for the comparable period in 1999. The dollar increases were principally attributable to increased commissions and staffing costs associated with the growth of the Company's revenues, increased legal costs, and increased profit sharing accruals

*Amortization of deferred stock compensation.* The Company accounts for stock-based awards to employees using the intrinsic value method in accordance with Accounting Principles Board Opinion ("APB") No. 25, "Accounting for Stock Issued to Employees". The Company's practices in effect through December 2001 related to employee stock option pricing resulted in stock compensation expense under APB 25. For the year ended December 31, 2001 total amortization of deferred stock compensation was \$14.7 million of which \$3.1 million was included in cost of revenues, \$9.6 million was included in amortization of deferred stock compensation and \$2.0 million was included in non-recurring acquisition costs. For the year ended December 31, 2000 total amortization of deferred stock compensation was \$8.3 million of which \$2.2 million was included in cost of revenues and \$6.1 million was included in amortization of deferred stock compensation. For the year ended December 31, 1999 total amortization of deferred stock compensation was \$3.0 million of which \$1.0 million was included in cost of revenues and \$2.1 million was included in amortization of deferred stock compensation.

*Non-recurring acquisition expenses.* Non-recurring acquisition expenses reflect \$6.9 million in direct transaction costs and \$2.0 million in stock compensation costs related to the acquisition of Kendin.

*Purchased In-Process Technology.* On December 15, 1999, the Company acquired all the outstanding capital stock of Altos for a cash purchase price of \$1.8 million. The transaction was accounted for as a purchase. Approximately \$1.7 million of the total purchase cost was allocated to intangible assets. Of that amount, \$603,000 was allocated to purchased in-process technology, which has not reached technological feasibility and has no alternative future use, for which the Company recorded charges in the year ended December 31, 1999.

*Other Income, Net.* Other income, net reflects interest income from investments in short-term investment grade securities and other non operating income, offset by interest expense incurred on term notes. Other income, net increased by \$1.3 million to \$6.1 million in 2001 from \$4.7 million in 2000. This increase were primarily due to the receipt of insurance proceeds of \$1.1 million in 2001, combined with decreased interest expense due to a reduction in the average balances of term notes.

For the year ended December 31, 2000, other income, net increased by \$4.0 million to \$4.7 million from \$692,000 in 1999. This increase was primarily due to an increase in average cash and investment balances combined with increased rate of returns on such balances.

*Provision (benefit) for Income Taxes.* For the year ended December 31, 2001 the benefit for income taxes was \$5.5 million or 111% of loss before taxes. The 2001 benefit for income taxes differs from taxes computed at the federal statutory rate primarily due to the effect of federal and state research and development credits, and state manufacturing credits. For each of the years ended December 31, 2000 and 1999 the provision for taxes on income was 32% of income before taxes. The 2000 and 1999 income tax provisions differ from taxes computed at the federal statutory rate due to the effect of state taxes offset by the benefit from the foreign sales corporation, federal and state research and development credits, and state manufacturing credits.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)**

**Liquidity and Capital Resources**

Since inception, the Company's principal sources of funding have been its cash from operations, bank borrowings and sales of common stock. Principal sources of liquidity at December 31, 2001 consisted of cash and short-term investments of \$133 million and bank borrowing arrangements. Borrowing agreements consisted of (i) \$5 million under a revolving line of credit and (ii) \$10 million under a non-revolving line of credit. There were no borrowings under these agreements at December 31, 2001. The two lines of credit are covered by the same loan and security agreement. The revolving line of credit portion of the agreement expires on June 30, 2002 subject to automatic renewal on a month-to-month basis thereafter unless terminated by either party upon 30 days notice. The non-revolving line of credit portion of the agreement expires on June 30, 2002. Borrowings under the revolving line of credit bear interest rates of, at the Company's election, the prime rate (4.75% at December 31, 2001), or the bank's revolving offshore rate, which approximates LIBOR (1.88% at December 31, 2001) plus 2.0%. Borrowings under the non-revolving line of credit bear interest rates of, at the Company's election, the prime rate, the bank's non-revolving offshore rate, which approximates LIBOR plus 2.13%, a fixed rate based on the four-year U.S. Treasury Bill rate (4.21% at December 31, 2001) plus 2.75% or an annual adjustable rate based on the one-year U.S. Treasury Bill rate (2.09% at December 31, 2001) plus 2.75%. The agreement contains certain restrictive covenants that include a restriction on the declaration and payment of dividends without the lender's consent. The Company was in compliance with all such covenants at December 31, 2001.

The non-revolving bank line of credit that is covered by the loan agreement described above, can be used to fund purchases of capital equipment whereby the Company may borrow up to 100% of the acquisition cost. Amounts borrowed under this credit line are automatically converted to four-year installment notes. All equipment notes are collateralized by the value of manufacturing equipment underlying the specified amounts advanced under the non-revolving bank line of credit.

As of December 31, 2001, the Company had \$4.9 million outstanding under term notes (see Note 5 of Notes to Consolidated Financial Statements contained in Item 14).

The Company's working capital increased by \$24.1 million to \$196.9 million as of December 31, 2001 from \$172.8 million as of December 31, 2000. The increase was primarily attributable to increases in cash, cash equivalents and short-term investments of \$10.4 million, prepaid expenses and other of \$7.2 million and inventories of \$6.4 million combined with decreases in income taxes payable of 11.8 million, accounts payable of \$8.6 million, deferred income of \$4.4 million and accrued compensation of \$3.0 million, which were partially offset by a decrease in accounts receivable of \$34.6 million.

The Company generated \$43.6 million in cash flows from operating activities for the year ended December 31, 2001 compared to \$115.4 million for the year ended December 31, 2000. This decrease in cash flows provided by operating activities was primarily due to decreased net income adjusted for non-cash activities. For the year ended December 31, 2001 the Company's cash flows provided by operating activities were primarily attributable to net income of \$45.3 million after adding back non-cash activities and a decrease in accounts receivable of \$34.6 which were partially offset by increases in prepaid expenses and other of \$7.2 million and inventories of \$6.4 million combined with decreases in accounts payable of \$8.6 million, deferred income of \$4.4 million and accrued compensation of \$3.0 million.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

The Company's investing activities during the year ended December 31, 2001 used cash of \$1.9 million as compared to \$67.8 million of cash used in investing activities during the year ended December 31, 2000. This decrease in cash used for investing activities was primarily due to a reduction in purchases of equipment and leasehold improvements combined with an increase in proceeds from the net sale of short-term investments. Cash used for investing activities during the year ended December 31, 2001 resulted primarily from net purchases of \$35.7 million of equipment and leasehold improvements that were primarily for wafer fab and testing equipment, which was partially offset by net sales of short-term investments of \$33.9 million.

The Company's financing activities during the year ended December 31, 2001 provided cash of \$2.5 million as compared to cash provided of \$18.5 million during the year ended December 31, 2000. Cash provided by financing activities during the year ended December 31, 2001 was the result of \$15.6 million in proceeds from the issuance of Common Stock through the exercise of employee stock options and purchases through the employee stock purchase plan, which was partially offset by repurchases of Common Stock of \$7.3 million and \$5.8 million in repayments of long-term debt.

The Company currently intends to purchase approximately \$10 million to \$20 million in capital equipment during the next twelve months primarily for the purchase of additional wafer and test manufacturing equipment and leasehold improvements. The Company's Board of Directors has approved the repurchase of up to \$20 million of Common Stock during 2002. The Company expects that its cash requirements through 2002 will be met by its cash from operations, existing cash balances and short-term investments, and its credit facilities.

### Factors That May Affect Operating Results

*The statements contained in this Report on Form 10-K that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including statements regarding the Company's expectations, hopes, intentions or strategies regarding the future. Forward-looking statements include: statements regarding future products or product development; statements regarding future research and development spending and the Company's product development strategy; statements regarding the levels of international sales; statements regarding future expansion or utilization of manufacturing capacity; statements regarding future expenditures; and statements regarding current or future acquisitions. All forward-looking statements included in this document are based on information available to the Company on the date hereof, and the Company assumes no obligation to update any such forward-looking statements. It is important to note that our actual results could differ materially from those in such forward-looking statements. Some of the factors that could cause actual results to differ materially are set forth in Item 1 ("Business"), Item 3 ("Legal Proceedings"), Item 7 ("Management's Discussion and Analysis of Financial Condition and Results of Operations") and in the additional factors set forth below.*

**The Company is exposed to risks because of the recent slowdown in the global economy.**

Recently, the global economy has been experiencing a slowdown due to many factors, including decreased consumer confidence and concerns about inflation, and reduced corporate profits and capital spending. The technology related end markets that the Company serves such as the high-speed communications, computing and telecommunications markets have been greatly effected by this economic slowdown. As a result of these unfavorable economic conditions, the Company has experienced lower

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

levels of new customer order rates and lower revenue levels. If these weak economic conditions in the global economy continue or worsen, or if a wider global economic recession materializes, the Company's business, financial condition and results of operations may be materially and adversely affected.

The Company's operating results may fluctuate because of a number of factors, many of which are beyond the its control.

If the Company's operating results are below the expectations of public market analysts or investors, then the market price of its Common Stock could decline. Some of the factors that affect the Company's quarterly and annual results, but which are difficult for the Company to control or predict are:

- the volume and timing of orders received
- changes in the mix of products sold
- market acceptance of the Company's products and its customers' products
- competitive pricing pressures
- cyclical semiconductor industry conditions
- dependence on third party suppliers
- the ability to introduce new products on a timely basis
- the timing of new product announcements and introductions by the Company or its competitors
- the timing and extent of research and development expenses
- fluctuations in manufacturing yields
- the ability to hire and retain key technical and management personnel
- access to advanced process technologies
- the timing and extent of process development costs
- the current California energy crisis

Customer demand for the Company's products is volatile and difficult to predict

The Company's customers continuously adjust their inventories in response to changes in end market demand for their products and the availability of semiconductor components. This results in frequent changes in demand for the Company's products. The volatility of customer demand limits the Company's ability to predict future levels of sales and profitability. The supply of semiconductors can quickly and unexpectedly match or exceed demand because customer end demand can change very quickly. Also, semiconductor suppliers can rapidly increase production output. This can lead to a sudden oversupply situation and a subsequent reduction in order rates and revenues as customers adjust their inventories to true demand rates.

The current weakness in the global economy has caused the end markets that the Company's customers serve to grow less rapidly, or in some cases, contract. The resulting uncertainty of demand has caused most of the Company's customers to err on the side of caution until they see signs of order strength for their end products. In addition, many customers are continuing to deplete excess inventories, particularly contract manufacturers and high bandwidth communication OEM's. Semiconductors are perceived to be readily available and supplier lead times are at or near historic lows. In this environment customers are not making large purchase commitments, only ordering small quantities to fill known short-term requirements, greatly reducing our visibility into customer demand. As a result, the Company's revenues are highly dependent upon turns fill orders (orders booked and shipped in the same quarter). The reduced level of order backlog coupled with the short term nature of customer demand makes it extremely difficult to predict near term revenues and profits.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

The cyclical nature of the semiconductor industry can result in downturns that can harm the Company's operating results.

The semiconductor industry has historically been cyclical and periodically subject to significant economic downturns. These downturns have been characterized by diminished product demand, accelerated erosion of selling prices and over capacity levels as well as rapidly changing technology and evolving industry standards. Management believes that the semiconductor industry is currently in such a downturn and that the decrease in our net revenues from \$346.3 million for the year ended December 31, 2000, to \$217.8 million for the year ended December 31, 2001 is primarily due to this downturn. The Company's net revenues may continue to be adversely affected if this downturn continues. In general, the Company may experience future substantial period-to-period fluctuations in its business and operating results due to general semiconductor industry conditions, overall economic conditions or other factors.

The Company's gross margin is dependent upon a number of factors, including the level of capacity utilization.

Semiconductor manufacturing is a capital-intensive business resulting in high fixed costs. If the Company is unable to utilize its installed wafer fabrication or test capacity at a high level, the costs associated with these facilities and equipment is not fully absorbed, resulting in higher average unit costs and lower sales margins. The decline in new customer order rates in 2001 has resulted in reduced capacity utilization of the Company's factories as it has attempted to match production with anticipated customer demand. The Company's gross margins have declined as a result of this reduced utilization of production capacity. Gross margins may deteriorate further should production activity be curtailed in response to lower customer demand in the future.

The semiconductor industry is highly competitive.

The semiconductor industry is highly competitive and subject to rapid technological change, price-erosion and increased international competition. Significant competitive factors include:

- product features
- performance
- price
- timing of product introductions
- emergence of new computer and communications standards
- quality and customer support

In times of weak economic conditions, such as the semiconductor industry is now experiencing and due to uncertain customer demand and under-utilization of semiconductor fabrication capacity, price competition becomes more prevalent. This can have the effect of reducing revenue levels and gross margins.

Because the standard products market for integrated circuits is diverse and highly fragmented, the Company encounters different competitors in various market areas. Most of these competitors have substantially greater technical, financial and marketing resources and greater name recognition than the Company has. Increased competition could adversely affect the Company's financial condition or results of operations. There can be no assurance that the Company will be able to compete successfully in either the standard products or custom and foundry products business in the future or that competitive pressures will not adversely affect the Company's financial condition, results of operations, or cash flows.

## MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (CONTINUED)

Dependence on third-party manufacturing and supply relationships increases the risk that the Company will not have an adequate supply of products to meet demand or that its cost of materials will be higher than expected.

The Company faces many risks associated with its dependence upon third parties that manufacture, assemble or package certain of our products. These risks include:

- reduced control over delivery schedules and quality
- risks of inadequate manufacturing yields and excessive costs
- the potential lack of adequate capacity during periods of excess demand
- difficulties selecting and integrating new subcontractors
- limited warranties on wafers or products supplied to us
- potential increases in prices
- potential misappropriation of the Company's intellectual property

Any of these risks may lead to increased costs or delay delivery of the Company's products, which would harm its profitability and customer relationships.

Additionally, the Company's wafer and product requirements typically represent a relatively small portion of the total production of the third-party foundries and outside assembly, testing and packaging contractors. As a result, Micrel is subject to the risk that a foundry will provide delivery or capacity priority to other larger customers at the expense of Micrel, resulting in an inadequate supply to meet customer demand or higher costs to obtain the necessary product supply. Also, there is a risk that third party manufacturer will cease production on an older or lower volume process that it uses to produce the Company's products. The Company cannot be certain that its outside manufacturers will continue to devote resources to the production of its products or continue to advance the process design technologies on which the manufacturing of its products are based. Each of these events could increase the Company's costs and harm its ability to deliver our products on time.

The Company's product offering is concentrated and are highly dependent on certain select end markets.

The Company currently sells a significant portion of its products in the high speed communications, computer, networking and wireless handset markets. These markets are characterized by short product life cycles, rapidly changing customer demand, evolving and competing industry standards and seasonal demand trends. Additionally, there can be no assurance that these markets will continue to grow. If the markets for high speed communications, computers, networking or wireless handsets that the Company serves fail to grow, or grows more slowly than it currently anticipates, or if there is increased competition in these markets, the Company's business, results of operations and financial condition could be adversely affected.

The Company currently derives the majority of its product revenues from sales of standard analog and mixed-signal integrated circuits and expects these products to continue to account for the majority of its revenues for the foreseeable future. As a result, factors adversely affecting the pricing of or demand for standard analog integrated and mixed-signal circuits, such as competition, product performance or technological change, could have a material adverse effect on the Company's business and consolidated results of operations and financial condition.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

A significant portion of the Company's revenues in recent periods has been derived from sales of products based on SONET, SDH and ATM transmission standards. If the communications market evolves to new standards, the Company may not be able to successfully design and manufacture new products that address the needs of its customers or gain substantial market acceptance. Although the Company has developed products for the Gigabit Ethernet and Fibre Channel communications standards, volume sales of these products are modest, and it may not be successful in addressing other market opportunities for products based on these standards.

An important part of the Company's strategy is to continue to focus on the market for high-speed communications integrated circuits, or ICs. If the Company is unable to penetrate this market further, the Company's revenues could stop growing and may decline.

The Company's Ethernet products have become an important portion of the Company's revenues with the acquisition of Kendin. If the Company fails to develop new products to serve this market in a timely manner, or if a competitor's products unfavorably effect pricing or demand for the Company's products, the Company's revenues and results of operations could be adversely effected.

The markets which the Company serves frequently undergo transitions in which products rapidly incorporate new features and performance standards on an industry-wide basis. If the Company's products are unable to support the new features or performance levels required by OEMs in these markets, it would likely lose business from existing or potential customers and would not have the opportunity to compete for new design wins until the next product transition. If the Company fails to develop products with required features or performance standards, or experiences even a short delay in bringing a new product to market, or if its customers fail to achieve market acceptance of their products, its revenues could be significantly reduced for a substantial period of time.

The Company encounters risks associated with its international operations.

The Company has generated a substantial portion of its net revenues from export sales. The Company believes that a substantial portion of its future net revenues will depend on export sales to customers in international markets, including Asia. International markets are subject to a variety of risks, including changes in policy by foreign governments, social conditions such as civil unrest, and economic conditions including high levels of inflation, fluctuation in the value of foreign currencies and currency exchange rates and trade restrictions or prohibitions. In addition, the Company sells to domestic customers that do business worldwide and cannot predict how the businesses of these customers may be affected by economic conditions in Asia or elsewhere. Such factors could adversely affect the Company's future revenues, financial condition, results of operations or cash flows.

The Company is reliant on certain key suppliers for wafer fabrication, circuit assembly and testing services. Most of these suppliers are based outside of the U.S. The Company's supply could be interrupted as a result of any of the previously mentioned risk factors relating to international markets.

The Company's international sales are primarily denominated in U.S. currency. Consequently, changes in exchange rates that strengthen the U.S. dollar could increase the price of the Company's products in the local currencies of the foreign markets it serves. This would result in making the Company's products relatively more expensive than its competitors' products that are denominated in local currencies, leading to a reduction in sales or profitability in those foreign markets. The Company has not taken any protective measures against exchange rate fluctuations, such as purchasing hedging instruments.

**MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)**

**The Company may not be able to protect its intellectual property adequately, or could be harmed by litigation involving its patents and proprietary rights.**

The Company's future success depends in part upon its intellectual property, including patents, trade secrets, know-how and continuing technology innovation. There can be no assurance that the steps taken by the Company to protect its intellectual property will be adequate to prevent misappropriation or that others will not develop competitive technologies or products. There can be no assurance that any patent owned by the Company will not be invalidated, circumvented or challenged, that the rights granted thereunder will provide competitive advantages or that any of its pending or future patent applications will be issued with the scope of the claims sought, if at all. Furthermore, there can be no assurance that others will not develop technologies that are similar or superior to the Company's technology, duplicate technology or design around the patents owned by the Company. Additionally, the semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. There can be no assurance that existing claims or any other assertions or claims for indemnity resulting from infringement claims will not adversely affect the Company's business, financial condition, results of operations, or cash flows.

**The Company is subject to the a risk of litigation and regulatory action in connection with the restatement of its financial statements, and the potential liability from any such litigation or regulatory action could harm its business.**

On January 28, 2002, the Company announced that it would restate its consolidated financial statements for the fiscal years ended December 31, 1998, 1999, and 2000, and the fiscal quarters ended March 31, 2001, June 30, 2001, and September 30, 2001. As a result of this restatement, the Company could become subject to litigation or regulatory proceedings, or both. As of the date hereof, the Company is not aware of any litigation having been commenced against it related to this restatement. However, such litigation could be commenced against the Company in the future and, if so, the Company cannot predict the outcome of any such action at this time. However, if an unfavorable result occurred in any such action, the Company's business and financial condition could be harmed. In addition, regulatory agencies, such as the Securities and Exchange Commission, could commence a formal investigation of the Company's restatement. At this time management cannot predict whether or not any regulatory investigation related to the restatement will be commenced or, if it is, the outcome of any such investigation. However, if any such investigation were to result in a regulatory proceeding or action against the Company, its business and financial condition could be harmed. The restatement also involves certain tax issues that we need to resolve with the appropriate taxing authorities. The Company cannot predict the results of any discussions with these authorities with respect to the tax implications of the restatement.

**The Company's operating results substantially depend on manufacturing output and yields, which may not meet expectations.**

The Company manufactures most of its semiconductors at its San Jose and Santa Clara, California fabrication facilities. Manufacturing semiconductors requires manufacturing tools which are unique to each product being produced. If one of these unique manufacturing tools was damaged or destroyed, then the Company's ability to manufacture the related product would be impaired and its business would suffer until the tool was repaired or replaced. Additionally, the fabrication of integrated circuits is a highly complex and precise process. Small impurities, contaminants in the manufacturing environment, difficulties in the fabrication process, defects in the masks used to print circuits on a wafer, manufacturing equipment failures, wafer breakage or other factors can cause a substantial percentage of wafers to be rejected or numerous die on each wafer to be nonfunctional.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

The Company faces risks associated with acquisitions it has completed and will face risks associated with any future acquisitions.

The Company has made four strategic acquisitions in the past three years: Synergy Semiconductor in November 1998, Altos Semiconductor Inc. in December 1999, Electronic Technology Corporation in April 2000 and Kendin Communications Inc. in May 2001. The acquisition of Kendin Communications Inc. is the largest acquisition that the Company has undertaken. The risks involved with these acquisitions and any other acquisitions include:

- diversion of management's attention
- failure to retain key personnel
- amortization of acquired intangible assets
- customer dissatisfaction or performance problems with the acquired company
- the cost associated with acquisitions and the integration of acquired operations
- assumption of unknown liabilities

Any of these risks could materially harm the Company's business, financial condition and results of operations. Additionally, any acquisition involves a significant amount of integration of two companies that have previously operated independently. No assurance can be given that difficulties will not be encountered in integrating certain products, technologies or operations of the acquired companies or that the benefits expected from such integration will be realized. There can be no assurance that any of the acquired companies will retain its key personnel, that the engineering teams of Micrel and the acquired companies will successfully cooperate and realize any technological benefits or that Micrel or the acquired companies will realize any of the other anticipated benefits of the acquisitions. In addition, the consummation of the Kendin acquisition could result in the cancellation, termination or non-renewal of arrangements with Kendin by suppliers, distributors or customers of Kendin or the loss of certain key Kendin employees, or the termination of negotiations or delays in ordering by prospective customers of Kendin as a result of uncertainties that may be perceived as a result of the acquisition. Any significant amount of cancellations, terminations, delays or non-renewals of arrangements with Kendin or loss of key employees or termination of negotiations or delays in ordering could have a material adverse effect on the business, operating results or financial condition of Kendin and Micrel after the acquisition.

In addition, some of these acquisitions have been accounted for using the pooling-of-interests method of accounting which means the acquisitions are subject to rules established by the Financial Accounting Standards Board and the Securities and Exchange Commission. These rules are complex and the interpretation of them is subject to change. Additionally, the availability of pooling of interests accounting treatment for a business combination depends in part upon circumstances and events occurring after the acquisition. The failure of a past business combination that has been accounted for under the pooling of interests accounting method to qualify for this accounting treatment would materially harm the Company's reported and future earnings and likely, the price of its Common Stock.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION  
AND RESULTS OF OPERATIONS (CONTINUED)

The Company's future success depends in part on the continued service of its key design engineering, sales, marketing and executive personnel and its ability to identify, hire and retain additional personnel.

There is intense competition for qualified personnel in the semiconductor industry, in particular design engineers, and the Company may not be able to continue to attract and train engineers or other qualified personnel necessary for the development of its business or to replace engineers or other qualified personnel who may leave its employ in the future. Loss of the services of, or failure to recruit, key design engineers or other technical and management personnel could be significantly detrimental to the Company's product and process development programs.

Our ability to manufacture sufficient wafers to meet demand could be severely hampered by natural disasters.

Our existing wafer fabrication facilities are, and potential new wafer fabrication facilities may be, located in Northern California and these facilities may be subject to natural disasters such as earthquakes. A significant natural disaster, such as an earthquake, could have a material adverse impact on our business, financial condition and operating results.

The Company's business could be adversely effected by electrical power or natural gas supply interruptions.

The majority of the Company's administrative, technical and manufacturing facilities are located in Northern California and these facilities may be subject to electrical power or natural gas supply interruptions. In recent months, electrical power suppliers have experienced shortages in electrical power which has resulted in brief electrical power interruptions. The weak financial condition of California's Public Utilities may aggravate the situation and shortages may develop for natural gas. Semiconductor manufacturing depends upon a controlled environment which requires high usage of electrical power and natural gas. Frequent or extended electrical power interruptions could have a negative impact on production output, manufacturing yields, and manufacturing efficiencies and could have a material adverse impact on the Company's business, financial condition and operating results.

We could incur substantial fines or litigation costs associated with our storage, use and disposal of hazardous materials.

We are subject to a variety of federal, state and local governmental regulations related to the use, storage, discharge and disposal of toxic, volatile or otherwise hazardous chemicals used in our manufacturing process. Any failure to comply with present or future regulations could result in the imposition of fines, the suspension of production, alteration of our manufacturing processes or a cessation of operations. In addition, these regulations could restrict our ability to expand our facilities at their present locations or construct or operate a new wafer fabrication facility or could require us to acquire costly equipment or incur other significant expenses to comply with environmental regulations or clean up prior discharges. Our failure to control the use of, disposal or storage of, or adequately restrict the discharge of, hazardous substances could subject us to future liabilities and could have a material adverse effect on our business.

#### **ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

At December 31, 2001, the Company held \$3.1 million in short-term investments consisting of corporate debt securities (commercial paper) with maturities of less than one year. These available-for-sale securities are subject to interest rate risk and will fall in value if market interest rates increase. If market interest rates were to increase immediately and uniformly by 10 percent from levels at December 31, 2001, the fair value of the short-term investments would decline by an immaterial amount. The Company generally expects to have the ability to hold its fixed income investments until maturity and therefore would not expect operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on short-term investments.

At December 31, 2001, the Company had fixed rate long-term debt of approximately \$2.2 million. A hypothetical 10 percent decrease in interest rates would not have a material impact on the fair market value of this debt. The Company does not hedge any interest rate exposures.

#### **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

The Company's financial statements are set forth on pages 43 through 64, which follow Item 14.

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

Not applicable.

### PART III

#### ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information concerning the directors of the Company is included in the Company's Proxy Statement to be filed in connection with the Company's 2002 Annual Meeting of Shareholders under the caption "Election of Directors" and is incorporated herein by reference. The information concerning the executive officers of the Company required by this item is as follows:

#### EXECUTIVE OFFICERS

The executive officers of the Company, and their ages as of March 15, 2002, are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Raymond D. Zinn.....	64	President, Chief Executive Officer and Chairman of the Board
Robert Whelton.....	62	Executive Vice President of Operations
Robert J. Barker.....	55	Vice President, Corporate Business Development
Richard D. Crowley, Jr. ....	45	Vice President, Finance and Chief Financial Officer
Mark Downing.....	41	Vice President, Marketing
Carlos Laber.....	50	Vice President, Design Engineering
Tian-I Liou, Ph. D .....	47	Vice President and General Manager of Kendin Operations
Mark Lunsford.....	44	Vice President, World-Wide Sales
Carlos Mejia.....	51	Vice President, Human Resources
Barry Small .....	53	Vice President, Wafer Fabrication Division
Scott Ward .....	47	Vice President, Test Division
Thomas Wong.....	46	Vice President, High Bandwidth Products
J. Vincent Tortolano.....	52	Vice President, General Counsel, and Secretary
Richard Zelenka.....	46	Vice President, Quality Assurance

Mr. Zinn is a co-founder of the Company and has been its President, Chief Executive Officer and Chairman of its Board of Directors since its incorporation in 1978. Prior to co-founding Micrel, Mr. Zinn held various management and manufacturing executive positions in the semiconductor industry at Electromask TRE, Electronic Arrays, Inc., Teledyne, Inc., Fairchild Semiconductor Corporation and Nortek, Inc. He holds a B.S. in Industrial Management from Brigham Young University and a M.S. in Business Administration from San Jose State University.

Mr. Whelton joined the Company as Executive Vice President of Operations in January 1998. From 1996 to 1997, Mr. Whelton was employed by Micro Linear Corp., where he held the position of Executive Vice President in charge of operations, design, sales and marketing. Prior to Micro Linear, Mr. Whelton was employed by National Semiconductor Corp., from 1985 to 1996 where he held the position of Vice President of the Analog Division. Mr. Whelton holds a B.S.E.E. from U.C. Berkeley, and a M.S.E.E. from the University of Santa Clara.

Mr. Barker has served as Vice President, Corporate Business Development since October 1999. Mr. Barker also served as the Company's Secretary from May 2000 until May 2001. From April 1994 to September 1999 he held the position of Vice President, Finance and Chief Financial Officer. From April 1984 until he joined Micrel, Mr. Barker was employed by Waferscale Integration, Inc., where his last position was Vice President of Finance and Secretary. Prior to 1984, Mr. Barker held various accounting and financial positions at Monolithic Memories and Lockheed Missiles and Space Co. He holds a B.S. in Electrical Engineering and a M.B.A. from University of California at Los Angeles.

Mr. Crowley joined the Company as Vice President, Finance and Chief Financial Officer in September 1999. From December 1998 until he joined Micrel, Mr. Crowley was employed by Vantis Corporation as its Vice President, Chief Financial Officer. From 1980 to 1998 Mr. Crowley was employed by National Semiconductor Corporation, where his last position was Vice President, Corporate Controller. He holds a B.B.A. in Finance from the University of Notre Dame and a Masters in Management in Accounting and Finance from Northwestern University.

Mr. Downing joined the Company as Vice President, Marketing in December 2000. Prior to joining the Company he was employed by Pericom Semiconductor Corporation as its Vice President, Marketing from October 1997 to December 2000. From 1988 to 1997 Mr. Downing was employed by National Semiconductor in various marketing management positions in their international sales and marketing operations and their Analog division. He holds a BSc in Physics from the University of Aston in Birmingham, England and an M.B.A. from the Open University, Milton Keynes, England.

Mr. Laber joined the Company in March 2000 as its Vice President, Design Engineering. Prior to joining the Company, Mr. Laber was employed by Micro Linear Corporation from 1984 to 2000 where he held the positions of Vice President of Design Engineering, Director of Engineering, and Principal Engineer. Prior to 1984 Mr. Laber was employed by National Semiconductor and Intel Corporation in various design engineering positions. He holds a M.S.E.E. from the University of Minnesota.

Dr. Liou joined the Company in May 2001 as Vice President and General Manager of Kendin Operations. Prior to joining Micrel, Dr. Liou founded Kendin Communications, Inc. in 1996 and held the position of President, Chief Executive Officer, and Director until the acquisition of Kendin by Micrel in May of 2001. Prior to founding Kendin, Dr. Liou co-founded Winbic Semiconductor, Inc. in 1990. Prior to 1990 Dr. Liou held various positions at Performance Semiconductor and National Semiconductor. Dr. Liou holds a B.S. in Electrical Engineering from National Cheng Kung University, Taiwan, and M.S. and Ph.D. degrees in Electrical Engineering from Rice University, Texas.

Mr. Lunsford joined the Company in September 2001 as Vice President World-Wide Sales. Prior to joining Micrel, Mr. Lunsford was Director of Marketing and Business Development at Broadcom Corporation from 2000 to 2001. Prior to 2000, Mr. Lunsford held the position of Vice President World-Wide Sales at Pivotal Technologies from 1999 until Pivotal was acquired by Broadcom in 2000. Prior to 1999 Mr. Lunsford held various senior level management positions at Advanced Micro Devices from 1984 to 1999. He holds a B.S. degree in Mechanical Engineering from the University of California, Davis.

Mr. Mejia joined the Company in June 1999 as Vice President, Human Resources. From 1976 until he joined Micrel, Mr. Mejia was employed by Analog Devices, Inc. where his last position was Director, Human Resources. Prior to Analog Devices, Inc., Mr. Mejia held various human resource positions at ROHR Industries and California Computer Products. He holds a B.S. in Industrial Technology and a M.A.H.R. from the University of Redlands.

Mr. Small joined the Company in April 1998 as its Vice President, Wafer Fab. Prior to joining the Company, Mr. Small was employed by IC Works from 1996 to 1998, where he was Vice President of Operations. From 1971 to 1995, Mr. Small was employed by National Semiconductor Corp. where he held the position of Vice President of Linear Standard Products. Mr. Small holds a B.A. in Physics from U.C. Berkeley and an M.A. in Physics and an M.B.A. from University of California at Los Angeles.

Mr. Ward joined the Company in August 1999 as Vice President, Test Division. From 1997 until he joined Micrel, Mr. Ward was employed by QuickLogic Corporation as Vice President of Engineering. From 1980 to 1997, Mr. Ward was employed by National Semiconductor Corporation where he held various Product Line Director positions in the Analog Division. Mr. Ward holds a B.S.E.T. degree from California Polytechnic University at San Luis Obispo.

Mr. Wong joined the Company in November 1998 as its Vice President, HighBandwith Products. Prior to joining the Company, Mr. Wong was a co-founder of Synergy Semiconductor and held various management positions including Chief Technical Officer, Vice President Engineering, Vice President Standard Products and Vice President Product Development for Synergy Semiconductor from 1987 to November 1998 at which time Synergy was acquired by the Company. From 1978 to 1986, Mr. Wong was employed by Advanced Micro Devices where his last position was Design Engineering Manager. He holds a B.S.E.E. from the University of California at Berkeley and a M.S.E.E. from San Jose State University.

Mr. Tortolano joined the Company in August 2000 as its Vice President, General Counsel. Mr. Tortolano has also served as the Company's Secretary since May 2001. From 1999 until he joined the Company, Mr. Tortolano was employed by Lattice Semiconductor Corporation, where he held the position of Vice President, Co-General Counsel. From 1983 to 1999, Mr. Tortolano was employed by Advanced Micro Devices, Inc., where his last position was Vice President, General Counsel of AMD's Vantis subsidiary. Mr. Tortolano holds a B.S.E.E. from Santa Clara University and a Juris Doctor degree from University of California at Davis.

Mr. Zelenka has served as Vice President, Quality Assurance since August 2000. From January 1998 to July 2000 he held the position of Director of Product Assurance. Prior to joining the Company, Mr. Zelenka was employed by National Semiconductor from 1987 to 1998 as a Senior Quality Manager. From 1983 to 1987 Mr. Zelenka was employed by Fairchild Semiconductor where he held the position of Wafer Fab Quality Manager. He holds a B.S. in Chemical Engineering from the University of Wyoming.

Certain information required by this item is included under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in the Company's Proxy Statement to be filed in connection with the Company's 2002 Annual Meeting of Shareholders and is incorporated herein by reference.

#### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is included under the caption "Executive Compensation" and "Stock Option Grants and Exercise" in the Company's Proxy Statement to be filed in connection with the Company's 2002 Annual Meeting of Shareholders and is incorporated herein by reference.

**ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND  
MANAGEMENT**

The information required by this item is included under the caption "Security Ownership of Certain Beneficial Owners and Management" in the Company's Proxy Statement to be filed in connection with the Company's 2002 Annual Meeting of Shareholders and is incorporated herein by reference.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

The information required by this item is included under the caption "Certain Transactions" in the Company's Proxy Statement to be filed in connection with the Company's 2002 Annual Meeting of Shareholders and is incorporated herein by reference.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) The following documents are filed as part of this Report:

1. Financial Statements. The following financial statements of the Company and the Report of Deloitte & Touche LLP, Independent Auditors, are included in this Report on the pages indicated:

	<u>Page</u>
Independent Auditors' Report .....	43
Consolidated Balance Sheets as of December 31, 2001 and 2000.....	44
Consolidated Statements of Income for the Years ended December 31, 2001, 2000 and 1999 .....	45
Consolidated Statements of Shareholders' Equity and Comprehensive Income for the Years ended December 31, 2001, 2000 and 1999.....	46
Consolidated Statements of Cash Flows for the Years ended December 31, 2001, 2000 and 1999 .....	47
Notes to Consolidated Financial Statements .....	48

2. Financial Statement Schedule. The following financial statement schedule of the Company for the years ended December 31, 2001, 2000 and 1999 is filed as part of this report on Form 10-K and should be read in conjunction with the financial statements.

<u>Schedule</u>	<u>Title</u>	<u>Page</u>
	Independent Auditors' Report .....	63
II	Valuation and Qualifying Accounts.....	64

Schedules not listed above have been omitted because they are not applicable, not required, or the information required to be set forth therein is included in the Consolidated Financial Statements or notes thereto.

3. Exhibits. Those exhibits required by Item 601 of Regulation S-K to be filed or incorporated by reference as a part of this Report are listed on the Exhibit Index immediately preceding the exhibits filed herewith.
- (b) Reports on Form 8-K. During the quarter ended December 31, 2001, the Company filed a Current Report on Form 8-K, dated October 3, 2001 to present its consolidated financial statements and the related consolidated financial statement schedule for the years ended December 31, 2000, 1999 and 1998, which have been retroactively restated to reflect the merger of Micrel and Kendin accounted for as a pooling of interest. Also during the quarter ended December 31, 2001 the Company filed a Current Report on Form 8-K, dated November 26, 2001 reporting that members of the Registrant's Board of Directors and Executive Officers of the Registrant have adopted plans under Rule 10b5-1 of the Securities Exchange Act of 1934, as amended, for trading in shares of the Registrant's Common Stock.
- (c) Exhibits Pursuant to Item 601 of Regulation S-K. See Item 14(a)(3) above.
- (d) Financial Statement Schedules. The financial statement schedule required by this Item is listed under Item 14(a)(2) above.

## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of  
Micrel, Incorporated:

We have audited the accompanying consolidated balance sheets of Micrel, Incorporated and its subsidiaries as of December 31, 2001 and 2000, and the related consolidated statements of income, shareholders' equity and comprehensive income, and cash flows for each of the three years in the period ended December 31, 2001. 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 in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Company and its subsidiaries at December 31, 2001 and 2000, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America.

The consolidated financial statements referred to above give retroactive effect to the merger of Micrel, Incorporated and Kendin Communications, Inc. which has been accounted for as a pooling of interests as described in Note 2 to the consolidated financial statements.

DELOITTE & TOUCHE LLP

San Jose, California  
January 28, 2002

**MICREL, INCORPORATED**  
**CONSOLIDATED BALANCE SHEETS**  
**DECEMBER 31, 2001 AND 2000**  
(In thousands, except share amounts)

	<b>2001</b>	<b>2000</b>
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents	\$ 130,406	\$ 86,137
Short-term investments	3,093	36,953
Accounts receivable, less allowances: 2001, \$3,886; 2000, \$4,517	28,209	62,843
Inventories	35,394	28,983
Prepaid expenses and other	8,754	1,565
Deferred income taxes	27,367	24,989
Total current assets	233,223	241,470
EQUIPMENT AND LEASEHOLD IMPROVEMENTS, NET	117,571	112,125
INTANGIBLE ASSETS, NET	3,660	5,775
OTHER ASSETS	359	378
<b>TOTAL</b>	<b>\$ 354,813</b>	<b>\$ 359,748</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 12,737	\$ 21,342
Accrued compensation	8,496	11,496
Accrued commissions	808	2,277
Income taxes payable	—	11,805
Other accrued liabilities	850	2,129
Deferred income on shipments to distributors	9,777	14,224
Current portion of long-term debt	3,615	5,429
Total current liabilities	36,283	68,702
LONG-TERM DEBT	1,299	5,327
DEFERRED RENT	1,020	943
DEFERRED INCOME TAXES	2,881	2,941
COMMITMENTS AND CONTINGENCIES (Notes 8 and 11)		
<b>SHAREHOLDERS' EQUITY:</b>		
Preferred stock, no par value – authorized: 5,000,000 shares; issued and outstanding: none	—	—
Common stock, no par value – authorized: 250,000,000 shares; issued and outstanding: 2001 – 92,823,677; 2000 – 90,641,922	194,384	164,713
Deferred stock compensation	(44,755)	(46,020)
Accumulated other comprehensive income (loss)	(25)	(32)
Retained earnings	163,726	163,174
Total shareholders' equity	313,330	281,835
<b>TOTAL</b>	<b>\$ 354,813</b>	<b>\$ 359,748</b>

See Notes to Consolidated Financial Statements.

**MICREL, INCORPORATED**  
**CONSOLIDATED STATEMENTS OF INCOME**  
**YEARS ENDED DECEMBER 31, 2001, 2000 AND 1999**  
(In thousands, except per share amounts)

	<u>2001</u>	<u>2000</u>	<u>1999</u>
NET REVENUES	\$ 217,808	\$ 346,335	\$ 200,016
COST OF REVENUES*	<u>126,242</u>	<u>149,083</u>	<u>89,572</u>
GROSS PROFIT	<u>91,566</u>	<u>197,252</u>	<u>110,444</u>
OPERATING EXPENSES:			
Research and development	51,306	42,201	29,563
Selling, general and administrative	32,862	45,319	29,399
Amortization of deferred stock compensation*	9,572	6,060	2,109
Non-recurring acquisition expenses*	8,894	—	—
Purchased in-process technology	<u>—</u>	<u>—</u>	<u>603</u>
Total operating expenses	<u>102,634</u>	<u>93,580</u>	<u>61,674</u>
INCOME (LOSS) FROM OPERATIONS	<u>(11,068)</u>	<u>103,672</u>	<u>48,770</u>
OTHER INCOME (EXPENSE):			
Interest income	5,596	5,849	2,138
Interest expense	(583)	(976)	(1,468)
Other income(loss), net	<u>1,073</u>	<u>(134)</u>	<u>22</u>
Total other income, net	<u>6,086</u>	<u>4,739</u>	<u>692</u>
INCOME (LOSS) BEFORE INCOME TAXES	(4,982)	108,411	49,462
PROVISION (BENEFIT) FOR INCOME TAXES	<u>(5,534)</u>	<u>35,104</u>	<u>16,019</u>
NET INCOME	<u>\$ 552</u>	<u>\$ 73,307</u>	<u>\$ 33,443</u>
NET INCOME PER SHARE:			
Basic	<u>\$ 0.01</u>	<u>\$ 0.82</u>	<u>\$ 0.39</u>
Diluted	<u>\$ 0.01</u>	<u>\$ 0.75</u>	<u>\$ 0.36</u>
SHARES USED IN COMPUTING PER SHARE AMOUNTS:			
Basic	<u>91,888</u>	<u>89,242</u>	<u>85,762</u>
Diluted	<u>98,092</u>	<u>98,186</u>	<u>92,906</u>
*Amortization of deferred stock compensation related to:			
Cost of revenues	<u>\$ 3,141</u>	<u>\$ 2,202</u>	<u>\$ 926</u>
Operating expenses:			
Research and development	\$ 5,047	\$ 3,347	\$ 1,444
Selling, general and administrative	<u>4,525</u>	<u>-2,713</u>	<u>665</u>
Amortization of deferred stock compensation	9,572	6,060	2,109
Non-recurring acquisition expenses	<u>2,007</u>	<u>—</u>	<u>—</u>
Total operating expenses	<u>\$ 11,579</u>	<u>\$ 6,060</u>	<u>\$ 2,109</u>

See Notes to Consolidated Financial Statements.

MICREL, INCORPORATED

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY  
AND COMPREHENSIVE INCOME

YEARS ENDED DECEMBER 31, 2001, 2000 AND 1999

(In thousands, except share amounts)

	Common Stock		Accumulated Other Comprehensive Income (Loss)	Deferred Stock Compensation	Retained Earnings	Total Shareholders' Equity	Comprehensive Income
	Shares	Amount					
Balances, December 31, 1998	84,416,822	\$ 55,430	\$ 10	\$ (10,539)	\$ 55,792	\$ 100,693	
Net income	—	—	—	—	33,443	33,443	\$ 33,443
Other comprehensive income, net of tax - Change in net unrealized gains from short-term investments	—	—	5	—	—	5	<u>5</u>
Comprehensive income							<u>\$ 33,448</u>
Deferred stock compensation, net	—	10,538	—	(7,504)	—	3,034	
Issuance of common stock	524,346	4,974	—	—	—	4,974	
Employee stock transactions	2,473,565	8,303	—	—	—	8,303	
Tax benefit of employee stock transactions	—	<u>6,806</u>	—	—	—	<u>6,806</u>	
Balances, December 31, 1999	87,414,733	86,051	15	(18,043)	89,235	157,258	
Net income	—	—	—	—	73,307	73,307	\$ 73,307
Other comprehensive income, net of tax - Change in net unrealized gains from short-term investments	—	—	(47)	—	—	(47)	<u>(47)</u>
Comprehensive income							<u>\$ 73,260</u>
Acquisition of ETC	152,234	32	—	—	632	664	
Deferred stock compensation, net	—	36,035	—	(27,977)	—	8,058	
Issuance of common stock	655,284	6,629	—	—	—	6,629	
Employee stock transactions	2,419,671	15,556	—	—	—	15,556	
Tax benefit of employee stock transactions	—	<u>20,410</u>	—	—	—	<u>20,410</u>	
Balances, December 31, 2000	90,641,922	164,713	(32)	(46,020)	163,174	281,835	
Net income	—	—	—	—	552	552	\$ 552
Other comprehensive income, net of tax - Change in net unrealized gains from short-term investments	—	—	7	—	—	7	<u>7</u>
Comprehensive income							<u>\$ 559</u>
Deferred stock compensation, net	—	13,455	—	1,265	—	14,720	
Issuance of common stock upon net exercise of warrants	142,951	—	—	—	—	—	
Repurchase of common stock	(365,000)	(7,264)	—	—	—	(7,264)	
Employee stock transactions	2,403,804	15,653	—	—	—	15,653	
Tax benefit of employee stock transactions	—	<u>7,827</u>	—	—	—	<u>7,827</u>	
Balances, December 31, 2001	<u>92,823,677</u>	<u>\$ 194,384</u>	<u>\$ (25)</u>	<u>\$ (44,755)</u>	<u>\$ 163,726</u>	<u>\$ 313,330</u>	

See Notes to Consolidated Financial Statements.

MICREL, INCORPORATED  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
YEARS ENDED DECEMBER 31, 2001, 2000 AND 1999  
(In thousands)

	2001	2000	1999
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net income	\$ 552	\$ 73,307	\$ 33,443
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	32,373	25,785	19,587
Stock based compensation	14,720	8,262	3,035
Purchased in-process technology	—	—	603
(Gain) loss on disposal of assets	16	(40)	(24)
Deferred rent	77	319	(166)
Deferred income taxes	(2,438)	(7,610)	(4,091)
Changes in operating assets and liabilities, net of effects of acquisition:			
Accounts receivable	34,634	(22,453)	(15,476)
Inventories	(6,411)	(4,390)	(7,841)
Prepaid expenses and other assets	(7,170)	(198)	(365)
Accounts payable	(8,605)	8,607	3,442
Accrued compensation	(3,000)	5,264	1,772
Accrued commissions	(1,469)	245	442
Income taxes payable	(3,978)	19,898	14,810
Other accrued liabilities	(1,279)	693	(1,341)
Deferred income on shipments to distributors	(4,447)	7,663	2,127
Net cash provided by operating activities	<u>43,575</u>	<u>115,352</u>	<u>49,957</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchases of equipment and leasehold improvements	(35,720)	(67,483)	(29,726)
Purchases of short-term investments	(30,540)	(158,010)	(65,629)
Proceeds from sales and maturities of short-term investments	64,407	157,681	44,018
Purchase of company, net of cash acquired	—	—	(1,800)
Net cash used in investing activities	<u>(1,853)</u>	<u>(67,812)</u>	<u>(53,137)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Proceeds from long-term borrowings	—	2,000	2,100
Repayments of long-term debt	(5,842)	(5,463)	(7,701)
Proceeds from the issuance of common stock	15,653	21,982	13,277
Repurchase of common stock	(7,264)	—	—
Net cash provided by financing activities	<u>2,547</u>	<u>18,519</u>	<u>7,676</u>
NET INCREASE IN CASH AND CASH EQUIVALENTS	44,269	66,059	4,496
CASH AND CASH EQUIVALENTS - Beginning of year	86,137	20,078	15,582
CASH AND CASH EQUIVALENTS - End of year	<u>\$ 130,406</u>	<u>\$ 86,137</u>	<u>\$ 20,078</u>
<b>SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:</b>			
Cash paid during the year for:			
Interest	\$ 583	\$ 976	\$ 1,468
Income taxes	\$ 8,896	\$ 22,709	\$ 5,295
Non-cash transactions:			
Deferred stock compensation	\$ 13,455	\$ 36,035	\$ 10,538
Issuance of stock for service	\$ —	\$ 203	\$ —

See Notes to Consolidated Financial Statements.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**Years Ended December 31, 2001, 2000 and 1999**

**1. SIGNIFICANT ACCOUNTING POLICIES**

*Nature of Business* — Micrel, Incorporated and its wholly-owned subsidiaries (the “Company”) develops, manufactures and markets analog and mixed-signal semiconductor devices. The Company also provides custom and foundry services which include silicon wafer fabrication, integrated circuit assembly and testing. The Company’s standard integrated circuits are sold principally in North America, Asia, and Europe for use in a variety of products, including those in the computer, communication, and industrial markets. The Company’s custom circuits and wafer foundry services are provided to a wide range of customers that produce electronic systems for communications, consumer, automotive and military applications. The Company produces the majority of its wafers at the Company’s wafer fabrication facilities located in San Jose and Santa Clara, California. After wafer fabrication, the completed wafers are then separated into individual circuits and packaged at independent assembly and final test contract facilities primarily located in Malaysia.

*Principles of Consolidation* — The accompanying consolidated financial statements include the accounts of Micrel, Incorporated and its wholly-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

*Use of Estimates* — In accordance with accounting principles generally accepted in the United States of America, management utilizes certain estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. The primary estimates underlying the Company’s financial statements include allowance for doubtful accounts receivable, reserves for product returns, reserves for obsolete and slow moving inventory, income taxes and accrual for other liabilities. Actual results could differ from those estimates.

*Cash Equivalents* — The Company considers all liquid debt instruments purchased with remaining maturities of three months or less to be cash equivalents.

*Short-term Investments* — Short-term investments consist primarily of liquid debt instruments purchased with remaining maturity dates of greater than three months. Short-term investments are classified as available-for-sale securities and are stated at market value with unrealized gains and losses included in shareholders’ equity, net of income taxes. At December 31, 2001 and 2000, short-term investments consisted of corporate debt securities (commercial paper) with maturities of less than one year.

Short-term investments include the following available-for-sale securities at December 31, 2001 and 2000 (in thousands):

	<u>Amortized Cost</u>	<u>Market Value</u>	<u>Unrealized Holding Gains</u>	<u>Unrealized Holding Losses</u>
December 31, 2001	\$ 3,118	\$ 3,093	\$ —	\$ 25
December 31, 2000	\$ 36,985	\$ 36,953	\$ —	\$ 32

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

*Certain Significant Risks and Uncertainties* — Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents, short-term investments, and accounts receivable. Risks associated with cash are mitigated by banking with creditworthy institutions. Cash equivalents and short-term investments consist primarily of commercial paper and bank certificates of deposit and are regularly monitored by management. Credit risk with respect to the trade receivables is spread over geographically diverse customers. At December 31, 2001, two customers accounted for 18% and 14% of total accounts receivable. At December 31, 2000, no customer accounted for 10% or more of total accounts receivable.

The Company participates in a dynamic high technology industry and believes that changes in any of the following areas could have a material adverse effect on the Company's future financial position, results of operations, or cash flows: changes in the overall demand for products offered by the Company; competitive pressures in the form of new products or price reductions on current products; advances and trends in new technologies and industry standards; changes in product mix; changes in third-party manufacturers; changes in key suppliers; changes in certain strategic relationships or customer relationships; litigation or claims against the Company based on intellectual property, patents (Note 11), product, regulatory or other factors; risk associated with the ability to obtain necessary components; risks associated with the Company's ability to attract and retain employees necessary to support its growth.

*Inventories* — Inventories are stated at the lower of cost (first-in, first-out method) or market.

*Equipment and Leasehold Improvements* — Equipment and leasehold improvements are stated at cost. Depreciation on equipment is computed using the straight-line method over estimated useful lives of three to five years. Leasehold improvements are amortized over the shorter of the lease term or the useful lives of the improvements.

*Intangible Assets* — Intangible assets (net of accumulated amortization of \$6.6 million in 2001; \$4.4 million in 2000) at December 31, consist of the following (in thousands):

	<u>2001</u>	<u>2000</u>	<u>Amortization Period (Years)(1)</u>
Developed and core technology	\$ 2,637	\$ 3,980	5
Assembled workforce	12	271	5
Tradename and patents	517	774	5
Customer relationships	<u>494</u>	<u>750</u>	5
	<u>\$ 3,660</u>	<u>\$ 5,775</u>	

(1) Using straight-line basis amortization.

*Impairment of Long-Lived Assets* — Long-lived assets and certain intangibles held and used by the Company are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. An impairment loss would be recognized when the sum of the undiscounted future net cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying value.

MICREL, INCORPORATED  
 NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)  
 Years Ended December 31, 2001, 2000 and 1999

*Revenue Recognition* — Revenue from products sold directly to customers is recognized upon shipment. A portion of the Company's sales are made to United States of America, Canadian and certain other international distributors under agreements allowing certain rights of return and price protection on merchandise unsold by these distributors. Accordingly, the Company defers recognition of such revenues until the merchandise is sold by the distributors to their customers. The Company records a provision for estimated returns, allowances and warranty costs at the time revenue is recognized. Warranty costs have not been material in any period presented.

*Research and Development Expenses* — Research and development expenses are expenses as incurred and include costs associated with the development of new wafer fabrication processes and the definition, design and development of standard products. The Company also expenses prototype wafers and new production mask sets related to new products as research and development costs until products based on new designs are fully characterized by the Company and are demonstrated to support published data sheets and satisfy reliability tests.

*Income Taxes* — Income taxes are provided at current rates. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes.

*Stock-based Awards* — The Company accounts for stock-based awards to employees using the intrinsic value method in accordance with Accounting Principles Board Opinion ("APB") No. 25, "Accounting for Stock Issued to Employees". Deferred stock compensation balances are recorded as a contra-equity amount and amortized as a charge to operating results over the applicable vesting periods.

*Net Income per Share* — Basic earnings per share ("EPS") is computed by dividing net income by the number of weighted average common shares outstanding. Diluted EPS reflects potential dilution from outstanding stock options, using the treasury stock method.

Reconciliation of weighted average shares used in computing earnings per share is as follows (in thousands):

	Years Ended December 31,		
	2001	2000	1999
Weighted average common shares outstanding	91,888	89,242	85,762
Dilutive effect of stock options outstanding, using the treasury stock method	6,204	8,944	7,144
Shares used in computing diluted earnings per share	98,092	98,186	92,906

*Fair Value of Financial Instruments* — Financial instruments included in the Company's consolidated balance sheets at December 31, 2001 and 2000 consist of cash, cash equivalents, short-term investments and long-term debt. For cash, the carrying amount is a reasonable estimate of the fair value. The carrying amount for cash equivalents and short-term investments approximates fair value because of the short maturity of those investments. The fair value of long-term debt approximates the carrying amount. The fair value of long-term debt is based on the discounted value of the contractual cash flows. The discount rate is estimated using the rates currently offered for debt with similar remaining maturities.

MICREL, INCORPORATED  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)  
Years Ended December 31, 2001, 2000 and 1999

*Comprehensive Income* — Comprehensive income represents the change in net assets during the period from nonowner sources. Consolidated statements of comprehensive income for the years ended December 31, 2001, 2000, and 1999 have been included within the consolidated statements of shareholders' equity and comprehensive income.

*Segment Information* — The Company reports segment data pursuant to SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information," which establishes annual and interim reporting standards for an enterprise's business segments and related disclosures about its products, services, geographic areas and major customers. The Company operates in two reportable segments, standard products and custom and foundry products (Note 12).

*New Accounting Standards* — In June 2001, the FASB issued No. 141, "Business Combinations" and SFAS No. 142, "Goodwill and Other Intangible Assets". SFAS No. 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and addresses the initial recognition and measurement of goodwill and other intangible assets acquired in a business combination. SFAS No. 142 addresses the initial recognition and measurement of intangible assets acquired outside of a business combination and the accounting for goodwill and other intangible assets subsequent to their acquisition. SFAS No. 142 provides that intangible assets with finite useful lives be amortized and that goodwill and intangible assets with indefinite lives will not be amortized, but will rather be tested at least annually for impairment. The Company will adopt SFAS No. 142 for the fiscal year beginning January 1, 2002. The impact of adopting this standard is not expected to have a material effect on the Company's financial position or results of operations.

In October 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS No. 144 requires that one accounting model be used for long-lived assets to be disposed of by sale whether previously held and used or newly acquired, and broadened the presentation of discontinued operations to include more disposal transactions. SFAS No. 144 will be effective for fiscal years beginning after December 15, 2001 and the Company intends to adopt the provisions of SFAS No. 144 as of January 1, 2002 but does not expect SFAS No. 144 to have a material effect on the Company's financial position or results of operations.

## 2. ACQUISITIONS

On May 30, 2001, the Company completed the acquisition of Kendin Communications, Inc. ("Kendin"), a privately held fabless semiconductor company that designs, develops and markets high performance integrated circuits for the communications and networking markets. Under the terms of the merger agreement, the Company issued 6,138,635 shares of Common Stock and options to purchase 645,097 shares of Common Stock in exchange for all outstanding Kendin securities and options to purchase Kendin securities. The transaction has been accounted for as a pooling of interests, and accordingly all financial statements presented have been restated to include the Kendin results. Associated with the acquisition the Company recorded \$8.9 million in non-recurring acquisition expenses in the quarter ended June 30, 2001. The non-recurring expenses consisted of \$6.9 million in transaction costs and \$2.0 million in stock compensation charges.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

The table below sets forth combined revenues and net income of Micrel and Kendin for the three months ended March 31, 2001 (unaudited) and the years ended December 31, 2000 and 1999:

	<b>Three Months Ended March 31, 2001</b>	<b>Years Ended December 31, 2000</b>	<b>1999</b>
Net revenues:			
Micrel	\$ 64,855	\$ 322,475	\$ 195,122
Kendin	10,096	23,860	4,894
	<b>\$ 74,951</b>	<b>\$ 346,335</b>	<b>\$ 200,016</b>
Net income:			
Micrel	\$ 9,388	\$ 71,704	\$ 34,636
Kendin	284	1,603	(1,193)
	<b>\$ 9,672</b>	<b>\$ 73,307</b>	<b>\$ 33,443</b>

No Micrel or Kendin accounting policies were required to be conformed as a result of the merger. Both Micrel and Kendin have the same fiscal years. There were no intercompany transactions between the two companies.

On April 13, 2000, the Company completed the acquisition of Electronic Technology Corporation ("ETC"), a privately held provider of power management and mixed signal products for the portable computing, communications and automotive markets. Under the terms of the merger agreement, the Company issued 152,234 shares of Common Stock in exchange for the outstanding shares of capital stock of ETC. The transaction is accounted for as a pooling of interests. Prior period financial statements presented have not been restated to include the ETC results as the impact was not material.

On December 15, 1999, the Company acquired the outstanding capital stock of Altos Semiconductor for a cash purchase price of \$1.8 million. The acquisition was accounted for as a purchase and, accordingly, the results of operations of Altos from the date of acquisition forward have been included in the Company's consolidated financial statements. Approximately \$1.7 million of the total purchase cost was allocated to intangible assets. Of that amount, \$603,000 was allocated to purchased in-process technology, which has not reached technological feasibility and has no alternative future use, for which the Company recorded charges in the year ended December 31, 1999. The remaining intangible assets of \$1.1 million, consisting of existing technology, assembled workforce (now classified as goodwill), and patents, are included in intangible assets in the accompanying balance sheets. Existing technology and patents are being amortized over their useful lives of five years.

**3. INVENTORIES**

Inventories at December 31 consist of the following (in thousands):

	<b>2001</b>	<b>2000</b>
Finished goods	\$ 16,812	\$ 9,929
Work in process	16,506	17,040
Raw materials	2,076	2,014
	<b>\$ 35,394</b>	<b>\$ 28,983</b>

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

**4. EQUIPMENT AND LEASEHOLD IMPROVEMENTS**

Equipment and leasehold improvements at December 31 consist of the following (in thousands):

	<u>2001</u>	<u>2000</u>
Manufacturing equipment	\$ 177,472	\$ 153,164
Leasehold improvements	17,349	12,595
Office furniture and equipment	<u>13,919</u>	<u>13,221</u>
	208,740	178,980
Accumulated depreciation and amortization	<u>(91,169)</u>	<u>(66,855)</u>
	<u>\$ 117,571</u>	<u>\$ 112,125</u>

**5. BORROWING ARRANGEMENTS**

Borrowing agreements consisted of (i) \$5 million under a revolving line of credit and (ii) \$10 million under a non-revolving line of credit. There were no borrowings under these agreements at December 31, 2001. The two lines of credit are covered by the same loan and security agreement. The revolving line of credit portion of the agreement expires on June 30, 2002 subject to automatic renewal on a month-to-month basis thereafter unless terminated by either party upon 30 days notice. The non-revolving line of credit portion of the agreement expires on June 30, 2002. Borrowings under the revolving line of credit bear interest rates of, at the Company's election, the prime rate (4.75% at December 31, 2001), or the bank's revolving offshore rate, which approximates LIBOR (1.88% at December 31, 2001) plus 2.0%. Borrowings under the non-revolving line of credit bear interest rates of, at the Company's election, the prime rate, the bank's non-revolving offshore rate, which approximates LIBOR plus 2.13%, a fixed rate based on the four-year U.S. Treasury Bill rate (4.21% at December 31, 2001) plus 2.75% or an annual adjustable rate based on the one-year U.S. Treasury Bill rate (2.09% at December 31, 2001) plus 2.75%. The agreement contains certain restrictive covenants that include a restriction on the declaration and payment of dividends without the lender's consent. The Company was in compliance with all such covenants at December 31, 2001.

The non-revolving bank line of credit that is covered by the loan agreement described above, can be used to fund purchases of capital equipment whereby the Company may borrow up to 100% of the acquisition cost. Amounts borrowed under this credit line are automatically converted to four-year installment notes. All equipment notes are collateralized by substantially all of the Company's manufacturing equipment.

As of December 31, 2001, the Company had \$4.9 million outstanding under term notes.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

Long-term debt at December 31, collateralized by equipment, consists of the following (in thousands):

	<u>2001</u>	<u>2000</u>
Notes payable bearing interest at prime, payable in monthly installments through September 2002	\$ 492	\$ 1,604
Notes payable bearing a fixed interest rate of 7.5%, payable in monthly installments through November 2002	1,805	3,805
Notes payable bearing interest at annual adjustable rate based on the one-year U.S. Treasury Bill rate plus 3.0%, payable in monthly installments through June 2003	733	1,258
Notes payable bearing interest at quarterly adjustable rate based on LIBOR plus 2.75%, payable in monthly installments through December 2004	1,500	2,000
Notes payable assumed from Synergy Semiconductor bearing fixed rates ranging from 8.9% to 9.4%, payable in monthly installments through January 2003	<u>384</u>	<u>2,089</u>
Total debt	4,914	10,756
Current portion	<u>(3,615)</u>	<u>(5,429)</u>
Long-term debt	<u>\$ 1,299</u>	<u>\$ 5,327</u>

Maturities of long-term debt subsequent to December 31, 2001 are as follows (in thousands): \$3,615 in 2002, \$799 in 2003, and \$500 in 2004.

**6. SHAREHOLDERS' EQUITY**

*Preferred Stock*

The Company has authorized 5,000,000 shares of preferred stock, no par value, of which none were issued or outstanding at December 31, 2001. The preferred stock may be issued from time to time in one or more series. The Board of Directors is authorized to determine or alter the rights, preferences, privileges and restrictions of such preferred stock.

In May 2001, the Company issued 142,951 common shares for the net exercise of Common Stock warrants. These warrants were issued in April 2000 in connection with a Kendin Communications Common Stock issuance.

*Stock Option Plans*

Under the Company's 2000 Non-Exempt Option Plan and 1994 and 1989 Stock Option Plans (the "Option Plans"), 35,958,672 shares of Common Stock are authorized for issuance to key employees. The Option Plans provide that the option price will be determined by the Board of Directors at a price not less than the fair value as represented by the closing price of the Company's Common Stock on the last market trading day before the date of grant. Certain shareholder/employees of the Company are granted options at 110% of the current fair market value. Options granted under the 2000 Non-Exempt Option Plan are exercisable in 20% increments with the initial 20% vesting occurring on the date of grant and then in annual increments of 20% per year from the date of grant. Under the 1994 and 1989 Stock Option Plans options granted become exercisable in not less than cumulative annual

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

increments of 20% per year from the date of grant. At December 31, 2001, 17,427,135 total shares were reserved for future issuance, of which 3,235,795 shares were available for future grants under the Option Plans.

Option activity under the Option Plans is as follows:

	Number of Shares	Weighted Average Exercise Price
Outstanding, December 31, 1998 (1,909,632 exercisable at a weighted average price of \$2.81 per share)	13,313,780	\$ 5.61
Granted	4,323,044	14.89
Exercised	(2,372,065)	2.88
Canceled	(847,231)	7.67
Outstanding, December 31, 1999 (2,750,457 exercisable at a weighted average price of \$5.00 per share)	14,417,528	8.77
Granted	3,607,160	33.99
Exercised	(2,319,283)	5.54
Canceled	(646,525)	12.34
Outstanding, December 31, 2000 (3,798,771 exercisable at a weighted average price of \$7.62 per share)	15,058,880	15.15
Granted	2,191,194	24.90
Exercised	(2,286,837)	5.59
Canceled	(771,897)	19.55
Outstanding, December 31, 2001	<u>14,191,340</u>	<u>\$ 17.96</u>

Additional information regarding options outstanding as of December 31, 2001 is as follows:

Range of Exercise Prices	Stock Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (yrs)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 0.16 to \$ 6.38	2,021,999	5.3	\$ 4.23	1,361,466	\$ 3.84
\$ 6.39 to \$12.76	4,577,475	6.1	\$ 8.65	2,136,204	\$ 8.52
\$12.77 to \$19.14	2,274,555	7.5	\$ 15.86	716,355	\$ 15.46
\$19.15 to \$25.53	2,173,130	8.6	\$ 23.20	349,780	\$ 20.79
\$25.54 to \$31.91	886,359	8.5	\$ 29.13	116,060	\$ 30.25
\$31.92 to \$38.29	779,940	8.5	\$ 34.55	124,400	\$ 34.80
\$38.30 to \$44.67	729,120	8.0	\$ 42.52	148,280	\$ 42.53
\$44.68 to \$51.05	720,765	8.5	\$ 48.37	144,505	\$ 48.37
\$51.06 to \$57.43	4,000	8.6	\$ 56.63	800	\$ 56.63
\$57.44 to \$63.81	24,000	8.7	\$ 61.56	4,800	\$ 61.56
\$ 0.16 to \$ 63.81	<u>14,191,340</u>	7.1	\$ 17.96	<u>5,102,650</u>	\$ 12.39

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
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*Employee Stock Purchase Plan*

Under the 1994 Employee Stock Purchase Plan, (the "Purchase Plan"), eligible employees are permitted to have salary withholdings to purchase shares of Common Stock at a price equal to 85% of the lower of the market value of the stock at the beginning or end of each six-month offer period, subject to an annual limitation. Shares of Common Stock issued under the Purchase Plan were 116,774, 100,389 and 101,500 in 2001, 2000, and 1999, respectively, at weighted average prices of \$24.91, \$26.47 and \$14.75, respectively. At December 31, 2001, there were 1,313,727 shares of Common Stock issued under the Purchase Plan and 1,086,273 shares are reserved for future issuance under the Purchase Plan.

*Additional Stock - Based Award Information*

As discussed in Note 1, the Company accounts for its stock-based awards using the intrinsic value method in accordance with APB No. 25, "Accounting for Stock Issued to Employees" and its related interpretations.

SFAS No. 123, "Accounting for Stock-Based Compensation," requires the disclosure of pro forma net income and earnings per share had the Company applied the fair value method as of the beginning of fiscal 1995. Under SFAS 123, the fair value of stock-based awards to employees is calculated through the use of option pricing models, even though such models were developed to estimate the fair value of freely tradable, fully transferable options without vesting restrictions, which significantly differ from the Company's stock option awards. These models also require subjective assumptions, including future stock volatility and expected time to exercise, which greatly affect the calculated values. The Company's calculations were made using the Black-Scholes option pricing model with the following weighted average assumptions: expected life, 60 months; stock volatility, 81.6% in 2001, 80.1% in 2000 and 70.7% in 1999; risk free interest rates, 4.38% in 2001, 5.33% in 2000 and 5.46% in 1999; and no dividends during the expected term. The Company's calculations are based on a multiple option valuation approach and forfeitures are recognized as they occur. The weighted average fair value of options granted under the stock option plans during 2001, 2000, and 1999 was \$17.76, \$27.17 and \$11.01 per share. If the computed fair values of the 2001, 2000 and 1999 awards under both the Option Plans and the Purchase Plan had been amortized to expense over the vesting period of the awards, pro forma net income and net income per share would have been as follows (in thousands, except per share amounts):

	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Pro forma net income (loss)	\$(23,268)	\$ 49,106	\$ 20,452
Pro forma net income (loss) per share:			
Basic	\$ (0.25)	\$ 0.55	\$ 0.24
Diluted	\$ (0.25)	\$ 0.52	\$ 0.22

The amounts used above are based on calculated tax effected values for option awards in 2001, 2000 and 1999 aggregating \$61 million.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

**7. INCOME TAXES**

The provision for income taxes for the years ended December 31 consists of the following (in thousands):

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Currently payable (receivable):			
Federal	\$ (4,016)	\$ 38,205	\$ 19,017
State	<u>(55)</u>	<u>4,509</u>	<u>1,093</u>
Total currently payable (receivable)	<u>(4,071)</u>	<u>42,714</u>	<u>20,110</u>
Deferred income taxes:			
Federal	2,241	(3,209)	(453)
State	<u>(3,704)</u>	<u>(4,401)</u>	<u>(3,638)</u>
Total deferred	<u>(1,463)</u>	<u>(7,610)</u>	<u>(4,091)</u>
Total provision (benefit)	<u>\$ (5,534)</u>	<u>\$ 35,104</u>	<u>\$ 16,019</u>

A reconciliation of the statutory federal income tax rate to the effective tax rate for the years ended December 31 is as follows:

	<u>2001</u>	<u>2000</u>	<u>1999</u>
Statutory federal income tax rate	(35)%	35%	35%
State income taxes (net of federal income tax benefit)	(42)	1	2
Federal research and experimentation tax credits	(33)	(2)	(2)
Export sales tax credit	(4)	(1)	(1)
Non-deductible acquisition costs	17	(1)	(2)
Other	<u>(14)</u>	<u>(1)</u>	<u>(2)</u>
Effective tax rate	<u>(111)%</u>	<u>32%</u>	<u>32%</u>

Temporary differences that give rise to deferred tax assets and liabilities at December 31 are as follows (in thousands):

	<u>2001</u>	<u>2000</u>
Deferred tax assets:		
Accruals and reserves not currently deductible	\$ 13,536	\$ 12,650
Deferred income	4,057	5,901
Tax net operating loss and credit carryforwards	16,280	11,685
Capitalized research and development	<u>3,747</u>	<u>2,296</u>
Total deferred tax asset	<u>37,619</u>	<u>32,532</u>
Deferred tax liabilities:		
Depreciation	(6,599)	(5,463)
State income taxes	(5,016)	(3,082)
Intangible assets	<u>(1,519)</u>	<u>(1,939)</u>
Total deferred tax liability	<u>(13,133)</u>	<u>(10,484)</u>
Net deferred tax asset (current and non-current)	<u>\$ 24,486</u>	<u>\$ 22,048</u>

**MICREL, INCORPORATED**  
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Included in net deferred assets are tax net operating loss and credit carryforwards. Due to the Company's acquisition of Synergy, the Company has available pre-ownership change federal and state net operating loss carryforwards of approximately \$6.0 million and \$400,000, respectively, which expire beginning in 2006 and 2000. These pre-ownership change net operating loss carryforwards are subject under Section 382 of the Internal Revenue Code to an annual limitation estimated to be approximately \$500,000. Due to the Company's acquisition of Kendin Communications, the Company has available pre-ownership change federal and state net operating loss carryforwards of approximately \$3.8 million and \$3.2 million, respectively, which expire beginning in 2012 and 2005. These pre-ownership change net operating loss carryforwards may be subject under Section 382 of the Internal Revenue Code to an annual limitation. In addition, the Company has available federal research and state credit carryforwards of approximately \$2.0 million and \$10.6 million, respectively. Regarding the state credit carryforwards, approximately \$2.6 million represents pre-ownership change carryforwards subject to the Section 382 annual limitation.

**8. OPERATING LEASES**

The Company leases its facilities under operating lease agreements that expire in 2003, 2005, 2006, and 2011. The lease agreements provide for escalating rental payments over the lease periods. Rent expense is recognized on a straight-line basis over the term of the lease. Deferred rent represents the difference between rental payments and rent expense recognized on a straight-line basis. Future minimum payments under these agreements are as follows (in thousands):

<u>Year Ending</u> <u>December 31,</u>	
2002	\$ 4,693
2003	4,565
2004	4,579
2005	3,512
2006	2,418
Thereafter	<u>4,771</u>
	<u>\$ 24,538</u>

Rent expense under operating leases was (in thousands): \$4,593, \$3,745, and \$2,855 for the years ended December 31, 2001, 2000, and 1999, respectively.

**9. PROFIT-SHARING 401(k) PLAN**

The Company has a profit-sharing plan and deferred compensation plan (the "Plan"). All employees completing one month of service are eligible to participate in the Plan. Participants may contribute 1% to 15% of their annual compensation on a before tax basis, subject to Internal Revenue Service limitations. Profit-sharing contributions by the Company are determined at the discretion of the Board of Directors. The Company accrued \$0 in 2001, \$1.8 million in 2000 and \$830,000 in 1999. Participants vest in Company contributions ratably over six years of service.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

**10. SIGNIFICANT CUSTOMERS**

In 2001, one customer accounted for \$24.1 million (11.1%) of net revenues. In 2000, one customer, a distributor, accounted for \$32.2 million (10.0%) of net revenues. In 1999 no single customer accounted for ten percent or more of net revenues. At December 31, 2001, two customers accounted for 18% and 14% of total accounts receivable. At December 31, 2000, no customer accounted for 10% or more of total accounts receivable.

**11. LITIGATION**

The semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. To the extent that the Company becomes involved in such intellectual property litigation, it could result in substantial costs and diversion of resources to the Company and could have a material adverse effect on the Company's financial condition or results of operations.

On July 2, 1999, National Semiconductor Corporation ("National"), a competitor of the Company, filed a complaint against the Company, entitled National Semiconductor Corporation v. Micrel Semiconductor, Inc. in the United States District Court, Northern District of California, in San Jose, California, alleging that the Company infringes five National Semiconductor patents. The complaint in the lawsuit seeks unspecified compensatory damages for infringement, and treble damages as well as permanent injunctive relief against further infringement of the National patents at issue. The Company intends to continue defending itself against these claims. The litigation is currently in the motion and discovery phase. An initial trial date has been set by the Court for September 16, 2002.

On February 26, 1999, the Lemelson Medical, Education & Research Foundation (the "Lemelson Partnership") filed a complaint which was served on the Company on June 15, 1999, entitled Lemelson Medical, Education & Research Foundation, Limited Partnership v. Lucent Technologies Inc., et al. in the United States District Court in Phoenix, Arizona, against eighty-eight defendants, including the Company, alleging infringement of Lemelson Foundation patents. The complaint in the lawsuit seeks unspecified compensatory damages, treble damages and attorneys' fees, as well as injunctive relief against further infringement of the Lemelson patents at issue. The Company intends to continue to defend itself against these claims. The case is currently in the motion and discovery phase and no trial date has been set.

On May 9, 1994, Linear Technology Corporation ("Linear" or "LTC"), a competitor of the Company, filed a complaint against the Company, entitled Linear Technology Corporation v. Micrel, Incorporated, in the United States District Court in San Jose, California, alleging patent and copyright infringement and unfair competition. All claims, except the patent infringement claim, have been settled or dismissed. In this lawsuit, Linear claimed that two of the Company's products infringed one of Linear's patents. The complaint in the lawsuit sought unspecified compensatory damages, treble damages and attorneys' fees as well as preliminary and permanent injunctive relief against infringement of the Linear patent at issue. On August 20, 1999, the United States District Court in San Jose adjudicated in favor of the Company in this patent infringement suit brought by the plaintiff. The plaintiff alleged in the suit that the Company had infringed upon U.S. Patent No. 4,755,741, which covers design techniques used to increase the efficiency of switching regulators. The United States District Court in San Jose found the patent to be invalid under the "on sale bar" defense as the plaintiff had placed integrated circuits containing the alleged invention on sale more than a year before

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

filing its patent application. The United States District Court in San Jose dismissed the plaintiff's complaint on the merits of the case and awarded the Company its legal costs. A notice of appeal of the Judgment was filed by Linear with the United States Court of Appeal for the Federal Circuit ("CAFC") on September 17, 1999. After briefing and oral argument by both companies, on December 28, 2001 the CAFC reversed the District Court's judgment of invalidity and remanded the case to the District Court. The Company intends to continue to vigorously defend itself against the claims set forth in the lawsuit.

On June 16, 1999, Paul Boon ("Boon" or "plaintiff"), an ex-employee of the Company, filed a complaint in the Superior Court of California entitled Paul Boon v. Micrel Incorporated, dba Micrel Semiconductor, alleging breach of employment contract, discrimination based upon age, and wrongful termination in violation of public policy. On October 12, 2000, Boon filed an amended complaint alleging breach of an implied covenant of good faith and fair dealing, and breach of written agreement, in addition to the original causes of action. On February 23, 2001, a jury decided that the Company had breached an employment contract with plaintiff and awarded plaintiff \$1.3 million. On April 13, 2001, the Company filed a motion for judgement notwithstanding the verdict or alternatively, a motion for new trial. On May 18, 2001, the Court granted the Company's motion, issuing an order that vacated and set aside the judgement in favor of Boon, and ordered a new trial on all issues. A new trial date was set for July 16, 2001. Prior to the beginning of trial, the parties settled the matter. On July 27, 2001, the case was dismissed by the Court.

The Company believes that the ultimate outcome of the legal actions discussed above will not result in a material adverse effect on the Company's financial condition, results of operation or cash flows. However, litigation is subject to inherent uncertainties, and no assurance can be given that the Company will prevail in these lawsuits. Accordingly, the pending lawsuits, as well as potential future litigation with other companies, could result in substantial costs and diversion of resources and could have a material adverse effect on the Company's financial condition, results of operations or cash flows.

Certain additional claims and lawsuits have arisen against the Company in its normal course of business. The Company believes that these claims and lawsuits will not have a material adverse effect on the Company's financial condition, results of operation or cash flows.

In the event of an adverse ruling in any intellectual property litigation that now exists or might arise in the future, the Company might be required to discontinue the use of certain processes, cease the manufacture, use and sale of infringing products, expend significant resources to develop non-infringing technology or obtain licenses to the infringing technology. There can be no assurance, however, that under such circumstances, a license would be available under reasonable terms or at all. In the event of a successful claim against the Company and the Company's failure to develop or license substitute technology on commercially reasonable terms, the Company's financial condition, results of operations, or cash flows could be adversely affected.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

**12. SEGMENT REPORTING**

SFAS No.131 requires disclosures regarding products and services, geographic areas, and major customers. The Company operates in two reportable segments: standard products and custom and foundry products. For the year ended December 31, 2001, the Company recorded revenue from customers throughout the United States; France, the U.K., Finland, Germany, Italy, Switzerland, Israel, Spain, Ireland, Sweden, and The Netherlands (collectively referred to as "Europe"); Korea; Japan; Taiwan; Singapore, Hong Kong, China, and Malaysia (collectively referred to as "Other Asian Countries"); and Canada.

Net Revenues by Segment (in thousands):	<u>Years Ended December 31,</u>		
	<u>2001</u>	<u>2000</u>	<u>1999</u>
Standard Products	\$ 183,103	\$ 275,306	\$ 155,979
Custom and Foundry Products	<u>34,705</u>	<u>71,029</u>	<u>44,037</u>
Total net revenues	<u>\$ 217,808</u>	<u>\$ 346,335</u>	<u>\$ 200,016</u>

Geographic Information (in thousands):	<u>2001</u>		<u>2000</u>		<u>1999</u>
	<u>Total Net Revenues*</u>	<u>Long-Lived Assets</u>	<u>Total Net Revenues*</u>	<u>Long-Lived Assets</u>	<u>Total Net Revenues*</u>
United States of America	\$ 72,755	119,436	\$ 155,542	\$110,789	\$ 81,948
Korea	22,535	2	30,305	34	30,037
Japan	11,131	14	20,659	83	15,557
Taiwan	65,831	19	45,109	30	20,640
Other Asian Countries	10,381	1,909	15,551	6,100	8,296
Europe	22,673	1,115	34,263	1,242	21,364
Canada	<u>12,502</u>	<u>—</u>	<u>44,906</u>	<u>—</u>	<u>22,174</u>
Total	<u>\$ 217,808</u>	<u>\$ 122,495</u>	<u>\$ 346,335</u>	<u>\$118,278</u>	<u>\$ 200,016</u>

\* Total revenues are attributed to countries based on "ship to" location of customer.

**MICREL, INCORPORATED**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**Years Ended December 31, 2001, 2000 and 1999**

**13. QUARTERLY RESULTS — UNAUDITED**

(in thousands, except per share amounts)

	<u>Three Months Ended</u>			
	<u>Mar. 31,</u> <u>2001</u>	<u>June 30,</u> <u>2001</u>	<u>Sept. 30,</u> <u>2001</u>	<u>Dec. 31,</u> <u>2001</u>
Net revenues	\$ 74,951	\$ 50,774	\$ 45,064	\$ 47,019
Gross profit	\$ 39,194	\$ 19,527	\$ 15,226	\$ 17,619
Net income (loss)	\$ 9,672	\$ (8,639)	\$ (1,754)	\$ 1,329
Net income per share:				
Basic	\$ 0.11	\$ (0.09)	\$ (0.02)	\$ 0.01
Diluted	\$ 0.10	\$ (0.09)	\$ (0.02)	\$ 0.01
Shares used in computing per share amounts:				
Basic	90,936	91,888	92,533	92,931
Diluted	98,704	91,888	92,533	98,003

	<u>Three Months Ended</u>			
	<u>Mar. 31,</u> <u>2000</u>	<u>June 30,</u> <u>2000</u>	<u>Sept. 30,</u> <u>2000</u>	<u>Dec. 31,</u> <u>2000</u>
Net revenues	\$ 69,018	\$ 80,239	\$ 94,682	\$ 102,396
Gross profit	\$ 38,300	\$ 45,240	\$ 54,696	\$ 59,016
Net income	\$ 12,310	\$ 16,664	\$ 21,251	\$ 23,082
Net income per share:				
Basic	\$ 0.14	\$ 0.19	\$ 0.24	\$ 0.26
Diluted	\$ 0.13	\$ 0.17	\$ 0.21	\$ 0.23
Shares used in computing per share amounts:				
Basic	87,788	88,888	89,811	90,479
Diluted	97,292	97,501	99,394	98,690

## INDEPENDENT AUDITORS' REPORT

To the Board of Directors and Shareholders of  
Micrel, Incorporated:

We have audited the consolidated financial statements of Micrel, Incorporated and its subsidiaries as of December 31, 2001 and 2000, and for each of the three years in the period ended December 31, 2001, and have issued our report thereon dated January 28, 2002. Our audits also included the financial statement schedule of Micrel, Incorporated, listed in Item 14 (a) (2). This financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audits. In our opinion, such financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

DELOITTE & TOUCHE LLP

San Jose, California  
January 28, 2002

**MICREL, INCORPORATED**  
**VALUATION AND QUALIFYING ACCOUNTS**  
**For the Years Ended December 31, 2000, 1999, and 1998**  
(Amounts in thousands)

<u>Description</u>	<u>Balance at Beginning of Year</u>	<u>Additions and Charges to Expenses</u>	<u>Bad Debt Write-offs</u>	<u>Balance at End of Year</u>
<b><u>Year Ended December 31, 2001</u></b>				
Accounts receivable allowance	<u>\$ 4,517</u>	<u>\$( 570)</u>	<u>\$( 61)</u>	<u>\$ 3,886</u>
<b><u>Year Ended December 31, 2000</u></b>				
Accounts receivable allowance	<u>\$ 2,747</u>	<u>\$ 1,803</u>	<u>\$( 33)</u>	<u>\$ 4,517</u>
<b><u>Year Ended December 31, 1999</u></b>				
Accounts receivable allowance	<u>\$ 1,613</u>	<u>\$ 1,141</u>	<u>\$( 7)</u>	<u>\$ 2,747</u>

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized, in San Jose, California on the 1st day of April, 2002.

### MICREL, INCORPORATED

By           /S/ RAYMOND D. ZINN            
Raymond D. Zinn  
*President and Chief Executive Officer*

### POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Raymond D. Zinn and Richard D. Crowley, Jr., and each of them, his attorneys-in-fact, each with the power of substitution, for him in any and all capacities, to sign any amendments to this Report on Form 10-K and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>          /S/ RAYMOND D. ZINN          </u> Raymond D. Zinn	President, Chief Executive Officer and Chairman of the Board of Directors <i>(Principal Executive Officer)</i>	April 1, 2002
<u>          /S/ RICHARD D. CROWLEY, JR.          </u> Richard D. Crowley, Jr.	Vice President, Finance and Chief Financial Officer <i>(Principal Financial and Accounting Officer)</i>	April 1, 2002
<u>          /S/ WARREN H. MULLER          </u> Warren H. Muller	Director	April 1, 2002
<u>          /S/ GEORGE KELLY          </u> George Kelly	Director	April 1, 2002
<u>          /S/ DALE L. PETERSON          </u> Dale L. Peterson	Director	April 1, 2002
<u>          /S/ LARRY L. HANSEN          </u> Larry L. Hansen	Director	April 1, 2002

Micrel, Incorporated  
Exhibits Pursuant to Item 601 of Regulation S-K

<u>Exhibit Number</u>	<u>Description</u>
2.1	Agreement and Plan of Merger and Reorganization among Micrel, Incorporated, Electronic Technology Corporation and ETC Acquisition Sub, Inc., dated as of April 4, 2000 (9)
2.2	Agreement and Plan of Merger and Reorganization among Micrel, Incorporated, Kournikova Acquisition Sub, Inc., Kendin Communications Inc., and with respect to Articles VIII and IX only, John C.C. Fan, as Stockholders' Agent, dated May 4, 2001. (10)
3.1	Amended and Restated Articles of Incorporation of the Registrant. (1)
3.2	Certificate of Amendment of Articles of Incorporation of the Registrant. (2)
3.3	Amended and Restated Bylaws of the Registrant. (2)
3.4	Certificate of Amendment of Articles of Incorporation of the Registrant. (8)
4.1	Certificate for Shares of Registrant's Common Stock. (3)
10.1	Indemnification Agreement between the Registrant and each of its officers and directors. (3)
10.2	1989 Stock Option Plan and form of Stock Option Agreement. (1) *
10.3	1994 Stock Option Plan and form of Stock Option Agreement. (1) *
10.4	1994 Stock Purchase Plan. (3)
10.6	Lease Agreement dated June 24, 1992 between the Registrant and GOCO Realty Fund I, as amended August 6, 1992 and February 5, 1993. (1)
10.8	Form of Domestic Distribution Agreement. (2)
10.9	Form of International Distributor Agreement. (2)
10.10	Second Amendment dated February 20, 1995 between the Registrant and TR Brell Cal Corporation to Lease Agreement dated June 24, 1992 between the Registrant and GOCO Realty Fund I, as amended August 6, 1992 and February 5, 1993. (3)
10.11	Amended and Restated 1994 Employee Stock Purchase Plan, as amended January 1, 1996. (4)
10.12	Commercial Lease between Harris Corporation and Synergy Semiconductor Corporation dated February 29, 1996. (5)
10.13	Standard Industrial/Commercial Single-Tenant Lease Agreement Dated March 3, 2000 between the Registrant and Rose Ventures II (6)
10.14	Loan and Security Agreement Dated March 8, 2000 between the Registrant and Bank of the West (7)
10.15	Loan and Security Agreement Dated June 29, 2001 between the Registrant and Bank of the West (11)
23.1	Independent Auditors' Consent.
24.1	Power of Attorney. (See Signature Page.)

\* Management contract or compensatory plan or agreement.

(1) Incorporated herein by reference to the Company's Registration Statement on Form S-1 ("Registration Statement"), File No. 33-85694, in which this exhibit bears the same number, unless otherwise indicated.

(2) Incorporated by reference to Amendment No. 1 to the Registration Statement, in which this exhibit bears the same number, unless otherwise indicated.

- (3) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1995, in which this exhibit bears the same number, unless otherwise indicated.
- (4) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1996, in which this exhibit bears the number 10.14.
- (5) Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1998, in which this exhibit bears the number 10.14.
- (6) Incorporated by reference to exhibit 10.1 filed with the Company's quarterly report on Form 10-Q for the period ended March 31, 2000.
- (7) Incorporated by reference to exhibit 10.2 filed with the Company's quarterly report on Form 10-Q for the period ended March 31, 2000.
- (8) Incorporated by reference to exhibit 3.1 filed with the Company's quarterly report on Form 10-Q for the period ended September 30, 2000.
- (9) Incorporated by reference to exhibit 10.1 filed with the Company's registration statement on Form S-3 filed with the S.E.C. on May 25, 2000.
- (10) Incorporated by reference to exhibit 10.1 filed with the Company's registration statement on Form S-3 filed with the S.E.C. on June 22, 2001.
- (11) Incorporated by reference to exhibit 10.1 filed with the Company's quarterly report on Form 10-Q for the period ended June 30, 2001.

We consent to the incorporation by reference in Registration Statement Nos. 333-70876, 333-63620 and 333-37808 of Micrel, Incorporated on Form S-3 and in Registration Statement Nos. 333-63618, 33-87222, 33-90396, 333-10167, 333-89223, 333-52136 and 333-37832 of Micrel, Incorporated on Form S-8 of our reports dated January 28, 2002 appearing in this Annual Report on Form 10-K of Micrel, Incorporated for the year ended December 31, 2001.

DELOITTE & TOUCHE LLP

San Jose, California  
March 29, 2002

# Corporate Information

## Officers and Directors

Raymond D. Zinn  
President, Chief Executive Officer,  
Co-Founder and Chairman of the Board

Warren H. Muller  
Director and Co-Founder

Robert Whelton  
Executive Vice President, Operations

Robert J. Barker  
Vice President, Corporate  
Business Development

Richard D. Crowley, Jr.  
Vice President Finance,  
Chief Financial Officer

Mark Downing  
Vice President, Marketing

Carlos Laber  
Vice President, Design

Mark Lunsford  
Vice President, Sales

Carlos Mejia, Jr.  
Vice President, Human Resources

J. Barry Small  
Vice President, Wafer Fab Operations

Dr. Tian-I Liou  
Vice President, General Manager  
Kendin Operations

J. Vincent Tortolano  
Vice President, General Counsel  
and Secretary

Scott Ward  
Vice President, Test Operations

Thomas Wong  
Vice President, High Bandwidth Products

Richard Zelenka  
Vice President, Quality Assurance

George Kelly  
Director

Larry L. Hansen  
Director

Dale L. Peterson  
Director

## Transfer Agent and Registrar

Mellon Investor Services, LLC  
San Francisco, California, U.S.A.  
1-800-356-2017

## Independent Auditors

Deloitte & Touche, LLP  
San Jose, California, U.S.A.

## SEC Form 10-K

Additional copies of our annual report and form 10-K as filed with the Securities and Exchange Commission for the last fiscal year ended December 31, 2001, may be obtained without charge.

Direct Your Request to:  
Investor Relations  
Micrel, Incorporated  
1849 Fortune Drive  
San Jose, California 95131, U.S.A.  
1-888-400-7789  
<http://www.micrel.com>

The statements contained in this annual report and the accompanying letter to the Company's shareholders which are not purely historical are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934, as amended, including those statements regarding Micrel's strategies, beliefs, endeavors, focuses, intentions, goals, desires, expectations and anticipations. All forward-looking statements included in this annual report are based on information available to Micrel on the date hereof, and Micrel assumes no obligation to update any such forward-looking statements. It is important to note that the Company's actual results could differ materially from those in such forward-looking statements. Among the factors which could cause actual results to differ materially are the following: business conditions and growth in the personal computer industry, telecommunications industry and general economy, the volume and timing of orders received, changes in product mix, competitive pricing pressures, inventory risk due to shifts in market demand, manufacturing cost and yield issues associated with initiating production at new facilities, business acquisition and potential obsolescence of product offerings. You should also consult the risk factors listed from time to time in the Company's reports filed on Form 10-K, 10-Q and 8-K.

**MICREL**  
SEMICONDUCTOR

1849 Fortune Drive  
San Jose, California 95131, U.S.A.

[www.micrel.com](http://www.micrel.com)