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CIENA CORP
Form 424B4
February 06, 2001

1

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Registration No. 333-53922

[CIENA LOGO]

\$600,000,000

CIENA CORPORATION
3.75% Convertible Notes due February 1, 2008

You may convert the notes into shares of CIENA Corporation's common stock at any time before their maturity or their prior redemption or repurchase by CIENA. The notes will mature on February 1, 2008. The conversion rate is 9.5808 shares per each \$1,000 principal amount of notes, subject to adjustment in some circumstances. This is equivalent to a conversion price of approximately \$104.38 per share. On February 5, 2001, the last reported sale price for CIENA's common stock on the Nasdaq National Market was \$84.50 per share. The common stock is quoted on the Nasdaq National Market under the symbol "CIEN".

CIENA will pay interest on the notes on February 1 and August 1 of each year. The first interest payment will be made on August 1, 2001. The notes will be issued only in denominations of \$1,000 and integral multiples of \$1,000.

On or after the third business day after February 1, 2004, CIENA has the option to redeem all or a portion of the notes that have not been previously converted at the redemption prices set forth in this prospectus. You have the option, subject to certain conditions, to require CIENA to repurchase any notes held by you in the event of a "change in control", as described in this prospectus, at a price equal to 100% of the principal amount of the notes plus accrued interest to the date of repurchase.

Concurrently with this offering, CIENA is also conducting a separate public offering of 11,000,000 shares of its common stock by a separate prospectus. Neither the completion of the common stock offering nor the completion of this convertible debt offering is contingent upon the other.

See "Risk Factors" beginning on page 8 in this prospectus to read about certain factors you should consider before buying the notes.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY OTHER REGULATORY BODY HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THE PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

| | Per Note ----- | Total ----- |
|------------------------------------------|-------------------|----------------|
| Initial public offering price..... | 100.0% | \$600,000 |
| Underwriting discount..... | 3.0% | \$ 18,000 |
| Proceeds, before expenses, to CIENA..... | 97.0% | \$582,000 |

The offering prices set forth above do not include accrued interest, if any.

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Interest on the notes will accrue from the date of original issuance of the notes, expected to be February 9, 2001.

To the extent the underwriters sell more than \$600,000,000 of notes at the initial public offering price, the underwriters have the option to purchase up to an additional \$90,000,000 of notes from CIENA at the initial offering price less the underwriting discount.

The underwriters expect to deliver the notes in book-entry form only through the facilities of the Depository Trust Company in New York, New York on February 9, 2001.

GOLDMAN, SACHS & CO.

MORGAN STANLEY DEAN WITTER

BANC OF AMERICA SECURITIES LLC

ROBERTSON STEPHENS

Prospectus dated February 5, 2001.

2

PROSPECTUS SUMMARY

You should read this summary together with the entire prospectus, including the more detailed information in our financial statements and accompanying notes incorporated by reference in this prospectus.

CIENA CORPORATION

We are an established leader in the rapidly growing intelligent optical networking equipment market. We offer a comprehensive portfolio of products for communications service providers worldwide, including long-distance and metropolitan optical transport, intelligent optical core switching and network management solutions. Our customers include long-distance carriers, competitive and incumbent local exchange carriers, Internet service providers and wholesale carriers. We have pursued a strategy to develop and leverage the power of our technologies to change the fundamental economics of building carrier-class tele- and data-communications networks, thereby providing our customers with a competitive advantage. Our intelligent optical networking products are designed to enable carriers to deliver any time, any size, any priority bandwidth to their customers. Our optical networking products add intelligence to the network, enabling communications service providers to optimize network capacity and to offer a new range of services on demand at a substantially lower cost than traditional products. Furthermore, our products allow service providers to optimize their investments in fiber-optic infrastructure while positioning them to easily transition to next-generation optical network architectures.

Rapidly increasing use of the Internet and Internet-based applications and services has fueled dramatic growth in the volume of data traffic in the public communications network. In response, communications service providers are making significant investments to upgrade their network infrastructure by laying fiber-optic cable and installing transmission equipment based on optical technology. While advances in optical technology have enabled carriers to expand network capacity, they continue to face critical challenges including network scalability, escalating capital and operational costs and network management difficulties.

We provide a comprehensive portfolio of optical networking solutions that address these challenges by optimizing bandwidth in critical areas of service provider networks: long-distance and metropolitan optical transport, intelligent optical core switching and network management. Our solutions provide our

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customers with the following benefits:

- greater bandwidth capacity;
- simplified and more scalable networks;
- enhanced network manageability;
- lower capital and operational costs;
- ability to provision high-bandwidth services rapidly and flexibly; and
- ability to offer new revenue-generating services.

We have shipped products to over 35 customers, including 27 new customers since the end of fiscal 1998. Our customers include:

- Bell South;
- Broadwing;
- Cable & Wireless (U.S. & U.K.);
- CrossWave Communications;
- Enron;
- GTS (now known as eBone);
- MobilCom AG;
- PSINet;
- Qwest;
- Sprint;
- Telecom Developpement;
- Telia AB;
- Verizon;
- WorldCom (U.S. & Europe); and
- XO Communications.

3

3

Our strategy is to maintain and build upon our market leadership in the development and deployment of intelligent optical networking systems and to leverage our bandwidth-optimizing technologies to provide solutions for both voice and data communications-based networks. Important elements of our strategy are to:

- expand our base of customers using our intelligent optical networking solutions;
- increase sales and marketing efforts;
- continue to emphasize technical support and customer service;

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- maintain world class manufacturing capability; and
- leverage bandwidth-optimizing technology and know-how.

Our revenue and net income for the fiscal year ended October 31, 2000 were \$858.8 million and \$81.4 million, respectively. Of our revenue for this period, 33.0% was derived from international sales. We recorded revenue for the fiscal year ended October 31, 2000 from sales to 32 customers, including 12 new customers.

We were incorporated in Delaware in 1992. Our principal executive offices are located at 1201 Winterson Road, Linthicum, Maryland 21090. Our telephone number is (410) 865-8500.

RATIO OF EARNINGS TO FIXED CHARGES

We present below the ratio of our earnings to our fixed charges for each of the fiscal years ended October 31, 1996, 1997, 1998, 1999 and 2000:

| | YEARS ENDED OCTOBER 31, | | | | |
|-----------------------------------------|-------------------------|--------|-------|-------|-------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| Ratio of earnings to fixed charges..... | 33.8x | 153.1x | 36.2x | -- | 25.9 |
| | ===== | ===== | ===== | ===== | ===== |

These computations include CIENA and its consolidated subsidiaries. For these ratios "earnings" represents income (loss) before taxes plus fixed charges. "Fixed charges" consists of interest on all indebtedness and interest expense under operating leases deemed by us to be representative of the interest factor. Due to the loss before income taxes in the year ended October 31, 1999, the ratio coverage was less than 1:1. CIENA must have generated additional earnings of \$5,991,000 to achieve a coverage ratio of 1:1 for the year ended October 31, 1999.

4

4

THE OFFERING

Securities offered..... \$600.0 million aggregate principal amount of 3.75% Convertible Notes due February 1, 2008 (\$690.0 million if the underwriters exercise their overallotment option).

Offering price..... 100% of the principal amount of the notes, plus accrued interest, if any, from February 9, 2001.

Interest..... We will pay interest on the notes semi-annually on February 1 and August 1 of each year, commencing August 1, 2001.

Conversion..... You may convert your notes into shares of our common stock at a conversion rate of 9.5808 shares of common stock per \$1,000 principal amount of notes. This is equivalent to a conversion price of approximately \$104.38 per share. The conversion rate is subject to adjustment in certain events.

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The notes will be convertible at any time before the close of business on the maturity date, unless we have previously redeemed or repurchased the notes. You may convert your notes called for redemption or submitted for repurchase up to and including the business day immediately preceding the date fixed for redemption or repurchase, as the case may be.

Global note; Book-entry

system..... We will issue the notes only in fully registered form with interest coupons and in minimum denominations of \$1,000. The notes will be evidenced by one or more global notes deposited with the trustee for the notes, as custodian for DTC. Beneficial interests in the global note will be shown on, and transfers of those beneficial interests can only be made through, records maintained by DTC and its participants.

Optional redemption by

CIENA..... On or after the third business day after February 1, 2004, we have the right, at any time, to redeem some or all of your notes at the redemption prices set forth in this prospectus plus accrued and unpaid interest.

Repurchase at the option of the holders upon a change in control.....

In the event of a change in control, as that term is defined in "Description of the Notes -- Repurchase at Option of Holders Upon a Change in Control", you will have the right, subject to conditions and restrictions, to require us to repurchase some or all of your notes at a price equal to 100% of the principal amount, plus accrued and unpaid interest to the repurchase date. The repurchase price is payable in cash or, at our option and subject to certain conditions, in shares of our common stock, valued at 95% of the average closing sales prices of the common stock for the five trading days preceding and including the third trading day prior to the repurchase date.

Use of proceeds.....

We will use the net proceeds from the offering for general corporate purposes, which may include working capital, capital expenditures and acquisitions. We have not determined the amount we plan to spend on any of the uses described above or the timing of these expenditures. Pending our use of the net

5

5

proceeds, we intend to invest them in short-term interest-bearing, investment grade securities.

Events of default.....

The following will be events of default under the indenture for the notes:

- we fail to pay principal of, or any premium on,

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any note when due, whether or not the payment is prohibited by the subordination provisions of the indenture;

- we fail to pay any interest on any note when due and that default continues for 30 days;
- we fail to provide the notice that we are required to give in the event of a change in control;
- we fail to perform any other covenant in the indenture and that failure continues for 60 days after written notice to us by the trustee or the holders of at least 25% in aggregate principal amount of outstanding notes;
- we or any of our significant subsidiaries fail to pay when due at final maturity thereof, either at its maturity or upon acceleration, any indebtedness under any bonds, debentures, notes or other evidences of indebtedness for money borrowed, or any guarantee thereof, in excess of \$25 million if the indebtedness is not discharged, or the acceleration is not annulled, within 30 days after written notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the outstanding notes; and
- events of bankruptcy, insolvency or reorganization with respect to us or any of our significant subsidiaries specified in the indenture.

Listing of notes..... The notes will not be listed on any securities exchange or quoted on the Nasdaq National Market. Our common stock is quoted on the Nasdaq National Market under the symbol "CIEN".

Governing law..... The indenture and the notes will be governed by the laws of the State of New York.

CONCURRENT COMMON STOCK OFFERING

Concurrent with this offering of convertible notes, CIENA is conducting a separate public offering of 11,000,000 shares of its common stock by a separate prospectus. Neither the completion of the common stock offering nor the completion of this convertible debt offering is contingent upon the other.

6

6

RECENT DEVELOPMENTS

PROPOSED ACQUISITION OF CYRAS SYSTEMS, INC.

On December 19, 2000, we announced an agreement to acquire all of the outstanding capital stock, options and warrants of Cyras Systems, Inc., a privately held provider of next-generation optical networking systems based in Fremont, California. As consideration in the acquisition, we agreed to issue a total of approximately 27 million shares of our common stock and indirectly

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assume \$150 million principal amount of Cyras's convertible subordinated indebtedness.

Cyras is designing and developing next-generation optical networking solutions for telecommunications carriers. The Cyras K2 product, which is in the development phase and is not yet ready for commercial manufacturing or deployment, will enable carriers of metropolitan area networks to consolidate multiple legacy network elements into a single transport and switching platform. This consolidation results in the increased cost effectiveness, network optimization and scalability that are demanded in today's increasingly data-oriented carrier environment. We believe that the addition of the K2 product to our portfolio will increase our market opportunity by leveraging this leading-edge product for the metropolitan network with our CoreDirector(TM) and long-haul optical transport presence, extensive sales force and global services and support infrastructure. These capabilities will enable us to offer carriers seamless end-to-end service creation and management with unmatched scalability, agility and efficiency using our LightWorks architecture for smart bandwidth provisioning and network-wide service management.

We will account for the Cyras acquisition as a purchase. We expect to complete the acquisition in the first calendar quarter of 2001. If and when we complete the acquisition of Cyras, we will record a charge for acquired in-process research and development, which we currently estimate will be approximately \$16.4 million, and will amortize goodwill and other intangibles of approximately \$1.6 billion over a three- to seven-year period and deferred stock compensation of approximately \$255 million over the relevant vesting periods. We expect the Cyras acquisition to be dilutive to our fiscal 2001 earnings by \$0.19 to \$0.22 per share and, excluding one-time charges associated with the acquisition and amortization of intangibles and deferred stock compensation, accretive during the latter half of our fiscal 2002, assuming expected revenue and cost synergies as well as anticipated product cost and pricing.

For the nine months ended September 30, 2000, Cyras recorded no revenues, incurred operating expenses of \$53.8 million and had a net loss of \$54.4 million. Additional audited and unaudited financial information of Cyras, and unaudited pro forma combined financial statements showing the pro forma effect of the acquisition on our historical financial statements, are incorporated in this prospectus by reference to our Form 8-K report filed on January 18, 2001.

The Cyras acquisition is subject to customary closing conditions, including regulatory approvals. See "Risk Factors -- Risks Related to the Cyras Acquisition".

7

7

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully consider the risk factors set forth below as well as other information we include or incorporate by reference in this prospectus and the additional information in the other reports we file with the SEC. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect us.

OUR RESULTS CAN BE UNPREDICTABLE

Our ability to recognize revenue during a quarter from a customer depends upon our ability to ship product and satisfy other contractual obligations of a customer sale in that quarter. In general, revenue and operating results in any reporting period may fluctuate due to factors including:

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- loss of a customer;
- the timing and size of orders from customers;
- changes in customers' requirements, including changes to orders from customers;
- the introduction of new products by us or our competitors;
- changes in the price or availability of components for our products;
- readiness of customer sites for installation;
- satisfaction of contractual customer acceptance criteria and related revenue recognition issues;
- manufacturing and shipment delays and deferrals;
- increased service, warranty or repair costs;
- the timing and amount of employer payroll tax to be paid on employee gains on stock options exercised; and
- changes in general economic conditions as well as those specific to the telecommunications and intelligent optical networking industries.

Our intelligent optical networking products require a relatively large investment, and our target customers are highly demanding and technically sophisticated. There are only a limited number of potential customers in each geographic market, and each customer has unique needs. As a result, the sales cycles for our products are long, often more than a year between our initial contact with the customer and its commitment to purchase.

We budget expense levels on our expectations of long-term future revenue. These budgets reflect our substantial investment in the financial, engineering, manufacturing and logistics support resources we think we may need for large potential customers, even though we do not know the volume, duration or timing of any purchases from them. In addition, we make a substantial investment in financial, manufacturing and engineering resources for the development of new and enhanced products. As a result, we may continue to experience high inventory levels, operating expenses and general overhead.

We have experienced rapid expansion in all areas of our operations, particularly in the manufacturing of our products. Our future operating results will depend on our ability to continue to expand our manufacturing facilities in a timely manner so that we can satisfy our delivery commitments to our customers. Our failure to expand these facilities in a timely manner and meet our customer delivery commitments would harm our business, financial condition and results of operations.

Our product development efforts will require us to incur ongoing development and operating expenses, and any delay in the contributions from new products, such as the MultiWave

CoreDirector product line, and enhancements to our existing optical transport products could harm our business.

CHANGES IN TECHNOLOGY OR THE DELAYS IN THE DEPLOYMENT OF NEW PRODUCTS COULD HURT

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OUR NEAR-TERM PROSPECTS

The market for optical networking equipment is changing at a rapid pace. The accelerated pace of deregulation and the adoption of new technology in the telecommunications industry likely will intensify the competition for improved optical networking products. Our ability to develop, introduce and manufacture new and enhanced products will depend upon our ability to anticipate changes in technology, industry standards and customer requirements. Our failure to introduce new and enhanced products in a timely manner could harm our competitive position and financial condition. Several of our new products, including the MultiWave CoreDirector and the enhancements to the MultiWave CoreStream products, are based on complex technology which could result in unanticipated delays in the development, manufacture or deployment of these products. In addition, our ability to recognize revenue from these products could be adversely affected by the extensive testing required for these products by our customers. The complexity of technology associated with support equipment for these products could also result in unanticipated delays in their deployment. These delays could harm our competitive and financial condition.

Competition from competitive products, the introduction of new products embodying new technologies, a change in the requirements of our customers, or the emergence of new industry standards could delay or hinder the purchase and deployment of our products and could render our existing products obsolete, unmarketable or uncompetitive from a pricing standpoint. The long certification process for new telecommunications equipment used in the networks of the regional Bell operating companies, referred to as RBOCs, has in the past resulted in and may continue to result in unanticipated delays which may affect the deployment of our products for the RBOC market.

WE FACE INTENSE COMPETITION WHICH COULD HURT OUR SALES AND PROFITABILITY

The market for optical networking equipment is extremely competitive. Competition in the optical networking installation and test services market is based on varying combinations of price, functionality, software functionality, manufacturing capability, installation, services, scalability and the ability of the system solution to meet customers' immediate and future network requirements. A small number of very large companies, including Alcatel, Cisco Systems, Fujitsu Group, Hitachi, Lucent Technologies, NEC Corporation, Nortel Networks, Siemens AG and Telefon AB LM Ericsson, have historically dominated the telecommunications equipment industry. These companies have substantial financial, marketing, manufacturing and intellectual property resources. In addition, these companies have substantially greater resources to develop or acquire new technologies than we do and often have existing relationships with our potential customers. We sell systems that compete directly with product offerings of these companies and in some cases displace or replace equipment they have traditionally supplied for telecommunications networks. As such, we represent a specific threat to these companies. The continued expansion of our product offerings with the MultiWave CoreDirector product line and enhancements to our MultiWave CoreStream product line likely will increase this perceived threat. We expect continued aggressive tactics from many of these competitors, including:

- price discounting;
- early announcements of competing products and other marketing efforts;
- "one-stop shopping" options;
- customer financing assistance;
- marketing and advertising assistance; and

- intellectual property disputes.

These tactics can be particularly effective in a highly concentrated customer base such as ours. Our customers are under increasing competitive pressure to deliver their services at the lowest possible cost. This pressure may result in pricing for optical networking systems becoming a more important factor in customer decisions, which may favor larger competitors that can spread the effect of price discounts in their optical networking products across a larger array of products and services and across a larger customer base than ours. If we are unable to offset any reductions in the average sales price for our products by a reduction in the cost of our products, our gross profit margins will be adversely affected. Our inability to compete successfully against our competitors and maintain our gross profit margins would harm our business, financial condition and results of operations.

Many of our customers have indicated that they intend to establish a relationship with at least two vendors for optical networking products. With respect to customers for whom we are the only supplier, we do not know when or if these customers will select a second vendor or what impact the selection might have on purchases from us. If a second optical networking supplier is chosen, these customers could reduce their purchases from us, which could in turn have a material adverse effect on us.

New competitors are emerging to compete with our existing products as well as our future products. We expect new competitors to continue to emerge as the optical networking market continues to expand. These companies may achieve commercial availability of their products more quickly due to the narrow and exclusive focus of their efforts. Several of these competitors have raised significantly more cash and they have in some cases offered stock in their companies, positions on technical advisory boards, or have provided significant vendor financing to attract new customers. In particular, a number of companies, including several start-up companies and recently public companies that have raised substantial equity capital, have announced products that compete with our products. Our inability to compete successfully against these companies would harm our business, financial condition and results of operations.

WE MAY NOT BE ABLE TO SUCCESSFULLY COMPLETE DEVELOPMENT AND ACHIEVE COMMERCIAL ACCEPTANCE OF NEW PRODUCTS

Our MultiWave CoreDirector CI product and some enhancements to the MultiWave CoreDirector and MultiWave CoreStream product lines and LightWorks Toolkit are in the development phase and are not yet ready for commercial manufacturing or deployment. We expect to offer additional releases of the MultiWave CoreDirector product over the life of the product and continue to enhance features of our MultiWave CoreStream product, including the longer reach and higher channel count functionality of our product line. The initial release of MultiWave CoreDirector CI is expected in limited availability for customer trials during the first calendar quarter of 2001. The maturing process from laboratory prototype to customer trials, and subsequently to general availability, involves a number of steps, including:

- completion of product development;
- the qualification and multiple sourcing of critical components, including application-specific integrated circuits, referred to as ASICs;
- validation of manufacturing methods and processes;
- extensive quality assurance and reliability testing, and staffing of

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- testing infrastructure;
- validation of embedded software;
- establishment of systems integration and systems test validation requirements; and
- identification and qualification of component suppliers.

Each of these steps in turn presents serious risks of failure, rework or delay, any one of which could decrease the speed and scope of product introduction and marketplace acceptance

10

10

of the product. Specialized ASICs and intensive software testing and validation, in particular, are key to the timely introduction of enhancements to the MultiWave CoreDirector product line, and schedule delays are common in the final validation phase, as well as in the manufacture of specialized ASICs. In addition, unexpected intellectual property disputes, failure of critical design elements, and a host of other execution risks may delay or even prevent the introduction of these products. If we do not develop and successfully introduce these products in a timely manner, our business, financial condition and results of operations would be harmed.

The markets for our MultiWave CoreDirector product line are relatively new. We have not established commercial acceptance of these products, and we cannot assure you that the substantial sales and marketing efforts necessary to achieve commercial acceptance in traditionally long sales cycles will be successful. If the markets for these products do not develop or the products are not accepted by the market, our business, financial condition and results of operations would suffer.

WE DEPEND ON A LIMITED NUMBER OF SUPPLIERS AND FOR SOME ITEMS WE DO NOT HAVE A SUBSTITUTE SUPPLIER

We depend on a limited number of suppliers for components of our products, as well as for equipment used to manufacture and test our products. Our products include several high-performance components for which reliable, high-volume suppliers are particularly limited. Furthermore, some key optical and electronic components we use in our optical transport systems are currently available only from sole sources, and in some cases, that sole source is also a competitor. A worldwide shortage of some electrical components has caused an increase in the price of components. Any delay in component availability for any of our products could result in delays in deployment of these products and in our ability to recognize revenues. These delays could also harm our customer relationships.

Failures of components can affect customer confidence in our products and could adversely affect our financial performance and the reliability and performance of our products. On occasion, we have experienced delays in receipt of components and have received components that do not perform according to their specifications. Any future difficulty in obtaining sufficient and timely delivery of components could result in delays or reductions in product shipments which, in turn, could harm our business. A recent wave of consolidation among suppliers of these components, such as the recent and pending purchases of E-TEK and SDL, respectively, by JDS Uniphase, could adversely impact the availability of components on which we depend. Delayed deliveries of key components from these sources could adversely affect our business.

Any delays in component availability for any of our products or test equipment could result in delays in deployment of these products and in our

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ability to recognize revenue from them. These delays could also harm our customer relationships and our results of operations.

WE RELY ON CONTRACT MANUFACTURERS FOR OUR PRODUCTS

We rely on a small number of contract manufacturers to manufacture our CoreDirector product line and some of the components for our other products. The qualification of these manufacturers is an expensive and time-consuming process, and these contract manufacturers build modules for other companies, including for our competitors. In addition, we do not have contracts in place with many of these manufacturers. We may not be able to effectively manage our relationships with our manufacturers and we cannot be certain that they will be able to fill our orders in a timely manner. If we cannot effectively manage these manufacturers or they fail to deliver components in a timely manner, it may have an adverse effect on our business and results of operations.

11

11

SOME OF OUR SUPPLIERS ARE ALSO OUR COMPETITORS

Some of our component suppliers are both primary sources for components and major competitors in the market for system equipment. For example, we buy components from:

- Alcatel;
- Lucent Technologies;
- NEC Corporation;
- Nortel Networks; and
- Siemens AG.

Each of these companies offers optical communications systems and equipment that are competitive with our products. Also, Lucent is the sole source of two components and is one of two suppliers of two others. Recently, Lucent has announced that it intends to spin off a portion of its components business. Our supply of components from Lucent may be adversely affected by this restructuring. Alcatel and Nortel are suppliers of lasers used in our products, and NEC is a supplier of an important piece of testing equipment. A decline in reliability or other adverse change in these supply relationships could harm our business.

SALES TO EMERGING CARRIERS MAY INCREASE THE UNPREDICTABILITY OF OUR RESULTS

As we continue to address emerging carriers, timing and volume of purchasing from these carriers can also be more unpredictable due to factors such as their need to build a customer base, acquire rights of way and interconnections necessary to sell network service, and build out new capacity, all while working within their capital budget constraints. Sales to these carriers may increase the unpredictability of our financial results because even these emerging carriers purchase our products in multi-million dollar increments.

Unanticipated changes in customer purchasing plans also create unpredictability in our results. A portion of our anticipated revenue over the next several quarters is comprised of orders of less than \$25 million each from several customers, some of which may involve extended payment terms or other financing assistance. Our ability to recognize revenue from financed sales to emerging carriers will depend on the relative financial condition of the

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specific customer, among other factors. Further, we will need to evaluate the collectibility of receivables from these customers if their financial conditions deteriorate in the future. Purchasing delays and changes in the financial condition or the amount of purchases by any of these customers could have a material adverse effect on us. In the past we have had to make provisions for the accounts receivables from customers that experienced financial difficulty. If additional customers face similar financial difficulties, our receivables from these customers may become uncollectible, and we would have to write off the asset or decrease the value of the asset to the extent the receivable could not be collected. These write-downs or write-offs would adversely affect our financial performance.

OUR ABILITY TO COMPETE COULD BE HARMED IF WE ARE UNABLE TO PROTECT AND ENFORCE OUR INTELLECTUAL PROPERTY RIGHTS OR IF WE INFRINGE ON INTELLECTUAL PROPERTY RIGHTS OF OTHERS

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We also enter into non-disclosure and proprietary rights agreements with our employees and consultants, and license agreements with our corporate partners, and control access to and distribution of our products, documentation and other proprietary information. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our products is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed. We are involved in an intellectual property dispute regarding the use of our technology and may

12

12

become involved with additional disputes in the future. Such lawsuits can be costly and may significantly divert time and attention from some members of our personnel.

We have received, and may receive in the future, notices from holders of patents in the optical technology field that raise issues of possible infringement by our products. Questions of infringement in the optical networking equipment market often involve highly technical and subjective analysis. We cannot assure you that any of these patent holders or others will not in the future initiate legal proceedings against us, or that we will be successful in defending against these actions. We are involved in an intellectual property dispute regarding the possible infringement of our products. In the past, we have been forced to take a license from the owner of the infringed intellectual property, or to redesign or stop selling the product that includes the challenged intellectual property. If we are sued for infringement and are unsuccessful in defending the suit, we could be subject to significant damages, and our business and customer relationships could be adversely affected.

PRODUCT PERFORMANCE PROBLEMS COULD LIMIT OUR SALES PROSPECTS

The production of new optical networking products and systems with high technology content involves occasional problems as the technology and manufacturing methods mature. If significant reliability, quality or network monitoring problems develop, including those due to faulty components, a number of negative effects on our business could result, including:

- costs associated with reworking our manufacturing processes;

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- high service and warranty expenses;
- high inventory obsolescence expense;
- high levels of product returns;
- delays in collecting accounts receivable;
- reduced orders from existing customers; and
- declining interest from potential customers.

Although we maintain accruals for product warranties, actual costs could exceed these amounts. From time to time, there will be interruptions or delays in the activation of our products at a customer's site. These interruptions or delays may result from product performance problems or from aspects of the installation and activation activities, some of which are outside our control. If we experience significant interruptions or delays that we can not promptly resolve, confidence in our products could be undermined, which could harm our business.

OUR PROSPECTS DEPEND ON DEMAND WHICH WE CANNOT RELIABLY PREDICT OR CONTROL

We may not anticipate changes in direction or magnitude of demand for our products. The product offerings of our competitors could adversely affect the demand for our products. In addition, unanticipated reductions in demand for our products could adversely affect us.

Demand for our products depends on our customers' requirements. These requirements may vary significantly from quarter to quarter due to factors such as:

- the type and quantity of optical equipment needed by our customers;
- the timing of the deployment of optical equipment by our customers;
- the rate at which our current customers fund their network build-outs; and
- the equipment configurations and network architectures our customers want.

Customer determinations are subject to abrupt changes in response to their own competitive pressures, capital requirements and financial performance expectations. These changes could harm our business.

Recently we have experienced an increased level of sales activity that could lead to an upsurge in demand that is reflected in the overall increase in demand for optical networking and similar products in the telecommunications industry. Our results may suffer if we are unable to address this demand adequately by successfully scaling up our manufacturing capacity and hiring additional qualified personnel. To date we have largely depended on our own manufacturing and assembly facilities to meet customer expectations, but we cannot be sure that we can satisfy our customers' expectations in all cases by internal capabilities. In that case, we face the challenge of adequately managing customer expectations and finding alternative means of meeting them. If we fail to manage these expectations we could lose customers or receive smaller orders from customers.

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OUR SUCCESS LARGELY DEPENDS ON OUR ABILITY TO RETAIN KEY PERSONNEL

Our success has always depended in large part on our ability to attract and retain highly-skilled technical, managerial, sales and marketing personnel, particularly those skilled and experienced with optical communications equipment. Our key founders and employees, together with the key founders and employees of our acquired companies, have received a substantial number of our shares and vested options that can be sold at substantial gains. In many cases, these individuals could become financially independent through these sales before our future products have matured into commercially deliverable products. These circumstances may make it difficult to retain and motivate these key personnel.

As we have grown and matured, competitors' efforts to hire our employees have intensified, particularly among competitive start-up companies and other early stage companies. We have agreements in place with most of our employees that limit their ability to work for a competitor and prohibit them from soliciting our other employees and our customers following termination of their employment. Our employees and our competitors may not respect these agreements. We have in the past been required to enforce, and are currently in the process of enforcing, some of these agreements. We expect in the future to continue to be required to resort to legal actions to enforce these agreements and could incur substantial costs in doing so. We may not be successful in these legal actions, and we may not be able to retain all of our key employees or attract new personnel to add to or replace them. The loss of key personnel would likely harm our business.

PART OF OUR STRATEGY INVOLVES PURSUING STRATEGIC ACQUISITIONS THAT MAY NOT BE SUCCESSFUL

As part of our strategy for growth, we will consider acquiring businesses that are intended to accelerate our product and service development processes and add complementary products and services. We may issue equity or incur debt to finance these acquisitions and may incur significant amortization expenses related to goodwill and other intangible assets. Acquisitions involve a number of operational risks, including risks that the acquired business will not be successfully integrated, may distract management attention and may involve unforeseen costs and liabilities.

RISKS RELATED TO THE CYRAS ACQUISITION

THE ACQUISITION MAY NOT BE COMPLETED

We currently expect to complete the acquisition of Cyras Systems, Inc. in the first calendar quarter of 2001, but because completion is subject to regulatory approvals and a shareholder vote of Cyras, the acquisition may be delayed or not completed at all.

WE MAY NOT BE ABLE TO ACHIEVE THE BENEFITS WE SEEK FROM THE ACQUISITION OR TO INTEGRATE CYRAS SUCCESSFULLY INTO OUR OPERATIONS

Even if the acquisition of Cyras is completed, we cannot be certain that we will achieve the benefits we envision from the acquisition. These benefits, including the accretion to our earnings,

which we expect to achieve in the second half of fiscal 2002, depend on our ability to successfully complete the development of the Cyras K2 product and integrate it into our product portfolio, achieve market acceptance for the Cyras

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product, achieve our revenue expectations for the Cyras product and the expected synergies, and successfully integrate and retain Cyras personnel. Cyras's product is in the development phase and is not yet ready for commercial manufacturing or deployment, and we cannot assure you that the substantial efforts necessary to complete development of the product and achieve commercial acceptance will be successful. We have only limited experience in significant acquisitions and cannot assure you that this acquisition will be successful.

The integration of Cyras into our operations following our merger with Cyras involves a number of risks, including:

- difficulty assimilating Cyras's operations and personnel;
- diversion of management attention;
- potential disruption of ongoing business;
- inability to retain key personnel;
- inability to maintain uniform standards, controls, procedures and policies; and
- impairment of relationships with employees, customers or vendors.

Failure to overcome these risks or any other problems encountered in connection with the merger could have a material adverse effect on our business, results of operations and financial condition.

SIGNIFICANT MERGER-RELATED CHARGES AGAINST EARNINGS WILL REDUCE OUR EARNINGS IN THE QUARTER IN WHICH WE CONSUMMATE THE MERGER AND DURING THE POST-MERGER INTEGRATION PERIOD

If and when we complete the acquisition of Cyras, we will incur a charge for in-process research and development, which we currently estimate will be approximately \$16.4 million. The actual charge we incur could be greater than this estimate, which could have a material adverse effect on our results of operations and financial condition. Also, in the future we will incur non-cash charges in connection with the merger related to goodwill and other intangible amortization and amortization of deferred stock compensation. Other merger-related costs will be capitalized as part of the acquisition's purchase price and amortized in future periods. We could also incur other additional unanticipated merger costs relating to our acquisition of Cyras.

WE WILL INCUR SIGNIFICANT ADDITIONAL DEBT IN CONNECTION WITH THE MERGER

Cyras has \$150 million of 4 1/2% convertible subordinated notes outstanding. We will indirectly assume these notes at the effective date of the merger. This additional indebtedness could adversely affect CIENA in a number of ways, including:

- limiting our ability to obtain necessary financing in the future;
- limiting our flexibility to plan for, or react to, changes in our business;
- requiring us to use a substantial portion of our cash flow from operations or utilize a significant portion of cash on hand to repay the debt when due in August 2005, or earlier if we are required to offer to repurchase the notes, as described below, rather than for other purposes, such as working capital or capital expenditures;
- making us more highly leveraged than some of our competitors, which may

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place us at a competitive disadvantage; and

- making us more vulnerable to a downturn in our business.

Additionally, in the event that the holders of the notes convert their notes into our common stock, we would have to issue a significant number of shares of additional common stock. For example, if our merger with Cyras had closed on December 28, 2000, when the estimated

15

15

exchange ratio would have been approximately 0.13, we would have had to issue approximately 1,000,000 shares of our common stock if holders of the entire \$150 million of convertible notes decided to convert their notes.

In the event that the holders of the notes do not elect to convert them into our common stock before March 31, 2002, and if a "complying public equity offering" has not occurred on or before that date, we will have to make an offer to repurchase the notes at 118.942% of the principal balance of the notes on April 30, 2002. A "complying public equity offering" is defined as a firm commitment underwritten public offering of the common stock of Cyras, in which Cyras raises at least \$50 million in gross proceeds.

FOLLOWING THE COMPLETION OF OUR ACQUISITION OF CYRAS, A SIGNIFICANT NUMBER OF ADDITIONAL SHARES WILL BE ADDED TO OUR PUBLIC FLOAT

We will issue approximately 27 million shares of our common stock as consideration in the Cyras acquisition. These shares represent 9.4% of our outstanding common stock as of February 1, 2001. Almost all of these shares will be freely tradable immediately following the closing of the acquisition which is currently expected to be in the first calendar quarter of 2001. Any sales of substantial numbers of shares of our common stock in the public market following the completion of the Cyras acquisition could adversely affect the market price of our common stock.

RISKS RELATED TO THE NOTES

SIGNIFICANT LEVERAGE AND DEBT SERVICE OBLIGATIONS MAY ADVERSELY AFFECT OUR CASH FLOW AND OUR ABILITY TO REPAY OR REPURCHASE THE NOTES

We will have significant amounts of outstanding indebtedness, primarily related to the notes, upon the completion of this offering, and will assume significant additional indebtedness if our acquisition of Cyras is consummated. As a result of this indebtedness, our principal and interest payment obligations will increase substantially. There is the possibility that we may be unable to generate sufficient cash to pay the principal of, interest on and other amounts due in respect of our indebtedness, including the notes, when due. We may also add equipment loans and lease lines to finance capital expenditures and may obtain additional long-term debt, working capital lines of credit and lease lines.

Our significant leverage could have important negative consequences, including:

- increasing our vulnerability to general adverse economic and industry conditions;
- limiting our ability to obtain additional financing;
- requiring the dedication of a substantial portion of our expected cash flow from operations to service our indebtedness, thereby reducing the

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amount of our expected cash flow available for other purposes, including capital expenditures;

- limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we compete;
- placing us at a possible competitive disadvantage relative to less leveraged competitors and competitors that have better access to capital resources; and
- making it difficult or impossible for us to pay the principal amount of the notes at maturity or the repurchase price of the notes upon a change of control, thereby causing an event of default under the indenture.

In addition, the notes will be our obligation exclusively. The indenture for the notes does not limit our ability, or that of our subsidiaries, to incur other indebtedness and liabilities. We may have difficulty paying what we owe under the notes if we or our subsidiaries incur additional indebtedness or other liabilities.

16

16

THERE CURRENTLY IS NO PUBLIC MARKET FOR THE NOTES BEING OFFERED

Prior to the sale of the notes in this offering, there has been no public market for any of the notes, and there can be no assurance as to:

- the liquidity of any such market that may develop;
- the ability of the holders to sell their notes; or
- the price at which the holders would be able to sell their notes.

If such a market were to exist, the notes could trade at prices that may be higher or lower than the principal amount or purchase price, depending on many factors, including prevailing interest rates, the market for similar notes, and our financial performance. We do not presently intend to apply for the listing of the notes on any securities exchange or for inclusion of the notes in the automated quotation system of the National Association of Securities Dealers, Inc.

The underwriters have advised us that they presently intend to make a market in the notes. The underwriters are not obligated, however, to make a market in the notes, and any such market-making may be discontinued at any time at the sole discretion of the underwriters. In addition, such market-making activity will be subject to the limits imposed by the Securities Act. and the Exchange Act. Accordingly, no assurance can be given as to the development or liquidity of any market for the notes.

FUTURE SALES OF OUR COMMON STOCK COULD DEPRESS THE PRICE OF OUR NOTES

Sales of substantial amounts of common stock by our officers, directors and other stockholders in the public market after this offering, or the awareness that a large number of shares is available for sale, could adversely affect the market price of our notes and common stock. In addition to the adverse effect a price decline would have on holders of our notes and common stock, that decline would impede our ability to raise capital through the issuance of additional shares of common stock or other equity or convertible debt securities. Substantially all of the shares of our common stock currently outstanding are eligible for resale in the public market. Furthermore, we will issue approximately 27 million additional shares of common stock if our acquisition of

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Cyras is consummated, almost all of which will be freely tradeable.

Although some of our officers and directors have agreed that for 90 days after the date of this prospectus they will not offer, sell, contract to sell or otherwise dispose of any shares of our common stock, Goldman, Sachs & Co. may, in its discretion, waive this lock-up at any time for any holder.

OUR STOCK PRICE MAY EXHIBIT VOLATILITY

Our common stock price has experienced substantial volatility in the past, and is likely to remain volatile in the future. The value of the notes will depend, in part, on the market price of our common stock. Volatility can arise as a result of the activities of short sellers and risk arbitrageurs, and may have little relationship to our financial results or prospects. Volatility can also result from any divergence between our actual or anticipated financial results and published expectations of analysts, and announcements that we, our competitors, or our customers may make.

Divergence between our actual results and our anticipated results, analyst estimates and public announcements by us, our competitors, or by customers will likely occur from time to time in the future, with resulting stock price volatility, irrespective of our overall year-to-year performance or long-term prospects. As long as we continue to depend on a limited customer base, and particularly when a substantial majority of their purchases consist of newly-introduced products like the MultiWave CoreStream, MultiWave CoreDirector and MultiWave Metro, there is substantial risk that our quarterly results will vary widely.

17

17

FORWARD LOOKING STATEMENTS

Some of the statements contained, or incorporated by reference, in this prospectus discuss future expectations, contain projections of results of operations or financial condition or state other "forward-looking" information. Those statements are subject to known and unknown risks, uncertainties and other factors that could cause the actual results to differ materially from those contemplated by the statements. The "forward-looking" information is based on various factors and was derived using numerous assumptions. In some cases, you can identify these so-called "forward-looking statements" by words like "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of those words and other comparable words. You should be aware that those statements only reflect our predictions. Actual events or results may differ substantially. Important factors that could cause our actual results to be materially different from the forward-looking statements are disclosed throughout this prospectus.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of our convertible notes will be approximately \$581.7 million, after deducting the underwriting discount and estimated offering expenses. If the underwriters' option to purchase additional convertible notes in this offering is exercised in full, we estimate that our net proceeds will be approximately \$669.0 million.

Concurrent with the offering of convertible notes, CIENA is conducting a separate offering of 11,000,000 shares of common stock. This offering of convertible notes is not conditioned on the completion of the offering of our common stock.

We may use the net proceeds for working capital, capital expenditures,

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acquisitions and other general corporate purposes.

We have not determined the amounts we plan to spend on any of the uses described above or the timing of these expenditures. Pending our use of the net proceeds, we intend to invest them in short-term, interest-bearing, investment grade securities.

18

18

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations." CIENA has a 52- or 53-week fiscal year which ends on the Saturday nearest to the last day of October in each year. For purposes of financial statement presentation, each fiscal year is described as having ended on October 31. Fiscal 1997, 1998, 1999 and 2000 comprised 52 weeks and fiscal 1996 comprised 53 weeks.

| | YEAR ENDED OCTOBER 31, | | | | |
|-----------------------------------------------------------------------|---------------------------------------|-----------|-----------|------------|-----------|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| | (IN THOUSANDS, EXCEPT PER SHARE DATA) | | | | |
| STATEMENT OF OPERATIONS DATA: | | | | | |
| Revenue..... | \$ 88,463 | \$413,215 | \$508,087 | \$482,085 | \$858,750 |
| Cost of goods sold..... | 47,315 | 166,472 | 256,014 | 299,769 | 477,393 |
| | ----- | ----- | ----- | ----- | ----- |
| Gross profit..... | 41,148 | 246,743 | 252,073 | 182,316 | 381,357 |
| | ----- | ----- | ----- | ----- | ----- |
| Operating expenses: | | | | | |
| Research and development..... | 8,922 | 23,773 | 73,756 | 104,641 | 129,069 |
| Selling and marketing..... | 5,641 | 22,627 | 47,343 | 61,603 | 90,922 |
| General and administrative..... | 6,346 | 11,476 | 18,468 | 22,736 | 34,000 |
| Settlement of accrued contract obligation..... | -- | -- | -- | -- | (8,538) |
| Purchased research and development..... | -- | -- | 9,503 | -- | -- |
| Pirelli litigation..... | -- | 7,500 | 30,579 | -- | -- |
| Merger related costs..... | -- | -- | 2,548 | 13,021 | -- |
| Provision for doubtful accounts..... | 76 | 489 | 806 | 250 | 28,010 |
| | ----- | ----- | ----- | ----- | ----- |
| Total operating expenses.... | 20,985 | 65,865 | 183,003 | 202,251 | 273,463 |
| | ----- | ----- | ----- | ----- | ----- |
| Income (loss) from operations..... | 20,163 | 180,878 | 69,070 | (19,935) | 107,894 |
| Other income (expense), net..... | 653 | 7,178 | 12,830 | 13,944 | 12,680 |
| | ----- | ----- | ----- | ----- | ----- |
| Income (loss) before income taxes.... | 20,816 | 188,056 | 81,900 | (5,991) | 120,574 |
| Provision (benefit) for income taxes..... | 3,553 | 72,488 | 36,200 | (2,067) | 39,187 |
| | ----- | ----- | ----- | ----- | ----- |
| Net income (loss)..... | \$ 17,263 | \$115,568 | \$ 45,700 | \$ (3,924) | \$ 81,387 |
| | ===== | ===== | ===== | ===== | ===== |
| Basic net income (loss) per common share..... | \$ 0.62 | \$ 0.76 | \$ 0.19 | \$ (0.01) | \$ 0.29 |
| | ===== | ===== | ===== | ===== | ===== |
| Diluted net income (loss) per common and dilutive potential common | | | | | |

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| | | | | | |
|-------------------------------------------------------------------------------------------|---------|---------|---------|-----------|---------|
| share..... | \$ 0.09 | \$ 0.55 | \$ 0.18 | \$ (0.01) | \$ 0.27 |
| | ===== | ===== | ===== | ===== | ===== |
| Weighted average basic common shares outstanding..... | 27,634 | 151,928 | 235,980 | 267,042 | 281,621 |
| | ===== | ===== | ===== | ===== | ===== |
| Weighted average basic common and dilutive potential common shares outstanding..... | 184,814 | 209,686 | 255,788 | 267,042 | 299,662 |
| | ===== | ===== | ===== | ===== | ===== |

OCTOBER 31,

| | | | | | |
|-------|-------|-------|-------|-------|-------|
| ----- | ----- | ----- | ----- | ----- | ----- |
| 1996 | 1997 | 1998 | 1999 | 2000 | |
| ----- | ----- | ----- | ----- | ----- | ----- |

(IN THOUSANDS)

BALANCE SHEET DATA:

| | | | | | |
|----------------------------------------------------------|----------|-----------|-----------|-----------|------------|
| Cash and cash equivalents..... | \$24,040 | \$273,286 | \$250,714 | \$143,440 | \$ 143,187 |
| Working capital..... | 42,240 | 338,078 | 391,305 | 427,471 | 639,675 |
| Total assets..... | 79,676 | 468,247 | 602,809 | 677,835 | 1,027,201 |
| Long-term obligations, excluding current portion..... | 3,465 | 1,900 | 3,029 | 4,881 | 4,882 |
| Mandatorily redeemable preferred stock..... | 40,404 | -- | -- | -- | -- |
| Stockholders' equity..... | 10,783 | 377,278 | 501,036 | 530,473 | 809,835 |

19

19

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

The following discussion and analysis should be read in conjunction with
"Selected Consolidated Financial Data."

OVERVIEW

CIENA is a leader in the rapidly growing intelligent optical networking equipment market. We offer a comprehensive portfolio of products for communications service providers worldwide. Our customers include long-distance carriers, competitive and incumbent local exchange carriers, Internet service providers, wireless and wholesale carriers. CIENA offers optical transport and intelligent optical switching systems that enable service providers to provision, manage and deliver high-bandwidth services to their customers. CIENA's intelligent optical networking products are designed to enable carriers to deliver any time, any size, any priority bandwidth to their customers.

CIENA has increased the number of revenue-generating optical networking equipment customers from a total of 27 customers during fiscal 1999 to 32 customers for fiscal 2000. During fiscal 2000, three customers each represented more than 10% of CIENA's total revenues. We intend to preserve and enhance our market leadership and eventually build on our installed base with new and additional products. CIENA believes that its product and service quality, manufacturing experience, and proven track record of delivery will enable it to endure competitive pricing pressure while concentrating on efforts to reduce product costs and maximize production efficiencies. See "Risk Factors" in the prospectus.

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As of October 31, 2000, CIENA and its subsidiaries employed approximately 2,775 persons, which was an increase of 847 persons over the approximate 1,928 employed on October 31, 1999.

RESULTS OF OPERATIONS

FISCAL YEARS ENDED 2000, 1999 AND 1998

REVENUE. CIENA recognized \$858.8 million, \$482.1 million and \$508.1 million in revenue for the fiscal years ended October 31, 2000, 1999 and 1998, respectively. The approximate \$376.7 million or 78.1% increase in revenue from fiscal 1999 to fiscal 2000 was due primarily to an increase in product shipments across all product lines. The approximate \$26.0 million or 5.1% decrease in revenue from fiscal 1998 to fiscal 1999 was largely the result of reduced selling prices.

CIENA recognized revenues from a total of 32, 27, and 14 optical equipment customers during fiscal 2000, 1999, and 1998, respectively. During fiscal year 2000, Sprint, Qwest Communications and GTS Network Ltd. each accounted for at least 10% or more of CIENA's revenue and all three combined accounted for 60.9% of CIENA's fiscal 2000 revenue. During fiscal year 1999 Sprint, WorldCom and GTS Network Ltd. each accounted for at least 10% or more of CIENA's revenue and all three combined accounted for 46.2% of CIENA's fiscal 1999 revenue. This compares to fiscal 1998 in which Sprint was the only 10% customer and in total accounted for 52.5% of CIENA's fiscal 1998 revenue. Revenue derived from foreign sales accounted for approximately 33.0%, 44.3%, and 23.0% of CIENA's total revenues during fiscal 2000, 1999, and 1998, respectively.

For fiscal 2000, CIENA's optical network equipment revenues were derived from sales of the MultiWave Sentry 4000, MultiWave CoreStream configured for both 2.5 gigabits per second ("Gbps") and 10.0 Gbps transmission rates, MultiWave Sentry 1600, MultiWave Metro, MultiWave 1600, MultiWave CoreDirector, MultiWave Firefly systems and MultiWave MetroOne. During fiscal 1999, CIENA recognized revenues from sales of MultiWave Sentry 4000, MultiWave Sentry 1600, MultiWave 1600, MultiWave Metro, MultiWave Firefly, and MultiWave CoreStream systems. During fiscal 1998, CIENA recognized revenues from sales of MultiWave Sentry 1600,

20

20

MultiWave 1600, MultiWave Firefly and MultiWave Sentry 4000 systems. The revenues for fiscal 2000 improved as compared to fiscal 1999 due to increased sales of MultiWave Sentry 4000, MultiWave CoreStream, MultiWave Sentry 1600, MultiWave Metro, and MultiWave Firefly systems, and also from the introduction of revenues from MultiWave CoreDirector and MultiWave MetroOne systems. The amount of revenue recognized from MultiWave Sentry 1600 and MultiWave 1600 declined in fiscal 1999 as compared to fiscal 1998. This decline in MultiWave Sentry 1600 sales in fiscal 1999 was offset by the introduction of new revenues from the MultiWave CoreStream and MultiWave Metro products in fiscal 1999. Fiscal 1999 revenues from MultiWave Sentry 4000 and MultiWave Firefly were comparable to the revenues recognized for these products in fiscal 1998. Revenues derived from engineering, furnishing and installation services as a percentage of total revenue were 8.4%, 12.1%, and 9.2% for the fiscal years 2000, 1999, and 1998, respectively.

GROSS PROFIT. Cost of goods sold consists of component costs, direct compensation costs, warranty and other contractual obligations, royalties, license fees, inventory obsolescence costs and overhead related to CIENA's manufacturing and engineering, furnishing and installation operations. Gross profit was \$381.4 million, \$182.3 million, and \$252.1 million for fiscal years 2000, 1999, and 1998, respectively. Gross margin was 44.4%, 37.8%, and 49.6% for

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fiscal 2000, 1999, and 1998, respectively. The increase in gross profit from fiscal 1999 to fiscal 2000 was due primarily to lower component costs and improved production efficiencies. The decrease in gross profit from fiscal 1998 to fiscal 1999 was largely attributable to lower selling prices.

CIENA's gross margins may be affected by a number of factors, including product mix, continued competitive market pricing, outsourcing of manufacturing, manufacturing volumes and efficiencies, competition for skilled labor, and fluctuations in component costs. Downward pressures on our gross margins may be further impacted by an increased percentage of engineering, furnishing and installation revenues from services or additional service requirements. CIENA will continue to concentrate on efforts to reduce product costs and maximize production efficiencies and, if successful in these efforts, may be able to improve gross margins in the future. See "Risk Factors".

RESEARCH AND DEVELOPMENT EXPENSES. Research and development expenses were \$129.1 million, \$104.6 million, and \$73.8 million for fiscal 2000, 1999, and 1998, respectively. The approximate \$24.4 million or 23.3% increase from fiscal 1999 to 2000 and the approximate \$30.9 million or 41.9% increase from fiscal 1998 to 1999 in research and development expenses related to increased staffing levels, purchases of materials used in development of new or enhanced product prototypes, and outside consulting services in support of certain developments and design efforts. During fiscal 2000, 1999, and 1998 research and development expenses were 15.0%, 21.7%, and 14.5% of revenue, respectively. CIENA expects that its research and development expenditures will continue to increase in absolute dollars and perhaps as a percentage of revenue during fiscal 2001 to support the continued development of CIENA's intelligent optical networking products, the exploration of new or complementary technologies, and the pursuit of various cost reduction strategies. CIENA has expensed research and development costs as incurred.

SELLING AND MARKETING EXPENSES. Selling and marketing expenses were \$90.9 million, \$61.6 million, and \$47.3 million for fiscal 2000, 1999, and 1998, respectively. The approximate \$29.3 million or 47.6% increase from fiscal 1999 to 2000 and the approximate \$14.3 million or 30.1% increase from fiscal 1998 to 1999 in selling and marketing expenses was primarily the result of increased staffing levels in the areas of sales, technical assistance and field support, and increases in commissions earned, trade show participation and promotional costs. During fiscal 2000, 1999, and 1998 selling and marketing expenses were 10.6%, 12.8%, and 9.3% of revenue, respectively. CIENA anticipates that its selling and marketing expenses may increase in absolute dollars and perhaps as a percentage of revenue during fiscal 2001 as additional personnel are hired and additional offices are opened to allow CIENA to pursue new customers

21

21

and market opportunities. CIENA also expects the portion of selling and marketing expenses attributable to technical assistance and field support, specifically in Europe, Latin America, and Asia, will increase as CIENA's installed base of operational MultiWave systems increases.

GENERAL AND ADMINISTRATIVE EXPENSES. General and administrative expenses were \$34.0 million, \$22.7 million and \$18.5 million for fiscal 2000, 1999, and 1998, respectively. The approximate \$11.2 million or 49.5% increase from fiscal year 1999 to 2000 and the approximate \$4.3 million or 23.1% increase from fiscal year 1998 to 1999 in general and administrative expenses was primarily the result of increased staffing levels and outside consulting services. During fiscal 2000, 1999, and 1998 general and administrative expenses were 4.0%, 4.7%, and 3.6% of revenue, respectively. CIENA believes that its general and administrative expenses will increase in absolute dollars and perhaps as a percentage of revenue during fiscal 2001 as a result of the expansion of CIENA's

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administrative staff required to support its expanding operations.

SETTLEMENT OF ACCRUED CONTRACT OBLIGATION. The \$8.5 million gain from settlement of accrued contract obligation relates to the July 2000 termination of certain accrued contract obligations that CIENA received from iaxis Limited, one of CIENA's European customers. In September 2000, CIENA was informed that an administrative order had been issued by a London court against iaxis Limited. As a result of this order, joint administrators were appointed to manage the business of iaxis Limited while they marketed the business for sale and formulated a reorganization. See "Provision for Doubtful Accounts" below.

PURCHASED RESEARCH AND DEVELOPMENT. Purchased research and development costs were \$9.5 million for the fiscal year 1998. These costs were for the purchase of technology and related assets associated with the acquisition of Terabit during the second quarter of fiscal 1998.

PIRELLI LITIGATION. The Pirelli litigation costs of \$30.6 million in fiscal 1998 were attributable to a \$30.0 million payment made to Pirelli during the third quarter of 1998 and to additional other legal and related costs incurred in connection with the settlement of this litigation.

MERGER-RELATED COSTS. The merger costs for fiscal 1999 of approximately \$13.0 million were costs related to CIENA's acquisition of Omnia and Lightera. These costs include an \$8.1 million non-cash charge for the acceleration of warrants based upon CIENA's common stock price on June 30, 1999 and \$4.9 million for fees, legal and accounting services and other costs. The warrants were issued to one of Omnia's potential customers and became exercisable upon the consummation of the merger between CIENA and Omnia. The merger-related costs for fiscal 1998 were costs related to the contemplated merger between CIENA and Tellabs. These costs include approximately \$1.2 million in Securities and Exchange Commission filing fees and approximately \$1.3 million in legal, accounting, and other related expenses.

PROVISION FOR DOUBTFUL ACCOUNTS. CIENA performs ongoing credit evaluations of its customers and generally does not require collateral from its customers. CIENA maintains an allowance for potential losses when identified. CIENA's allowance for doubtful accounts as of October 31, 2000 was \$29.6 million. Approximately \$27.8 million relates to provisions made for doubtful accounts associated with iaxis Limited, one of CIENA's European customers. In September 2000, CIENA was informed that an administrative order had been issued by a London court against iaxis Limited. As a result of this order, joint administrators were appointed to manage the business of iaxis Limited while they marketed the business for sale and formulated a reorganization. In November 2000, CIENA was notified that Dynegy Inc. and its subsidiaries had entered into a proposed agreement to acquire the assets and stock of iaxis Limited from the administrators. As a consequence of the terms of (a) the proposed agreement between the administrators of iaxis Limited, Dynegy and its subsidiaries, and of (b) a related sales agreement between CIENA and Dynegy, CIENA expects to realize approximately \$8.9 million of the gross outstanding accounts receivable balance due from iaxis Limited as of October 31, 2000. While the proposed purchase agreement between the administrators of iaxis Limited and Dynegy is subject to certain administrative and judicial approvals, CIENA believes that such approvals will be

22

22

ultimately obtained and that CIENA will be successful in collecting the net \$8.9 million outstanding accounts receivable balance from the customer. However, should such approvals not occur, additional write-offs might be required.

OTHER INCOME (EXPENSE), NET. Other income (expense), net, consists of

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interest income earned on CIENA's cash, cash equivalents and marketable debt securities, net of interest expense associated with CIENA's debt obligations. Other income (expense), net, was \$12.7 million, \$13.9 million, and \$12.8 million for fiscal 2000, 1999, and 1998, respectively. The decrease in other income (expense) from fiscal 1999 to fiscal 2000 was due to lower balances of cash, cash equivalents and marketable debt securities in fiscal 2000 as compared to fiscal 1999. The increase in companies other income (expense) from fiscal 1998 to fiscal 1999 was primarily the result of the investment of the net proceeds of CIENA's stock offerings and net earnings.

PROVISION (BENEFIT) FOR INCOME TAXES. CIENA's provision (benefit) for income taxes was 32.5%, (34.5%), and 44.2% of pre-tax earnings (loss) for fiscal 2000, 1999 and 1998, respectively. The income tax provision for 2000 was lower than the expected 35% primarily due to benefits from research and development tax credits. The benefit for fiscal 1999 was less than the expected statutory benefit of 35% due to non-deductible merger costs. The income tax provision for 1998 was higher than the expected statutory rate of 35%, due primarily to charges for purchased research and development and state tax charges related to the Alta acquisition. Purchased research and development charges are not deductible for tax purposes. Exclusive of the effect of these charges, CIENA's provision for income taxes was 38.6% of income before income taxes in fiscal 1998. As of October 31, 2000, CIENA's deferred tax asset was \$143.0 million. The realization of this asset could be adversely affected if future earnings are lower than anticipated.

QUARTERLY RESULTS OF OPERATIONS

The tables below set forth the operating results and percentage of revenue represented by certain items in CIENA's statements of operations for each of the eight quarters in the period ended October 31, 2000. This information is unaudited, but in the opinion of CIENA reflects all adjustments (consisting only of normal recurring adjustments) that CIENA considers necessary for a fair presentation of such information in accordance with generally accepted accounting principles. The results for any quarter are not necessarily indicative of results for any future period.

23

23

| | QUARTER ENDED | | | | | | |
|---------------------------------|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| | JAN. 31, 1999 | APR. 30, 1999 | JUL. 31, 1999 | OCT. 31, 1999 | JAN. 31, 2000 | APR. 30, 2000 | JUL. 31, 2000 |
| | (IN THOUSANDS, EXCEPT PER SHARE DATA) | | | | | | |
| Revenue..... | \$100,417 | \$111,490 | \$128,826 | \$141,352 | \$152,213 | \$185,679 | \$233,213 |
| Cost of goods sold..... | 65,778 | 71,238 | 79,361 | 83,392 | 87,003 | 104,205 | 128,113 |
| Gross profit..... | 34,639 | 40,252 | 49,465 | 57,960 | 65,210 | 81,474 | 105,099 |
| Operating expenses: | | | | | | | |
| Research and development..... | 22,218 | 24,094 | 28,402 | 29,927 | 29,742 | 29,965 | 32,613 |
| Selling and marketing..... | 13,608 | 13,092 | 16,839 | 18,064 | 18,122 | 20,331 | 24,313 |
| General and administrative..... | 5,036 | 5,849 | 5,433 | 6,418 | 6,621 | 7,176 | 9,313 |
| Settlement of accrued contract | | | | | | | |

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| | | | | | | | |
|-----------------------------------------------------------------------------------------|------------|----------|------------|----------|----------|-----------|---------|
| obligation..... | -- | -- | -- | -- | -- | -- | (8,5 |
| Merger-related costs..... | -- | 2,253 | 10,768 | -- | -- | -- | |
| Provision for doubtful accounts..... | -- | -- | -- | 250 | 250 | -- | 8,5 |
| Total operating expenses..... | 40,862 | 45,288 | 61,442 | 54,659 | 54,735 | 57,472 | 66,4 |
| Income (loss) from operations..... | (6,223) | (5,036) | (11,977) | 3,301 | 10,475 | 24,002 | 38,6 |
| Other income (expense), net..... | 3,301 | 3,583 | 3,492 | 3,568 | 2,950 | 3,268 | 3,0 |
| Income (loss) before income taxes..... | (2,922) | (1,453) | (8,485) | 6,869 | 13,425 | 27,270 | 41,7 |
| Provision (benefit) for income taxes..... | (1,041) | (468) | (2,928) | 2,370 | 4,363 | 8,863 | 13,5 |
| Net income (loss)..... | \$ (1,881) | \$ (985) | \$ (5,557) | \$ 4,499 | \$ 9,062 | \$ 18,407 | \$ 28,1 |
| Basic net income (loss) per common share (1)..... | \$ (0.01) | \$ 0.00 | \$ (0.02) | \$ 0.02 | \$ 0.03 | \$ 0.07 | \$ 0. |
| Diluted net income (loss) per common share and dilutive potential common share (1)..... | \$ (0.01) | \$ 0.00 | \$ (0.02) | \$ 0.02 | \$ 0.03 | \$ 0.06 | \$ 0. |
| Weighted average basic common share (1)..... | 262,404 | 265,060 | 266,032 | 267,616 | 276,182 | 280,162 | 282,2 |
| Weighted average basic common and dilutive potential common share (1)..... | 262,404 | 265,060 | 266,032 | 290,604 | 295,806 | 299,126 | 299,7 |

(1) All share and per share information has been retroactively restated to reflect the two-for-one stock split effective September 18, 2000.

| | QUARTER ENDED | | | | |
|-------------------------|------------------------------|------------------|------------------|------------------|------------------|
| | JAN. 31, 1999 | APR. 30, 1999 | JUL. 31, 1999 | OCT. 31, 1999 | JAN. 31, 2000 |
| | (AS A PERCENTAGE OF REVENUE) | | | | |
| Revenue..... | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |
| Cost of goods sold..... | 65.5 | 63.9 | 61.6 | 59.0 | 57.2 |
| Gross profit..... | 34.5 | 36.1 | 38.4 | 41.0 | 42.8 |

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| | | | | | |
|------------------------------------------------|--------|--------|--------|-------|-------|
| Operating expenses: | | | | | |
| Research and development..... | 22.1 | 21.6 | 22.0 | 21.2 | 19.5 |
| Selling and marketing..... | 13.6 | 11.7 | 13.1 | 12.8 | 11.9 |
| General and administrative..... | 5.0 | 5.2 | 4.2 | 4.5 | 4.3 |
| Settlement of accrued contract obligation..... | -- | -- | -- | -- | -- |
| Merger-related costs..... | -- | 2.0 | 8.4 | -- | -- |
| Provision for doubtful accounts..... | -- | -- | -- | 0.2 | 0.2 |
| | ----- | ----- | ----- | ----- | ----- |
| Total operating expenses..... | 40.7 | 40.5 | 47.7 | 38.7 | 35.9 |
| | ----- | ----- | ----- | ----- | ----- |
| Income (loss) from operations..... | (6.2) | (4.4) | (9.3) | 2.3 | 6.9 |
| Other income (expense), net..... | 3.3 | 3.2 | 2.7 | 2.5 | 1.9 |
| | ----- | ----- | ----- | ----- | ----- |
| Income (loss) before income taxes..... | (2.9) | (1.2) | (6.6) | 4.8 | 8.8 |
| Provision (benefit) for income taxes.... | (1.0) | (0.4) | (2.3) | 1.7 | 2.9 |
| | ----- | ----- | ----- | ----- | ----- |
| Net income (loss)..... | (1.9)% | (0.8)% | (4.3)% | 3.1% | 5.9% |
| | ===== | ===== | ===== | ===== | ===== |

CIENA's quarterly operating results have varied and are expected to vary in the future. CIENA's detailed discussion of risk factors addresses the many factors that have caused such variation in the past, and may cause similar variations in the future. See "Risk Factors". CIENA's revenues have increased in each of the last eight quarters due to strong demand across existing products and introduction of new products such as MultiWave CoreStream configured for both 2.5 Gbps and 10.0 Gbps transmission rates. CIENA's gross margin percentage has improved from the first quarter fiscal 1999 to the fourth quarter fiscal 2000 as a result of component cost reductions, production efficiencies, and relative stable sales pricing. CIENA's operating expenses have increased in each of the last eight quarters due to continued investments in research and development, selling and marketing, and infrastructure activities. Exclusive of provisions for doubtful accounts and merger-related costs, the Company's operating expenses as a percentage of revenue have generally decreased each of the last eight quarters. During fiscal 2001, CIENA's operating expenses will continue to increase in absolute dollars and may increase as percentage of revenue. We expect to preserve and enhance our market leadership and build on our installed base with new and additional products in conjunction with increased investments in selling, marketing, and customer service activities. See "Risk Factors".

LIQUIDITY AND CAPITAL RESOURCES

At October 31, 2000, CIENA's principal source of liquidity was its cash and cash equivalents. CIENA had \$143.2 million in cash and cash equivalents, and \$95.1 million in corporate debt securities and U.S. Government obligations. CIENA's corporate debt securities and U.S. Government obligations have contractual maturities of six months or less.

CIENA's operating activities provided cash of \$59.0 million, \$28.7 million, and \$48.8 million for fiscal 2000, 1999, and 1998, respectively. Cash provided by operations in fiscal 2000 was primarily attributable to a net gain adjusted for the non-cash charges of depreciation, amortization, tax benefit related to exercise of stock options, provisions for doubtful accounts, inventory obsolescence, and warranty, increases in accounts payable, and accrued expenses, offset by increases in accounts receivable and inventories.

Cash used in investing activities in fiscal 2000, 1999, and 1998 was \$103.2 million, \$149.7 million, and \$107.0 million, respectively. Included in investment activities were additions to capital equipment and leasehold improvements in fiscal 2000, 1999, and 1998 of \$123.9 million, \$46.8 million,

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and \$88.9 million, respectively. The capital equipment expenditures were primarily for test, manufacturing and computer equipment. CIENA expects additional combined capital

25

25

equipment and leasehold improvement expenditures of approximately \$208 million to be made during fiscal 2001 to support selling and marketing, manufacturing and product development activities and the construction of leasehold improvements for its facilities.

We generated \$43.9 million, \$13.8 million, and \$35.6 million in cash from financing activities in fiscal 2000, 1999, and 1998, respectively. During fiscal 2000, CIENA received \$44.0 million from the exercise of stock options and the sale of stock through our employee stock purchase plan. During fiscal 1999 CIENA received \$11.3 million from the exercise of stock options, the sale of stock through our employee stock purchase plan, and from the additional capitalization of Omnia and Lightera. During fiscal 1998, CIENA received approximately \$34.3 million from the issuance of stock associated with the capitalization of Omnia and Lightera, and from the exercise of stock options.

We believe that our existing cash balances and investments, together with cash flow from operations, will be sufficient to meet our liquidity and capital spending requirements at least through the end of fiscal 2001. However, possible investments in or acquisitions of complementary businesses, products or technologies may require additional financing prior to such time. There can be no assurance that additional debt or equity financing will be available when required or, if available, can be secured on terms satisfactory to us.

EFFECTS OF RECENT ACCOUNTING PRONOUNCEMENTS

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 133 (SFAS No. 133), "Accounting for Derivative Instruments and Hedging Activities". This Statement requires companies to record derivatives on the balance sheet as assets or liabilities, measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. SFAS No. 133, as amended by SFAS No. 137 "Accounting for Derivative Instruments and Hedging Activities -- Deferral of the Effective Date for SFAS No. 133", will be effective for the Company's fiscal year ending October 31, 2000. The Company believes the adoption of SFAS No. 133 and SFAS No. 137 will not have a material effect on the consolidated financial statements.

In December 1999, the Securities and Exchange Commission released Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements," (SAB 101) which clarifies the Securities and Exchange Commission's view on revenue recognition. Subsequently, the SEC released SAB 101B, which delayed the implementation date of SAB 101 for registrants with fiscal years that begin between December 16, 1999 and March 15, 2000. CIENA is required to be in conformity with the provisions of SAB 101, as amended, no later than January 31, 2001, with the impact of such adoption being treated on a cumulative basis as of November 1, 2000. While management will continue to assess SAB 101, CIENA presently believes its existing revenue recognition policies and procedures are generally in compliance with SAB 101 and, therefore, SAB 101's adoption will have no material impact on CIENA's financial condition, results of operations or cash flows.

In July 2000, the FASB's Emerging Issues Task Force ("EITF") reached a final consensus that the income tax benefit realized by a company upon the exercise of a nonqualified stock option or the disqualifying disposition of an

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incentive stock option should be classified in the operating section of the statement of cash flows. The consensus is effective for the Company's quarters ending after July 20, 2000. All comparative cash flow statements as presented have been restated to comply with this consensus.

In September 2000, the FASB issued SFAS No. 140, "Accounting for the Transfers and Servicing of Financial Assets and Extinguishments of Liabilities". SFAS No. 140 is effective for transfers occurring after March 31, 2001 and for disclosures relating to the securitization transactions and collateral for fiscal years ending after December 15, 2000. The Company believes the adoption of SFAS No. 140 will not have a material effect on the consolidated financial statements.

26

26

BUSINESS

OVERVIEW

CIENA is an established leader in the rapidly growing intelligent optical networking equipment market. We offer a comprehensive portfolio of products for communications service providers worldwide. Our customers include long-distance carriers, competitive and incumbent local exchange carriers, Internet service providers, wireless and wholesale carriers. CIENA offers intelligent optical transport and optical switching systems that enable service providers to provision, manage and deliver high-bandwidth services to their customers. We have pursued a strategy to develop and leverage the power of our technologies to change the fundamental economics of building carrier-class tele- and data-communications networks, thereby providing our customers with a competitive advantage. CIENA's intelligent optical networking products are designed to enable carriers to deliver any time, any size, any priority bandwidth to their customers.

Historically, the significant majority of CIENA's revenue has come from the sale of long-distance optical transport equipment. CIENA believes it is one of the worldwide market leaders in field deployment of open-architecture long-distance optical transport equipment utilizing dense wavelength division multiplexing, or DWDM, technology. The majority of CIENA's fiscal 2000 revenue was derived from sales of its long-distance optical transport products, including MultiWave CoreStream(TM) and MultiWave Sentry 4000(TM). During the fiscal year 2000, CIENA also recognized revenue from the sale of seven optical networking products including sales of its metropolitan optical transport product, MultiWave(R) Metro and its intelligent optical core switch, MultiWave CoreDirector(TM).

For the fiscal year ended October 31, 2000, CIENA recorded revenue from sales of intelligent optical networking equipment to a total of 32 customers. Our research and development efforts as well as potential future acquisition and partnership activities are targeted at capitalizing on our installed base of carrier customers and leveraging our position as a leader in the rapidly growing optical networking market.

INDUSTRY BACKGROUND

The world's tele- and data-communications infrastructure is formed by fiber-optic networks owned and operated by service providers. In recent years, the combination of several factors, including global deregulation which fueled competition among service providers and increased bandwidth demand resulting from the proliferation of the Internet and the emergence of electronic commerce, gave rise to the increased deployment of communications equipment utilizing dense wavelength division multiplexing technology.

DWDM replaces the single beam of light that traverses fiber-optic cable in legacy networks with multiple colors of light, each of which is capable of carrying tens of thousands of voice conversations or data transmissions. Prior to the emergence of DWDM, service providers could increase network capacity either by adding new physical fibers to their network or by increasing the rate of transmission through the fiber. In many cases DWDM has proven to be more cost efficient than physically deploying new fibers, and it has enabled the delivery of significantly more traffic by service providers.

The widespread adoption of DWDM enabled carriers to efficiently and economically expand network capacity, or bandwidth, while reducing bandwidth costs. CIENA believes that the application of products using DWDM has led to a dramatic decline in service providers' capital cost per bit from 1995 to present, thereby enabling pricing competition between carriers and significant bandwidth price declines of up to 80% in some U.S. regions.

27

27

NETWORK SCALABILITY CHALLENGES

For the past several years DWDM has been implemented by carriers to increase capacity between discrete points in their long-distance networks. To construct a network using DWDM equipment as its backbone, a carrier must interconnect the point-to-point high-capacity links and manage all traffic flowing through them. For example, an important element enabling this interconnection in traditional architectures has been the SONET/SDH add/drop multiplexer, or ADM. In most network architectures, a SONET ADM is used to transmit the information-carrying signal for each DWDM optical channel. A second ADM then is used to receive the information-carrying signal from each DWDM optical channel. As a result, every time an additional optical channel is deployed, two additional SONET ADMs must be purchased, installed and maintained -- one for each end of the traffic-carrying route. For example, in order to transmit/receive the traffic from a DWDM optical transport system with 96 channels of DWDM, a service provider would require a total of 192 SONET ADMs.

Though DWDM gave carriers the ability to solve the bandwidth problem in the core of their networks, the technology created operational and scalability challenges for carriers. Historically this method has been the only way available to service providers to scale their networks. Unfortunately, this approach creates upwardly spiraling costs. In addition to the capital equipment costs associated with the equipment, each SONET ADM uses valuable central office space and power. Furthermore, as the number of DWDM channels and links increases, the carrier's management of the network grows more complex, making manual service provisioning and network operation more difficult and costly.

ESCALATING OPERATIONAL COSTS

In addition to the problems inherent in scaling traditional network architectures, carriers are challenged to scale their operating staff as quickly as they can grow their networks. According to information filed by carriers with the United States Securities and Exchange Commission, many service providers are spending more on operating, growing, and managing their networks than they are on capital expenditures relating to their networks. In some cases, service providers are spending two to four dollars on network operations and support expenses for every dollar spent on network capital equipment. In addition, in many cases, network operations and support expenses are increasing at a significantly faster rate than revenues.

CIENA'S SOLUTIONS

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CIENA's intelligent optical networking equipment was designed to enable service providers to transition from inefficient, legacy, voice-centric networks to more efficient data-optimized, intelligent optical networks. CIENA's systems address both the network scalability challenges and the escalating operational costs faced by service providers by:

- leveraging expertise in optics, software, systems and Application Specific Integrated Circuits, or ASICs, to develop innovative products designed to dramatically lower the cost of constructing service provider networks;
- replacing multiple traditional network elements such as ADMs and digital cross-connects with fewer, more intelligent network elements, thereby simplifying the network and lowering carriers' capital and operational costs;
- enhancing bandwidth availability to service providers, thereby allowing them to increase network bandwidth with growing Internet demand;
- lowering ongoing network operating costs by enabling carriers to more efficiently manage network traffic;
- enabling carriers to shorten the time it takes to provision services, in some cases from months to minutes, thereby accelerating the generation of revenue; and
- enabling new, revenue-generating and differentiated optical services.

28

28

Our optical networking product portfolio is targeted at the critical areas of service provider networks: long-distance and metropolitan optical transport, intelligent optical core switching and network management.

- OPTICAL TRANSPORT. CIENA's long-distance optical transport products, MultiWave CoreStream(TM), MultiWave Sentry(TM) and MultiWave 1600, and our short-distance products, MultiWave Metro(TM), Metro One(TM) and MultiWave Firefly(TM), utilize DWDM technology and should enable carriers to cost effectively add critical network bandwidth when and where they need it. As a result, service providers should be better able to scale their networks to meet demand.
- INTELLIGENT OPTICAL CORE SWITCHING. Our intelligent optical core switches, MultiWave CoreDirector(TM) and MultiWave CoreDirector CI(TM), which is currently under development, allow carriers to manage the bandwidth created with optical transport products. CoreDirector and CoreDirector CI help carriers solve both the issues of network scalability and escalating operating costs by incorporating the functionality of multiple network elements into single elements with previously unavailable switching capabilities and management.
- NETWORK MANAGEMENT. ON-Center, CIENA's recently introduced fully integrated family of software-based tools for comprehensive element, network and service layer management, is designed to enable accelerated deployment of new, differentiating optical services. ON-Center should also reduce network operating and management costs.

CIENA calls the network architecture created by these products "CIENA LightWorks." The components of CIENA's LightWorks can be sold together as a complete network solution or separately as best-of-breed solutions. CIENA's LightWorks architecture is designed to dramatically simplify a carrier's network

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by reducing the number of network elements. We believe this network simplification will enable service providers to lower capital equipment and operating costs.

STRATEGY

CIENA's strategy is to maintain and build upon its market leadership in the deployment of intelligent optical networking systems and to leverage its technologies in order to provide solutions for both voice and data communications-based network architectures. CIENA believes that the technological, operational and cost benefits of its optical networking solutions create competitive advantages for service providers worldwide. We believe our solutions will become increasingly important as these service providers are being pressed by their customers to deliver services to address the dramatic growth in Internet and other data communications traffic. CIENA's strategy includes the following initiatives:

- EXPAND OUR BASE OF CUSTOMERS USING OUR INTELLIGENT OPTICAL NETWORKING SOLUTIONS. We believe that achieving early widespread operational deployment of our systems in a particular carrier's network will provide CIENA significant competitive advantages with respect to additional optical networking deployments and will enhance our marketing to other carriers as a field-proven supplier. While continuing to aggressively serve our existing customers, we intend to actively pursue additional optical networking deployment opportunities among fiber-optic carriers in domestic and foreign long distance, interoffice and local exchange markets.
- INCREASE SALES AND MARKETING EFFORTS. The nature of the target customer base for all our product lines requires a focused sales effort on a customer-by-customer basis. We will continue to increase our sales and marketing efforts aimed at the worldwide market of service providers. CIENA increased the number of revenue-generating optical networking customers from 27 during 1999 to 32 in 2000. In addition, CIENA has a significant international presence, particularly in Europe. Revenues from international customers represented 33.0% of CIENA's total revenues in fiscal 2000. CIENA plans to continue to

29

29

strengthen its marketing programs and to increase its domestic and international presence through both direct sales and distributor relationships.

- CONTINUE TO EMPHASIZE TECHNICAL SUPPORT AND CUSTOMER SERVICE. CIENA markets technically advanced systems to sophisticated customers. The nature of CIENA's systems and market require a high level of technical support and customer service. We believe we have a good reputation for our technical support and customer service, and we intend to emphasize our global service and support excellence and capabilities as differentiating factors in our efforts to maintain and enhance our market position. CIENA offers complete engineering, furnishing and installation services in addition to full-time customer support from strategic locations worldwide.
- MAINTAIN WORLD CLASS MANUFACTURING CAPABILITY. CIENA's optical networking systems play a critical role in our customers' networks. Quality assurance and manufacturing excellence are necessary for CIENA to achieve success. CIENA believes it has developed a world class optical manufacturing capability, and this capability provides CIENA with a significant competitive advantage. CIENA achieved ISO 9001 certification

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in July 1997 in further support of this element of its strategy. CIENA expects to continue to invest in both the capital and the human resources necessary to maintain and leverage this advantage. In addition, CIENA expects to utilize this expertise to leverage our manufacturing capability with contract manufacturers.

- LEVERAGE CIENA'S BANDWIDTH-OPTIMIZING TECHNOLOGY AND KNOW-HOW. We believe the overall growth in demand for bandwidth and the need for intelligent bandwidth-optimizing services in telecommunications networks will lead to transmission bottlenecks in other segments of the networks where the application of optical technologies and other high bandwidth enabling technologies may provide solutions, either within existing network architectures, or as part of the design and development of alternative data communications-based network architectures. CIENA expects to leverage the core competencies it has developed in the design, development and manufacturing of its optical transport and intelligent optical switching product lines and key enabling components by pursuing new product development efforts, and strategic alliances or acquisitions, to address these expected opportunities. CIENA intends to move aggressively to maintain leadership in the design and development of intelligent optical networking equipment, components and software which will both respond to customer needs and help customers move toward newer, higher capacity, more cost-efficient network designs for the future.

PRODUCTS

Our optical networking product portfolio is targeted at the critical areas of service provider networks: long-distance and metropolitan optical transport, intelligent optical core switching and network management. CIENA's open architecture design allows its products to operate with most carriers' existing fiber-optic transmission systems and network elements, including connecting directly to either traditional SONET equipment, ATM switches or IP routers.

30

30

LONG-DISTANCE OPTICAL TRANSPORT

| PRODUCT ----- | FEATURES ----- |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MULTIWAVE CORESTREAM | <ul style="list-style-type: none">- CIENA's fourth generation carrier-class intelligent optical transport product.- First commercially deployed 96-channel DWDM system with commercial shipments beginning in the third fiscal quarter of 1999.- Utilizes DWDM technology to deliver up to 96 optical channels at 2.5Gbps (240 gigabits) or up to 48 channels at 10Gbps (480 gigabits).- Designed for in-service growth; scalable to handle 2 terabits of traffic in the future.- With its longer reach feature set, will ultimately be capable of transporting signals up to 5,000 kilometers without electrical |

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regeneration.

- | | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MULTIWAVE SENTRY 4000 | <ul style="list-style-type: none"> - CIENA's third generation carrier-class intelligent optical transport product. - First commercially deployed 40-channel system with commercial shipments beginning in the second fiscal quarter of 1998. - Utilizes DWDM technology to deliver up to 40 channels at 2.5Gbps (100 gigabits). |
| MULTIWAVE SENTRY 1600 | <ul style="list-style-type: none"> - CIENA's second generation carrier-class intelligent optical transport product. - Utilizes DWDM technology to deliver up to 16 channels at 2.5Gbps (40 gigabits). - Incorporated performance monitoring capabilities, not previously available in DWDM equipment beginning in the second half of fiscal 1996. |
| MULTIWAVE 1600 | <ul style="list-style-type: none"> - CIENA's first generation carrier-class intelligent optical transport product. - First commercially deployed 16-channel system with commercial shipments beginning in the first half of fiscal 1996. - Utilizes DWDM technology to deliver 16 channels at 2.5Gbps (40 gigabits). |
| METROPOLITAN OPTICAL TRANSPORT | |

| PRODUCT ----- | FEATURES ----- |
|------------------|-------------------|
|------------------|-------------------|

- | | |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MULTIWAVE METRO | <ul style="list-style-type: none"> - A carrier-class optical transport product designed specifically to address the performance and economic requirements of metropolitan markets. - Provides up to 24 duplex channels over a single fiber pair, enabling a service provider to transport up to 60Gbps. |
| | 31 |
| | <ul style="list-style-type: none"> - Supports multiple network topologies, such as rings, hubs, and stars. - Offers a wide range of interfaces from 100 megabits per second up to 10Gbps. |
| MULTIWAVE METRO ONE | <ul style="list-style-type: none"> - Offers the same carrier-class reliability and functionality as MultiWave Metro, but for a |

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single channel in a reduced size and reduced power consumption package.

MULTIWAVE FIREFLY

- MultiWave Firefly was developed specifically for use by carriers in short-distance, point-to-point applications.
- Multiplexes up to 24 channels at 2.5Gbps, over a single fiber pair, allowing a carrier to transport up to 60Gbps.

INTELLIGENT OPTICAL CORE SWITCHING

PRODUCT

FEATURES

MULTIWAVE COREDIRECTOR

- Provides traffic management and switching capability beyond current network solutions of up to 256 ports of OC-48 or up to 640Gbps in a single 7 foot bay.
- Designed to reduce capital equipment costs by displacing multiple traditional devices.
- CoreDirector's intelligence is designed to simplify service provisioning, in some cases reducing provisioning times from months to seconds.
- CoreDirector offers the ability to switch at the wavelength level or at levels of granularity down to an STS-1.
- CoreDirector should enable new revenue opportunities for service providers through new optical layer capabilities and services.

COREDIRECTOR CI

- When available, CoreDirector CI will provide up to 64 ports of OC-48 or up to 160Gbps in a half bay.
- CoreDirector CI will deliver CoreDirector functionality in a smaller package and at a lower entry cost that is ideal for lower capacity networks or smaller switching sites.

NETWORK MANAGEMENT

PRODUCT

FEATURES

LIGHTWORKS ON-CENTER

- A fully integrated family of software-based tools for comprehensive element, network and service layer management across service

provider networks.

- ON-Center is designed to enable accelerated deployment of new, differentiating optical services, reduced network operating and management costs, and innovative customer service solutions.
- Designed so that service providers can select any or all components necessary to meet their particular network's management needs, LightWorks ON-Center is comprised of:

32

32

- an Optical Service Layer Management System for cross-vendor end-to-end service management;
- an Optical Network Management System for integrated management across all of CIENA's intelligent optical transport, switching and access systems; and
- a Modeling and Planning System for network design.

NEW OPTICAL SERVICES

In addition to allowing significant capital equipment and operational cost savings, CIENA's intelligent optical networking equipment is designed to enable its customers to offer new, revenue-generating optical layer services. CIENA's LightWorks Toolkit(TM) is designed to allow carriers to offer dynamic high-bandwidth services and handle real-time service provisioning and prioritization. By mixing and matching CIENA's ToolKit options, carriers will be able to offer customized services and further differentiate themselves from their competition.

When development is completed, the breadth of options in the LightWorks ToolKit will ultimately include:

| SERVICE | DESCRIPTION |
|---------|-------------|
| ----- | ----- |

| | |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPTICAL PRIORITY PROVISIONING | - Optical Priority Provisioning is designed to allow carriers to turn-up optical services in seconds, and to specify priority levels for further differentiation of optical services. For instance, a carrier may elect to offer multiple levels of optical bandwidth, ranging from "premium" to "best-effort" service, with each level of service being priced and delivered differently. Optical Priority Provisioning is designed to help carriers more easily meet service level agreements by assigning and adjusting traffic priorities in seconds, potentially allowing carriers to |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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unlock more revenue from data services.

- Optical Priority Provisioning should simplify the delivery of differentiated optical services by providing access to service templates of predefined restoration priorities, preemptability, and linear, ring and mesh protection options. Using these simplified templates, service provisioners should be able to deliver optical services, at any service level, in just a few clicks of a mouse.

FLEXIBLE CONCATENATION

- In legacy networks, bandwidth demand is arbitrarily shoehorned into SONET/SDH-sized transport containers where the size of the container is fixed. For example, if a customer requires OC-15 service, the customer must purchase OC-48 service, even though only a fraction of the 48 time slots in the transport container will be filled with bits. In this scenario, the customer is paying for bandwidth it is not using and the carrier is losing valuable network bandwidth. CIENA is using a combination of silicon and software to redefine how carriers access and deliver bandwidth.
- When available, Flexible Concatenation will allow carriers to access all time slots within the SONET/SDH frame --

33

33

even when those frames are fractionally filled. That means carriers will be able to create true OC-"N" services in which "N" can be any number between 1 and 48 and in the future will be 192 and eventually 768 instead of the current restrictions of SONET, which sets fixed sizes on transport containers. Flexible concatenation is designed to enable carriers to maximize their network bandwidth and deliver customer-specific service.

RATE ADAPTIVE GIGABIT ETHERNET

- CIENA's Rate-Adaptive Gigabit Ethernet technology uses software and ASICs to enable service providers to sell Gigabit Ethernet services in customizable increments of 50Mbps (STS-1) up to 1.25Gbps.
- When available, service providers will be able to use Rate Adaptive Gigabit Ethernet to create a wide range of customized optical service options for end-users and deliver those services over more efficient access and core networks that leverage the economies of Gigabit Ethernet transmission.

VSR OPTICS

- For increased profitability, carriers must continually drop their cost per bit. However,

to stay competitive, carriers must continue to increase the value of their services. VSR (Very Short Reach) Optics are designed to provide lower-cost, high-capacity connections between Internet and optical networking systems within a service provider's central office. VSR Optics leverage Vertical Cavity Surface Emitting Laser (VCSEL) technology and Gigabit Ethernet standards to make variable-rate optical services possible and economical -- a valuable service for unpredictable bandwidth demands. When available, CIENA will apply this data rate-scalable technology to 10Gbps network connections.

TRANSPARENT SERVICE
MULTIPLEXING

- As opposed to traditional SONET/SDH multiplexing, CIENA's "transparent" multiplexing is designed to enable optical services to be delivered without compromising the SONET/SDH overheads of individual tributaries that make up the aggregate signal. Enabling multiple signals to be transparently multiplexed, transported and demultiplexed means signals are delivered as if they were connected directly to the destination equipment by their own unique wavelength, maintaining the customers' signal security and integrity. When available, Transparent Service Multiplexing (TSM) should be ideal for delivering IP traffic, wavelength services and other new optical services that CIENA's Toolkit enables. With TSM, each end device appears to communicate over its own unique wavelength while actually being economically consolidated with other signals.

WAVELENGTH BINDING

- With unprecedented traffic growth and changing traffic demands, Internet-centric carriers are looking for ways

34

34

to better match the changes in IP router traffic demands with the provisioned bandwidth capacities available within their networks. To meet this need, CIENA is developing Wavelength Binding.

- Wavelength Binding will leverage intellectual property to enable a device of any speed to be connected to a network operating at a lower speed by building "virtual channels" of multiple wavelengths bound together in a single, very high-capacity bitstream. As a result, when Wavelength Binding is available, CIENA's customers will be able to deliver 40Gbps without changing their transport infrastructure. Wavelength Binding will also

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give carriers previously unavailable network flexibility by enabling them to bundle and unbundle wavelengths as network capacity demands change.

PRODUCT DEVELOPMENT

We believe the overall growth in utilization of fiber-optic telecommunications networks will lead to transmission bottlenecks in other segments of the networks where the application of optical networking technologies may provide solutions. We also believe there may be opportunities for us to develop products and technologies complementary to existing optical networking technologies which may broaden our ability to provide, facilitate and/or interconnect with high-bandwidth solutions offered throughout fiber-optic networks. CIENA intends to focus its product development efforts and possibly pursue strategic alliances or acquisitions to address expected opportunities in these areas, including our recently announced acquisition of Cyras Systems, Inc.

CUSTOMERS

CIENA has announced publicly relationships with the following customers:

| DOMESTIC ----- | INTERNATIONAL ----- |
|---------------------------|-------------------------------------|
| Alltel | Cable & Wireless, UK |
| Bell South | CompleTel, France |
| Broadwing | Crosswave Communications, Japan |
| Cable & Wireless | Daini Deuden, Japan |
| Digital Teleport | Dynegy, Austria |
| Enron | ESAT Telecom, Ireland |
| Genuity Solutions | Fibernet |
| Intermedia Communications | Global Crossing, UK |
| PSINet | GTS (now known as eBone), Belgium |
| Qwest | HanseNet Telekommunikation, Germany |
| RCN of Pennsylvania | Interoute, UK |
| Sprint | Japan Telecom, Japan |
| Verizon | KDD/Teleway Japan, Japan |
| Williams Communications | Korea Telecom, Korea |
| WorldCom | MobilCom AG, Germany |
| XO Communications | Operadora Protel, Mexico |
| | Telecom Developpement, France |
| | Telia AB, Sweden |
| | WorldCom, Europe |

In addition, CIENA has a number of unannounced customer relationships.

CUSTOMERS BY CATEGORY

INTEREXCHANGE CARRIERS (IXCS)

The initial deployments of CIENA's bandwidth enhancing optical transport equipment occurred in the core of the U.S. long-distance network with the interexchange carriers, or IXCs. IXCs provide connections between local exchanges in different geographic areas. In recent years, incumbent IXCs such as Sprint, WorldCom and AT&T have seen increased competition from emerging

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long-distance carriers such as Qwest Communications, Global Crossing, Broadwing Communications Services, Inc., and Level 3 Communications. We expect that continued competition in long-distance call rates, as well as the carriers' desire for market and service differentiation, will continue to drive demand for the increased capacity and features offered by CIENA's optical networking equipment.

INCUMBENT LOCAL EXCHANGE CARRIERS

Incumbent local exchange carriers, such as the RBOCs, are very active in interoffice and local exchange markets and, under the Telecommunications Act of 1996, RBOCs are eligible to enter the long-distance market once they have met certain requirements for opening their local markets to competition. CIENA believes that over time the RBOCs will continue to gain approval to offer long-distance services, although when and how they will offer these services is unclear. For instance, the RBOCs' move to offering long-distance services could occur through the establishment of owned network facilities, through the purchase of long-distance capacity from other long-distance carriers, or through some combination of the two. Regardless of the timing of any such move, CIENA believes there are opportunities for in-region deployment of CIENA's long-distance and metropolitan optical transport products at certain RBOCs.

INTERNATIONAL COMPETITIVE CARRIERS

New competitive carriers are emerging as a result of deregulation in the international telecommunications markets. CIENA has concentrated its sales efforts on these emerging carriers as opposed to the traditional carriers or PTTs. During fiscal 2000, CIENA increased its announced international customer base from fourteen to eighteen customers. In many cases, these new competitive carriers do not have the installed fiber base of the larger carriers and therefore are in need of the scalable bandwidth CIENA's optical transport systems offer. In addition, because of the economies and flexibility afforded by the application of DWDM technology, CIENA's equipment is being used on several new projects where the service provider is physically constructing the network. CIENA expects that in the near term, the majority of its international revenue will come from these smaller, more aggressive competitive carriers, and CIENA will continue to concentrate its sales efforts accordingly.

COMPETITIVE LOCAL EXCHANGE CARRIERS (CLECS)

Deregulation has fueled the growth of U.S. competitive local exchange carriers, or CLECs. CIENA believes that in the short term, CLECs could benefit from the hesitancy of incumbent local exchange carriers, such as the Regional Bell Operation Companies, or RBOCs, to open their local markets to competitors, and that these CLECs are likely to move aggressively to capitalize on opportunities in the local area. CIENA recognized revenues from CLEC customers in fiscal 2000 and expects that tactical CLEC applications for its long-haul products, as well as the short-distance products, will be well suited to CLEC network applications.

NON-TRADITIONAL TELECOMMUNICATION SERVICE PROVIDERS

The growth of the Internet has produced traffic growth substantial enough to attract new, non-traditional telecommunication service providers to compete in this market as well. Both domestically and internationally, companies with rights-of-way, such as utility companies, cable TV providers, and railroads are capitalizing on their "network", whether a pipeline, a railroad, or a highway, and in some cases, are laying optical fiber and constructing telecommunications

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networks along those rights-of-way. The transmission capabilities of CIENA's optical networking equipment enable these new carriers to provide competitive services while purchasing and laying a minimal amount of fiber-optic cable.

MARKETING AND DISTRIBUTION

CIENA's intelligent optical networking systems require substantial investment, and our target customers in the fiber-optic telecommunications market -- where network capacity and reliability are critical -- are highly demanding and technically sophisticated. There are only a small number of such customers in any country or geographic market. Also, every network operator has unique configuration requirements, which impact the integration of optical networking systems with existing transmission equipment. The convergence of these factors leads to a very long sales cycle for optical networking equipment, often more than a year between initial introduction to CIENA and the customer's commitment to purchase, and has further led CIENA to pursue sales efforts on a focused, customer-by-customer basis. See "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and "Risk Factors".

CIENA has organized its resources for the separate but coordinated approach to United States and international customers. In the United States market, a sales team, comprised of an account manager, systems engineers and technical support and training personnel, is assigned responsibility for each customer account, and for the coordination and pursuit of sales contacts. In the international market, CIENA pursues prospective customers through direct sales efforts, as well as through distributors, independent marketing representatives and independent sales consultants. Through its subsidiaries, CIENA has established offices in the U.S., Europe and Latin America, including offices in the U.K., Germany, France, Spain, Mexico and Brazil. CIENA has distributor or marketing representative arrangements, including agreements with agents in Italy, the Republic of Korea, Japan, Venezuela, Columbia and Chile.

In support of its worldwide selling efforts, CIENA conducts marketing communications programs intended to position and promote its products within the telecommunications industry. Marketing personnel also coordinate our participation in trade shows and conduct media relations activities with trade and general business publications.

MANUFACTURING

CIENA conducts most of the optical assembly, final assembly and final component, module and system test functions for its optical transport products at its manufacturing facilities in Maryland. We also manufacture the in-fiber Bragg gratings used in our optical transport product lines. We expect the majority of the manufacturing associated with our MultiWave CoreDirector and CoreDirector CI products will be performed by third-party manufacturers, with only final system test and assembly performed by CIENA. We also rely on third-party manufacturers to manufacture some of our components for our products and continue to evaluate whether additional portions of our manufacturing can be done on a reliable and cost-effective basis by third-party manufacturers.

CIENA believes that portions of its manufacturing technologies and processes represent a key competitive advantage. Accordingly, we have invested significantly in automated production capabilities and manufacturing process improvements and expect to further enhance our manufacturing process with additional production process control systems. Some critical manufacturing functions require a highly skilled work force, and CIENA puts significant efforts into training and maintaining the quality of its manufacturing personnel and in maintaining its proprietary information in this area.

CIENA's optical transport product lines utilize hundreds of individual parts, many of which are customized for CIENA. Component suppliers in the

specialized, high technology end of the optical communications industry are generally not as plentiful or, in some cases, as reliable, as component suppliers in more mature industries. CIENA works closely with its strategic

37

37

component suppliers to pursue new component technologies that could either reduce cost or enhance the performance of our products.

COMPETITION

Competition in the telecommunications equipment industry is intense, particularly in that portion of the industry focused on delivering higher bandwidth and more cost effective services throughout the telecommunications network. CIENA believes that its position as a leading supplier of open architecture optical networking equipment and the field-tested design and performance of its optical transport products give it a competitive advantage, and CIENA expects to leverage that advantage in bringing its core switching products to market. However, competition has been and will continue to be very intense. See "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and "Risk Factors".

CIENA's competition is dominated by a small number of very large, usually multinational, vertically integrated companies, each of which has substantially greater financial, technical and marketing resources, and greater manufacturing capacity as well as more established customer relationships with long distance carriers than CIENA. Included among CIENA's competitors are Alcatel Alsthom Group, Cisco, Fujitsu Group, Hitachi Ltd., Lucent Technologies Inc., NEC Corporation, Nortel Networks Corporation, Siemens AG, Telefon AB LM Ericsson and several new companies, such as ONI Systems, Sycamore Networks, Corvis Systems, and Tellium, Inc. CIENA believes each of its major competitors is in various stages of development, introduction or deployment of products directly competitive with CIENA's optical transport, core switching and service delivery systems.

In addition to optical networking equipment suppliers, traditional TDM-based transmission equipment suppliers compete with CIENA in the market for transmission capacity. Alcatel, Fujitsu, Hitachi, Lucent, NEC and Nortel are already providers of a full complement of such transmission equipment. These and other competitors have introduced or are expected to introduce equipment that will offer 10 Gbps transmission capability.

PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

CIENA has licensed intellectual property from third parties, including key enabling technologies with respect to the production of in-fiber Bragg gratings, utilized publicly available technology associated with Erbium-doped fiber amplifiers, and applied its design, engineering and manufacturing skills to develop its optical transport systems. These licenses expire when the last of the licensed patents expires or is abandoned. CIENA also licenses from third parties some software components for its network management products. These licenses are perpetual but will generally terminate after an uncured breach of the agreement by CIENA. We have registered trademarks for CIENA, WaveWatcher, MODULE SCOPE, CIENA Optical Communications, Multiwave and Multiwave Sentry. CIENA also relies on contractual rights, trade secrets and copyrights to establish and protect its proprietary rights in its products.

CIENA intends to enforce vigorously its intellectual property rights if infringement or misappropriation occurs.

CIENA's practice is to require its employees and consultants to execute

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non-disclosure and proprietary rights agreements upon commencement of employment or consulting arrangements with CIENA. These agreements acknowledge CIENA's exclusive ownership of all intellectual property developed by the individual during the course of his or her work with CIENA, and require that all proprietary information disclosed to the individual will remain confidential. CIENA's employees generally also sign agreements not to compete with CIENA for a period of twelve months following any termination of employment.

As of November 2000, CIENA had received fifty-eight United States patents, and had one hundred sixteen pending U.S. patent applications. We also have a number of foreign patents and patent applications. Of the United States patents that have been issued to CIENA, the earliest

38

38

any will expire is 2012. Pursuant to an agreement between CIENA and General Instrument Corporation dated March 10, 1997, CIENA is a co-owner with General Instrument Corporation of a portfolio of 27 United States and foreign patents relating to optical communications, primarily for video-on-demand applications. See "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors".

EMPLOYEES

As of October 31, 2000, CIENA and its subsidiaries employed 2,775 persons, of whom 527 were primarily engaged in research and development activities, 1,233 in manufacturing, 412 in installation services, 372 in sales, marketing, customer support and related activities and 231 in administration. None of CIENA's employees are currently represented by a labor union. CIENA considers its relations with its employees to be good.

39

39

DESCRIPTION OF NOTES

The notes will be issued under an indenture between us and First Union National Bank, as trustee, substantially in the form filed as an exhibit to the registration statement of which this prospectus forms a part. The indenture and the notes are governed by New York law. Because this section is a summary, it does not describe every aspect of the notes and the indenture. The following summaries of certain provisions of the indenture do not purport to be complete and are subject to, and are qualified in their entirety by reference to, the detailed provision of the notes and the indenture, including the definitions therein of certain terms.

GENERAL

The notes will be senior, unsecured general obligations of CIENA. The notes will be limited to \$600.0 million aggregate principal amount or \$690.0 million if the underwriters exercise in full their right to purchase additional notes to cover over-allotments. We are required to repay the principal amount of the notes in full on February 1, 2008, unless they are redeemed or repurchased on an earlier date. The notes will rank equally with our other senior unsecured obligations.

The notes will bear interest at the rate per annum shown on the front cover of this prospectus from February 9, 2001. We will pay interest on the notes on February 1 and August 1 of each year, commencing on August 1, 2001. Interest payable per \$1,000 principal amount of notes for the period from February 9, 2001 to August 1, 2001 will be approximately \$17.92.

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You may convert the notes into shares of our common stock initially at the conversion rate stated on the front cover of this prospectus at any time before the close of business on February 1, 2008, unless the notes have been previously redeemed or repurchased. Holders of notes called for redemption or submitted for repurchase will be entitled to convert the notes up to and including the business day immediately preceding the date fixed for redemption or repurchase, as the case may be. The conversion rate may be adjusted as described below.

We may redeem the notes at our option at any time on or after the third business day after February 1, 2004, in whole or in part, at the redemption prices set forth below under "-- Optional Redemption by CIENA", plus accrued and unpaid interest to the redemption date. If we undergo a change in control of us, you will have the right to require us to repurchase your notes as described below under "-- Repurchase at Option of Holders Upon a Change In Control".

FORM, DENOMINATION, TRANSFER, EXCHANGE AND BOOK-ENTRY PROCEDURES

The notes will be issued:

- only in fully registered form;
- without interest coupons; and
- in denominations of \$1,000 and greater multiples.

The notes will be evidenced by one or more global notes, which will be deposited with the trustee as custodian for the Depository Trust Company, or DTC, and registered in the name of Cede & Co., as nominee of DTC. Except as set forth below, record ownership of the global note may be transferred, in whole or in part, only to another nominee of DTC or to a successor of DTC or its nominee.

The global note will not be registered in the name of any person, or exchanged for notes that are registered in the name of any person, other than DTC or its nominee, unless either of the following occurs:

- DTC notifies us that it is unwilling, unable or no longer qualified to continue acting as the depository for the global note; or
- an event of default with respect to the notes represented by the global note has occurred and is continuing.

40

40

In those circumstances, DTC will determine in whose names any securities issued in exchange for the global note will be registered.

DTC or its nominee will be considered the sole owner and holder of the global note for all purposes, and as a result:

- you cannot receive notes registered in your name if they are represented by the global note;
- you cannot receive physical certificated notes in exchange for your beneficial interest in the global note;
- you will not be considered to be the owner or holder of the global note or any note it represents for any purpose; and
- all payments on the global note will be made to DTC or its nominee.

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The laws of some jurisdictions require that certain kinds of purchasers, such as insurance companies, can only own securities in definitive, certificated form. These laws may limit your ability to transfer your beneficial interests in the global note to these types of purchasers.

Only institutions, such as a securities broker or dealer, that have accounts with DTC or its nominee, called "participants", and persons that may hold beneficial interests through participants can own a beneficial interest in the global note. The only place where the ownership of beneficial interests in the global note will appear and the only way the transfer of those interests can be made will be on the records kept by DTC for their participants' interests and the records kept by those participants for interests of persons held by participants on their behalf.

Secondary trading in bonds and notes of corporate issuers is generally settled in clearinghouse, that is, next-day, funds. In contrast, beneficial interests in a global note usually trade in DTC's same-day funds settlement system, and settle in immediately available funds. We make no representations as to the effect that settlement in immediately available funds will have on trading activity in those beneficial interests.

We will make cash payments of interest on and principal and the redemption or repurchase price of the global note, as well as any payment of liquidated damages, to Cede, the nominee for DTC, as the registered owner of the global note. We will make these payments by wire transfer of immediately available funds on each payment date.

We have been informed that DTC's practice is to credit participants' accounts on the payment date with payments in amounts proportionate to their respective beneficial interests in the notes represented by the global note as shown on DTC's records, unless DTC has reason to believe that it will not receive payment on that payment date. Payments by participants to owners of beneficial interests in notes represented by the global note held through participants will be the responsibility of those participants, as is now the case with securities held for the accounts of customers registered in street name.

We will send any redemption notices to Cede. We understand that if less than all the notes are being redeemed, DTC's practice is to determine by lot the amount of the holdings of each participant to be redeemed.

We also understand that neither DTC nor Cede will consent or vote with respect to the notes. We have been advised that under its usual procedures, DTC will mail an "omnibus proxy" to us as soon as possible after the record date for any vote or consent. The omnibus proxy assigns Cede's consenting or voting rights to those participants to whose accounts the notes are credited on the record date identified in a listing attached to the omnibus proxy.

Because DTC can only act on behalf of participants, who in turn act on behalf of indirect participants, the ability of a person having a beneficial interest in the principal amount represented by the global note to pledge the interest to persons or entities that do not participate

41

41

in the DTC book-entry system, or otherwise take actions in respect of that interest, may be affected by the lack of a physical certificate evidencing its interest.

DTC has advised us that it will take any action permitted to be taken by a holder of notes, including the presentation of notes for exchange, only at the

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direction of one or more participants to whose account with DTC interests in the global note are credited and only in respect of such portion of the principal amount of the notes represented by the global note as to which such participant or participants has or have given such direction.

DTC has also advised us as follows:

- DTC is a limited purpose trust company organized under the laws of the State of New York, member of the Federal Reserve System, "clearing corporation" within the meaning of the Uniform Commercial Code and "clearing agency" registered pursuant to the provisions of Section 17A of the Exchange Act;
- DTC was created to hold securities for its participants and facilitate the clearance and settlement of securities transactions between participants through electronic book-entry changes in accounts of its participants;
- participants include securities brokers and dealers, banks, trust companies and clearing corporations and may include certain other organizations;
- certain participants, or their representatives, together with other entities, own DTC; and
- indirect access to the DTC system is available to other entities such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a participant, either directly or indirectly.

The policies and procedures of DTC, which may change periodically, will apply to payments, transfers, exchanges and other matters relating to beneficial interests in the global note. We and the trustee have no responsibility or liability for any aspect of DTC's or any participant's records relating to beneficial interests in the global note, including for payments made on the global note. Further, we and the trustee are not responsible for maintaining, supervising or reviewing any of those records.

CONVERSION RIGHTS

You have the option to convert any portion of the principal amount of any note that is an integral multiple of \$1,000 into shares of our common stock at any time on or prior to the close of business on the maturity date, unless the notes have been previously redeemed or repurchased. The conversion rate will be equal to 9.5808 shares per \$1,000 principal amount of notes. The conversion rate is equivalent to a conversion price of approximately \$104.38 per share. Your right to convert a note called for redemption or delivered for repurchase will terminate at the close of business on the business day immediately preceding the redemption date or repurchase date for that note, unless we default in making the payment due upon redemption or repurchase.

You may convert all or part of any note by delivering the note at the Corporate Trust Office of the trustee in the Borough of Manhattan, The City of New York, accompanied by a duly signed and completed conversion notice, a copy of which may be obtained from the trustee. The conversion date will be the date on which the note and the duly signed and completed conversion notice are so delivered.

As promptly as practicable on or after the conversion date, we will issue and deliver to the trustee a certificate or certificates for the number of full shares of our common stock issuable upon conversion, together with payment in lieu of any fraction of a share. The certificate or certificates will then be

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sent by the trustee to the conversion agent for delivery to the holder of the note being converted. The shares of our common stock issuable upon conversion of the

42

42

notes will be fully paid and nonassessable and will rank equally with the other shares of our common stock.

If you surrender a note for conversion on a date that is not an interest payment date, you will not be entitled to receive any interest for the period from the immediately preceding interest payment date to the conversion date, except as described below in this paragraph. Any note surrendered for conversion during the period from the close of business on any regular record date to the opening of business on the next succeeding interest payment date, except notes, or portions thereof, called for redemption on a redemption date or to be repurchased on a repurchase date for which the right to convert would terminate during such period, must be accompanied by payment of an amount equal to the interest payable on such interest payment date on the principal amount of notes being surrendered for conversion. In the case of any note that has been converted after any regular record date but before the next succeeding interest payment date, interest payable on such interest payment date shall be payable on such interest payment date notwithstanding such conversion, and such interest shall be paid to the holder of such note on such regular record date.

No other payment or adjustment for interest, or for any dividends in respect of our common stock, will be made upon conversion. Holders of our common stock issued upon conversion will not be entitled to receive any dividends payable to holders of our common stock as of any record time or date before the close of business on the conversion date. We will not issue fractional shares upon conversion. Instead, we will pay cash based on the market price of our common stock at the close of business on the conversion date.

You will not be required to pay any taxes or duties relating to the issue or delivery of our common stock on conversion, but you will be required to pay any tax or duty relating to any transfer involved in the issue or delivery of our common stock in a name other than yours. Certificates representing shares of our common stock will not be issued or delivered unless all taxes and duties, if any, payable by you have been paid.

The conversion rate will be subject to adjustment for, among other things:

- dividends and other distributions payable in our common stock on shares of our capital stock;
- the issuance to all holders of our common stock of rights, options or warrants entitling them to subscribe for or purchase our common stock at less than the then current market price of such common stock as of the record date for shareholders entitled to receive such rights, options or warrants;
- subdivisions, combinations and reclassifications of our common stock;
- distributions to all holders of our common stock of evidences of our indebtedness, shares of capital stock, cash or assets, including securities, but excluding:
 - those dividends, rights, options, warrants and distributions referred to above;
 - dividends and distributions paid exclusively in cash; and

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- distributions upon mergers or consolidations discussed below;
- distributions consisting exclusively of cash, excluding any cash portion of distributions referred to in the bullet point immediately above, or cash distributed upon a merger or consolidation to which the next succeeding bullet point applies, to all holders of our common stock in an aggregate amount that, combined together with:
 - other all-cash distributions made within the preceding 365-day period in respect of which no adjustment has been made; and
 - any cash and the fair market value of other consideration payable in connection with any tender offer by us or any of our subsidiaries for our common stock

43

43

concluded within the preceding 365-day period in respect of which no adjustment has been made,

exceeds 10% of our market capitalization, being the product of the current market price per share of our common stock on the record date for such distribution and the number of shares of common stock then outstanding; and

- the successful completion of a tender offer made by us or any of our subsidiaries for our common stock which involves an aggregate consideration that, together with:
 - any cash and other consideration payable in a tender offer by us or any of our subsidiaries for our common stock expiring within the 365-day period preceding the expiration of that tender offer in respect of which no adjustment has been made; and
 - the aggregate amount of all cash distributions referred to in the immediately preceding bullet point above to all holders of our common stock within the 365-day period preceding the expiration of that tender offer in respect of which no adjustments have been made,

exceeds 10% of our market capitalization on the expiration of such tender offer.

We reserve the right to effect such increases in the conversion rate in addition to those required by the foregoing provisions as we consider to be advisable so that any event treated for United States federal income tax purposes as a dividend of stock or stock rights will not be taxable to the recipients. We will not be required to make any adjustment to the conversion rate until the cumulative adjustments amount to 1.0% or more of the conversion rate. We will compute all adjustments to the conversion rate and will give notice by mail to holders of the registered notes of any adjustments.

If we consolidate or merge with or into another entity or another entity is merged into us, or in case of any sale or transfer of all or substantially all of our assets, each note then outstanding will become convertible only into the kind and amount of securities, cash and other property receivable upon such consolidation, merger, sale or transfer by a holder of the number of shares of common stock into which the notes were convertible immediately prior to the consolidation or merger or sale or transfer. The preceding sentence will not apply to a merger that does not result in any reclassification, conversion,

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exchange or cancellation of our common stock.

We may increase the conversion rate for any period of at least 20 days, upon at least 15 days notice, if our board of directors determines that the increase would be in our best interest. The board of directors' determination in this regard will be conclusive. We will give holders of notes at least 15 days' notice of such an increase in the conversion rate. No such increase, however, will be taken into account for purposes of determining whether the closing price of our common stock exceeds the conversion price by 105% in connection with an event that otherwise would be a change in control as defined below.

If at any time we make a distribution of property to our stockholders that would be taxable to such stockholders as a dividend for United States federal income tax purposes, such as distributions of evidences of indebtedness or assets by us, but generally not stock dividends on common stock or rights to subscribe for common stock, and, pursuant to the anti-dilution provisions of the indenture, the number of shares into which notes are convertible is increased, that increase may be deemed for United States federal income tax purposes to be the payment of a taxable dividend to holders of notes. See "Important United States Federal Income Tax Consequences -- U.S. Holders".

OPTIONAL REDEMPTION BY CIENA

On or after the third business day after February 1, 2004, we may redeem the notes in whole or in part, at our option, at the prices set forth below. If we elect to redeem all or part of the notes, we will give at least 30, but no more than 60, days notice to you.

44

44

The redemption price, expressed as a percentage of principal amount, is as follows for the following periods:

| PERIOD ----- | REDEMPTION PRICE ----- |
|------------------------------------------------------------------------------------------------|------------------------------|
| Beginning on the third business day after February 1, 2004 and ending on January 31, 2005..... | 102.143% |
| Beginning on February 1, 2005 and ending on January 31, 2006..... | 101.607% |
| Beginning on February 1, 2006 and ending on January 31, 2007..... | 101.071% |
| Beginning on February 1, 2007 and ending on January 31, 2008..... | 100.536% |

and thereafter is equal to 100% of the principal amount. In each case, we will pay interest to, but excluding the redemption date.

No sinking fund is provided for the notes, which means that the indenture does not require us to redeem or retire the notes periodically.

We may, to the extent permitted by applicable law, at any time purchase notes in the open market, by tender at any price or by private agreement. Any note that we purchase may, to the extent permitted by applicable law, be re-issued or resold or may, at our option, be surrendered to the trustee for cancellation. Any notes surrendered for cancellation may not be re-issued or resold and will be canceled promptly.

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PAYMENT AND CONVERSION

We will make all payments of principal and interest on the notes by dollar check drawn on an account maintained at a bank in The City of New York. If you hold registered notes with a face value greater than \$2,000,000, at your request we will make payments of principal or interest to you by wire transfer to an account maintained by you at a bank in The City of New York. Payment of any interest on the notes will be made to the person in whose name the note, or any predecessor note, is registered at the close of business on January 15 or July 15, whether or not a business day, immediately preceding the relevant interest payment date, a "regular record date". If you hold registered notes with a face value in excess of \$2,000,000 and you would like to receive payments by wire transfer, you will be required to provide the trustee with wire transfer instructions at least 15 days prior to the relevant payment date.

Payments on any global note registered in the name of DTC or its nominee will be payable by the trustee to DTC or its nominee in its capacity as the registered holder under the indenture. Under the terms of the indenture, we and the trustee will treat the persons in whose names the notes, including any global note, are registered as the owners for the purpose of receiving payments and for all other purposes. Consequently, neither we, the trustee nor any of our agents or the trustee's agents has or will have any responsibility or liability for:

- any aspect of DTC's records or any participant's or indirect participant's records relating to or payments made on account of beneficial ownership interests in the global note, or for maintaining, supervising or reviewing any of DTC's records or any participant's or indirect participant's records relating to the beneficial ownership interests in the global note; or
- any other matter relating to the actions and practices of DTC, or any of its participants or indirect participants.

We will not be required to make any payment on the notes due on any day which is not a business day until the next succeeding business day. The payment made on the next succeeding business day will be treated as though it were paid on the original due date and no interest will accrue on the payment for the additional period of time.

Notes may be surrendered for conversion at the Corporate Trust Office of the trustee in the Borough of Manhattan, New York. Notes surrendered for conversion must be accompanied by

45

45

appropriate notices and any payments in respect of interest or taxes, as applicable, as described above under "-- Conversion Rights".

We have initially appointed the trustee as paying agent and conversion agent. We may terminate the appointment of any paying agent or conversion agent and appoint additional or other paying agents and conversion agents. However, until the notes have been delivered to the trustee for cancellation, or moneys sufficient to pay the principal of, premium, if any, and interest on the notes have been made available for payment, and either paid or returned to us as provided in the indenture, the trustee will maintain an office or agency in the Borough of Manhattan, New York for surrender of notes for conversion. Notice of any termination or appointment and of any change in the office through which any paying agent or conversion agent will act will be given in accordance with "-- Notices" below.

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All moneys deposited with the trustee or any paying agent, or then held by us, in trust for the payment of principal of, premium, if any, or interest on any notes which remain unclaimed at the end of two years after the payment has become due and payable will be repaid to us, and you will then look only to us for payment.

REPURCHASE AT OPTION OF HOLDERS UPON A CHANGE IN CONTROL

If a "change in control" as defined below occurs, you will have the right, at your option, to require us to repurchase all of your notes not previously called for redemption, or any portion of the principal amount thereof, that is equal to \$1,000 or an integral multiple of \$1,000. The price we are required to pay is 100% of the principal amount of the notes to be repurchased, together with interest accrued to, but excluding, the repurchase date.

At our option, instead of paying the repurchase price in cash, we may pay the repurchase price in our common stock valued at 95% of the average of the closing prices of our common stock for the five trading days immediately preceding and including the third trading day prior to the repurchase date. We may only pay the repurchase price in our common stock if we satisfy conditions provided in the indenture.

Within 30 days after the occurrence of a change in control, we are obligated to give to you notice of the change in control and of the repurchase right arising as a result of the change of control. We must also deliver a copy of this notice to the trustee. To exercise the repurchase right, you must deliver on or before the 30th day after the date of our notice irrevocable written notice to the trustee of your exercise of your repurchase right, together with the notes with respect to which that right is being exercised. We are required to repurchase the notes on the date that is 45 days after the date of our notice.

A change in control will be deemed to have occurred at the time after the notes are originally issued that any of the following occurs:

- any person, as defined below, acquires beneficial ownership, directly or indirectly, through a purchase, merger or other acquisition transaction or series of transactions, of shares of our capital stock entitling that person to exercise 50% or more of the total voting power of all shares of our capital stock that is entitled to vote generally in elections of directors, other than an acquisition by us, any of our subsidiaries or any of our employee benefit plans; or
- we merge or consolidate with or into any other person, any merger of another person into us or we convey, sell, transfer or lease all or substantially all of our assets to another person, other than any such transaction:
 - that does not result in any reclassification, conversion, exchange or cancellation of outstanding shares of our capital stock;
 - pursuant to which the holders of 50% or more of the total voting power of all shares of our capital stock entitled to vote generally in elections of directors immediately prior to such transaction have the entitlement to exercise, directly

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shares of capital stock entitled to vote generally in the election of directors of the continuing or surviving corporation immediately after such transaction; or

- which is effected solely to change our jurisdiction of incorporation and results in a reclassification, conversion or exchange of outstanding shares of our common stock into solely shares of common stock of the surviving entity.

However, a change in control will not be deemed to have occurred if either:

- the closing price per share of our common stock for any five trading days within the period of 10 consecutive trading days ending immediately after the later of the change in control or the public announcement of the change in control, in the case of a change in control relating to an acquisition of capital stock, or the period of 10 consecutive trading days ending immediately before the change in control, in the case of change in control relating to a merger, consolidation or asset sale, equals or exceeds 105% of the conversion price of the notes in effect on each of those five trading days; or
- all of the consideration, excluding cash payments for fractional shares and cash payments made pursuant to dissenters' appraisal rights, in a merger or consolidation otherwise constituting a change of control under the first and second bullet points in the preceding paragraph above consists of shares of common stock traded on a national securities exchange or quoted on the Nasdaq National Market, or will be so traded or quoted immediately following such merger or consolidation, and as a result of such merger or consolidation the notes become convertible solely into such common stock.

For purposes of these provisions:

- the conversion price is equal to \$1,000 divided by the conversion rate;
- whether a person is a "beneficial owner" will be determined in accordance with Rule 13d-3 under the Exchange Act; and
- a "person" includes any syndicate or group that would be deemed to be a person under Section 13(d)(3) of the Exchange Act.

The rules and regulations promulgated under the Exchange Act require the dissemination of prescribed information to security holders in the event of an issuer tender offer and may apply if the repurchase option becomes available to you. We will comply with these rules to the extent they apply to us at that time.

The definition of change in control includes a phrase relating to the conveyance, transfer, sale, lease or disposition of all or substantially all of our assets. There is no precise, established definition of the phrase "substantially all" under applicable law. Accordingly, your ability to require us to repurchase your notes as a result of conveyance, transfer, sale, lease or other disposition of less than all of our assets may be uncertain.

The foregoing provisions would not necessarily provide you with the protection if we are involved in a highly leveraged or other transaction that may adversely affect you.

Our ability to repurchase notes upon the occurrence of a change in control is subject to important limitations. Some of the events constituting a change in control could result in an event of default under, or be prohibited or limited by, the terms of our then existing borrowing arrangements. Further, although we

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have the right to repurchase the notes with our common stock, subject to certain conditions, we cannot assure you that we would have the financial resources, or would be able to arrange financing, to pay the repurchase price in cash for all the notes that might be delivered by holders of notes seeking to exercise the repurchase right. If we were to fail to repurchase the notes when required following a change in control, an event of default under the indenture would occur, whether or not such repurchase is permitted by the terms of our then existing borrowing arrangements. Any such default may, in turn, cause a default under our other debt.

47

47

MERGERS AND SALES OF ASSETS BY CIENA

We may not consolidate with or merge into any other person or convey, transfer, sell or lease our properties and assets substantially as an entirety to any person, and we may not permit any person to consolidate with or merge into us or convey, transfer, sell or lease such person's properties and assets substantially as an entirety to us unless:

- the person formed by such consolidation or into or with which we are merged or the person to which our properties and assets are so conveyed, transferred, sold or leased, shall be a corporation, limited liability company, partnership or trust organized and validly existing under the laws of the United States, any State within the United States or the District of Columbia and, if we are not the surviving person, the surviving person files a supplement to the indenture and expressly assumes the payment of the principal of, premium, if any, and interest on the notes and the performance of our other covenants under the indenture;
- immediately after giving effect to the transaction, no event of default, and no event that, after notice or lapse of time or both, would become an event of default, will have occurred and be continuing; and
- other requirements as described in the indenture are met.

EVENTS OF DEFAULT

The following will be events of default under the indenture:

- we fail to pay principal of or premium, if any, on any note when due;
- we fail to pay any interest on any note when due, which failure continues for 30 days;
- we fail to provide notice of a change in control;
- we fail to perform any other covenant in the indenture, which failure continues for 60 days after written notice as provided in the indenture;
- any indebtedness under any bonds, debentures, notes or other evidences of indebtedness for money borrowed, or any guarantee thereof, by us or any of our significant subsidiaries in an aggregate principal amount in excess of \$25 million is not paid when due either at its stated maturity or upon acceleration thereof, and such indebtedness is not discharged, or such acceleration is not rescinded or annulled, within a period of 30 days after notice as provided in the indenture; and
- certain events of bankruptcy, insolvency or reorganization involving us or any of our significant subsidiaries.

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Subject to the provisions of the indenture relating to the duties of the trustee in case an event of default shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request or direction of any holder, unless the holder shall have furnished reasonable indemnity to the trustee. Subject to providing indemnification of the trustee, the holders of a majority in aggregate principal amount of the outstanding notes will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

If an event of default other than an event of default arising from events of insolvency, bankruptcy or reorganization occurs and is continuing, either the trustee or the holders of at least 25% in principal amount of the outstanding notes may accelerate the maturity of all notes. However, after such acceleration, but before a judgment or decree based on acceleration, the holders of a majority in aggregate principal amount of outstanding notes may, under certain circumstances, rescind and annul the acceleration if all events of default, other than the non-payment of principal of the notes that have become due solely by such declaration of acceleration, have been cured or waived as provided in the indenture. If an event of default

48

48

arising from events of insolvency, bankruptcy or reorganization occurs, then the principal of, and accrued interest on, all the notes will automatically become immediately due and payable without any declaration or other act on the part of the holders of the notes or the trustee. For information as to waiver of defaults, see "-- Meetings, Modification and Waiver" below.

You will not have any right to institute any proceeding with respect to the indenture, or for any remedy under the indenture, unless:

- you give the trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of the outstanding notes have made written request and offered reasonable indemnity to the trustee to institute proceedings;
- the trustee has not received from the holders of a majority in aggregate principal amount of the outstanding notes a direction inconsistent with the written request; and
- the trustee shall have failed to institute such proceeding within 60 days of the written request.

However, these limitations do not apply to a suit instituted by you for the enforcement of payment of the principal of, premium, if any, or interest on your note on or after the respective due dates expressed in your note or your right to convert your note in accordance with the indenture.

We will be required to furnish to the trustee annually a statement as to our performance of certain of our obligations under the indenture and as to any default in such performance.

MEETINGS, MODIFICATION AND WAIVER

The indenture contains provisions for convening meetings of the holders of notes to consider matters affecting their interests.

Certain limited modifications of the indenture may be made without the necessity of obtaining the consent of the holders of the notes. Other

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modifications and amendments of the indenture may be made, and certain past defaults by us may be waived, either:

- with the written consent of the holders of not less than a majority in aggregate principal amount of the notes at the time outstanding; or
- by the adoption of a resolution, at a meeting of holders of the notes at which a quorum is present, by the holders of at least 66 2/3% in aggregate principal amount of the notes represented at such meeting.

The quorum at any meeting called to adopt a resolution will be persons holding or representing a majority in aggregate principal amount of the notes at the time outstanding and, at any reconvened meeting adjourned for lack of a quorum, 25% of such aggregate principal amount.

However, a modification or amendment requires the consent of the holder of each outstanding note affected if it would:

- change the stated maturity of the principal or interest of a note;
- reduce the principal amount of, or any premium or interest on, any note;
- reduce the amount payable upon a redemption or mandatory repurchase;
- modify the provisions with respect to the repurchase rights of holders of notes in a manner adverse to the holders;
- change the place or currency of payment on a note;
- impair the right to institute suit for the enforcement of any payment on any note;
- modify our obligation to maintain an office or agency in New York City;

49

49

- adversely affect the right to convert the notes;
- reduce the above-stated percentage of the principal amount of the holders whose consent is needed to modify or amend the indenture;
- reduce the percentage of the principal amount of the holders whose consent is needed to waive compliance with certain provisions of the indenture or to waive certain defaults; or
- reduce the percentage required for the adoption of a resolution or the quorum required at any meeting of holders of notes at which a resolution is adopted.

The holders of a majority in aggregate principal amount of the outstanding notes may waive compliance by us with certain restrictive provisions of the indenture by written consent. Holders of at least 66 2/3% in aggregate of the principal amount of notes represented at a meeting may also waive compliance by us with certain restrictive provisions of the indenture by the adoption of a resolution at the meeting if a quorum of holders are present and certain other conditions are met. The holders of a majority in aggregate principal amount of the outstanding notes also may waive by written consent any past default under the indenture, except a default in the payment of principal, premium, if any, or interest.

NOTICES

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Notice to holders of the registered notes will be given by mail to the addresses as they appear in the security register. Notices will be deemed to have been given on the date of such mailing.

Notice of a redemption of notes will be given not less than 30 nor more than 60 days prior to the redemption date and will specify the redemption date. A notice of redemption of the notes will be irrevocable.

REPLACEMENT OF NOTES

We will replace any note that becomes mutilated, destroyed, stolen or lost at the expense of the holder upon delivery to the trustee of the mutilated notes or evidence of the loss, theft or destruction satisfactory to us and the trustee. In the case of a lost, stolen or destroyed note, indemnity satisfactory to the trustee and us may be required at the expense of the holder of the note before a replacement note will be issued.

PAYMENT OF STAMP AND OTHER TAXES

We will pay all stamp and other duties, if any, that may be imposed by the United States or any political subdivision thereof or taxing authority thereof or therein with respect to the issuance of the notes or of shares of stock upon conversion of the notes. We will not be required to make any payment with respect to any other tax, assessment or governmental charge imposed by any government or any political subdivision thereof or taxing authority thereof or therein.

GOVERNING LAW

The indenture and the notes will be governed by and construed in accordance with the laws of the State of New York, United States of America.

THE TRUSTEE

If an event of default occurs and is continuing, the trustee will be required to use the degree of care of a prudent person in the conduct of his own affairs in the exercise of its powers. Subject to such provisions, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request of any of the holders of notes, unless they shall have furnished to the trustee reasonable security or indemnity.

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IMPORTANT UNITED STATES FEDERAL INCOME TAX CONSEQUENCES

The following is a summary of some U.S. federal income tax considerations relating to the purchase, ownership and disposition of the notes and common stock into which the notes may be converted, but does not purport to be a complete analysis of all the potential tax considerations relating to the notes. This summary is based on laws, regulations, rulings and decisions now in effect, all of which are subject to change or differing interpretation, possibly with retroactive effect. This summary applies only to beneficial owners that will hold notes and common stock into which notes may be converted as "capital assets" within the meaning of Section 1221 of the Internal Revenue Code of 1986, or the "Code". For purposes of this discussion, U.S. Holders are holders who, for U.S. federal income tax purposes, are: (1) individual citizens or residents of the U.S.; (2) corporations, partnerships or other entities created or organized in or under the laws of the U.S. or of any political subdivision thereof unless, in the case of a partnership, Treasury Regulations otherwise provide; (3) estates, the incomes of which are subject to U.S. federal income

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taxation regardless of the source of such income or; (4) trusts subject to the primary supervision of a U.S. court and the control of one or more U.S. persons (collectively, "U.S. Holders").

Persons other than U.S. Holders ("Non-U.S. Holders") are subject to special U.S. federal income tax considerations, some of which are discussed below. This discussion does not address tax considerations applicable to an investor's particular circumstances or to investors that may be subject to special tax rules, such as: banks; holders subject to the alternative minimum tax; tax-exempt organizations; insurance companies; foreign persons or entities, except to the extent specifically set forth below; dealers in securities or currencies; persons that will hold notes as a position in a hedging transaction, "straddle" or "conversion transaction" for tax purposes; or persons deemed to sell notes or common stock under the constructive sale provisions of the Code.

This summary discusses the tax considerations applicable to initial purchasers of the notes who purchase the notes at their "issue price" as defined in Section 1273 of the Code and does not discuss the tax considerations applicable to subsequent purchasers of the notes. We have not sought any ruling from the Internal Revenue Service, or the IRS, or an opinion of counsel with respect to the statements made and the conclusions reached in the following summary. We cannot assure you that the IRS will agree with these statements and conclusions. In addition, the IRS is not precluded from successfully adopting a contrary position. This summary does not consider the effect of the federal estate or gift tax laws, except as set forth below with respect to Non-U.S. Holders, or of any applicable foreign, state, local or other jurisdiction.

INVESTORS CONSIDERING THE PURCHASE OF NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE UNITED STATES FEDERAL TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER THE FEDERAL ESTATE OR GIFT TAX RULES OR UNDER THE LAWS OF ANY STATE, LOCAL OR FOREIGN TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY.

U.S. HOLDERS

TAXATION OF INTEREST

Interest paid on the notes will be included in the income of a U.S. Holder as ordinary income at the time it is treated as received or accrued, in accordance with such holder's regular method of accounting for U.S. federal income tax purposes. Under Treasury Regulations, the possibility of differences in the amount and/or timing of payments under a note in the event of certain contingencies may be disregarded for purposes of determining the amount of interest income to be recognized by a holder in respect of such note, or the timing of such recognition, if the likelihood of the contingency, as of the date the notes are issued, is remote. We intend to take the position that an early redemption or repurchase of the notes by us, including a required redemption of the notes by us at the option of the holder in the event of a change of control, is

51

51

remote under the Treasury Regulations, and do not intend to treat such contingencies as affecting the yield to maturity of any note. In the event any such contingency occurs, it would affect the amount and timing of the income that must be recognized by a U.S. Holder of notes. We cannot assure you that the IRS will agree with this position.

SALE, EXCHANGE OR REDEMPTION OF THE NOTES

Upon the sale, exchange, other than a conversion, or redemption of a note,

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a U.S. Holder generally will recognize capital gain or loss equal to the difference between (1) the amount of cash proceeds and the fair market value of any property received on the sale, exchange or redemption, except to the extent this amount is attributable to accrued interest income not previously included in income, which will be taxable as ordinary income, or is attributable to accrued interest that was previously included in income, which amount may be received without generating further income, and (2) the holder's adjusted tax basis in the note. A U.S. Holder's adjusted tax basis in a note generally will equal the cost of the note to the holder. This capital gain or loss will be long-term capital gain or loss if the U.S. Holder's holding period in the note is more than one year at the time of sale, exchange or redemption. Long-term capital gains recognized by some non-corporate U.S. Holders, including individuals, will generally be subject to a maximum rate of tax of 20%, except in the case of long-term capital gains from notes held more than five years, in which case the maximum tax rate is 18%. The deductibility of capital losses is subject to limitations.

CONVERSION OF THE NOTES

A U.S. Holder generally will not recognize any income, gain or loss upon conversion of a note into common stock except with respect to (i) common stock received with respect to interest that has accrued but was not included in income and (ii) cash received in lieu of a fractional share of common stock. Common stock received with respect to interest that has accrued but was not included in income will be taxable to a U.S. Holder as ordinary interest income. A U.S. Holder's tax basis in the common stock received on conversion of a note will be the same as the holder's adjusted tax basis in the note at the time of conversion, reduced by any basis allocable to a fractional share interest, and the holding period for the common stock received on conversion will generally include the holding period of the note converted. However, a U.S. Holder's tax basis in shares of common stock considered attributable to accrued interest generally will equal the amount of the accrued interest included in income, and the holding period for the shares shall begin on the date of conversion.

Cash received in lieu of a fractional share of common stock upon conversion will be treated as a payment in exchange for the fractional share of common stock. Accordingly, the receipt of cash in lieu of a fractional share of common stock generally will result in capital gain or loss, measured by the difference between the cash received for the fractional share and the holder's adjusted tax basis in the fractional share.

ADJUSTMENTS TO CONVERSION PRICE OF NOTES

Holders of convertible debt instruments such as the notes may, in some circumstances, be deemed to have received distributions of stock if the conversion price of these instruments is adjusted. Adjustments to the conversion price made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing the dilution of the interest of the holders of the debt instruments, however, will generally not be considered to result in a constructive distribution of stock. Some of the possible adjustments provided in the notes, including, without limitation, adjustments in respect of taxable dividends to our stockholders, will not qualify as being pursuant to a bona fide reasonable adjustment formula. If these adjustments are made, the U.S. Holders of notes will be deemed to have received constructive distributions taxable as dividends to the extent of our current and accumulated earnings and profits even though they have not received any cash or property as a result of these adjustments. In some circumstances, the failure to provide for an adjustment may result in taxable dividend income to the U.S. Holders of common stock.

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DIVIDENDS ON COMMON STOCK

Distributions, if any, made on the common stock after a conversion generally will be included in the income of a U.S. Holder as ordinary dividend income to the extent of our current or accumulated earnings and profits. Distributions in excess of our current and accumulated earnings and profits will be treated as a return of capital to the extent of the U.S. Holder's basis in the common stock and thereafter as capital gain. A dividend distribution to a corporate U.S. Holder may qualify for a dividends received deduction.

SALE OF COMMON STOCK

Upon the sale or exchange of common stock, a U.S. Holder generally will recognize capital gain or loss equal to the difference between (1) the amount of cash and the fair market value of any property received on the sale or exchange and (2) the U.S. Holder's adjusted tax basis in the common stock. This capital gain or loss will be long-term capital gain or loss if the U.S. Holder's holding period in common stock is more than one year at the time of the sale or exchange. Long-term capital gains recognized by some non-corporate U.S. Holders, including individuals, will generally be subject to a maximum rate of tax of 20%, except in the case of common stock held for more than five years, in which case the maximum tax rate is 18%. A U.S. Holder's basis and holding period in common stock received upon conversion of a note are determined as discussed above under "Conversion of the Notes". The deductibility of capital losses is subject to limitations.

SPECIAL TAX RULES APPLICABLE TO NON-U.S. HOLDERS

In general, subject to the discussion below concerning backup withholding:

(a) Payments of principal or interest on the notes by us or any paying agent to a beneficial owner of a note that is a Non-U.S. Holder will not be subject to U.S. withholding tax, provided that, in the case of interest,

(1) the Non-U.S. Holder does not own, actually or constructively, 10% or more of the total combined voting power of all classes of our stock entitled to vote within the meaning of Section 871(h)(3) of the Code,

(2) the Non-U.S. Holder is not a "controlled foreign corporation" with respect to which we are a "related person" within the meaning of the Code,

(3) the Non-U.S. Holder is not a bank receiving interest described in Section 881(c)(3)(A) of the Code, and

(4) the U.S. payor of interest does not have actual knowledge or reason to know that you are a United States person and the certification requirements under Section 871(h) or Section 881(c) of the Code and related Treasury Regulations, discussed below, are satisfied;

(b) A Non-U.S. Holder of a note or common stock will not be subject to U.S. federal income tax on gains realized on the sale, exchange or other disposition of such note or common stock unless

(1) the Non-U.S. Holder is an individual who is present in the U.S. for 183 days or more in the taxable year of sale, exchange or other disposition, and certain conditions are met,

(2) the gain is effectively connected with the conduct by the Non-U.S. Holder of a trade or business in the U.S. and, if certain U.S. income tax treaties apply, is attributable to a U.S. permanent establishment maintained by the Non-U.S. Holder,

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(3) the Non-U.S. Holder is subject to Code provisions applicable to some U.S. expatriates, or

(4) in the case of a Non-U.S. Holder who holds more than 5% of the notes or the common stock, we are or have been, at any time within the shorter of the five-year period preceding the sale or other disposition or the period such Non-U.S. Holder held the note or common stock, a U.S. real property holding corporation, or a USRPHC for U.S. federal

53

53

income tax purposes. We do not believe that we are currently a USRPHC or that we will become one in the future;

(c) Interest on notes not excluded from U.S. withholding tax as described in (a) above and dividends on common stock after conversion generally will be subject to U.S. withholding tax at a 30% rate, except where an applicable tax treaty provides for the reduction or elimination of such withholding tax.

The conversion price of the notes is subject to adjustment in some circumstances. Any such adjustment could, in some circumstances, give rise to a deemed distribution to Non-U.S. Holders of the notes. See "U.S. Holders -- Adjustments to Conversion Price" above. In such case, the deemed distribution would be subject to the rules described above regarding U.S. withholding tax on dividends.

A Non-U.S. Holder generally should not be subject to U.S. federal income tax on the conversion of a note into common stock. To the extent a non-U.S. holder receives cash in lieu of a fractional share of common stock upon conversion, such cash may give rise to gain that would subject to the rules described above with respect to the sale, exchange or redemption of a note or common stock. To the extent a Non-U.S. Holder receives upon conversion common stock that is attributable to accrued interest not previously included in income, such stock may give rise to income that would subject to the rules described above with respect to the taxation of interest.

To satisfy the certification requirements referred to in (a)(4) above, Sections 871(h) and 881(c) of the Code and the Treasury Regulations thereunder require that either (1) the beneficial owner of a note must certify, under penalties of perjury, to us or our paying agent, as the case may be, that the owner is a Non-U.S. Holder and must provide the owner's name and address, and U.S. taxpayer identification number, or TIN, if any, on Form W-8BEN, or a suitable substitute form; or (2) an intermediary payee (such as a withholding foreign partnership, qualified intermediary or U.S. branch of a non-U.S. bank or of a non-U.S. insurance company) provides to us, or our paying agent, as the case may be, a Form W-8IMY, signed under penalties of perjury and such intermediary payee has obtained appropriate certification from the beneficial owner on Form W-8IMY, W-8BEN or W-8ECI, as to the beneficial owners U.S. status; or (3) a securities clearing organization, bank or other financial institution that holds customer securities in the ordinary course of its trade or business, which we refer to as a "Financial Institution", and holds the note on behalf of the beneficial owner must certify, under penalties of perjury, to us or our paying agent, as the case may be, that a Form W-8BEN or a suitable substitute form has been received from the beneficial owner and must furnish the payor with a copy thereof.

If a Non-U.S. Holder of a note or common stock is engaged in a trade or business in the U.S. and if interest on the note, dividends on the common stock, or gain realized on the sale, exchange or other disposition of the note or common stock is effectively connected with the conduct of the trade or business (and, if certain tax treaties apply, is attributable to a U.S. permanent

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establishment maintained by the Non-U.S. Holder in the U.S.), the Non-U.S. Holder, although exempt from U.S. withholding tax (provided that the certification requirements discussed in the next sentence are met), will generally be subject to U.S. federal income tax on such interest, dividends or gain on a net income basis in the same manner as if it were a U.S. Holder. In lieu of the certificate described above, such a Non-U.S. Holder will be required to provide us with a properly executed IRS Form W-8ECI or successor form in order to claim an exemption from withholding tax. In addition, if such Non-U.S. Holder is a foreign corporation, it may be subject to a branch profits tax equal to 30%, or any lower rate provided by an applicable treaty, of its effectively connected earnings and profits for the taxable year, subject to adjustment.

A note held by an individual who at the time of death is not a citizen or resident of the U.S., as specially defined for U.S. federal estate tax purposes, will not be subject to U.S. federal estate tax if the individual did not actually or constructively own 10% or more of the total combined voting power of all classes of our stock and, at the time of the individual's death, payments with respect to the note would not have been effectively connected with the conduct by such

54

54

individual of a trade or business in the U.S. Common stock held by an individual who at the time of death is not a citizen or resident of the U.S., as specially defined for U.S. federal estate tax purposes, will be included in such individual's estate for U.S. federal estate tax purposes, unless an applicable estate tax treaty otherwise applies.

Non-U.S. Holders should consult with their tax advisors regarding U.S. and foreign tax consequences with respect to the notes and common stock.

BACKUP WITHHOLDING AND INFORMATION REPORTING

Backup withholding of U.S. federal income tax at a rate of 31% may apply to payments pursuant to the terms of a note or common stock to a U.S. Holder that is not an "exempt recipient" and that fails to provide certain identifying information, such as the holder's TIN, in the manner required. Generally, individuals are not exempt recipients, whereas corporations and some other entities are exempt recipients. Payments made in respect of a note or common stock must be reported to the IRS, unless the U.S. holder is an exempt recipient or otherwise establishes an exemption.

In the case of payments of interest on a note to a Non-U.S. Holder, Treasury Regulations provide that backup withholding and information reporting will not apply to payments with respect to which either requisite certification has been received or an exemption has otherwise been established, provided that neither we nor a paying agent has actual knowledge that the holder is a U.S. Holder or that the conditions of any other exemption are not in fact satisfied.

Dividends on the common stock paid to Non-U.S. Holders that are subject to U.S. withholding tax, as described above, generally will be exempt from U.S. backup withholding tax.

Payments of the proceeds of the sale of a note or common stock to or through a foreign office of a U.S. broker or a foreign office of a broker that is a U.S. related person are currently subject to certain information reporting requirements, unless the payee is an exempt recipient or the broker has the requisite certification or documentary evidence in its records that the payee is a Non-U.S. Holder and no actual knowledge that the evidence is false and certain other conditions are met. Temporary Treasury Regulations indicate that these payments are not currently subject to backup withholding.

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Under current Treasury Regulations, payments of the proceeds of a sale of a note or common stock to or through the U.S. office of a broker will be subject to information reporting and backup withholding unless the payee certifies under penalties of perjury as to his or her status as a Non-U.S. Holder and satisfies certain other qualifications (and no agent of the broker who is responsible for receiving or viewing such statement has actual knowledge that it is incorrect) and provides his or her name and address or the payee otherwise establishes an exemption.

Any amounts withheld under the backup withholding rules from a payment to a holder of a note or common stock will be allowed as a refund or credit against such holder's U.S. federal income tax provided that the required information is furnished to the IRS in a timely manner. THE PRECEDING DISCUSSION OF CERTAIN UNITED STATES FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. ACCORDINGLY, EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR AS TO THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF THE NOTES AND COMMON STOCK OF CIENA. TAX ADVISORS SHOULD ALSO BE CONSULTED AS TO THE U.S. ESTATE AND GIFT TAX CONSEQUENCES AND THE FOREIGN TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF THE NOTES AND COMMON STOCK OF CIENA, AS WELL AS THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

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UNDERWRITING

CIENA and the underwriters named below have entered into an underwriting agreement with respect to the notes being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the aggregate principal amount at maturity of notes indicated in the following table. Goldman, Sachs & Co., Morgan Stanley & Co. Incorporated, Banc of America Securities LLC and Robertson Stephens, Inc. are the representatives of the underwriters.

| UNDERWRITERS ----- | AGGREGATE PRINCIPAL AMOUNT AT MATURITY OF NOTES ----- |
|----------------------------------------|----------------------------------------------------------------|
| Goldman, Sachs & Co. | \$390,000,000 |
| Morgan Stanley & Co. Incorporated..... | 90,000,000 |
| Banc of America Securities LLC..... | 60,000,000 |
| Robertson Stephens, Inc. | 60,000,000 |
| | ----- |
| Total..... | \$600,000,000 ===== |

If the underwriters sell more notes than the total principal amount set forth in the table above, the underwriters have an option to buy up to an additional \$90.0 million principal amount of notes from CIENA to cover such sales. They may exercise that option for 30 days. If any notes are purchased pursuant to this option, the underwriters will severally purchase notes in approximately the same proportion as set forth in the table above.

Notes sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus. Any notes sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price of up to 1.8% of the principal amount of

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the notes. Any such securities dealers may resell any notes purchased from the underwriters to certain other brokers or dealers at a discount from the initial public offering price of up to 0.01% of the principal amount of the notes. If all the notes are not sold at the initial public offering price, the underwriters may change the offering price and the other selling terms.

CIENA and some of its officers and directors have agreed with the underwriters not to dispose of or hedge any of our common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 90 days after the date of this prospectus, except with the prior written consent of Goldman, Sachs & Co. CIENA's agreement does not apply to any securities issued: (i) under employee benefit plans or dividend reinvestment plans, (ii) upon exercise of currently outstanding stock options, (iii) upon conversion or exchange of currently outstanding convertible or exchangeable securities, (iv) in connection with the acquisition of Cyrus Systems, Inc. or (v) in connection with other mergers, acquisitions or similar transactions so long as the parties agree to be bound by the terms of the lock-up. This agreement does not restrict us from filing a shelf registration statement which includes equity securities. CIENA will issue approximately 27 million shares of common stock if the Cyrus acquisition is consummated, almost all of which shares will be freely tradeable.

The notes are a new issue of securities with no established trading market. CIENA has been advised by the underwriters that the underwriters intend to make a market in the notes but are not obligated to do so and may discontinue market making at any time without notice. No assurance can be given as to the liquidity of the trading market for the notes.

In connection with the offering, the underwriters may purchase and sell notes in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of notes than they are required to purchase in the offering. Stabilizing transactions consist of certain bids or purchases made for the purpose of preventing or retarding a decline in the market price of the notes while the offering is in progress.

56

56

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

These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the notes. As a result, the price of the notes may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the underwriters at any time. These transactions may be effected in the over-the-counter market or otherwise.

CIENA has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

CIENA estimates that its share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately \$305,000.

Some of the underwriters have from time to time performed, and may in the future perform, certain investment banking and advisory services for CIENA for

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which they have received, and may in the future receive, customary fees and expenses.

Lawton W. Fitt, a director of CIENA, is a Managing Director of Goldman, Sachs & Co., one of the underwriters in this offering.

LEGAL MATTERS

Hogan & Hartson L.L.P., Baltimore, Maryland, will provide CIENA with an opinion as to legal matters in connection with the notes and common stock issuable upon conversion of the notes offered by this prospectus. Certain legal matters in connection with this offering will be passed on for the underwriters by Hale and Dorr LLP, Reston, Virginia.

EXPERTS

The consolidated financial statements of CIENA Corporation as of October 31, 2000 and 1999 and for each of the three years in the period ended October 31, 2000 incorporated in this prospectus by reference to CIENA's Annual Report on Form 10-K for the year ended October 31, 2000, as amended January 18, 2001, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, given on the authority of said firm as experts in auditing and accounting.

The financial statements of Cyras Systems, Inc. as of December 31, 1998 and 1999 and for the period from July 24, 1998 (inception) to December 31, 1998 and for the year ended December 31, 1999, incorporated in this prospectus by reference to the current report on Form 8-K of CIENA Corporation filed January 18, 2001, have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference, and have been so incorporated by reference in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC under the Securities Act a registration statement on Form S-3. This prospectus does not contain all of the information contained in the registration statement, certain portions of which have been omitted under the rules of the SEC. We also file annual, quarterly and special reports, proxy statements and other information with the SEC under the Exchange Act. The Exchange Act file number for our SEC filings is 000-21969. You may read and

57

57

copy the registration statement and any other document we file at the following SEC public reference rooms:

Judiciary Plaza
450 Fifth Street, N.W.
Rm. 1024
Washington, D.C. 20549

500 West Madison Street
14th Floor
Chicago, Illinois 60661

7 World Trade Center
Suite 1300
New York, New York 10048

You may obtain information on the operation of the public reference room in Washington, D.C. by calling the SEC at 1-800-SEC-0330. We file information electronically with the SEC. Our SEC filings are available from the SEC's Internet site at <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically. You may read and copy our SEC filings and other information at

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the offices of Nasdaq Operations, 1735 K Street, N.W., Washington, D.C. 20006.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the documents we file with it, which means that we can disclose important information to you by referring you to those documents instead of reproducing that information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and information in documents that we file later with the SEC will automatically update and supersede information in this prospectus. We incorporate by reference the documents listed below:

- Our Annual Report on Form 10-K for the fiscal year ended October 31, 2000, as amended on January 18, 2001;
- Our Form 8-K filed on January 18, 2001;
- All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date of this prospectus and before the termination of the offering; and
- The description of common stock contained in our Form 8-A filed on January 13, 1997, as amended.

We will provide a copy of the documents we incorporate by reference, at no cost, to any person who receives this prospectus. To request a copy of any or all of these documents, you should write or telephone us at: 1201 Winterson Road, Linthicum, MD, (410) 865-8500, Attention: Director, Investor Relations.

58

58

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This Prospectus is an offer to sell only the notes offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

TABLE OF CONTENTS

| | Page |
|--------------------------------------------------------------------------------------------------|------|
| | ---- |
| Prospectus Summary..... | 3 |
| Risk Factors..... | 8 |
| Forward Looking Statements..... | 18 |
| Use of Proceeds..... | 18 |
| Selected Consolidated Financial Data..... | 19 |
| Management's Discussion and Analysis of Financial Condition and Results of Operations..... | 20 |
| Business..... | 27 |

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| | |
|-----------------------------------------------------------------|----|
| Description of Notes..... | 40 |
| Important United States Federal Income Tax Consequences..... | 51 |
| Underwriting..... | 56 |
| Legal Matters..... | 57 |
| Experts..... | 57 |
| Where You Can Find More Information..... | 57 |
| Incorporation by Reference..... | 58 |

\$600,000,000
CIENA CORPORATION
3.75% Convertible
Notes due February 1, 2008

[Ciena logo]

GOLDMAN, SACHS & CO.
MORGAN STANLEY DEAN WITTER
BANC OF AMERICA SECURITIES LLC
ROBERTSON STEPHENS

