CIENA CORP
Form 10-K
December 21, 2012
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

þ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended October 31, 2012

OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number 0-21969
Ciena Corporation
(Exact name of registrant as specified in its charter)

Delaware	23-2725311
(State or other jurisdiction of Incorporation or organization)	(I.R.S. Employer Identification No.)
7035 Ridge Road, Hanover, MD	21076
(Address of principal executive offices)	(Zip Code)

(410) 694-5700
(Registrant's telephone number, including area code)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value	The NASDAQ Stock Market

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES þ NO o

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. YES o NO þ

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.4-5 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). YES þ NO o

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Act. (Check one):

Accelerated filer o Non-accelerated filer o

Large accelerated filer		Smaller reporting company
þ		o
	(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act) YES o NO þ

The aggregate market value of the Registrant's Common Stock held by non-affiliates of the Registrant was approximately $1.0 billion based on the closing price of the Common Stock on the NASDAQ Global Select Market on April 27, 2012.

The number of shares of Registrant's Common Stock outstanding as of December 13, 2012 was 100,610,686.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of the Form 10-K incorporates by reference certain portions of the Registrant's definitive proxy statement for its 2013 Annual Meeting of Stockholders to be filed with the Commission not later than 120 days after the end of the fiscal year covered by this report.

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CIENA CORPORATION
ANNUAL REPORT ON FORM 10-K
FOR FISCAL YEAR ENDED OCTOBER 31, 2012
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PART I

The information in this annual report contains certain forward-looking statements, including statements related to our business prospects and strategies, the markets for our products and services, and trends in our business and markets that involve risks and uncertainties. Our actual results may differ materially from the results discussed in these forward-looking statements. Factors that might cause such a difference include those discussed in “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere in this annual report.

Item 1. Business

Overview

We are a provider of equipment, software and services that support the transport, switching, aggregation and management of voice, video and data traffic on communications networks. Our Packet-Optical Transport, Packet-Optical Switching and Carrier-Ethernet Solutions products are used, individually or as part of an integrated solution, in communications networks operated by service providers, cable operators, governments, enterprises, research and education institutions and other network operators around the globe. We are a network specialist focused on solutions that enable converged, next-generation architectures, optimized to handle a broader mix of high-bandwidth communications services. Our products allow network operators to scale capacity and increase transmission speeds, efficiently allocate network traffic, and deliver services to business and consumer end users. Our network solutions also include our integrated Ciena One software suite that provides network management capabilities that unify our product portfolio and provide automation and management features that enable efficient service delivery. To complement our hardware and software portfolio, we offer a broad range of consulting and support services that help our customers design, optimize, deploy, manage and maintain their networks. We believe that the close, collaborative engagement with customers enabled by our services offering is an important component of our network specialist approach and a significant differentiator with customers.

Network operators face a challenging and rapidly changing environment that requires their networks to be robust enough to address increasing capacity needs and flexible enough to adapt quickly to emerging applications and evolving consumer and business use of communications services. At the same time, network operators are competing to distinguish their service offerings and add revenue-generating services while managing the cost to implement and maintain their networks. To address these business, infrastructure and service delivery challenges, we offer a comprehensive, solutions-oriented portfolio that builds upon the principles of our OP^n Architecture for next-generation networks. Our OP^n Architecture, which underpins our solutions offering and guides our research and development strategy, leverages the convergence of optical and packet networking technologies to increase network scale cost effectively, while emphasizing software-enabled programmability, automation and open interfaces. Through this network approach, we seek to enable high-capacity, configurable infrastructures that can be managed and adapted by network-level applications, and to provide flexible interfaces for the integration of computing, storage and network resources. By increasing network flexibility for service delivery, reducing required network elements and enabling increased scale at reduced cost, our communications networking solutions create business and operational value for our customers.

Certain Financial Information and Segment Data

We generated revenue of $1.8 billion in fiscal 2012, as compared to $1.7 billion in fiscal 2011. For more information regarding our results of operations, see “Management's Discussion and Analysis of Financial Condition and Results of Operations” in Item 7 of Part II of this annual report. We currently organize our operations into four separate operating segments: “Packet-Optical Transport,” “Packet-Optical Switching,” “Carrier Ethernet Solutions,” and “Software and Services.” The matters discussed in this “Business” section should be read in conjunction with the Consolidated Financial Statements found under Item 8 of Part II of this annual report, which include additional financial information about

our operating segments, total assets, revenue, measures of profit and loss, and financial information about geographic areas and customers representing greater than 10% of revenue.

Corporate Information and Access to SEC Reports

We were incorporated in Delaware in November 1992 and completed our initial public offering on February 7, 1997. Our principal executive offices are located at 7035 Ridge Road, Hanover, Maryland 21076. Our telephone number is (410) 694-5700, and our web site address is www.ciena.com. We make our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, available free of charge on the "Investors" page of our web site as soon as reasonably practicable after we file these reports with the Securities and Exchange Commission (SEC). We routinely post the reports above, recent news and announcements, financial results and other important information about our business on our website at www.ciena.com. Information contained on our web site is not a part of this annual report.

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Industry Background

The markets in which we sell our communications networking solutions have been subject to significant changes in recent years, including rapid growth in network traffic, expanded service offerings, and evolving technologies and end user demands. These conditions have created market opportunities and business challenges, and they have changed competitive landscapes. Existing and emerging network operators are competing to distinguish their service offerings and rapidly introduce differentiated, revenue-generating services. At the same time, network operators continue to seek to manage network expense and operate their businesses profitably. These dynamics continue to drive technology convergence of network features, functions and layers, as well as demand for software-based programmability. We believe these market dynamics will cause network operators to adopt communications network infrastructures that are increasingly more automated, robust and configurable.

Network Traffic Growth Driving Increased Capacity Requirements and Transmission Speeds

Optical networks, which carry voice, video and data traffic using multiple wavelengths of light across fiber optic cables, have experienced a multi-year period of strong traffic growth, and industry analysts project continued growth for the foreseeable future. Increasing network traffic is being driven by growing use of and reliance upon a broad range of communications services by consumer and business end users, as well as the expansion of bandwidth intensive wireline and wireless service offerings. Expanding mobile applications, including Internet, video and data services from the proliferation of smartphones, tablets and other devices with wireless access, are further increasing network traffic. Business customers seeking to improve automation, efficiency and productivity are increasingly dependent upon bandwidth-intensive, enterprise-oriented communications services that facilitate global operations, employee mobility and seamless access to critical business applications and data. Enterprise technology trends such as virtualization, cloud computing and machine-to-machine connections are placing new capacity and service requirements on networks. At the same time, an increasing portion of network traffic is being driven by growth of consumer-oriented applications and adoption of mobile and broadband technologies. These include peer-to-peer Internet applications, residential video services, multimedia downloads, cloud-based consumer services and online gaming. This traffic growth requires that network operators add capacity or transition to higher capacity networks with increased transmission speeds.

Multiservice Traffic and Transition to Software-Defined Programmable Network Architectures

We expect that the broadening mix of high-bandwidth, data and video communications services, together with growing mobility and expanding wireless applications, will require upgrades to existing network infrastructure, including mobile backhaul and traditional wireline networks. We believe that this mix of high-bandwidth and latency-sensitive data traffic, and an increased focus on controlling network costs, are driving a transition from multiple, disparate SONET/SDH-based networks to more efficient, converged, multi-purpose optical transport network (OTN)/Ethernet packet-based network architectures. The industry has previously experienced such network technology transitions and these upgrade and investment cycles tend to happen over multi-year periods. For instance, from the mid 1980s to the mid 1990s, service providers focused network upgrades on the transition required to digitize voice traffic. From the mid 1990s to the mid 2000s, service providers focused network upgrades on the transition to SONET/SDH networks designed to reliably handle substantially more network traffic. We believe that the industry is currently experiencing a network transition to flexible, multi-purpose OTN/Ethernet packet-based network architectures that more efficiently handle a growing mix of high-bandwidth communications services and a greater concentration of data traffic.

Emerging Drivers for Network Modernization

Enterprise and consumer end users historically perceived value simply from their network connectivity. Today, however, end users are increasingly focused upon the value that they receive from the services, applications and performance delivered by the underlying network. As a result, network operators seek to create, market, and profitably sell services, as opposed to simply selling connectivity. This shift fundamentally changes how communications networks are designed and managed. Some of the areas that network operators are pursuing to better compete and drive end user value include:

- Mobility. The emergence of smart mobile devices that deliver integrated voice, audio, photo, video, email and mobile Internet capabilities, like Apple's iPhone™ and iPad™, and Android™-based smart phones and tablets, is rapidly changing the service type and magnitude of data traffic carried by wireless networks. The increase in availability and improved ease of use of mobile web-based applications expands the reach of virtualized services beyond a wireline connection. For instance, consumer-driven video and gaming are being virtualized, allowing broad access, regardless

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of the device or the network used. Because most wireless traffic ultimately travels over a wireline network in order to reach its destination, growth in mobile communications continues to place demands upon wireline networks.

- "Cloud" Services. Cloud services are characterized by the sharing of computing, storage and network resources to improve economics through higher utilization of network elements. IT and network service providers are centralizing these resources in order to offer usage-based and metered services that are hosted remotely across a network. Prevalent cloud-based services include Platform as a Service (PaaS), Software as a Service (SaaS) and Infrastructure as a Service (IaaS). As a result, smaller enterprises and consumers can subscribe to an expanding range of cloud services to replace local computing and storage requirements. Larger enterprises and data center operators may use private clouds to consolidate their own resources and public clouds to accommodate peak demand situations, often in combination.

- Network Virtualization. Virtualization is the process of decoupling physical IT or communications assets from the logical services or capabilities they can provide. This approach has many appealing attributes such as minimizing expensive resources while adding flexibility and scale. The virtualization of computing, storage and network resources elevates the value of connectivity and drives demand for network infrastructures that offer greater programmability, scale, and flexibility.

- Machine-to-Machine (M2M) Applications. In the past, communications services largely related to the connection of people-to-people or people with content. Today, the number of networked connections between devices and servers is growing rapidly with M2M-related traffic expected to represent an increasing portion of Internet traffic. These connections allow the sharing of data that can be monitored and analyzed by applications residing on those devices in order to provide value-added services to users. We expect service traffic relating to the interconnection of machines or devices to grow as Internet and cloud content delivery, smartgrid applications, health care and safety monitoring, resource/inventory management, home entertainment, consumer appliances and other mobile data applications become more widely adopted.

Market Conditions and Effect on Network Investment

We believe that these dynamics, together with multiservice traffic growth, are driving a shift in network priorities and spending toward high-capacity, converged network architectures. However, during fiscal 2012 our market experienced a challenging environment, including declining growth rates in spending in the packet-optical networking markets our solutions address. We believe that this reflects the macroeconomic conditions and competitive landscape encountered in our market during the year. The sustained period of macroeconomic weakness and volatility in the global economy resulted in heightened uncertainty and cautious customer spending in our industry. These market dynamics have caused increased customer scrutiny and more rigid prioritization of network investment, resulting in protracted sales cycles, lengthier network deployments, and revenue recognition delays. In addition, our market is intensely competitive and fragmented and securing new opportunities, particularly for international sales, can often require less favorable pricing and less favorable commercial terms that can elongate the revenue recognition cycle and contribute to fluctuations in operating results. In spite of these macroeconomic and competitive conditions, we grew our business in fiscal 2012 and believe we are well positioned for the longer-term opportunities presented by multiservice traffic growth. By offering a solution that converges network functions and layers, particularly the integration of transport, OTN switching and packet-switching, we believe we offer a more robust, efficient and differentiated network architecture that allows network operators to create and rapidly deliver new service offerings and derive increased value from their network investment.

Strategy

We believe that a number of underlying drivers in the marketplace represent significant, long-term opportunities for our business. We believe that market trends, including the proliferation of smartphones, tablets and similar devices running mobile web applications, the prevalence of video applications, and the shift of enterprise and consumer applications to cloud-based or virtualized network environments, are indicative of increasing use and dependence by consumers and enterprises upon a growing variety of broadband applications and services. We expect that these services will continue to add significant multiservice network traffic, requiring network operators to invest in next-generation, high-capacity network infrastructures that are more efficient, robust and programmable.

Our corporate strategy to capitalize on these market dynamics, promote operational efficiency and drive profitable growth of our business includes the following initiatives:

Promote our OP^{n} Architecture for Next-Generation Networks. The services and applications running on communications networks require that more of the traffic on these networks be packet-oriented. The traditional approach to this problem has

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been to add IP routing capability at various points in the network. As capacity needs grow, this approach becomes unnecessarily complex and costly. We reduce the cost and complexity of growing these networks with a programmable infrastructure that we believe brings together the reliability and capacity of optical networking with the flexibility and economics of packet networking technologies. Combining these attributes with network level applications creates an approach we call our OP^n Architecture. Our OP^n Architecture leverages the convergence of optical and packet networking to enable network scale, applies advanced control plane software for network programmability and enables network-level applications to integrate and optimize network, computing and storage resources in a virtualized environment. We intend to promote the scalability, programmability, flexibility and cost effectiveness advantages of our OP^n Architecture, and we see opportunities in offering a portfolio of carrier-class solutions that facilitate the transition to converged, next-generation networks.

Alignment of Research and Development Investment with Growth Opportunities. We seek to ensure that our product development initiatives and investments are closely aligned with market growth opportunities and reflect the changing dynamics faced by network operators. We are investing in our OP^n Architecture, which combines a cost-optimized, programmable network platform with open interfaces and network-level software applications. Our current development efforts are focused upon expanding packet capabilities on our Carrier Ethernet Solutions and Packet-Optical Transport products for metro and service aggregation applications, optimizing our core network solutions for application in metro networks, and investing in new vectors for growth. Research and development efforts are focused on extending our WaveLogic coherent optical processor for 40G and 100G optical transport across our portfolio and introducing 400G transmission products. We are also focused upon enhancing our software applications, extending our OneConnect control plane across the 5400 and 6500 platform families, and developing network level applications that automate network functions and support new service introduction.

Evolve Go-to-Market Model. We seek to evolve our go-to-market selling model, both from a coverage and an engagement perspective.

Coverage. Our coverage model is focused on penetrating high-growth geographic markets, selling into key customer segments and addressing additional network applications with our solutions. We seek to enhance our brand internationally, expand our geographic reach and capture market share in international markets, including Brazil, the Middle East, Russia, Japan and India. We intend to pursue opportunities to diversify our customer base beyond our traditional customer base. We are expanding our sales efforts to capture opportunities arising from enterprise migration to, and increased reliance upon, cloud-based services, and targeting government agencies, and research and educational institutions. We are also targeting Internet content providers and other network operators emerging as a result of network modernization drivers and the adoption of new communication services. We seek to expand the application of our solutions, including in metro aggregation, submarine networks, and in support of cloud-based services, business Ethernet services and mobile backhaul. We intend to pursue selling initiatives and strategic channel opportunities, including relationships with key resellers, and carrier-managed sales to end users through our service provider customers, in order to complement our direct sales force and penetrate more deeply our targeted geographic markets, customer segments and additional applications for our solutions.

Engagement. Our strategy is to leverage our close relationship with customers in the design, development, implementation and support of their networks and to promote a close alignment of our solutions with customer network priorities. This engagement model is a key differentiator for our business and provides us with unique insight into the business and network needs of our customers. We seek to expand our Network Transformation Solutions offering to address the network modernization and service delivery demands of our customers, as well as their desire to drive additional value from their network infrastructure. We believe this services-oriented solutions offering shifts our value proposition beyond the sale of our next-generation communications networking products and allows us to play a key role in the design and evolution of our customers' networks to support their strategic business objectives. By understanding and addressing their network infrastructure needs and the evolving markets in which our customers

compete, we believe this customized solutions offering creates additional business and operational value for our customers, enabling them to better compete in a challenging environment.

Business optimization to yield operating leverage. We seek to improve the operational efficiencies in our business and gain additional operating leverage. We are focused on the transformation and redesign of certain business processes, systems, and resources. These initiatives include additional investments, re-engineering and automation of certain key business processes, including the engagement of strategic partners or resources to assist with select business functions. In addition, we are focused on optimizing our supply chain structure in order to increase efficiency, reduce overhead and cost-reduce our product solutions. These initiatives include the rationalization and consolidation of third party manufacturers, distribution facilities and logistics providers, direct order fulfillment of additional products, and the consideration of select vertical integration within our supply chain. We seek to leverage these opportunities to promote the profitable growth of our business.

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Customers and Markets

Our customer base, and the geographic markets and customer segments into which we sell our products and services, have expanded in recent years. As a result of industry dynamics above, additional network operators supporting new communications services and applications continue to emerge. The network infrastructure needs of our customers vary, depending upon their size, location, the nature of their end users and the services that they deliver and support. We sell our product and service solutions through our direct sales force and third party channel partners to end user network operators in the following customer segments:

Communications Service Providers

Our service provider customers include regional, national and international wireline and wireless carriers, as well as service provider consortia offering services over submarine networks. Our customers include AAPT, Allstream, AT&T, Australia Japan Cable, Bell Canada, BT, Cable & Wireless, CenturyLink, France Telecom, Japan-US Cable, Korea Telecom, PLDT, Reliance, SEA-ME-WE 4, SingTel, Southern Cross, Sprint, Tata Communications, Telefonica, Telmex, Telus, Verizon, Vimpelcom, Vodafone and XO Communications. Communications service providers are our historical customer base and continue to represent a significant majority of our revenue. We provide service providers with products from the network core to its edge where end users gain access. Our service provider solutions address growing bandwidth demand from multiservice traffic growth and support key service provider offerings, including carrier-managed services, wide area network (WAN) consolidation, data center and inter-site connectivity, wireless backhaul and business Ethernet services.

Cable & Multiservice Operators (MSO)

Our customers include leading cable and multiservice operators in the U.S. and internationally. These customers include Cogeco, Comcast, Cox, RCN, Rogers and Time Warner. Our cable and multiservice operator customers rely upon us for carrier-grade, Ethernet transport and switching products and high-capacity coherent optical transport to support enterprise-oriented services. Our platforms allow cable operators to integrate voice, video and data applications over a converged infrastructure and to scale their networking infrastructure to keep ahead of the bandwidth and application demands of their subscribers. Our products support key cable applications including business Ethernet services, wireless backhaul, broadcast and digital video, voice over IP, and video on demand.

Enterprise

Our enterprise customers include large, multi-site commercial organizations, including participants in the financial, health care, transportation, utilities and retail industries. Our solutions enable enterprises to leverage network resources to achieve operational improvements, increased automation and information technology cost reductions. Our products enable inter-site connectivity between data centers, sales offices, manufacturing plants, retail stores and research and development centers, using an owned or leased private fiber network or a carrier-managed service. Our products facilitate key enterprise applications including IT virtualization, cloud computing, business Ethernet services, business continuity, online collaboration, video conferencing, low latency networking and WAN encryption. Our products also enable our enterprise customers to prevent unexpected network downtime and ensure the safety, security and availability of their data.

Internet Content Providers

Our customers include global providers of a diverse range of Internet content services and applications such as search, social media, video, real-time communications and cloud-based offerings to consumers and enterprises. Our

customers require massive scale, low latency, and proven reliability and performance to connect end-users to network resources and to interconnect critical data centers. Our customers leverage high-capacity coherent optics, packet switching, automated service provisioning and software-based network control to deliver flexible, high-performance connectivity services on demand in a virtualized network environment.

Government, Research and Education

Our government customers include federal and state agencies in the U.S. as well as international government entities. Our government and research and education customers seek to take advantage of technology innovation, improve their information infrastructure, and facilitate increased collaboration. Our solutions feature ultra-high capacity, reconfigurability and service flexibility to meet the requirements of supercomputing systems. Our solutions offering promotes network assurance, security and reliability while improving network performance, capacity, and flexibility. We collaborate with leading institutions to

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provide government and research and education communities with optimized networks that minimize cost and complexity, through initiatives that support intelligent control plane technologies, interoperability and scalability.

Products and Services

Our product portfolio consists of our Packet-Optical Transport, Packet-Optical Switching and Carrier Ethernet Solutions products. These products, together with our unified network management software, network transformation solutions and support services offerings, allow us to offer customers comprehensive solutions to address their communications network priorities.

Packet-Optical Transport

Our Packet-Optical Transport platforms include flexible, scalable wavelength division multiplexing (WDM) solutions that add capacity to core, regional and metro networks and enable cost-effective and efficient transport of voice, video and data traffic at high transmission speeds. We offer scalable Packet-Optical Transport platforms, including several chassis sizes and a comprehensive set of line cards, that can be utilized from the customer premises, where space and power are limited, to the metropolitan/regional core, where the need for high capacity and carrier-class performance is essential. By automating optical infrastructures, our Packet-Optical Transport products support the efficient delivery of a wide variety of consumer-oriented network services, as well as key managed service and enterprise applications. Our Packet-Optical Transport portfolio includes the following products:

- 6500 Packet-Optical Platform;
- 4200® Advanced Services Platform;
- 5100/5200 Advanced Services Platform;
- Corestream® Agility Optical Transport System;
- Common Photonic Layer (CPL); and
- 6100 Multiservice Optical Platform.

Our Packet-Optical Transport portfolio, including our 6500 Packet-Optical Platform, features coherent, 40G and 100G optical transport technology and our WaveLogic coherent optical processors. We are currently shipping our third generation of these proprietary silicon chips that facilitate deployment of our transport technology over existing customer fiber plant (terrestrial and submarine), enable our optical transmission systems to scale capacity to 40G and 100G, and yield additional economic benefits through the reduction or elimination of network equipment, such as amplifiers, regenerators and dispersion compensating devices. Our 6500 Packet-Optical Platform includes certain integrated switching elements addressing market demand for converged network features, functions and layers to drive more robust and cost-effective network infrastructures. Our Packet-Optical Transport solutions also include our traditional SONET/SDH products and data networking products, as well as certain enterprise-oriented transport solutions that support storage and local area network (LAN) extension, interconnection of data centers, and virtual private networks.

Packet-Optical Switching

Our Packet-Optical Switching family of products provides time division multiplexing (TDM) switching and packet switching capability to allocate efficiently network capacity and to enable service delivery. Our principal Packet-Optical Switching products are our CoreDirector® Multiservice Optical Switch, our 5430 Reconfigurable Switching System and our OTN configuration for the 5410 Reconfigurable Switching System. This product segment includes multiservice, multi-protocol switching systems that consolidate the functionality of an add/drop multiplexer, digital cross-connect and packet switch into a single, high-capacity intelligent switching system. These products address both core and metro segments of communications networks and support key managed services, including

Ethernet/TDM Private Line and IP services. Our Packet-Optical Switching solutions include a family of multi-terabit reconfigurable switching systems that utilize intelligent mesh networking to provide resiliency and feature an integrated optical control plane to automate the provisioning and bandwidth control of high-capacity services. Our Packet-Optical Switching systems flexibly support a mix of Carrier Ethernet/MPLS, OTN, WDM, and SONET/SDH switching to facilitate the transition to a service-enabling infrastructure.

Carrier Ethernet Solutions

Our Carrier Ethernet Solutions allow customers to utilize the automation and capacity created by our Packet-Optical Transport products in core and metro networks and to deliver new, revenue-generating services to consumers and enterprises. These products have applications from the edge of metro and core networks, where they aggregate traffic, to the access tiers of networks where they can be deployed to support wireless backhaul infrastructures and deliver business data services.

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Employing sophisticated Carrier Ethernet switching technology, these products deliver quality of service capabilities, virtual local area networking and switching functions, and carrier-grade operations, administration, and maintenance features.

Our Carrier Ethernet Solutions offering primarily consists of our 3000 family of service delivery switches and service aggregation switches, our 5000 series of service aggregation switches, and our Carrier Ethernet configuration for the 5410 Service Aggregation Switch. Our service delivery and packet aggregation switches provide a more reliable and feature-rich Ethernet technologies that can support a wider variety of services. Service delivery products are often used at customer premises locations while aggregation platforms are used to combine services to improve network resource utilization. This segment also includes our legacy broadband products that transition voice networks to support IP telephony, video services and DSL.

Unified Software and Service Management Tools

Our integrated software offering, the Ciena One software suite, includes OneControl, our integrated network management software that unifies our product portfolio and provides the automation and management features that enable efficient service delivery. Our network management tools offer a comprehensive set of functions, from monitoring network performance and provisioning the network to full service level management across a variety of network layers and domains. Our Ciena One software suite is a robust, service aware framework that improves network utilization and availability, while delivering enhanced performance monitoring and reliability. By increasing network automation, minimizing network downtime and monitoring network performance and service metrics, our software tools enable customers to improve cost effectiveness, while increasing the performance and functionality of their network operations. This software suite also includes Ciena OnePlanner, a suite of planning tools that help network operators utilize their networks more efficiently, and our ON-Center® Network & Service Management Suite.

Network Transformation Solutions and Support Services

To complement our product portfolio, we offer a broad range of consulting and support services that help our customers design, optimize, deploy, manage and maintain their communications networks. We believe that our broad set of service offerings is an important component of our network specialist approach and a significant differentiator from our competitors. We believe that our services offering and our close collaborative engagement with customers provide us with valued insight into network and business challenges faced by our customers, enabling them to modernize and gain value from their network infrastructures. Our network transformation solutions offering enables us to work closely with our customers in the assessment, planning, deployment, and transformation of their networks. We believe that customers place significant value on the strategic, consultative engagements afforded by our services offering, and our ability to partner with them through services-oriented solutions that address their network and business needs.

Our services and support portfolio includes the following offerings:

- Network transformation solutions, including:
  Network analysis, planning and design; and
  Network optimization, modernization and assurance services.
- Maintenance and support services, including:
  helpdesk and technical assistance;
  training;
  spares and logistics management;
  engineering dispatch and on-site professional services;

equipment repair and replacement; and
software maintenance and updates.

- Deployment services, including turnkey installation and turn-up and test services; and
- Project management services, including staging, site preparation and installation support activities.

We provide these services using a combination of internal resources and qualified third party service partners.

Product Development

Our industry is subject to rapid technological developments, evolving service delivery requirements, standards and protocols, and shifts in customer and end user network demand. To remain competitive, we must continually enhance existing product platforms by adding new features and functionality, increasing transmission speeds and capacity, and introducing new network solutions that address multiservice traffic growth and enable new service offerings. Our research and development

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strategy has been to pursue technology convergence, which allows us to consolidate network features, functionalities and layers onto a single platform, helping network operators architect robust, feature-rich networks that reduce required network elements and address cost, space and power limitations. We believe these converged, next-generation networking solutions promote rapid service delivery and allow network operators to derive business and operational value from their network infrastructures.

We are investing in our OPn Architecture for designing next-generation network. Our OPn Architecture, which underpins our solutions offering and guides our research and development strategy, leverages the convergence of optical and packet technologies to increase network scale cost effectively, while emphasizing software-enabled programmability, automation and open interfaces. Through this network approach, we seek to enable high-capacity, configurable infrastructures that can be managed and adapted by network-level applications, and to provide flexible interfaces for the integration of computing and storage resources in a unified network. Our product development initiatives also include design and development work intended to address growing opportunities, such as metropolitan network applications, enterprise networking, cloud infrastructure and packet-based infrastructure solutions for next-generation, high-capacity networks. To address these opportunities and realize our network vision, our current development efforts are focused upon:

- Extending our leadership in 40G and 100G long-haul transport, and making metropolitan network applications more cost effective for network operators;
- Continued development of our high-capacity optical transport technology and our WaveLogic coherent optical processor to further improve network capacity, transmission speed, spectral efficiency and reach;
- Expanding packet networking capabilities and features for our high-capacity Ethernet aggregation switches, for metro and service aggregation applications, mobile backhaul and business Ethernet services;
- Enhancing our data-optimized, switching solutions to enable an end-to-end Optical Transport Network (OTN) architecture that offers improved cost per bit, flexibility and reliability;
- Interoperability and enhancing our control plane and integrated network management software platform to enable service level management across our solutions; and
- Development of network level applications that automate various network functions and support new service introduction.

Our research and development efforts are also geared toward engineering changes intended to drive cost reductions across our platforms.

To ensure that our product development investments and solutions offering are closely aligned with market demand, we continually seek input from customers and promote collaboration among our product development, marketing and global field organizations. In some cases, we work with third parties pursuant to technology licenses, original equipment manufacturer (OEM) arrangements and other strategic technology relationships or investments, to develop new components or products, modify existing platforms or offer complementary technology to our customers. In addition, we participate in industry and standards organizations, where appropriate, and incorporate information from these affiliations throughout the product development process.

We regularly review our existing product offerings and prospective development projects to determine their fit within our portfolio and broader corporate strategy. We assess the market demand, technology evolution, prospective return on investment and growth opportunities, as well as the costs and resources necessary to develop and support these products. In recent years, our strategy has been to pursue technology and product convergence that allows us to consolidate multiple technologies and functionalities on a single platform, or to control and manage multiple elements throughout the network from a uniform management system, ultimately creating more robust, integrated and cost-effective network tools. We have also shifted our strategic development approach from delivering point products to providing a focused combination of networking equipment, software and service solutions that address the business

and network needs of our customers.

Within our global products group, we maintain a team of skilled engineers with extensive experience in the areas of photonics, packet and circuit switching, network system design, embedded operating system and network management software. Our research and development expense was $327.6 million, $379.9 million and $364.2 million, for fiscal 2010, 2011 and 2012, respectively. For more information regarding our research and development expense, see “Management's Discussion and Analysis of Financial Condition and Results of Operations” in Item 7 of Part II of this report.

Sales and Marketing

We sell our communications networking solutions through our direct sales resources as well as through strategic channel relationships. In addition to securing new customers in growth geographies and customer market segments, our sales strategy has focused on building long-term, consultative relationships with existing customers. We believe this approach promotes our

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network specialist approach and helps ensure the alignment of our expertise with the business and network requirements of our customers. We believe this approach also provides opportunities to participate in future projects relating to the transition or expansion of existing network infrastructures and to cross-sell solutions across our portfolio.

Within our global field organization, we maintain a direct sales presence that is organized geographically around the following markets: (i) U.S. and Canada; (ii) Caribbean and Latin America; (iii) Europe, Middle East and Africa; and (iv) Asia-Pacific. These regions include sales personnel that focus on one or more of the following customer segments: communications service providers including wireless providers, cable and multiservice operators, enterprise customers and government, research and education. Within each geographic area, we maintain regional, country and/or customer-specific teams, including sales management, account salespersons, and systems engineers, as well as strategic marketing, services and commercial management personnel, who ensure we operate closely with and provide a high level of support to our customers. We also maintain global sales teams that focus on submarine network opportunities and emerging customer segments including Internet content and cloud infrastructure providers.

We also maintain a global channel program that works with resellers, systems integrators, service providers, and other third party distributors who market and sell our products and services. Our third party channel sales and other distribution arrangements enable us to reach additional geographic regions and customer segments. We intend to pursue and foster a small number of strategic channel relationships in an effort to enable us to sell our products as a complement to the broader offering of these vendors or integrators, including, in particular, in support of enterprise-oriented applications and cloud-based services. We also see opportunities to leverage these strategic channel relationships to address additional customer segments, emerging applications for our solutions and growth geographies. Our use of channel partners has been a key component in our sales to government, research and education and enterprise customers. We believe this strategy and our use of third party channels affords us expanded market opportunities and reduces the financial and operational risk of entering these additional markets.

To support our sales efforts, we engage in marketing activities intended to position and promote both our brand and our product, software and service offerings. Our marketing team supports sales efforts through direct customer interaction, industry events, public relations, industry analysts, social media, tradeshows, our website and other marketing channels for our customers and channel partners.

Operations and Supply Chain Management

Operations personnel within our global products group manage our relationships with our third party manufacturers and manage our supply chain. In addition, this team also addresses component procurement and sourcing, product testing and quality, fulfillment and logistics relating to our sales, support and professional services, and distribution efforts.

We utilize a global sourcing strategy that emphasizes procurement of materials and product manufacturing in lower cost regions. Activities performed by our third party supply partners can include design and prototype development, component sourcing, full production, final assembly, testing and customer order fulfillment. We rely upon third party contract manufacturers, with facilities in Canada, China, Mexico, Thailand and the United States, to perform nearly all of the manufacturing of our products. As a result, we are exposed to risks associated with the business continuity of these third parties and other events or conditions affecting the locations where their manufacturing occurs. We are also exposed to risks associated with their business practices and practices in the markets in which they operate including the level of corruption or protection of intellectual property. To address customer concerns and to mitigate the related risks to our business, operations and intellectual property, we have been reducing our reliance upon contract manufacturers and component suppliers in China and are currently transitioning, or expect to transition in the near-term, the procurement of certain components and the manufacture and assembly of our product platforms to

alternate locations.

We are currently utilizing a direct order fulfillment model for the sale of certain products, and are engaged in initiatives to expand this model to a broader set of products. This model allows us to rely on our third party manufacturers to perform final system integration and testing prior to shipment of products from their facilities directly to our customers. For certain products, we continue to perform a portion of the system assembly, software application, final system integration and testing internally. We believe that our sourcing and manufacturing strategy allows us to conserve capital, lower costs of product sales, adjust quickly to changes in market demand, and operate without dedicating significant resources to manufacturing-related plant and equipment. As part of our effort to optimize our operations, we continue to focus on driving cost reductions through sourcing and engineering efforts, rationalizing our supply chain and consolidating third party contract manufacturers, distribution sites and service logistics partners.

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Our manufacturers procure components necessary for assembly and manufacture of our products based on our specifications, approved vendor lists, bill of materials and testing and quality standards. Our manufacturers' activity is based on rolling forecasts that we provide to them to estimate demand for our products. This build-to-forecast purchase model exposes us to the risk that our customers will not order those products for which we have forecast sales, or will purchase less than we have forecast. As a result, we incur carrying charges or obsolete material charges for components purchased by our manufacturers. We work closely with our manufacturers to manage material, quality, cost and delivery times, and we continually evaluate their services to ensure performance on a reliable and cost-effective basis.

Our products include some components that are proprietary in nature, only available from one or a small number of suppliers, or manufactured by sole or limited sources responsible for production. If component supplies become limited, production at a manufacturer is disrupted, or if we experience difficulty in our relationship with a key supplier or manufacturer, we may encounter manufacturing delays that could adversely affect our business.

Backlog

Generally, we make sales pursuant to purchase orders issued under framework agreements that govern the general commercial terms and conditions of the sale of our products and services. These agreements do not obligate customers to purchase any minimum or guaranteed order quantities. Our backlog includes orders for products that have not been shipped and for services that have not yet been performed. In addition, backlog also includes orders relating to products that have been delivered and services that have been performed, but are awaiting customer acceptance under the applicable purchase terms. Generally, our customers may cancel or change their orders with limited advance notice, or they may decide not to accept these products and services, although both cancellation and non-acceptance are infrequent. Orders in backlog may be fulfilled several quarters following receipt or may relate to multi-year support service obligations. As a result, backlog should not be viewed as an accurate indicator of future revenue in any particular period.

Our backlog increased from $714.1 million as of October 31, 2011 to $902.0 million as of October 31, 2012. Backlog includes product and service orders from commercial and government customers combined. Backlog at October 31, 2012 includes approximately $140.5 million, primarily related to orders for maintenance and support services that we do not reasonably expect to be filled within the next fiscal year. Backlog at October 31, 2011 included approximately $84.1 million that was not expected to be filled within fiscal 2012. Our presentation of backlog may not be comparable with figures presented by other companies in our industry.

Seasonality

Like other companies in our industry, we have experienced quarterly fluctuations in customer activity due to seasonal considerations. We typically experience reductions in order volume toward the end of the calendar year, as the procurement cycles of some of our customers slow and network deployment activity at service providers is curtailed. This seasonality in our order flows can result in somewhat weaker revenue results in the first quarter of our fiscal year. These seasonal effects do not apply consistently and do not always correlate to our financial results. Accordingly, they should not be considered a reliable indicator of our future revenue or results of operations.

Competition

Competition among communications network solution vendors remains intense. The markets in which we compete are characterized by rapidly advancing and converging technologies, introduction of new network solutions and selling efforts to displace incumbent vendors and secure market share. Successfully competing in these markets is based on any one or a combination of the following factors:

- product functionality, speed, capacity, scalability and performance;
- price and total cost of ownership;
- incumbency and existing business relationships;
- ability to offer comprehensive networking solutions, consisting of equipment, software and network consulting services;
- product development plans and the ability to drive convergence of network features, functions and layers and meet customers' immediate and future network requirements;
- flexibility, including ease of integration, product interoperability and integrated management;
- manufacturing and lead-time capability; and
- services and support capabilities.

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In this competitive environment, securing new opportunities, particularly in international markets, often requires that we agree to less favorable commercial terms or pricing, financial commitments requiring collateralized performance bonds or similar instruments that place cash resources at risk, and other onerous contractual commitments that place a disproportionate allocation of risk upon the vendor. These terms can adversely affect our result of operations.

Competition for sales of communications networking solutions is dominated by a small number of very large, multi-national companies. Our competitors have included Alcatel-Lucent, Cisco, Ericsson, Fujitsu, Huawei, Juniper Networks, Nokia Siemens Networks, and ZTE. Many of these competitors have substantially greater financial, operational and marketing resources than Ciena, significantly broader product offerings or more extensive customer bases. In recent years, mergers among some of our larger competitors have intensified these advantages. We expect the level of competition, particularly in North America, to continue and potentially increase, as Chinese equipment vendors seek to gain entry into the U.S. market, and other multinational competitors seek to retain incumbent positions and market share with large customers in the region.

We expect our competitive landscape to be dynamic as network technologies and features converge, and vendors compete to have their network architectural approaches adopted. As this convergence occurs, and networks become more cloud-based, virtualized and software-defined, we expect that we may compete with additional information technology and software vendors, as well as suppliers of networking technology traditionally geared toward different network layers or functions. We also continue to compete with several smaller, but established, companies that offer one or more products that compete directly or indirectly with our offerings or whose products address specific niches within the markets and customer segments we address. These competitors include ADVA, BTI, Infinera, Tellabs and Transmode. In addition, there are a variety of earlier-stage companies with products targeted at specific segments of the communications networking market. These competitors often employ aggressive competitive and business tactics as they seek to gain entry to certain customers or markets. Due to these practices and the narrower focus of their development efforts, these competitors may be able to develop and introduce products more quickly, or offer commercial terms that are more attractive to customers.

Patents, Trademarks and Other Intellectual Property Rights

The success of our business and technology leadership is significantly dependent upon our proprietary and internally developed technology. We rely upon patents, copyrights, trademarks, and trade secret laws to establish and maintain proprietary rights in our technology. We maintain a patent incentive program that seeks to reward innovation. We regularly file applications for patents and have a significant number of patents in the United States and other countries where we do business. As of December 1, 2012, we had 1,357 U.S. patents and 233 pending U.S. applications. We also have over 415 non-U.S. patents.

We also rely on non-disclosure agreements and other contracts and policies regarding confidentiality with employees, contractors and customers, to establish proprietary rights and protect trade secrets and confidential information. Our practice is to require employees and relevant consultants to execute non-disclosure and proprietary rights agreements upon commencement of employment or consulting arrangements with us. These agreements acknowledge our ownership of intellectual property developed by the individual during the course of his or her work with us. The agreements also require that these persons maintain the confidentiality of all proprietary information disclosed to them.

Enforcing proprietary rights, especially patents, can be costly and uncertain. Moreover, monitoring unauthorized use of our technology is difficult, and we cannot be certain that the steps that we are taking will detect or prevent unauthorized use. In recent years, we have filed suit to enforce our intellectual property rights. We have also been subject to several claims related to patent infringement, including by competitors and non-practicing entities or "patent trolls," and have been requested to indemnify customers pursuant to contractual indemnity obligations relating to

infringement claims made by third parties. Intellectual property infringement assertions could cause us to incur substantial costs, including legal fees in the defense of these actions. If we are not successful in defending these claims, our business would be adversely affected. For example, we may be required to enter into a license agreement requiring ongoing royalty payments, required to redesign our products, or prohibited from selling any infringing technology.

Our operating system, element and network management software and other products incorporate software and components under licenses from third parties. We may be required to license additional technology from third parties in order to develop new products or product enhancements. Failure to obtain or maintain such licenses or other rights could affect our development efforts, require us to re-engineer our products or obtain alternate technologies.

In connection with our acquisition of substantially all of the optical networking and Carrier Ethernet assets of Nortel's Metro Ethernet Networks business (the "MEN Acquisition"), we obtained a non-exclusive license to use patents and other intellectual property controlled or exclusively owned by Nortel in connection with our manufacture, sale and support of a broad range of optical networking and Carrier Ethernet products and services and natural evolutions of such products and services.

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This license also provides us with an exclusive license to use a narrower set of patents and other intellectual property owned by Nortel in connection with Ciena's manufacture, sale and support of optical networking and Carrier Ethernet products and services within a narrower field of use and subject to certain limitations. As part of this license, we granted Nortel a non-exclusive license to use the patents and other intellectual property (except trademarks) that we acquired as part of the MEN Business in connection with the manufacture and sale of products and services in the fields of Nortel's other businesses (including those businesses sold and to be sold to other parties) and natural evolutions of such fields.

Environmental Matters

Our business and operations are subject to environmental laws in various jurisdictions around the world, including the Waste Electrical and Electronic Equipment (WEEE) and Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) regulations adopted by the European Union. We seek to operate our business in compliance with such laws relating to the materials and content of our products and product takeback and recycling. Environmental regulation is increasing, particularly outside of the United States, and we expect that our domestic and international operations may be subject to additional environmental compliance requirements, which could expose us to additional costs. To date, our compliance costs relating to environmental regulations have not resulted in a material cost or effect on our business, results of operations or financial condition.

Employees

As of October 31, 2012, we had 4,481 employees. We have not experienced any work stoppages, and we consider the relationships with our employees to be good. Competition to attract and retain highly skilled technical, engineering and other personnel with experience in our industry is intense. We believe that our future success depends in critical part on our continued ability to recruit, motivate and retain such qualified personnel.

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Directors and Executive Officers

The table below sets forth certain information concerning our directors and executive officers:

Name	Age	Position
Patrick H. Nettles, Ph.D.	69	Executive Chairman of the Board of Directors
Gary B. Smith	52	President, Chief Executive Officer and Director
Stephen B. Alexander	53	Senior Vice President, Chief Technology Officer
Rick Dodd	43	Senior Vice President, Global Marketing
James A. Frodsham	46	Senior Vice President, Chief Strategy Officer
François Locoh-Donou	41	Senior Vice President, Global Products Group
Philippe Morin	47	Senior Vice President, Global Field Organization
James E. Moylan, Jr.	61	Senior Vice President, Finance and Chief Financial Officer
Andrew C. Petrik	49	Vice President and Controller
David M. Rothenstein	44	Senior Vice President, General Counsel and Secretary
Harvey B. Cash (1)(3)	74	Director
Bruce L. Claflin (1)(2)	61	Director
Lawton W. Fitt (2)	59	Director
Judith M. O'Brien (1)(3)	62	Director
Michael J. Rowny (2)	62	Director
Patrick T. Gallagher (2)	57	Director

(1) Member of the Compensation Committee

(2) Member of the Audit Committee

(3) Member of the Governance and Nominations Committee

Our Directors hold staggered terms of office, expiring as follows: Ms. Fitt, Dr. Nettles and Mr. Rowny in 2013; Ms. O'Brien and Messrs. Cash and Smith in 2014; and Messrs. Claflin and Gallagher in 2015.

Patrick H. Nettles, Ph.D. has served as a Director of Ciena since April 1994 and as Executive Chairman of the Board of Directors since May 2001. From October 2000 to May 2001, Dr. Nettles was Chairman of the Board and Chief Executive Officer of Ciena, and he was President and Chief Executive Officer from April 1994 to October 2000. Dr. Nettles serves as a Trustee for the California Institute of Technology and serves on the board of directors of Axcelis Technologies, Inc. and The Progressive Corporation. Dr. Nettles also serves on the board of directors of Optiwind Corp, a privately held company, and has previously served on the board of directors of Apptrigger, Inc., formerly known as Carrius Technologies, Inc.

Gary B. Smith joined Ciena in 1997 and has served as President and Chief Executive Officer since May 2001. Mr. Smith has served on Ciena's Board of Directors since October 2000. Prior to his current role, his positions with Ciena included Chief Operating Officer, and Senior Vice President, Worldwide Sales. Mr. Smith previously served as Vice President of Sales and Marketing for INTELSAT and Cray Communications, Inc. Mr. Smith also serves on the board of directors for Avaya Inc. and CommVault Systems, Inc. Mr. Smith is a member of the President's National Security Telecommunications Advisory Committee, the Global Information Infrastructure Commission and the Center for Corporate Innovation (CCI).

Stephen B. Alexander joined Ciena in 1994 and has served as Chief Technology Officer since September 1998 and as a Senior Vice President since January 2000. Mr. Alexander has previously served as General Manager of Products & Technology and General Manager of Transport and Switching and Data Networking.

Rick Dodd has served as Ciena's Senior Vice President, Global Marketing since December 2010 and is responsible for Ciena's product, solutions and corporate marketing organizations. In this role, he provides strategic support to Ciena's global field organization and global products groups. Mr. Dodd previously worked at Infinera Corporation from September 2003 to December 2010 and served in roles including Vice President of Product Marketing and Vice President of Corporate Marketing. Mr. Dodd previously served as Associate Partner at venture capital firm Kleiner, Perkins, Caufield and Byers and as Ciena's Director, Strategic Marketing.

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James A. Frodsham joined Ciena in May 2004 and has served as Senior Vice President and Chief Strategy Officer since March 2010 with responsibility for our strategic planning and corporate development activities. In August 2010, Mr. Frodsham also assumed responsibility for the integration of the MEN Business, which was substantially completed in fiscal 2011. Mr. Frodsham previously served as Senior Vice President, General Manager of Ciena's former Broadband Access Group from October 2004 to October 2005 and Metro and Enterprise Solutions Group from May 2004 to October 2004. From August 2000 to January 2003, Mr. Frodsham served as chief operating officer of Innovance Networks, an optical networking company. On December 23, 2003, Innovance filed a Notice of Intent to make a proposal pursuant to Part III of the Bankruptcy and Insolvency Act (Canada). Prior to that, Mr. Frodsham was employed for more than ten years in senior level positions with Nortel Networks in product development and marketing strategy, lastly as Vice President, Product Line Marketing, Optical Networking Group, from December 1998 to June 2000. Mr. Frodsham serves on the board of directors of Innovance Networks.

François Locoh-Donou has served as Ciena's Senior Vice President, Global Products Group since August 2011. In this capacity, Mr. Locoh-Donou leads Ciena's engineering, supply chain, product line management, quality/customer advocacy and solutions interpretation organizations on a global basis. Mr. Locoh-Donou joined Ciena in August 2002 and served as Ciena's Vice President and General Manager, EMEA from June 2005 to August 2011.

Philippe Morin joined Ciena in March 2010 in connection with Ciena's acquisition of Nortel's MEN Business and has served as Senior Vice President, Global Field Organization since August 2011, where he is responsible for leading Ciena's global sales and services organizations. From March 2010 to August 2011, Mr. Morin served as Ciena's Senior Vice President, Global Products Group. Mr. Morin previously served as President of Nortel's MEN Business from May 2006 until Ciena's completion of the MEN Acquisition in March 2010. In January 2009, Nortel Networks Corporation and certain of its subsidiaries filed voluntary petitions in the United States under Chapter 11 of the U.S. Bankruptcy Code. From January 2003 to May 2006, Mr. Morin held the position of Nortel's General Manager of Optical Networks. Mr. Morin previously held other positions at Nortel in manufacturing, marketing, sales and product management both in North America and Europe.

James E. Moylan, Jr. has served as Senior Vice President, Finance and Chief Financial Officer since December 2007. From June 2006 to December 2007, Mr. Moylan served as Executive Vice President and Chief Financial Officer of Swett & Crawford, a wholesale insurance broker.

Andrew C. Petrik joined Ciena in 1996 and has served as Vice President, Controller since August 1997 and served as Treasurer from August 1997 to October 2008.

David M. Rothenstein joined Ciena in January 2001 and has served as Senior Vice President, General Counsel and Secretary since November 2008. Mr. Rothenstein served as Vice President and Associate General Counsel from July 2004 to October 2008 and previously as Assistant General Counsel.

Harvey B. Cash has served as a Director of Ciena since April 1994. Mr. Cash is a general partner of InterWest Partners, a venture capital firm in Menlo Park, California, which he joined in 1985. Mr. Cash serves on the board of directors of First Acceptance Corp., Silicon Laboratories, Inc. and Argonaut Group, Inc. and has previously served on the boards of directors of i2 Technologies, Inc., Voyence, Inc. and Staktek Holdings, Inc.

Bruce L. Claflin has served as a Director of Ciena since August 2006. Mr. Claflin served as President and Chief Executive Officer of 3Com Corporation from January 2001 until his retirement in February 2006. Mr. Claflin joined 3Com as President and Chief Operating Officer in August 1998. Prior to 3Com, Mr. Claflin served as Senior Vice President and General Manager, Sales and Marketing, for Digital Equipment Corporation. Mr. Claflin also worked for 22 years at IBM, where he held various sales, marketing and management positions, including general manager of IBM PC Company's worldwide research and development, product and brand management, as well as president of IBM PC Company Americas. Mr. Claflin also serves on the board of directors of Advanced Micro Devices (AMD) where he is currently Chairman of the Board.

Lawton W. Fitt has served as a Director of Ciena since November 2000. From October 2002 to March 2005, Ms. Fitt served as Director of the Royal Academy of Arts in London. From 1979 to October 2002, Ms. Fitt was an investment banker with Goldman Sachs & Co., where she was a partner from 1994 to October 2002, and a managing director from 1996 to October 2002. In addition to her service as a director of non-profit organizations, Ms. Fitt currently serves on the board of directors of Thomson Reuters, The Carlyle Group L.P., and The Progressive

Corporation, and has previously served on the board of directors of Overture Acquisition Corporation and Frontier Communications Company.

Judith M. O’Brien has served as a Director of Ciena since July 2000. Since November 2012, Ms. O'Brien has served as a partner and head of the Emerging Company Practice Group at the law firm of King & Spalding. From November 2006 through December 2010, Ms. O’Brien served as Executive Vice President and General Counsel of Obopay, Inc., a provider of mobile payment services. From February 2001 until October 2006, Ms. O’Brien served as a Managing Director at Incubic Venture Fund, a venture capital firm. Ms. O’Brien was a lawyer with Wilson Sonsini Goodrich & Rosati, where, from February 1984 to February 2001, she was a partner specializing in corporate finance, mergers and acquisitions and general corporate matters. Ms. O'Brien has previously served on the board of directors of Adaptec, Inc.

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Michael J. Rowny has served as a Director of Ciena since August 2004. Mr. Rowny has been Chairman of Rowny Capital, a private equity firm, since 1999. From 1994 to 1999, and previously from 1983 to 1986, Mr. Rowny was with MCI Communications in positions including President and Chief Executive Officer of MCI's International Ventures, Alliances and Correspondent group, acting Chief Financial Officer, Senior Vice President of Finance, and Treasurer. Mr. Rowny's career in business and government has also included positions as Chairman and Chief Executive Officer of the Ransohoff Company, Chief Executive Officer of Hermitage Holding Company, Executive Vice President and Chief Financial Officer of ICF Kaiser International, Inc., Vice President of the Bendix Corporation, and Deputy Staff Director of the White House. Mr. Rowny also serves on the board of directors of Neustar, Inc. and Pixspan, Inc. and has previously served on the boards of directors of Llamagraphics, Inc. and Step 9 Software Corporation.

Patrick T. Gallagher has served as a Director of Ciena since May 2009. From March 2008 until March 2012, Mr. Gallagher was Chairman of Ubiquisys Ltd., a leading developer and supplier of femtocells for the global 3G mobile wireless market. From January 2008 until February 2009, Mr. Gallagher was Chairman of Macro 4 plc, a global software solutions company, and from May 2006 until March 2008, served as Vice Chairman of Golden Telecom Inc., a leading facilities-based provider of integrated communications in Russia and the CIS. From 2003 until 2006, Mr. Gallagher was Executive Vice Chairman and served as Chief Executive Officer of FLAG Telecom Group and, prior to that role, held various senior management positions at British Telecom. Mr. Gallagher also serves on the boards of directors of Harmonic Inc. and Sollers JSC.

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Item 1A. Risk Factors

Investing in our securities involves a high degree of risk. In addition to the other information contained in this report, you should consider the following risk factors before investing in our securities.

Our revenue and operating results can fluctuate significantly and unpredictably from quarter to quarter.
Our revenue and results of operations can fluctuate significantly and unpredictably from quarter to quarter. Our budgeted expense levels depend in part on our expectations of long-term, future revenue and gross margin, and substantial reductions in expense are difficult and can take time to implement. Uncertainty or lack of visibility into customer spending, and changes in economic or market conditions that affect customer spending can make it difficult to forecast future revenue and margins. In addition, increases in the percentage of a given quarter's revenue relating to orders placed during that quarter, along with significant order volume late that quarter, could further result in variability and less predictability in our quarterly revenue. Consequently, our level of operating expense or inventory may be high relative to revenue, which could harm our profitability and cash flow. Additional factors that contribute to fluctuations in our revenue and operating results include:

- broader macroeconomic conditions, including weakness and volatility in global markets, affecting our customers;
- changes in capital spending by large communications service providers;
- order flow and backlog levels;
- the timing of our ability to recognize revenue on sales;
- the mix of revenue by product segment, geography and customer in any particular quarter;
- the level of competition and pricing pressure we encounter;
- seasonal effects in our business;
- the level of start-up costs we incur to support initial deployments, gain new customers or enter new markets; and
- our level of success in improving manufacturing efficiencies and achieving cost reductions in our supply chain.

Quarterly fluctuations from these and other factors may cause our results of operations to fall short of or significantly exceed the expectations of securities analysts or investors, which may cause volatility in our stock price.

We face intense competition that could hurt our sales and results of operations.
We face a competitive market for sales of communications networking equipment, software and services and increased competition could result in pricing pressure, reduced demand, lower gross margins and the loss of market share that could harm our business and results of operations. Competition is particularly intense as we and our competitors aggressively seek to displace incumbent equipment vendors at large service providers and secure new customers. In an effort to secure customer opportunities and capture market share, we have in the past, and may in the future, agree to onerous commercial terms or pricing that result in low or negative gross margins on a particular order or group of orders. We expect the level of competition we face to continue and potentially increase, particularly in the U.S., as larger Chinese equipment vendors such as Huawei seek to gain market entry and other global competitors seek to retain incumbent positions with customers in the region.

Competition in our markets, generally, is based on any one or a combination of the following factors: price; product features; functionality and performance; service offering; manufacturing capability and lead-times; incumbency and existing business relationships; scalability; and the flexibility of products to meet the immediate and future network and service requirements of customers. A small number of very large companies have dominated our industry, many of which have substantially greater financial and marketing resources, broader product offerings and more established relationships with service providers and other customer segments than we do. In addition, a number of these vendors are putting forth competing visions for how next-generation network architectures should be designed. Because of their scale and resources, they may be perceived to be a better fit for the procurement, or network operating and

management, strategies of large service providers. We also compete with a number of smaller companies that provide significant competition for a specific product, application, customer segment or geographic market. Due to the narrower focus of their efforts, these competitors may achieve commercial availability of their products more quickly or may be more attractive to customers. If competitive pressures increase or we fail to compete successfully in our markets, our business and results of operations would suffer.

Our business and operating results could be adversely affected by unfavorable changes in macroeconomic and market conditions and reductions in the level of capital expenditure by customers in response to these conditions.
Global markets have experienced a period of significant volatility that has resulted in a high degree of uncertainty and cautious customer behavior. Broad macroeconomic weakness and market volatility have previously resulted in sustained periods

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of decreased demand for our products and services that have adversely affected our operating results. Continuation of or an increase in macroeconomic weakness could result in:

- reductions in customer spending and delay, deferral or cancellation of network infrastructure initiatives;
- difficulty forecasting, budgeting and planning;
- increased competition for fewer network projects and sales opportunities;
- increased pricing pressure that may adversely affect revenue, gross margin and profitability;
- higher overhead costs as a percentage of revenue;
- tightening of credit markets to fund capital expenditures by our customers and us;
- customer financial difficulty, including longer collection cycles and difficulties collecting accounts receivable or write-offs of receivables; and
- increased risk of charges relating to excess and obsolete inventories and the write-off of other intangible assets.

Our business and operating results could be materially adversely affected by reduced customer spending in response to unfavorable or uncertain macroeconomic and market conditions, globally or specific to a particular region where we operate.

A small number of large communications service providers account for a significant portion of our revenue and the loss of any of these customers, or a significant reduction in their spending, would have a material adverse effect on our business and results of operations.

A significant portion of our revenue is concentrated among a few, large global communications service providers. By way of example, AT&T accounted for approximately 13.5% of fiscal 2012 revenue and our largest ten customers contributed 54.2% of fiscal 2012 revenue. Consequently, our financial results are closely correlated with the spending of a relatively small number of service provider customers and can be significantly affected by market or industry changes that affect their businesses. These factors can include consumer and enterprise spending on communication services, macroeconomic volatility, the adoption of new communications products and services, the emergence of competing network operators and changing demands of end user customers. Because the terms of our frame contracts generally do not include any minimum purchase commitment and spending by these service providers can be unpredictable and sporadic, our revenue and operating results can fluctuate on a quarterly basis. Reliance upon a relatively small number of service providers increases our exposure to changes in the network and purchasing strategies. Some of our customers are pursuing efforts to outsource the management and operation of their networks, or have indicated a procurement strategy to reduce the number of vendors from which they purchase equipment, which may benefit our larger competitors. Our concentration in revenue has increased in the past as a result of consolidation among a number of our largest customers. Consolidation may increase the likelihood of temporary or indefinite reductions in customer spending or changes in network strategy that could harm our business and operating results. The loss of one or more of our large service provider customers, a significant reduction in their spending, or market or industry factors adversely affecting service providers generally, would have a material adverse effect on our business, financial condition and results of operations.

Our reliance upon third party contract manufacturers exposes us to risks that could negatively affect our business and operations.

We rely upon third party contract manufacturers to perform substantially all of the manufacturing of our products and a significant portion of our component sourcing. We do not have guaranteed supply of components or access to manufacturing capacity, and in some cases are utilizing temporary or transitional commercial arrangements. Our reliance upon third party manufacturers could expose us to increased risks related to lead times, continuity of supply, on-time delivery, quality assurance, and compliance with environmental standards and other regulations. Reliance upon third party manufacturers exposes us to significant risks related to their operations, financial position, business continuity, sourcing relationships and labor relationships, that may affect their servicing of Ciena including their

continued viability. Our product manufacturing principally takes place in Mexico, Canada, China and Thailand. Significant disruptions in these and other countries where our products or key components are manufactured, including natural disasters, epidemics, acts of war or terrorism, social or political unrest or work stoppages, could affect the cost, availability or allocation of supply and manufacturing capacity and negatively affect our business and results of operations.

In an effort to drive cost reductions and further optimize Ciena's operations, we are working to rationalize our supply chain, consolidate third party contract manufacturers and distribution facilities and transition to alternative manufacturing locations. We are also actively pursuing additional opportunities for direct fulfillment of products from our manufacturers to our customers. These transitions are complex and there can be no assurance that these efforts, including any reallocation of third party manufacturing and sourcing, or our changes in fulfillment, will not ultimately result in additional costs or disruptions in our operations and business that affect our results of operations.

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Our reliance upon third party component suppliers, including sole and limited source suppliers, exposes our business to additional risk and could limit our sales, increase our costs and harm our customer relationships.

We maintain a global sourcing strategy and depend on third party suppliers for our product components and subsystems. Our products include key optical and electronic components for which reliable, high-volume supply is often available only from sole or limited sources. Increases in market demand or scarcity of resources or manufacturing capability have previously resulted in shortages in availability of important components for our solutions, allocation challenges and increased lead times. We are exposed to risks relating to unfavorable economic conditions or other similar challenges affecting the businesses of our component providers that can affect their liquidity levels, ability to continue to invest in their business, and manufacturing capability. This could expose our business to increased costs, lack of supply or discontinuation of components that can result in lost revenue, additional product costs, increased lead times and deployment delays that could harm our business and customer relationships. We do not have any guarantee of supply from these third parties, and in certain cases are relying upon temporary or transitional commercial arrangements. As a result, there is no assurance that we will be able to secure the components or subsystems that we require in sufficient quantity and quality on reasonable terms. The loss of a source of supply, or lack of sufficient availability of key components, could require that we locate an alternate source or redesign our products, each of which could increase our costs and negatively affect our product gross margin and results of operations. Our business and results of operations would be negatively affected if we were to experience any significant disruption or difficulties with key suppliers affecting the price, quality, availability or timely delivery of required components.

Investment of research and development resources in communications networking technologies for which there is not a matching market opportunity, or failure to sufficiently or timely invest in technologies for which there is market demand, would adversely affect our revenue and profitability.

The market for communications networking equipment is characterized by rapidly evolving technologies and changes in market demand. We continually invest in research and development to sustain or enhance our existing products and develop or acquire new product technologies. Our current development efforts are focused upon enhancing our software applications, extending our OneConnect control plane across the 5400 and 6500 platform families, expanding packet applications on service delivery switches, aggregation switches, and packet-optical transport platforms, extending our WaveLogic chipset, enabling 40G and 100G coherent optical transport across our portfolio, and introducing 400G transmission products. There is often a lengthy period between commencing these development initiatives and bringing a new or improved products to market. During this time, technology preferences, customer demand and the market for our products, or those introduced by our competitors, may move in directions we had not anticipated. There is no guarantee that our new products or enhancements will achieve market acceptance or that the timing of market adoption will be as predicted. There is a significant possibility, therefore, that some of our development decisions, including significant expenditures on acquisitions, research and development costs, or investments in technologies, will not turn out as anticipated, and that our investment in some projects will be unprofitable. There is also a possibility that we may miss a market opportunity because we failed to invest, or invested too late, in a technology, product or enhancement sought by our customers, or addressing growth markets or emerging customer segments or applications beyond our traditional customer base. Changes in market demand or investment priorities may also cause us to discontinue existing or planned development for new products or features, which can have a disruptive effect on our relationships with customers. If we fail to make the right investments or fail to make them at the right time, our competitive position may suffer and our revenue and profitability could be harmed.
We may experience delays in the development of our products that may negatively affect our competitive position and business.

Our products are based on complex technology, and we can experience unanticipated delays in developing and manufacturing these solutions. Our current development efforts are focused upon enhancing our software applications, extending our OneConnect control plane across the 5400 and 6500 platform families, expanding packet applications on service delivery switches, aggregation switches, and packet-optical transport platforms, extending our WaveLogic 3 chipset for 40G and 100G coherent optical transport across our portfolio, and introducing 400G transmission products. Delays in these and other product development may affect our reputation with customers, affect our ability to seize market opportunities and impact the timing and level of demand for our products. Each step in the development life cycle of our products presents serious risks of failure, rework or delay, any one of which could adversely affect the cost-effective and timely development of our products. We may encounter delays relating to engineering development activities and software, design, sourcing and manufacture of critical components, and the development of prototypes. In addition, intellectual property disputes, failure of critical design elements, and other execution risks may delay or even prevent the release of these products. If we do not successfully develop products in a timely manner, our competitive position may suffer and our business, financial condition and results of operations would be harmed.

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Product performance problems and undetected errors affecting the performance, reliability or security of our products could damage our business reputation and negatively affect our results of operations.

The development and production of sophisticated hardware and software for communications network equipment is complicated. Some of our products can be fully tested only when deployed in communications networks or when carrying traffic with other equipment. As a result, undetected defects or errors, and product quality, interoperability, reliability and performance problems are often more acute for initial deployments of new products and product enhancements. We are in the process of launching a number of new platforms across our product segments. Unanticipated product performance problems can relate to the design, manufacturing and installation of our products. Undetected errors can also arise as a result of defects in components, software or manufacturing, installation or maintenance services supplied by third parties, and technology acquired from or licensed by third parties. Unanticipated security vulnerabilities relating to our products or the activities of our supply chain, including any actual or perceived exposure of our solutions to malicious software or cyber-attacks, would adversely affect our business and reputation. Product performance, reliability, security and quality problems can negatively affect our business, including:

- damage to our reputation, declining sales and order cancellations.
- increased costs to remediate defects or replace products;
- payment of liquidated damages, contractual or similar penalties, or other claims for performance failures or delays;
- increased warranty expense or estimates resulting from higher failure rates, additional field service obligations or other rework costs related to defects;
- increased inventory obsolescence;
- costs and claims that may not be covered by liability insurance coverage or recoverable from third parties; and
- delays in recognizing revenue or collecting accounts receivable.

These and other consequences relating to undetected errors affecting the quality, reliability and security of our products could negatively affect our business and results of operations.

Network equipment sales to large communications service providers often involve lengthy sales cycles and protracted contract negotiations and may require us to assume commercial terms or conditions that negatively affect pricing, risk allocation, payment and the timing of revenue recognition.

A significant portion of our revenue comes from sales to large communications service providers. These sales typically involve lengthy sales cycles, extensive product testing, and demonstration laboratory or network certification, including network-specific or region-specific product certification or homologation processes. These sales also often involve protracted and sometimes difficult contract negotiations in which we may deem it necessary to agree to unfavorable contractual or commercial terms that adversely affect pricing, expose us to penalties for delays or non-performance, and require us to assume a disproportionate amount of risk. We may also be requested to provide deferred payment terms, vendor or third-party financing, or offer other alternative purchase structures that extend the timing of payment and revenue recognition. These terms may negatively affect our revenue and results of operations and increase our susceptibility to quarterly fluctuations in our results. Service providers may ultimately insist upon terms and conditions that we deem too onerous or not in our best interest. Moreover, our purchase agreements generally do not include minimum purchase commitments and customers often have the right to modify, delay, reduce or cancel previous orders. As a result, we may incur substantial expense and devote time and resources to potential sales opportunities that never materialize or result in lower than anticipated sales.

Efforts by us or our strategic third party channel partners to sell our solutions into targeted geographic markets and customer segments may be unsuccessful.

We continue to take steps, including sales initiatives and strategic channel relationships, to sell our products into new markets, growth geographies and diverse customer segments beyond our traditional service provider customer base. Specifically, we are targeting opportunities in Brazil, the Middle East, Russia, Japan and India. We are also targeting sales opportunities with enterprises, wireless operators, cable operators, submarine network operators, Internet content providers, cloud infrastructure providers, research and education institutions, and federal, state and local governments. We believe sales to these customer segments, as well as emerging network operators supporting new communications services and applications, will be an important component of our growth strategy. In many cases, we have less experience in these markets and customer segments and they may have less familiarity with our company. To succeed in some of these geographic markets and customer segments we intend to leverage strategic sales channels and distribution arrangements and expect these relationships to be an important part of our business. Our efforts may be unsuccessful, and difficulties selling into these target markets, including through third party channels, could limit our growth and harm our results of operations.

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The international scale of our operations exposes us to additional risk and expense that could adversely affect our results of operations.

We market, sell and service our products globally and rely upon a global supply chain for sourcing important components and manufacturing of our products. Our international operations are subject to inherent risks, including:

- the impact of economic conditions in countries outside the United States;
- effects of changes in currency exchange rates;
- greater difficulty in collecting accounts receivable and longer collection periods;
- difficulty and cost of staffing and managing foreign operations;
- less protection for intellectual property rights in some countries;
- adverse tax and customs consequences, particularly as related to transfer-pricing issues;
- social, political and economic instability;
- higher incidence of corruption or unethical business practices that could expose us to liability or damage our reputation;
- trade protection measures, export compliance, domestic preference procurement requirements, qualification to transact business and additional regulatory requirements; and
- natural disasters, epidemics and acts of war or terrorism.

We expect that we may enter new markets and withdraw from or reduce operations in others. Our global operations expose us to additional risk and expense that could give rise to unanticipated liabilities, costs or other difficulties that could adversely affect our operations and financial results.

We may be required to write off significant amounts of inventory as a result of our inventory purchase practices, the obsolescence of product lines or unfavorable market conditions.

To avoid delays and meet customer demand for shorter delivery terms, we place orders with our contract manufacturers and component suppliers based in part on forecasts of customer demand. As a result, our business is exposed to the risk that our customers ultimately may not order the products we have forecast, or will purchase fewer products than forecast. As features and functionalities converge across our product lines, and we introduce new products with overlapping feature sets, it is increasingly possible that customers may forgo purchases of one product we have inventoried in favor of another product with similar functionality. Market uncertainty can also limit our visibility into customer spending plans and compound the difficulty of forecasting inventory at appropriate levels. Moreover, our customer purchase agreements generally do not include any minimum purchase commitment, and customers often have the right to modify, reduce or cancel purchase quantities. We may also be exposed to the risk of inventory write offs as a result of certain supply chain initiatives, including consolidation and transfer of key manufacturing activities As a result, we may purchase inventory in anticipation of sales that ultimately do not occur. If we are required to write off or write down a significant amount of inventory, our results of operations for the period would be materially adversely affected.

Our intellectual property rights may be difficult and costly to enforce.

We generally rely on a combination of patents, copyrights, trademarks and trade secret laws to establish and maintain proprietary rights in our products and technology. Although we have been issued numerous patents and other patent applications are currently pending, there can be no assurance that any of these patents or other proprietary rights will not be challenged, invalidated or circumvented or that our rights will provide us with any competitive advantage. In addition, there can be no assurance that patents will be issued from pending applications or that claims allowed on any patents will be sufficiently broad to protect our technology. Further, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States.

We are subject to the risk that third parties may attempt to access, divert or use our intellectual property without authorization. Protecting against the unauthorized use of our products, technology and other proprietary rights is difficult, time-consuming and expensive, and we cannot be certain that the steps that we are taking will prevent or minimize the risks of such unauthorized use. Litigation may be necessary to enforce or defend our intellectual property rights or to determine the validity or scope of the proprietary rights of others. Such litigation could result in

substantial cost and diversion of management time and resources, and there can be no assurance that we will obtain a successful result. Any inability to protect and enforce our intellectual property rights, despite our efforts, could harm our ability to compete effectively.

We may incur significant costs in response to claims by others that we infringe their intellectual property rights.

From time to time third parties may assert claims or initiate litigation or other proceedings related to patent, copyright, trademark and other intellectual property rights to technologies and related standards that are relevant to our business. The rate of patent infringement assertions both by operating entities and third party non-practicing entities (sometimes referred to as “patent trolls”) is increasing, particularly in the United States and Canada. We can be adversely affected by litigation, other

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proceedings or claims against us, as well as our manufacturers, suppliers or customers, alleging infringement of third party proprietary rights by our products and technology, or components of those products. Regardless of the merit of these claims, they can be time-consuming, divert the time and attention of our technical and management personnel, and result in costly litigation. These claims, if successful, can require us to:

- pay substantial damages or royalties;
- comply with an injunction or other court order that could prevent us from offering certain of our products;
- seek a license for the use of certain intellectual property, which may not be available on commercially reasonable terms or at all;
- develop non-infringing technology, which could require significant effort and expense and ultimately may not be successful; and
- indemnify our customers pursuant to contractual obligations and pay expense or damages on their behalf.

Any of these events could adversely affect our business, results of operations and financial condition. Our exposure to risks associated with the use of intellectual property may be increased as a result of acquisitions, as we have a lower level of visibility into the development process with respect to such technology or the steps taken to safeguard against the risks of infringing the rights of third parties.

Our failure to manage effectively our relationships with third party service partners could adversely impact our financial results and relationship with customers.

We rely on a number of third party service partners, both domestic and international, to complement our global service and support resources. We rely upon these partners for certain installation, maintenance and support functions. In order to ensure the proper installation and maintenance of our products, we must identify, train and certify qualified service partners. Certification can be costly and time-consuming, and our partners often provide similar services for other companies, including our competitors. We may not be able to manage effectively our relationships with our service partners and cannot be certain that they will be able to deliver services in the manner or time required. We may also be exposed to liability relating to the performance of our service partners. If our service partners are unsuccessful in delivering services:

- we may suffer delays in recognizing revenue;
- our services revenue and gross margin may be adversely affected; and
- our relationship with customers could suffer.

If we do not manage effectively our relationships with third party service partners, or they fail to perform these services in the manner or time required, our financial results and relationship with customers could be adversely affected.

We may be exposed to unanticipated risks and additional obligations in connection with our resale of complementary products or technology of other companies.

We have entered into agreements with strategic supply partners that permit us to distribute their products or technology. We may rely upon these relationships to add complementary products or technologies, diversify our product portfolio, or address a particular customer or geographic market. We may enter into additional original equipment manufacturer (OEM), resale or similar strategic arrangements in the future, including in support of our selection as a domain supply partner with AT&T. We may incur unanticipated costs or difficulties relating to our resale of third party products. Our third party relationships could expose us to risks associated with the business, financial condition, intellectual property rights and supply chain continuity of such partners, as well as delays in their development, manufacturing or delivery of products or technology. We may also be required by customers to assume warranty, indemnity, service and other commercial obligations, including potential liability to customers, greater than the commitments, if any, made to us by our technology partners. Some of our strategic supply partners are relatively

small companies with limited financial resources. If they are unable to satisfy their obligations to us or our customers, we may have to expend our own resources to satisfy these obligations. Exposure to these risks could harm our reputation with key customers and negatively affect our business and our results of operations.

Our exposure to the credit risks of our customers and resellers may make it difficult to collect receivables and could adversely affect our revenue and operating results.

In the course of our sales to customers and resale channel partners, we may have difficulty collecting receivables and our business and results of operations could be exposed to risks associated with uncollectible accounts. Lack of liquidity in the capital markets, macroeconomic weakness and market volatility may increase our exposure to these credit risks. Our attempts to monitor these situations carefully and take appropriate measures to protect ourselves may not be sufficient, and it is possible that we may have to write down or write off accounts receivable. Such write-downs or write-offs could negatively affect our

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operating results for the period in which they occur, and, if large, could have a material adverse effect on our revenue and operating results.

Our business is dependent upon the proper functioning of our internal business processes and information systems and modification or interruption of such systems may disrupt our business, processes and internal controls.

We rely upon a number of internal business processes and information systems to support key business functions and the efficient operation of these processes and systems is critical to our business. Our business processes and information systems need to be sufficiently scalable to support the growth of our business and may require modifications or upgrades that expose us to a number of operational risks. We are currently pursuing initiatives to transform and optimize our business operations through the reengineering of certain processes, investment in automation and engagement of strategic partners or resources to assist with certain business functions. These changes may be costly and disruptive to our operations, and could impose substantial demands on management time. These changes may also require changes in our information systems, modification of internal control procedures and significant training of employees or third party resources. Our information technology systems, and those of third party providers, may also be vulnerable to damage or disruption caused by circumstances beyond our control. These include catastrophic events, power anomalies or outages, natural disasters, computer system or network failures, viruses or malware, physical or electronic break-ins, unauthorized access and cyber-attacks affecting our systems or those of third party business partners. Any material disruption, malfunction or similar challenges with our business processes or information systems, or disruptions or challenges relating to the transition to new processes, systems or providers, could have a material adverse effect on the operation of our business and our results of operations.

Data breaches and cyber-attacks could compromise our intellectual property or other sensitive information and cause significant damage to our business and reputation.

In the ordinary course of our business, we maintain sensitive data on our networks, including our intellectual property and proprietary or confidential business information relating to our business and that of our customers and business partners. The secure maintenance of this information is critical to our business and reputation. We believe that companies in the technology industry have been increasingly subject to a wide variety of security incidents, cyber-attacks and other attempts to gain unauthorized access. Our network and storage applications may be subject to unauthorized access by hackers or breached due to operator error, malfeasance or other system disruptions. In some cases, it is difficult to anticipate or immediately detect such incidents and the damage caused thereby. These data breaches and any unauthorized access or disclosure of our information, could compromise our intellectual property and expose sensitive business information. Cyber-attacks could also cause us to incur significant remediation costs, disrupt key business operations and divert attention of management and key information technology resources. These incidents could also subject us to liability, expose us to significant expense, or cause significant harm to our reputation.

Outstanding indebtedness under our convertible notes may adversely affect our liquidity and results of operations and could limit our business.

At October 31, 2012, indebtedness on our outstanding convertible notes totaled approximately $1.4 billion in aggregate principal, including approximately $216.0 million in convertible notes that mature in May 2013. Our indebtedness could have important negative consequences, including:

- increasing our vulnerability to adverse economic and industry conditions;
- limiting our ability to obtain additional financing, particularly in unfavorable capital and credit market conditions;
- incurrence of debt service and repayment obligations that reduce the availability of cash resources for other business purposes;

- limiting our flexibility in planning for, or reacting to, changes in our business and the markets; and
- placing us at a possible competitive disadvantage to competitors that have better access to capital resources.

On August 13, 2012, we entered into a $150 million senior secured asset-based revolving Credit Facility. In addition to customary remedies should we default under the credit agreement governing this facility, we may be subject to lender control over certain cash assets and required to comply with a fixed charge coverage ratio in the event that we do not maintain the requisite level of availability under the facility. The credit agreement also contains customary covenants that limit our ability to, among other things, pay cash dividends, incur debt, create liens and encumbrances, redeem or repurchase stock, enter into certain acquisition transactions, repay indebtedness, make investments or dispose of assets. The Credit Facility matures on August 13, 2015, provided that it will mature early on (i) January 31, 2013, if any of Ciena's 0.25% senior convertible notes due May 1, 2013 are then outstanding and Ciena is unable to meet certain financial criteria with respect to its cash position at that time, or (ii) December 15, 2014, if any of Ciena's 4.00% senior convertible notes due March 15, 2015 are then outstanding. We

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may also enter into additional transactions or lending facilities, including equipment loans, working capital lines of credit and other long-term debt, that may increase our indebtedness and result in additional restrictions upon our business.

Significant volatility and uncertainty in the capital markets may limit our access to funding.

We have accessed the capital markets in the past and successfully raised funds, through the issuance of equity or convertible debt, to increase our cash position, support our operations and undertake strategic growth initiatives, including the acquisition of the MEN Business. We regularly evaluate our liquidity position, debt obligations, and anticipated cash needs to fund our long-term operating plans and may consider raising additional capital in the future. Global capital markets have undergone a sustained period of significant volatility and uncertainty, and there can be no assurance that such financing alternatives would be available to us, should we determine it necessary or advisable to seek additional cash resources.

Facilities transitions could be disruptive to our operations and result in unanticipated expense.

We have recently undertaken and expect to undertake a number of significant facilities transitions affecting a number of our largest employee populations, including our headquarters facility. In November 2011, we entered into a lease for our new corporate headquarters in Hanover, Maryland. While we have transitioned certain affected employees and operations, including key management and administration resources, to this new facility, we do not expect to complete the transition of all affected personnel and functions until early 2013. This transition could be disruptive to our operations and could result in unanticipated expense that adversely affects our financial results. In addition, the lease of our “Lab 10” building on the Carling Campus in Ottawa, Canada will expire in fiscal 2016 and the lease for our research and development facility in Gurgaon, India will expire in fiscal 2014. Both locations include sophisticated research and development lab equipment and key engineering personnel, and our Ottawa facility is our largest facility globally. We are currently considering facilities and development alternatives in advance of the expiration of these leases. However, locating appropriate alternative space for our engineering operations may be costly and there can be no assurance that the transition of key engineering functions to a successor facility will not be disruptive, or adversely affect productivity.

Restructuring activities could disrupt our business and affect our results of operations.

We have previously taken steps, including reductions in force, office closures, and internal reorganizations to reduce the size and cost of our operations, improve efficiencies, or realign our organization and staffing to better match our market opportunities and our technology development initiatives. We may take similar steps in the future as we seek to realize operating synergies, optimize our operations to achieve our target operating model and profitability objectives, or better reflect changes in the strategic direction of our business. These changes could be disruptive to our business and may result in significant expense including accounting charges for inventory and technology-related write-offs, workforce reduction costs and charges relating to consolidation of excess facilities. Substantial expense or charges resulting from restructuring activities could adversely affect our results of operations in the period in which we take such a charge.

If we are unable to attract and retain qualified personnel, we may be unable to manage our business effectively.

Competition to attract and retain highly skilled technical, engineering and other personnel with experience in our industry is intense, and our employees have been the subject of targeted hiring by our competitors. We may experience difficulty retaining and motivating existing employees and attracting qualified personnel to fill key positions. Because we rely upon equity awards as a significant component of compensation, particularly for our executive team, a lack of positive performance in our stock price, reduced grant levels, or changes to our compensation program may adversely affect our ability to attract and retain key employees. The loss of members of

our management team or other key personnel could be disruptive to our business, and, were it necessary, it could be difficult to replace members of our management team or other key personnel. In addition, none of our executive officers is bound by an employment agreement for any specific term. If we are unable to attract and retain qualified personnel, we may be unable to manage our business effectively, and our operations and results of operations could suffer.

We may be adversely affected by fluctuations in currency exchange rates.

As a global concern, we face exposure to adverse movements in foreign currency exchange rates. Historically, our sales were primarily denominated in U.S. dollars. As a result of our increased global presence, a larger percentage of our revenue and operating expense are now non-U.S. dollar denominated and therefore subject to foreign currency fluctuation. We face exposure to currency exchange rates as a result of the growth in our non-U.S. dollar denominated operating expense in Canada, Europe, Asia and Latin America. From time to time, we may hedge against currency exposure associated with anticipated foreign currency cash flows. There can be no assurance that any hedging instruments will be effective, and losses associated with these instruments and the adverse effect of foreign currency exchange rate fluctuation may negatively affect our results of operations.

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Our products incorporate software and other technology under license from third parties and our business would be adversely affected if this technology were no longer available to us on commercially reasonable terms.

We integrate third-party software and other technology into our embedded operating system, network management system tools and other products. Licenses for this technology may not be available or continue to be available to us on commercially reasonable terms. Third party licensors may insist on unreasonable financial or other terms in connection with our use of such technology. Difficulties with third party technology licensors could result in termination of such licenses, which may result in significant costs and require us to obtain or develop a substitute technology. Difficulty obtaining and maintaining third-party technology licenses may disrupt development of our products and increase our costs.

Strategic acquisitions and investments may expose us to increased costs and unexpected liabilities.

We may acquire or make investments in other technology companies, or enter into other strategic relationships, to expand the markets we address, diversify our customer base or acquire or accelerate the development of technology or products. To do so, we may use cash, issue equity that would dilute our current stockholders' ownership, or incur debt or assume indebtedness. These transactions involve numerous risks, including:

- significant integration costs;
- disruption due to the integration and rationalization of operations, products, technologies and personnel;
- diversion of management's attention;
- difficulty completing projects of the acquired company and costs related to in-process projects;
- the loss of key employees;
- ineffective internal controls over financial reporting;
- dependence on unfamiliar suppliers or manufacturers;
- exposure to unanticipated liabilities, including intellectual property infringement claims; and
- adverse tax or accounting effects including amortization expense related to intangible assets and charges associated with impairment of goodwill.

As a result of these and other risks, our acquisitions, investments or strategic transactions may not reap the intended benefits and may ultimately have a negative impact on our business, results of operation and financial condition.

Changes in government regulation affecting the communications industry and the businesses of our customers could harm our prospects and operating results.

The Federal Communications Commission, or FCC, has jurisdiction over the U.S. communications industry and similar agencies have jurisdiction over the communication industries in other countries. Many of our largest customers are subject to the rules and regulations of these agencies. Changes in regulatory requirements applicable to wireline or wireless communications and the Internet in the United States or other countries could serve as a disincentive to providers to invest in their communications network infrastructures or introduce new services. These changes could adversely affect the sale of our products and services. Changes in regulatory tariff requirements or other regulations relating to pricing or terms of carriage on communications networks could slow the development or expansion of network infrastructures and adversely affect our business, operating results, and financial condition.

Governmental regulations affecting the use, import or export of products could adversely affect our operations, and negatively affect our revenue and increase our costs.

The United States and various foreign governments have imposed controls, license requirements and other restrictions on the usage, import or export of some of the technologies that we sell. Governmental regulation of usage, import or export of our products, technology within our products, or our failure to obtain required approvals for our products, could harm our international and domestic sales and adversely affect our revenue and costs of sales. Failure to comply with such regulations could result in enforcement actions, fines or penalties and restrictions on export privileges. In addition, costly tariffs on our equipment, restrictions on importation, trade protection measures and domestic preference requirements of certain countries could limit our access to these markets and harm our sales. For example, India's government has recently implemented and is considering additional security regulations applicable to network equipment vendors, and has imposed significant tariffs that may inhibit sales of certain communications equipment; including equipment manufactured in China, where certain of our products are assembled. These and other regulations could adversely affect the sale or use of our products, substantially increase our cost of sales and could adversely affect our business and revenue.

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Governmental regulations related to the environment and potential climate change, could adversely affect our business and operating results.

Our operations are regulated under various federal, state, local and international laws relating to the environment and potential climate change. We could incur fines, costs related to damage to property or personal injury, and costs related to investigation or remediation activities, if we were to violate or become liable under these laws or regulations. Our product design efforts, and the manufacturing of our products, are also subject to evolving requirements relating to the presence of certain materials or substances in our equipment, including regulations that make producers for such products financially responsible for the collection, treatment and recycling of certain products. For example, our operations and financial results may be negatively affected by environmental regulations, such as the Waste Electrical and Electronic Equipment (WEEE) and Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) that have been adopted by the European Union. Compliance with these and similar environmental regulations may increase our cost of designing, manufacturing, selling and removing our products. These regulations may also make it difficult to obtain supply of compliant components or require us to write off non-compliant inventory, which could have an adverse effect our business and operating results.

We may be required to write down long-lived assets and these impairment charges would adversely affect our operating results.

As of October 31, 2012, our balance sheet includes $438.3 million in long-lived assets, which includes $257.1 million of intangible assets. Valuation of our long-lived assets requires us to make assumptions about future sales prices and sales volumes for our products. These assumptions are used to forecast future, undiscounted cash flows. Given the significant uncertainty and instability of macroeconomic conditions in recent periods, forecasting future business is difficult and subject to modification. If actual market conditions differ or our forecasts change, we may be required to reassess long-lived assets and could record an impairment charge. Any impairment charge relating to long-lived assets would have the effect of decreasing our earnings or increasing our losses in such period. If we are required to take a substantial impairment charge, our operating results could be materially adversely affected in such period.

Failure to maintain effective internal controls over financial reporting could have a material adverse effect on our business, operating results and stock price.

Section 404 of the Sarbanes-Oxley Act of 2002 requires that we include in our annual report a report containing management's assessment of the effectiveness of our internal controls over financial reporting as of the end of our fiscal year and a statement as to whether or not such internal controls are effective. Compliance with these requirements has resulted in, and is likely to continue to result in, significant costs and the commitment of time and operational resources. Changes in our business, including certain initiatives to transform business processes, invest in information systems or transition certain functions to third party resources or providers, will necessitate modifications to our internal control systems, processes and information systems as we optimize our business and operations. Our increased global operations and expansion into new regions could pose additional challenges to our internal control systems. We cannot be certain that our current design for internal control over financial reporting, or any additional changes to be made, will be sufficient to enable management to determine that our internal controls are effective for any period, or on an ongoing basis. If we are unable to assert that our internal controls over financial reporting are effective, market perception of our financial condition and the trading price of our stock may be adversely affected, and customer perception of our business may suffer.

Our stock price is volatile.
Our common stock price has experienced substantial volatility in the past and may remain volatile in the future. Volatility in our stock price can arise as a result of a number of the factors discussed in this “Risk Factors” section.

During fiscal 2012, our closing stock price ranged from a high of $17.98 per share to a low of $10.38 per share. The stock market has experienced significant price and volume fluctuations that have affected the market price of many technology companies, with such volatility often unrelated to the operating performance of these companies. Divergence between our actual or anticipated financial results and published expectations of analysts can cause significant swings in our stock price. Our stock price can also be affected by announcements that we, our competitors, or our customers may make, particularly announcements related to acquisitions or other significant transactions. Our common stock is included in a number of market indices and any change in the composition of these indices to exclude our company would adversely affect our stock price. These factors, as well as conditions affecting the general economy or financial markets, may materially adversely affect the market price of our common stock in the future.

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Item 1B. Unresolved Staff Comments
Not applicable.

Item 2. Properties

Overview. As of October 31, 2012, all of our properties are leased and we do not own any real property. We lease facilities globally related to the ongoing operations of our four business segments and related functions. Our principal executive offices are located in two buildings in Hanover, Maryland. In addition, we currently occupy five buildings at various sites in Linthicum, Maryland, including an engineering facility, two supply chain and logistics facilities, and two administrative and sales facilities, though we will be vacating three of these buildings in the first half of fiscal 2013.

Our largest facility is our research and development center located at “Lab 10” on the former Nortel Carling Campus in Ottawa, Canada. See below for information regarding the lease associated with this engineering facility. We also have engineering and/or service facilities located in San Jose, California; Alpharetta, Georgia; Spokane, Washington; Kanata, Canada; and Gurgaon, India. In addition, we lease various smaller offices in the United States, Mexico, South America, Europe, the Middle East and Asia-Pacific to support our sales and services operations. We believe the facilities we are now using are adequate and suitable for our business requirements.

Hanover, Maryland Headquarters Lease. Ciena entered into a lease agreement dated November 3, 2011, with W2007 RDG Realty, L.L.C. relating to office space for its new corporate headquarters in Hanover, Maryland, consisting of an agreed-upon rentable area of approximately 154,100 square feet. At the commencement date, the minimal rental commitments to be paid over the 15-year lease term are approximately $61.8 million.

Carling, Ottawa Lease. Upon the completion of the MEN Acquisition, Ciena Canada Inc., a subsidiary of Ciena, entered into a lease agreement with Nortel Networks Technology Corp. (“Landlord”) relating to the “Lab 10” building on Nortel’s Carling Campus in Ottawa, Canada (the “Carling lease”). This facility consists of a rentable area of 265,000 square feet for which we incur lease expense of approximately $7.2 million CAD per year, consisting of both base rent and fixed additional operating expense, the latter of which increases at 2% per year. The Carling lease initially had a ten-year term, subject to an early termination feature that allowed Nortel to reduce the term of the lease in exchange for its payment of an early termination fee of up to $33.5 million. During the first quarter of fiscal 2011, Ciena received both notice of early termination from Nortel shortening the Carling lease to five years and the corresponding $33.5 million early termination payment.

Restructuring. We attempt to sublease properties that we no longer occupy. As part of our restructuring costs, we provide for the estimated cost of the future net lease expense for these facilities. The cost is based on the fair value of future minimum lease payments under contractual obligations offset by the fair value of the estimated future sublease payments that we may receive. As of October 31, 2012, our accrued restructuring liability related to these properties was $3.6 million. If actual market conditions relating to the use of these facilities are less favorable than those projected by management, additional restructuring costs associated with these facilities may be required. For additional information regarding our lease obligations, see Note 21 to the Consolidated Financial Statements in Item 8 of Part II of this annual report.

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Item 3. Legal Proceedings

On July 29, 2011, Cheetah Omni LLC filed a complaint in the United States District Court for the Eastern District of Texas against Ciena and several other defendants, alleging, among other things, that certain of the parties' products infringe upon multiple U.S. Patents relating to certain reconfigurable optical add-drop multiplexer (ROADM) technologies. The complaint seeks injunctive relief and damages. On November 8, 2011, Ciena filed an answer and counterclaims to Cheetah Omni's amended complaint. The parties are currently engaged in discovery. Ciena believes that it has valid defenses to the lawsuit and intends to defend it vigorously.

On May 29, 2008, Graywire, LLC filed a complaint in the United States District Court for the Northern District of Georgia against Ciena and four other defendants, alleging, among other things, that certain of the parties' products infringe U.S. Patent 6,542,673 (the "'673 Patent"), relating to an identifier system and components for optical assemblies. The complaint seeks injunctive relief and damages. In July 2009, upon request of Ciena and certain other defendants, the U.S. Patent and Trademark Office ("PTO") granted the defendants' inter partes application for reexamination with respect to certain claims of the '673 Patent, and the district court granted the defendants' motion to stay the case pending reexamination of all of the patents-in-suit. In December 2010, the PTO confirmed the validity of some claims and rejected the validity of other claims of the '673 Patent, to which Ciena and other defendants filed an appeal. On March 16, 2012, the PTO on appeal rejected multiple claims of the '673 Patent, including the two claims on which Ciena is alleged to infringe. Subsequently, the plaintiff requested a reopening of the prosecution of the '673 Patent, to which Ciena and the other defendants filed an opposition. The case currently remains stayed, and there can be no assurance as to whether or when the stay will be lifted.

In addition to the matters described above, we are subject to various legal proceedings and claims arising in the ordinary course of our business, including claims against third parties that may involve a contractual indemnification obligation on the part of Ciena. We do not expect that the ultimate costs to resolve these matters will have a material effect on our results of operations, financial position or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Stock, Related Stockholder Matters and Issuer Purchases of Equity Securities

(a) Our common stock is traded on the NASDAQ Global Select Market under the symbol "CIEN." The following table sets forth the high and low sales prices of our common stock, as reported on the NASDAQ Global Select Market, for the fiscal periods indicated.

	High	Low
Fiscal Year 2011		
First Quarter ended January 31	$25.49	$13.55
Second Quarter ended April 30	$28.81	$22.03
Third Quarter ended July 31	$27.91	$15.46
Fourth Quarter ended October 31	$14.82	$10.28
Fiscal Year 2012		
First Quarter ended January 31	$15.34	$10.38
Second Quarter ended April 30	$17.16	$13.44
Third Quarter ended July 31	$16.81	$11.49
Fourth Quarter ended October 31	$17.98	$12.17

As of December 13, 2012, there were approximately 834 holders of record of our common stock and 100,610,686 shares of common stock outstanding. We have never paid cash dividends on our capital stock. We intend to retain earnings for use in our business, and we do not anticipate paying any cash dividends in the foreseeable future.
The following graph shows a comparison of cumulative total returns for an investment in our common stock, the NASDAQ Telecommunications Index and the NASDAQ Composite Index from October 31, 2007 to October 31, 2012. The NASDAQ

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Composite Index measures all domestic and international based common stocks listed on The Nasdaq Stock Market. The NASDAQ Telecommunications Index contains securities of NASDAQ-listed companies classified according to the Industry Classification Benchmark as Telecommunications and Telecommunications Equipment. They include providers of fixed-line and mobile telephone services, and makers and distributors of high-technology communication products. This graph is not deemed to be “filed” with the SEC or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, and the graph shall not be deemed to be incorporated by reference into any prior or subsequent filing by us under the Securities Act of 1933 or the Exchange Act.

Assumes $100 invested in Ciena Corporation, the NASDAQ Telecommunications Index and the NASDAQ Composite Index on October 31, 2007 with all dividends reinvested at month-end.
(b) Not applicable.
(c) Not applicable.

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Item 6. Selected Consolidated Financial Data

The following selected consolidated financial data should be read in conjunction with Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the Consolidated Financial Statements and the notes thereto included in Item 8, “Financial Statements and Supplementary Data.” We have 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 2008, 2009, 2010 and 2011 consisted of 52 weeks and fiscal 2012 consisted of 53 weeks.

	Year Ended October 31, (in thousands)				
	2008	2009	2010	2011	2012
Cash and cash equivalents	$550,669	$485,705	$688,687	$541,896	$642,444
Short-term investments	$366,336	$563,183	$—	$—	$50,057
Long-term investments	$156,171	$8,031	$—	$50,264	$—
Total assets	$2,024,594	$1,504,383	$2,118,093	$1,951,418	$1,881,143
Short-term convertible notes payable	$—	$—	$—	$—	$216,210
Long-term convertible notes payable	$798,000	$798,000	$1,442,705	$1,442,364	$1,225,806
Total liabilities	$1,025,645	$1,048,545	$1,958,800	$1,937,545	$1,970,115
Stockholders’ equity (deficit)	$998,949	$455,838	$159,293	$13,873	$(88,972)

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Statement of Operations Data: