ADTRAN INC
Form 10-K
February 24, 2015
Table of Contents

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

FOR ANNUAL AND TRANSITION REPORTS

PURSUANT TO SECTION 13 OR 15(d) OF THE

SECURITIES EXCHANGE ACT OF 1934

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

For the Fiscal Year Ended December 31, 2014

¨ **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 0-24612

ADTRAN, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**63-0918200**
(State of Incorporation)	**(I.R.S. Employer Identification Number)**
901 Explorer Boulevard	
Huntsville, Alabama 35806-2807	**(256) 963-8000**
(Address of principal executive offices, including zip code)	**(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, par value $0.01 per share	**NASDAQ Global Select Market**

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

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

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

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 x No ¨

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 Regulations S-T (232.405 of this chapter) during the preceding 12 months (or for shorter period that the Registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the 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. ¨

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 Exchange Act. (Check one)

Large Accelerated Filer x	Accelerated Filer ¨
Non-accelerated Filer ¨	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 ¨ No x

The aggregate market value of the registrant s outstanding common stock held by non-affiliates of the registrant on June 30, 2014 was $1,228,547,070 based on a closing market price of $22.56 as quoted on the NASDAQ Global Select Market. There were 53,440,375 shares of common stock outstanding as of February 9, 2015.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the Annual Meeting of Stockholders to be held on May 13, 2015 are incorporated herein by reference in Part III.

Table of Contents

ADTRAN, Inc.

Annual Report on Form 10-K

For the Fiscal Year Ended December 31, 2014

Table of Contents

Table of Contents

PART I

ITEM 1. BUSINESS

Overview

ADTRAN, Inc. is a leading global provider of networking and communications equipment. Our solutions enable voice, data, video and Internet communications across a variety of network infrastructures. These solutions are deployed by some of the world s largest service providers, distributed enterprises and small and medium-sized businesses, public and private enterprises, and millions of individual users worldwide.

We were incorporated under the laws of Delaware in November 1985, and commenced operations in January 1986. We are headquartered in Cummings Research Park in Huntsville, Alabama. The mailing address at our headquarters is 901 Explorer Boulevard, Huntsville, Alabama, 35806. The telephone number at that location is (256) 963-8000.

Products and Services

We maintain two operating divisions based on our product and service offerings: the Carrier Networks Division and the Enterprise Networks Division. These divisions serve two distinct markets and support sales globally, operating as two reportable segments. In 2014, sales of Carrier Networks products accounted for 81.0% of total revenue, while sales of Enterprise Networks products accounted for 19.0% of total revenue. Sales to countries outside of the United States are included in these aggregate divisional figures, but when accounted for separately, comprised 39.5% of total revenue. For more financial information about these divisions and geographic areas, see Note 12 to the Consolidated Financial Statements included in this report.

Our Carrier Networks Division offers broadband and optical infrastructure products and services used by service providers to aggregate, transport, and deliver voice, data, and video services to their customers premises and mobile network cell sites. These products are typically located in central office exchanges or outside plant cabinets, infrastructure locations for business services and mobile backhaul networks, and residential and business premises. Our Enterprise Networks Division provides cloud connectivity solutions, such as IP business gateways and access routers, which provide business access to service provider networks, and enterprise communications solutions, which enable businesses to construct voice, data and video networks at a single customer premises or among a distributed enterprise s multiple sites. These products are sold through service providers in the form of bundled business services and solutions resale and through value-added resellers (VARs).

Both ADTRAN divisions are positioned with product and service offerings that compete in the global communications industry, specifically, in the areas of Ethernet and Internet Protocol (IP) based networks, as service providers and enterprises continue to transition to an all IP-based network to cost-effectively deliver and scale higher-bandwidth video and data services. Service providers are also planning to ubiquitously offer services up to 1 Gigabit and higher in a cost effective manner. To that end, we have strengthened our technologies in our core product areas: Broadband Access, Optical, and Internetworking.

For a discussion of risks associated with our products see Risk Factors We must continue to update and improve our products and develop new products in order to compete and to keep pace with improvements in communications technology , and Risk Factors If our products do not interoperate with our customers networks, installations may

be delayed or cancelled, which could harm our business , in Item 1A of this report.

Broadband Access Infrastructure for Advanced Services

Historically, service providers have deployed independent networks to meet the needs of their residential, enterprise, and mobile backhaul customers, with each network developed for their specific needs. As a result, the current state of communications operators networks is comprised of disparate overlay networks. Today, service providers are being challenged to deliver Gigabit-ready residential services, high-bandwidth and widely available cloud connectivity services for enterprise customers and scalable Ethernet and optical networking for mobile backhaul and data center connectivity, requiring varying service level agreements (SLAs) and simplified service automation requirements. In response to this demand, we are seeing a fundamental shift toward IP network convergence. Communications service providers have four fundamental network priorities: (1) high-capacity residential services, (2) enterprise services, (3) the expansion of fourth-generation mobile/Long Term Evolution (4G/LTE) and carrier-based Wi-Fi networks, and (4) data center connectivity for cloud services.

Table of Contents

Communication network operators are working to transition their networks to a single all-fiber, cloud-controlled and software defined future state for ubiquitous converged service delivery. Service providers plan to support the full range of residential, enterprise, and mobile backhaul services over a common, next-generation network capable of supporting each segment s advanced service management. It is becoming impractical to continue the proliferation of separate overlay networks to address each of these market segment needs. We believe that we are positioned to deliver flexible network solutions that enable network operators to meet today s service demands, while enabling the transition to a fully converged, scalable, highly automated, cloud-controlled voice, data and video networks of the future.

Our three major product categories are Carrier Systems, Business Networking, and Loop Access.

Carrier Systems products are used by communications service providers to provide data, voice, and video services to consumers and enterprises. This category includes the following product areas and related services:

Broadband Access

Total Access® 5000 Series of Multi-Service Access Node (MSAN)

hiX 5600 Series of MSANs

Total Access 1100/1200 Series of Fiber to the Node (FTTN) products

hiX 1100 Series of Fiber to the Node (FTTN) products

VDSL2 Vectoring based Digital Subscriber Line Access Multiplexer (DSLAM) products

ADTRAN 500 Series of FTTdp G.fast Distribution Point Units (DPU)

Optical

Optical Networking Edge (ONE)

NetVanta 8000 Series of Fiber Ethernet Access Devices (EAD)

NetVanta 8400 Series of 10Gig Multi-service Edge Switches

- OPTI-6100 and Total Access 3000 optical Multi-Service Provisioning Platforms (MSPP)
- Pluggable Optical Products, including SFP, XFP, and SFP+
- Time Division Multiplexed (TDM) systems

Business Networking products provide access to communication services and facilitate the delivery of cloud connectivity and enterprise communications to the small and mid-sized enterprise (SME) market. This category includes the following product areas and related services:

- Internetworking products
  - Total Access IP Business Gateways
  - Optical Network Terminals (ONTs)
  - Bluesocket® virtual Wireless LAN (vWLAN®)
  - NetVanta®
    - Access Routers
    - Enterprise Session Border Controllers (eSBC)
    - Managed Ethernet Switches
    - IP Business Gateways
    - Unified Communications (UC) solutions
    - Carrier Ethernet Network Terminating Equipment (NTE)
    - Carrier Ethernet Routers and Gateways
  - Network Management Solutions

Loop Access products are used by carrier and enterprise customers for access to copper-based communications networks. This category includes the following product areas and related services:

- High bit-rate Digital Subscriber Line (HDSL) products
- Digital Data Service (DDS)
- Integrated Services Digital Network (ISDN) products
- T1/E1/T3 Channel Service Units/Data Service Units (CSUs/DSUs)
- TRACER fixed-wireless products

In addition, we identify subcategories of product revenues, which we divide into core products and legacy products. Our core products consist of Broadband Access and Optical products (included in Carrier Systems) and Internetworking products (included in Business Networking). Our legacy products include HDSL products (included in Loop Access) and other products not included in the aforementioned core products.

Table of Contents

Carrier Networks Division

Carrier service providers are focused on accelerating the delivery of broadband, business and mobile revenue-generating services while streamlining and automating their network. We deliver flexible next-generation access products that enable service providers to reduce network costs and speed the delivery of services to connect greater numbers of customers at higher speeds and with better quality of experience, allowing for new revenue generation and decreased customer churn. Our Carrier Networks Division supplies the network access products, services and support that these service providers require to connect their customers to core transmission and switching networks. Specifically, we deliver broadband solutions that enable high-speed digital services. Our customer base includes many of the major service providers around the globe, including Incumbent Local Exchange Carriers (ILECs), Public Telephone and Telegraph companies (PTT), Competitive Local Exchange Carriers (CLECs), and Cable Multi-service Operators (MSOs), as well as many U.S.-based independent operating companies, utilities, municipalities and wireless service providers. We initially focused on opportunities in North America, but we have significantly increased our customer penetration in the Europe, Middle East and Africa (EMEA) region, Latin America, as well as other regions of the world. This was aided by our 2012 acquisition of Nokia Siemens Networks Broadband Access business.

Carrier services enabled using our Ethernet-based systems include traditional voice services, VoIP, IPTV, RF Video, high-speed Internet access, mobile broadband and data services based on Ethernet, frame relay, TDM and ATM technologies. These services connect the network with user components such as switches, routers, gateways, PBXs and wireless LAN products. Our devices are deployed at business sites and enable carriers to provide Ethernet services to SMEs and distributed enterprises. Our solutions provide a complete end-to-end solution for carriers by supporting both new fiber-based infrastructure and enabling them to reuse their existing copper infrastructure. This lowers their overall cost to deploy advanced Ethernet services.

Products marketed under the Total Access® and hiX® brands are platforms that can accommodate the demand for a variety of high-speed Internet, voice, data and video services from businesses and residential customers. Our Total Access product portfolio is focused on the American National Standards Institute (ANSI) markets for residential and business broadband applications and global markets for Carrier Ethernet and Packet Optical applications. Our hiX product portfolio is focused on the European Telecommunications Standards Institute (ETSI) markets for residential and business broadband applications and is deployed in central exchanges, outside plant cabinets or multi-tenant units. These modular, scalable and geographically distributed products offer advantages such as lower start-up costs, more flexible service deployment, greater network interface options, increased bandwidth, grow-as-you-go modularity and centralized network management. Our products connect to both fiber optic and copper network backbones, making them suitable for installation in many parts of the network and enabling deployment of a wide range of voice, video and data services around the world.

In the United States, the Total Access products, as well as a variety of other ADTRAN products, are accepted by the USDA Rural Utilities Service (RUS) as suitable for use in RUS-financed communications systems. Deployed in central offices, remote terminals, or multi-tenant units, the Total Access® system encompasses carrier-class solutions for fiber and copper broadband multi-service access, DSL access, Carrier Ethernet access and narrowband multi-service access.

Advanced IP Services

Our broadband access products offer service providers the ability to increase bandwidth and improve the quality of services to customers. These products are used in high-density central office applications, fiber-fed remote terminals and outside plant deployments. These products are available in models that are temperature hardened for use in harsh,

outside-plant environments and provide support for Ethernet delivery of advanced IP services over fiber or copper as well as legacy TDM and ATM networks.

High-speed Residential Services

Designed with fiber deployment in mind, our Total Access 5000 Series provides high-capacity switching and bandwidth for Fiber-to-the-Premises (FTTP) services based on advanced optical standards. It also provides other ultra-broadband services based on advanced copper technologies used in Fiber-to-the-Node, Cabinet or distribution point (FTTN/FTTCab/FTTdp). FTTP networks are based on the Gigabit Passive Optical Networks (GPON) standard. There are two key network components, the Optical Line Terminal (OLT) and the customer-side ONT. The OLT is typically located in communications exchanges and other network Central Offices within MSANs. For ADTRAN, both the hiX 5600 and the Total Access 5000 Series MSANs house the OLT modules. The OLT provides Gigabit levels of bandwidth shared or dedicated across thousands of subscribers enabling the delivery of advanced solutions like IPTV across an all-Ethernet architecture. On the other end of the FTTP network, every subscriber s home has a provider-owned ONT that terminates the fiber optics from the OLT and converts the optical signals to electric signals, enabling the in-home network to deliver voice, Internet and video services. Customer-owned devices, such as computers, usually expect Ethernet, a standard networking technology, making an all-Ethernet solution preferable. Our portfolio of ONTs, including the Total Access 300 Series, and next generation ADTRAN 400 and 500 Series ONTs provides carriers with a widely differentiated set of service delivery options for residential, business and mobile backhaul opportunities.

Table of Contents

To accelerate the penetration of 100Mbps and Gigabit services at the lowest cost per bit deployed, both the Total Access and hiX-based platforms allow service providers to realize ultra-broadband speeds over their existing copper infrastructure using established VDSL2 vectoring and emerging G.fast technologies. This economically secures the broadband connection to the home and enables the delivery of advanced communications and entertainment services. Capabilities like VDSL2 vectoring (a new cross-talk cancellation technology that expands typical 30 50Mbps DSL rates to 100Mbps or more) are actively being deployed to help service providers overcome the challenge of using existing copper facilities to compete with 100Mbps and higher service offerings without the need to invest in or overcome the obstacles often associated with end-to-end FTTP networks.

To further the competitiveness of operators using FTTCab and FTTdp architectures ADTRAN has G.fast ultra-broadband trials underway with service providers in Europe, North America and Asia-Pacific. The trials demonstrate that G.fast is moving beyond a technology concept toward a commercial reality supported by a portfolio of FTTdp environmentally sealed platforms. ADTRAN s G.fast solutions are helping service providers address the unique and varied deployment scenarios encountered where fiber-to-the-home (FTTH) is cost prohibitive.

The Total Access 1100 and hiX 1100 Series of environmentally sealed broadband access products provides an innovative approach to the successful deployment of FTTN architectures. Recognizing the technological and economic barriers of traditional cabinet-based DSL deployments, we designed this series of products to eliminate the need for expensive cabinet enclosures, heat exchangers and site construction, which account for a large portion of the total cost of deployment. In many cases, 1100 Series DSLAMs can deliver services for significantly less than traditional cabinet-based systems. This flexibility, combined with VDSL2 with system level vectoring, allows carriers to economically utilize the capacity of existing copper networks over the last mile.

The hiX 5600 Series can be positioned as a residential MSAN delivering high-density DSL and voice technologies. The hiX 5600 Series MSAN also supports residential point-to-point fiber applications. This product series leverages the latest technology in next generation VDSL2 - vectoring. Additionally, hiX platforms offer a comprehensive voice feature set for ETSI markets.

Business Ethernet Services

Business Ethernet is growing with the proliferation of packet-based infrastructure in both enterprise and carrier networks. The implementation of Ethernet throughout the communications network provides benefits in equipment and operational savings. While Gigabit speeds are increasingly becoming available throughout the access network, they are far from being widespread. Ethernet s increasing presence throughout the network is driving costs down, resulting in increasing availability to business customers. We provide Metro Ethernet Forum (MEF) compliant products that enable the delivery of these services.

We have a complete portfolio of solutions for Business Ethernet services utilizing Fiber (EoF), Copper (EoCu) and TDM (EoTDM). These solutions enable cost-effective business Ethernet service delivery across a variety of network infrastructures. The Total Access 5000 supports standards-based copper pair bonding of xDSL loops for direct Ethernet service delivery. Leveraging a complete end-to-end solution with NetVanta 800 Series, NetVanta 8000 Series and NetVanta 8400 Series network termination equipment, the Total Access 5000 and hiX 5600 also offer an innovative approach to delivering Ethernet services by aggregating bonded copper, bonded circuits, and fiber, while supporting multi-megabit rates for MEF-certified carrier Ethernet circuits. This combination allows carriers to offer Ethernet services across the entire network, enabling new revenue-generating services for businesses.

Packet Optical Networking, Optical Access and Optical Transport

Mobile networks that were originally built for voice communications are now being optimized for data applications, putting strain on the mobile backhaul network. With the introduction of carrier-class Ethernet technologies, operators can now take advantage of fiber facilities to achieve the highest traffic carrying capacity utilization of their embedded investment and provide a network migration path toward an all-packet network. With the integration of EoF in the Total Access 5000 and NetVanta 8000/8400 platforms, we offer a scalable solution that supports service migration as providers continue to strive to meet the customer demand for greater bandwidth. As wireless needs continue to grow, EoF is an ideal transport method for mobile backhaul networks and enables long-haul reach to residential and business networks.

ONE enables high-performance packet optical services at the network edge and integrated optical transport solutions. ONE solutions combine right-sized core packet optical networking like miniature Reconfigurable Optical Add Drop Multiplexer (mini-ROADM), Wave Division Multiplexing (WDM), Scalable Carrier Ethernet, Optical Transport Network (OTN), and SONET/SDH with high-speed access services in the Total Access 5000 Series of MSANs. ONE modules fit into the installed base or new deployments of the Total Access 5000 Series to deliver integrated access, aggregation and transport enabling service providers to simplify service delivery and network operation to improve profitability. ONE enables service providers to deliver, aggregate, and transport carrier-grade services, including multiple 10Gbps interfaces. The ONE portfolio supports agile photonics and tunable pluggable optics. These advancements provide operators with a flexible, efficient and scalable network architecture, improving their market responsiveness and speeding the transition from circuit-based to packet optical services.

Table of Contents

NetVanta® 8400 Series 10G Multi-service Edge Switch has achieved MEF Carrier Ethernet 2.0 (CE2.0) certification. MEF CE2.0 compliance ensures support for SLA-based Carrier Ethernet services, a critical requirement for service providers looking to support Gigabit services in Multiple Dwelling Unit (MDU) environments. The coexistence of commercial and residential customers presents the opportunity to converge premium Gigabit services across a range of market verticals from Gigabit broadband to 1 GE and 10 GE SLA-based services for both business cloud connectivity and small-cell backhaul segments.

One of the challenges presented in the MDU environment is how to preserve a high quality experience as Gigabit services converge for multiple vertical markets. As high-bandwidth services are delivered over the access network, the effective aggregation of those services is required. Network operators are, as a result, deploying both fiber-based access and packet-optical aggregation solutions closer to the customer edge to support both inter- and intra-building premium service delivery and aggregation. This enhanced scalability and quality assurance allows the service expansion to address gaps in mobile services coverage that can be found in high-rise residential/commercial buildings, making them ideal targets for small cell deployments that require 50-100 Mbps, scalable to 1 GE, of specialized backhaul access from multiple locations in a building.

All of these products enable wireless and wireline service providers to more efficiently handle network traffic by consolidating multiple circuits into a single facility, upgrading their networks to support next-generation services, and improving backhaul efficiency. These devices provide a migration path from TDM systems to Ethernet/IP networks and also support techniques for bonding multiple physical circuits into a single virtual circuit.

Service and Support

In addition to our product portfolio and standard pre-sales and post-sales technical support, the Carrier Networks Division offers a variety of services to provide customers with network implementation, maintenance and management services. Network implementation service offerings include engineering, site preparation, cabinet placement, installation, configuration, turn-up and test, training, project management services, and fully engineered pre-assembled, wired rack and cabinet assemblies. Maintenance services are designed to protect customers networks from unnecessary downtime. We offer services such as managed spares, extended warranty, and remote or on-site technical support beyond our standard warranty coverage. Management services facilitate remote management and monitoring of the service providers networks.

Network and Services Management

As communications solutions and networks become more complex, the need for carrier-class management systems becomes vital to ensure operational efficiencies. A system-level view is necessary and service awareness is increasingly important. We develop and support systems to centralize and automate the configuration, provisioning and management of our network access products. These systems are used to configure, monitor and control ADTRAN equipment installed in the network and ensure communication with the service provider s central management system to reduce technician dispatches and operating costs. Our Advanced Operational Environment products provide integrated, end-to-end, service-aware network management tools that enhance network planning, service activation, service assurance and decision support tools for our customers operations.

Services Automation and Software-Defined Networks (SDN)

ADTRAN is expanding its ability to automate and manage a broader range of premise-based devices for the home and enterprise. This will enable service providers to accelerate new revenue streams afforded by the Internet of Things. There are billions of devices that connect to the Internet and billions more coming online over the next few years.

Service providers deliver broadband connectivity to these same devices and recognize the incremental revenue opportunities that can be captured when leveraging agile service automation and extended network visibility. The SDN expansion to our services management ecosystem expands these requisite agile services delivery and elastic services management capabilities in our residential broadband and business Ethernet access solutions.

Enterprise Networks Division

Our Enterprise Networks Division delivers a full portfolio of networking and communications solutions tailored for small and medium-sized businesses as well as distributed enterprises. Our portfolio includes Cloud Connectivity solutions, such as IP business gateways and access routers, which provide business access to service provider networks, and Enterprise Communications solutions, which enable businesses to construct voice, data and video networks at the customer s site or among distributed sites. These products are sold through service providers in the form of bundled business services and solutions resale and through VARs.

With the increased speed, capacity and availability of broadband services to businesses and the proliferation of mobile broadband devices such as smartphones and tablets, both service providers and enterprises are rapidly migrating to cloud-based services and wireless solutions for their communications and networking needs. Businesses of all sizes are increasingly using the cloud for voice, data, video, computing, storage and applications. As business workers adopt mobile devices both inside and outside the physical office, convergence with fixed VoIP and UC solutions are emerging. Wireless networks in the enterprise are beginning to converge with wired networks. This wireless-wireline convergence, along with the convergence of voice, data, and messaging from any location or device results in increased employee efficiency and productivity. Our Enterprise Networks Division is addressing these major market shifts by focusing on solutions in two key areas: Cloud Connectivity and Enterprise Communications.

Table of Contents

Cloud Connectivity

Our Cloud Connectivity solutions allow service providers to deliver hosted and bundled service offerings that enable businesses to connect to the public or private cloud. These bundled service offerings are enabled by our Total Access and NetVanta IP Business Gateway (IPBG) and NetVanta Access Router solutions. Service offerings that are delivered utilizing our Cloud Connectivity solutions include: Hosted Voice and Unified Communications, Hosted Wireless Local Area Networking (WLAN), Business Internet Access, MEF-compliant Carrier Ethernet, Private Network, Session Initiation Protocol (SIP) Trunking, Enterprise Session Border Control (eSBC) functionality, Managed UC, and SIP Trunking with PBX. Our Enterprise Network Division solutions offered as key elements of these service provider business bundles are our Cloud Connectivity portfolio of IPBGs and Access Routers (used to provide connectivity to the business location), and our Enterprise Communications portfolio of vWLAN, Ethernet Switches, and UC solutions (used to provide the business productivity component of the service provider bundled services).

Our Total Access and NetVanta IPBGs and NetVanta Access Routers are deployed by service providers at the demarcation point of the customer premises. An IPBG combines the functionality of a voice gateway, multiservice router, eSBC, SIP Proxy, and firewall into a single device. Our products offer an integrated, cost-effective platform for delivering cloud services to enterprise customers. Our multiservice routers move data between networked computers over public or private IP, Frame Relay, Multi-Protocol Label Switching (MPLS) leased-line infrastructures, or carrier-supplied Ethernet services. These devices provide features to route traffic between multiple destinations, secure the network against cyber-attacks, ensure the privacy of data as it is transported across the Internet, and restore communications in the event of equipment or network failure. Our multiservice routers provide Internet access and interconnect corporate locations. The NetVanta router portfolio, provided in modular and fixed-port configurations, offers an assortment of business-class features including: Quality of Service (QoS), Firewall, VPN, Network Performance Monitoring, Packet Capture, eSBC, SIP Proxy, Voice Quality Monitoring (VQM), and numerous MEF-compliant Carrier Ethernet features.

Enterprise Communications

Our Enterprise Communications solutions are premises-based and enable businesses to become more productive and capable through efficient communications. We provide enterprises with solutions from the network edge to the desktop that create business efficiency and capability while driving employee productivity. Our Enterprise Communications solutions simplify network support and ensure ease of scalability, all while lowering the Total Cost of Ownership (TCO). These solutions include unified communications and wireless and wireline LAN infrastructure solutions.

Our Bluesocket vWLAN solutions deliver endpoints across the enterprise by utilizing virtualized, cloud-based solutions for connectivity, communications and collaboration. With the proliferation of smart phones, tablets and wireless devices, end-users are now dictating which devices should be supported across the enterprise. This Bring Your Own Device (BYOD) trend has forced the proliferation of wireless connectivity campus wide and is no longer limited to conference rooms and building lobbies. Users now expect to be able to roam across the enterprise campus while maintaining a persistent IP session to support voice, video and other wireless applications without interruption. Bluesocket vWLAN solutions allow users to access enterprise resources anytime, anywhere, on any device and deliver a unified service experience. These solutions leverage the scalability, reliability and cost benefits of virtualization and are cloud-ready for easy deployment and management and complement our portfolio of internetworking solutions.

Our NetVanta managed Layer 2 and Layer 3 (L2/L3) Ethernet switches complement our Bluesocket vWLAN solutions, providing integrated wireless/wireline LAN deployments and connectivity from the WAN to the end user s

desktop computer and IP Phone. Our managed L2/L3 switches offer speeds up to 10 Gigabit per second and include Power over Ethernet (PoE) options for powering IP phones, wireless network access points, IP cameras and other critical business networking devices.

Our NetVanta UC solutions enable businesses with up to 2,000 employees to realize the benefits of UC. These UC products deliver end-to-end Unified Communications that bridge the gap between telephony, desktop communications productivity and business processes. Utilizing CEBP, NetVanta UC solutions enable businesses to increase workforce productivity and improve customer service. Our 7000 Series IP Communications solutions deliver an integrated, single-box solution for small business communications needs and combine the features of an IP PBX with the functionality of an Ethernet switch, a multi-service router, security features and WAN connectivity.

Common Internetworking Software

We view the continued development and evolution of our internetworking software as critical to our success in bringing feature-rich, reliable, solutions to market. As such, our internetworking software is common across many of our products, optimizing our product development resources and minimizing time to market for new products and features. It also ensures common configuration practices, policies, protection schemes, and management interfaces for our carrier customers providing an advantage from a TCO perspective.

Table of Contents

Configuration and Network Management

We develop and support network productivity tools and systems to centralize the configuration and management of our internetworking products. These tools aid in the management of networks powered by our internetworking products and include the nCommand Managed Service Provider (MSP) management platform. nCommand MSP streamlines service providers product life cycle management efforts including remote monitoring and management of NetVanta or Total Access solutions. A web-based platform, nCommand MSP simplifies new device deployment and enables MSPs, service providers and enterprise IT organizations to deliver on SLAs, improve customer service response time, reduce network downtime and proactively monitor and report network performance, all while reducing operational costs.

Service and Support

In addition to our product portfolio, we offer technical support services to ensure we are responsive to customers who have deployed our networking and infrastructure solutions. We provide pre-sales and post-sales technical support and a variety of training options. We also offer a complete portfolio of professional services under our ProServices organization. We offer ProStart installation and ProCare maintenance services designed to protect customers networks from unnecessary downtime. ProServices guarantees priority access to technical support engineers and offers five different maintenance programs ranging from five days-a-week, eight hours-a-day and next business day equipment replacement to seven days-a-week, 24 hours-a-day and equipment replacement within four hours of notification. Our service and support offerings are available to all of our customers.

In 2014, we continued to add customers for both our ProCloud and ProCloud Plus cloud-based managed service offerings through our ProServices organization. ProCloud offers a managed, business-class WiFi infrastructure service built on Bluesocket vWLAN. Our ProCloud Plus offering expands upon the base ProCloud service by including management of the WiFi access points in addition to the underlying infrastructure. ProCloud offers a 7x24 service providing network monitoring and management reports to reduce IT support burdens. When coupled with ProStart and ProCare, our ProCloud service offers turnkey wireless LAN installation, maintenance, and management.

Customers

We have a diverse customer base which is segmented based on the markets served, and typically within each of our two divisions.

Customers of our **Carrier Networks Division** include major service providers, independent communications operating companies, competitive service providers, cable MSOs, Internet service providers, utilities, municipalities and wireless service providers. Major service providers and many smaller providers require product approval prior to adopting a vendor s products for use in their networks. We are involved in a constant process of submitting new and succeeding generations of products for approval. Our products are widely deployed in many of the service provider networks.

Customers of our **Enterprise Networks Division** include major service providers, cable MSOs, independent communications companies and competitive service providers. Additionally, SME organizations purchase our solutions through a two-tier distribution channel. The two-tier distribution channel is comprised of several large distributor partners and an extensive network of VARs as described in Distribution, Sales and Marketing below. Vertical markets where our solutions are used include retail, food service, healthcare, finance, government, education, manufacturing, military, transportation, hospitality and energy/utility.

Two customers, CenturyLink, Inc. and Deutsche Telekom, AG, individually comprised more than 10 percent of our revenue in 2014. The revenues from these customers are reported in both the Carrier Networks and Enterprise Networks segments.

For a discussion of risks associated with customers, service providers and approval processes, see Risk Factors The lengthy approval process required by major and other service providers for new products could result in fluctuations in our revenue , Risk Factors We depend heavily on sales to certain customers; the loss of any of these customers would significantly reduce our revenues and net income , and Risk Factors Consolidation and deterioration in the competitive service provider market could result in a significant decrease in our revenue , in Item 1A of this report.

Distribution, Sales and Marketing

We sell our **Carrier Networks** products globally through a combination of a direct sales organization and a distribution network. Our direct sales organization supports major accounts and has offices located in a number of domestic and international locations. Sales to most competitive service providers and independent telephone companies are fulfilled through a combination of direct sales and major technology distribution companies.

Prior to placing any orders, service providers typically require lengthy product qualification and standardization processes that can extend for several months or years. Orders, if any, are typically placed under single or multi-year supply agreements that are generally not subject to minimum volume commitments. Service providers generally prefer having two or more suppliers for most products, so individual orders are usually subject to competition based on some combination of total value, service, price, delivery and other terms.

Table of Contents

Similar to Carrier Networks products, Enterprise Networks products are fulfilled through a combination of direct sales and major technology distribution companies. This is supported by a direct sales organization for major accounts, and a channel-based sales organization to facilitate sales to our partners. VARs and system integrators may be affiliated with the company as a channel partner, or they may purchase from a distributor in an unaffiliated fashion. Affiliated partners participate with us at various program levels, based on sales volume and other factors, to receive benefits such as product discounts, market development funds, technical support and training. We maintain field offices worldwide to support direct sales, distributors, VARs and system integrators.

Outside of the United States, most Carrier products are sold through our direct sales organization and Enterprise products are sold direct or through distribution arrangements customized for each region. Each region is supported by a field office that offers sales and support functions, and in some cases, warehousing and manufacturing support.

Our field sales organizations, distributors, and service provider customers receive support from regional-based marketing, sales, and customer support groups. Under certain circumstances, other headquarters personnel may be involved in sales and other activities.

Research and Development

Rapidly changing technologies, evolving industry standards, changing customer requirements, and continuing developments in communications service offerings characterize the markets for our products. Our continuing ability to adapt to these changes and to develop new and enhanced products that meet or anticipate market demand is a significant factor influencing our competitive position and our prospects for growth.

During 2014, 2013, and 2012, product development expenditures totaled $132.3 million, $131.1 million, and $126.0 million, respectively. Our product development activities are an important part of our strategy. Because of rapidly changing technology and evolving industry standards, we plan to maintain an emphasis on product development each year.

We strive to deliver innovative network access solutions that lower the total cost of deploying services, increase the level of performance achievable with established infrastructures, reduce operating and capital expense for our customers, increase network bandwidth and functionality, and extend network reach. Our development process is conducted in accordance with ISO 9001, TL 9000, and ISO 14001, which are international standards for quality and environmental management systems.

We develop most of our products internally, although we sometimes license intellectual property for use in certain products. Internal development gives us more control over design and manufacturing issues related to our products and closer control over product costs. Our ability to continually reduce product costs is an important part of our overall business strategy. Our product development efforts are often centered on entering a market with improved technology, allowing us to offer products at competitive prices. We then compete for market share. We continually re-engineer successive generations of the product to improve our product costs.

Product development activities focus on products to support both existing and emerging technologies in the communications industry in segments of our markets that we consider viable revenue opportunities. We are actively engaged in developing and refining technologies to support data, voice, and video transport primarily over IP/Ethernet network architectures. This includes Ethernet aggregation, fiber optic transport and access, DSL access, access routing, Ethernet switching, wireless LANs, integrated access, converged services, VoIP, network management, and professional services.

A centralized research function supports product development efforts throughout the company. This group provides guidance to our various product design and engineering teams in digital signal processing technologies, computer simulation and modeling, CAD/CAM tool sets, custom semiconductor design, industry standards, and technological forecasting.

Many communications issues, processes and technologies are governed by Standards Development Organizations (SDOs). These SDOs consist of representatives from various manufacturers, service providers and testing laboratories working to establish specifications and compliance guidelines for emerging communications technologies. We are an active participant in several SDOs and have assisted with the development of worldwide standards in many technologies.

Table of Contents

Our SDO activities are primarily in the area of broadband access. This includes involvement with ITU-Telecommunications sector (ITU-T), ATIS, ETSI, NICC (UK Interoperability Standards), and the Broadband Forum (BBF). We continue to be involved in the evolution of optical access technologies, participating in activities in the ITU-T, ATIS, FSAN, and BBF on next-generation PON. We are also involved in standards development efforts related to maximizing the bandwidth potential of the copper pair to enable new applications. We participate in the ITU-T, where VDSL2, now with enhanced performance from G.Vector, and its short-range successor, G.fast are being developed. We continue to be involved with the industry-wide interoperability, performance testing, and system-level projects related to those standards in the BBF. We are also members of MEF, Wi-Fi Alliance (WFA) and the ETSI Network Functions Virtualization Industry Specification Group (NFV-ISG).

For a discussion of risks associated with our research and development activities, see Risk Factors We must continue to update and improve our products and develop new products in order to compete and to keep pace with improvements in communications technology and Risk Factors We engage in research and development activities to improve the application of developed technologies, and as a consequence may miss certain market opportunities enjoyed by larger companies with substantially greater research and development efforts who may focus on more leading edge development , in Item 1A of this report.

Manufacturing and Operations

The principal steps in our manufacturing process include the purchase and management of materials, assembly, testing, final inspection, packing and shipping. We purchase parts and components for the assembly of some products from a large number of suppliers through a worldwide sourcing program. In addition, we manage a process that identifies the components that are best purchased directly by contract manufacturers for use in the assembly of our products to achieve manufacturing efficiency, quality and cost objectives. Certain key components used in our products are currently available from a single source, and other key components are available from only a limited number of sources. In the past, we have experienced delays in the receipt of certain key components, which has resulted in delays in related product deliveries. We attempt to manage these risks through developing alternative sources, by staging inventories at strategic locations, through engineering efforts designed to obviate the necessity of certain components, and by maintaining close contact and building long-term relationships with our suppliers.

We rely on subcontractors for assembly and testing of certain printed circuit board assemblies, sub-assemblies, chassis, enclosures and equipment shelves, and to purchase some of the raw materials used in such assemblies. We typically manufacture our lower-volume, higher-mix product assemblies at our manufacturing site in Huntsville, Alabama. We continue to build and test new product prototypes and many of our initial production units for our products in Huntsville, and later transfer the production of higher-volume, lower-mix assemblies to our subcontractors. Subcontract assembly operations can lengthen fulfillment cycle times, but we believe we can respond more rapidly to uncertainties in incoming order rates by selecting assembly subcontractors having significant reserve capacity and flexibility. Our subcontractors have proven to be flexible and able to meet our quality requirements. We conduct the majority of all transactions with our foreign suppliers in United States currency.

The majority of shipments of products to our U.S. customers occur from our facilities in Huntsville, Alabama, although we do fulfill customer orders from other locations near our customers sites. The majority of our products shipped to EMEA customers occur from locations in that region. We also ship directly from suppliers to a number of customers in the U.S. and international locations. Many of our facilities are certified pursuant to the most current releases of ISO 9001, TL 9000, and ISO 14001. Our Huntsville facilities and many of our key suppliers are U.S. Customs-Trade Partnership Against Terrorism (C-TPAT) certified. Our products are also certified to certain other telephone company standards, including those relating to emission of electromagnetic energy and safety specifications.

For a discussion of risks associated with manufacturing activities, see Risk Factors Our strategy of outsourcing a portion of our manufacturing requirements to subcontractors located in various international regions may result in us not meeting our cost, quality or performance standards and Risk Factors Our dependence on a limited number of suppliers for certain raw materials and key components may prevent us from delivering our products on a timely basis, which could have a material adverse effect on customer relations and operating results , in Item 1A of this report.

Competition

We compete in markets for networking and communications equipment for service providers, businesses, government agencies and other organizations worldwide. Our products and services support the transfer of data, voice and video across service providers fiber, copper and wireless infrastructures, as well as across wide area networks, local area networks, and the Internet.

The markets for our products are intensely competitive. Numerous competitors exist in each of our product segments. Intensely competitive conditions and recent declines in economic activity have resulted in competitor consolidations, bankruptcies and liquidations. Consumer acceptance of alternative communications technologies such as coaxial cable and cellular-based services that compete with our products has grown in recent years. Competition might further increase if new technologies emerge, new companies enter the market, or existing competitors expand their product lines.

Table of Contents

For our **Carrier Networks Division**, factors influencing the markets in which we currently compete or may compete in the future include the ability to:

- Help the customer solve networking problems within the confines of restrained capital budgets;
- Offer globally competitive solutions against a different set of competitors than in the United States;
- Deliver solutions that fit the distributed networking model being deployed by most service providers;
- Deliver solutions for service provider networks as they increasingly focus on network transformation, convergence, and integration of services;
- Deliver solutions at attractive price points;
- Deliver reliability and redundancy, especially for higher bandwidth products;
- Adapt to new network technologies as they evolve;
- Compete effectively against large companies with greater resources;
- Deliver products when needed by the customer;
- Deliver responsive customer service, technical support and training; and
- Assist customers requiring pre-assembled, turnkey systems and professional services.

Competitors of our Carrier Networks Division include large, established companies such as Alcatel-Lucent, Ciena, Fujitsu, Huawei, Coriant, and ZTE. There are also a number of smaller, specialized companies with which we compete, such as Actelis Networks, Calix Networks, Cyan, Overture Networks, Zhone Technologies, and other privately held firms.

For our **Enterprise Networks Division**, factors influencing the markets in which we currently compete or may compete in the future include the ability to:

- Satisfy the customer s need for a cost-efficient alternative to established internetworking suppliers;

Satisfy the customer s need to utilize the most cost-effective combination of transmission technologies to connect geographically dispersed locations;

Increase network performance and lower the customer s cost for communications services and equipment;

Add capacity and migrate to new or different technologies without a major system upgrade;

Continue to develop and support established platforms;

Offer products to address new networking technologies in a timely manner;

Deliver reliability and system backup, especially for higher bandwidth products;

Adapt to new network technologies as they evolve;

Deliver responsive customer service, technical support and training; and

Assist customers requiring hands-on installation and maintenance.

Competitors of our Enterprise Networks Division include: Aruba Networks, Avaya, Cisco Systems, Extreme Networks, Hewlett Packard, Juniper Networks, and other smaller companies which include Aerohive, Ruckus, and ShoreTel. Some of these companies compete in a single product segment, while others compete across multiple product lines.

For further discussion of risks associated with our competition, see Risk Factors We must continue to update and improve our products and develop new products in order to compete and to keep pace with improvements in communications technology and Risk Factors We compete in markets that have become increasingly competitive, which may result in reduced gross profit margins and market share , in Item 1A of this report.

Table of Contents

Seasonality

We have experienced quarterly fluctuations in customer activity due to seasonal considerations. We typically experience reductions in order volume toward the beginning and end of the calendar year, which may result in lower revenues in the first and fourth quarters of our fiscal year. These seasonal effects may vary and do not always correlate to our operating results. Accordingly, they should not be considered a reliable indicator of our future revenue or operating results.

Backlog and Inventory

A substantial portion of our shipments in any fiscal period relate to orders received and shipped in that fiscal period for customers under agreements containing non-binding purchase commitments. Further, a significant percentage of orders require delivery within a few days. These factors normally result in very little order backlog or order flow visibility. Additionally, backlog levels may vary because of seasonal trends, timing of customer projects and other factors that affect customer order lead times. We believe that because we fill a substantial portion of customer orders within the fiscal quarter of receipt, backlog is not a meaningful indicator of actual sales for any succeeding period.

To meet this type of demand, we have implemented supply chain management systems to manage the production process. We also maintain a substantial finished goods inventory. Our practice of maintaining sufficient inventory levels to assure prompt delivery of our products and services increases the amount of inventory that may become obsolete. The obsolescence of this inventory may require us to write down the value of the obsolete inventory, which may have an adverse effect on our operating results.

For further discussion of risks associated with managing our inventory, see Risk Factors Managing our inventory is complex and may include write-downs of excess or obsolete inventory , in Item 1A of this report.

Government Regulation

Our products must comply with various regulations and standards established by communications authorities in various countries, as well as those of certain international bodies. For instance, environmental legislation within the European Union (EU) may increase our cost of doing business as we amend our products to comply with these requirements. The EU issued directives on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS), Waste Electrical and Electronic Equipment (WEEE), and the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). We continue to implement measures to comply with the RoHS directive, the WEEE directive and the REACH regulation as individual countries issue their implementation guidance.

For further discussion of risks associated with government regulation, see Risk Factors Our products may not continue to comply with evolving regulations governing their sale, which may harm our business and Risk Factors Regulatory and potential physical impacts of climate change and other natural events may affect our customers and our production operations, resulting in adverse effects on our operating results , in Item 1A of this report.

Employees

As of December 31, 2014, we had 2,080 full-time employees in the United States and in our international subsidiaries located in Canada, Mexico, the Asia-Pacific region, Europe and the Middle East region. The majority of ADTRAN GmbH employees, our subsidiary in Germany, are subject to collective bargaining agreements of either the Association of Metal and Electrical Industry in Berlin and Brandenburg e.V. or NORDMETALL Association of Metal

and Electrical Industry e.V. A small number of our other employees are represented by a collective bargaining agreement. We have never experienced a work stoppage and we believe that our relationship with our employees is good.

We also utilize contractors and temporary employees in various manufacturing, engineering and sales capacities, domestically and internationally, as needed.

Intellectual Property

The ADTRAN corporate logo is a registered trademark of ADTRAN. The name ADTRAN is a registered trademark of ADTRAN. A number of our product identifiers and names also are registered. We claim rights to a number of unregistered trademarks as well.

We have ownership of over 520 patents worldwide related to our products and have over 170 additional patent applications pending, of which at least 7 have been approved and are in the process of being issued by various patent offices worldwide. Our patents expire at various dates between March 2015 and March 2033. We will continue to seek additional patents from time to time related to our research and development activities. We do not derive any material amount of revenue from the licensing of our patents.

We protect our intellectual property and proprietary rights in accordance with good legal and business practices. We believe, however, that our competitive success will not depend on the ownership of intellectual property, but instead will depend primarily on the innovative skills, technical competence and marketing abilities of our personnel.

Table of Contents

The communications industry is characterized by the existence of an ever-increasing volume of patent litigation and licensing activities. From time to time we receive and may continue to receive notices of claims alleging that we are infringing upon patents or other intellectual property. We cannot predict whether we will prevail in any claims or litigation over alleged infringements, or whether we will be able to license any valid and infringed patents, or other intellectual property, on commercially reasonable terms. It is possible that litigation may result in significant legal costs and judgments. Any intellectual property infringement claims, or related litigation against or by us, could have a material adverse effect on our business and operating results.

For a discussion of risks associated with our intellectual property and proprietary rights, see Risk Factors Our failure to maintain rights to intellectual property used in our business could adversely affect the development, functionality, and commercial value of our products , in Item 1A of this report.

Available Information

A copy of this Annual Report on Form 10-K, as well as our Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to these reports, are available free of charge on the Internet at our Web site, www.adtran.com, as soon as reasonably practicable (generally, within one day) after we electronically file these reports with, or furnish these reports to, the Securities and Exchange Commission (SEC). The reference to our Web site address does not constitute incorporation by reference of the information contained on the Web site, which information should not be considered part of this document. You may also read and copy any materials we file with the SEC at the SEC s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site (www.sec.gov) that contains our reports, proxy and information statements, and other information that we have filed electronically with the SEC.

ITEM 1A. RISK FACTORS

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by or on behalf of ADTRAN. ADTRAN and its representatives may from time to time make written or oral forward-looking statements, including statements contained in this report and our other filings with the SEC and other communications with our stockholders. Generally, the words, believe, expect, intend, estimate, anticipate, will, may, could and similar expressions identify forward-looking statements. We caution you that any forward-looking statements made by or on our behalf are subject to uncertainties an