

AVIAT NETWORKS, INC.  
Form 10-K  
September 06, 2017

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

Form 10-K  
(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934  
For the fiscal year ended June 30, 2017

or  
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF  
1934

Commission File Number 001-33278

AVIAT NETWORKS, INC.  
(Exact name of registrant as specified in its charter)

Delaware 20-5961564  
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)  
860 N. McCarthy Blvd., Suite 200, Milpitas, California 95035  
(Address of principal executive offices) (Zip Code)  
Registrant's telephone number, including area code: (408) 941-7100

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 Stock Market LLC
Preferred Shares Purchase Rights	(NASDAQ Global Select 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  No

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  No

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

Indicate by check mark 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 (§232.405 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  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy 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):

Edgar Filing: AVIAT NETWORKS, INC. - Form 10-K

Large accelerated filer  Accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company) Smaller reporting company   
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

As of December 30, 2016, the aggregate market value of the registrant's common stock held by non-affiliates was approximately \$46.0 million. For purposes of this calculation, the registrant has assumed that its directors, executive officers and holders of 5% or more of the outstanding common stock are affiliates.

As of August 17, 2017, there was 5,317,957 shares of the registrant's common stock outstanding.

---

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders, which will be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's fiscal year ended June 30, 2017, are incorporated by reference into Part III of this Annual Report on Form 10-K.

---

Table of Contents

AVIAT NETWORKS, INC.  
 ANNUAL REPORT ON FORM 10-K  
 For the Fiscal Year Ended June 30, 2017  
 Table of Contents

<u>PART I</u>	<u>5</u>
Item 1. <u>Business</u>	<u>5</u>
Item 1A. <u>Risk Factors</u>	<u>13</u>
Item 1B. <u>Unresolved Staff Comments</u>	<u>26</u>
Item 2. <u>Properties</u>	<u>26</u>
Item 3. <u>Legal Proceedings</u>	<u>26</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>27</u>
 <u>PART II</u>	 <u>28</u>
Item 5. <u>Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>28</u>
Item 6. <u>Selected Financial Data</u>	<u>30</u>
Item 7. <u>Management’s Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>31</u>
Item 7A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>44</u>
Item 8. <u>Financial Statements and Supplementary Data</u>	<u>45</u>
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>81</u>
Item 9A. <u>Controls and Procedures</u>	<u>81</u>
Item 9B. <u>Other Information</u>	<u>82</u>
 <u>PART III</u>	 <u>83</u>
Item 10. <u>Directors, Executive Officers and Corporate Governance</u>	<u>83</u>
Item 11. <u>Executive Compensation</u>	<u>83</u>
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>83</u>
Item 13. <u>Certain Relationships and Related Transactions, and Director Independence</u>	<u>83</u>
Item 14. <u>Principal Accountant Fees and Services</u>	<u>83</u>
 <u>PART IV</u>	 <u>84</u>
Item 15. <u>Exhibits and Financial Statement Schedules</u>	<u>84</u>
<u>Signatures</u>	<u>85</u>
<u>Schedule II</u>	<u>86</u>
<u>Exhibit Index</u>	<u>87</u>

Table of Contents

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward-looking statements that involve risks and uncertainties, as well as assumptions that, if they do not materialize or prove correct, could cause our results to differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact are statements that could be deemed forward-looking statements, including statements of, about, concerning or regarding: our plans, strategies and objectives for future operations, including with respect to growing our business and sustaining profitability; our restructuring efforts; our research and development efforts and new product releases and services; trends in revenue; drivers of our business and the markets in which we operate; future economic conditions; performance or outlook and changes in our industry and the markets we serve; the outcome of contingencies; the value of our contract awards; beliefs or expectations; the sufficiency of our cash and our capital needs and expenditures; our intellectual property protection; our compliance with regulatory requirements and the associated expenses; expectations regarding litigation; our intention not to pay cash dividends; seasonality of our business; the impact of foreign exchange and inflation; taxes; and assumptions underlying any of the foregoing. Forward-looking statements may be identified by the use of forward-looking terminology, such as “anticipates,” “believes,” “expects,” “may,” “should,” “would,” “will,” “intends,” “plans,” “estimates,” “strategy,” “projects,” “targets,” “goals,” “seeing,” “delivering,” “future,” “predict,” “might,” “could,” “potential,” or the negative of these terms, and similar words or expressions.

These forward-looking statements are based on estimates reflecting the current beliefs of the senior management of Aviat Networks. These forward-looking statements involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. Forward-looking statements should therefore be considered in light of various important factors, including those set forth in this Annual Report on Form 10-K. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, but are not limited to, the following:

- continued price and margin erosion as a result of increased competition in the microwave transmission industry;
- the impact of the volume, timing and customer, product and geographic mix of our product orders;
- our ability to meet financial covenant requirements which could impact, among other things, our liquidity;
- the timing of our receipt of payment for products or services from our customers;
- our ability to meet projected new product development dates or anticipated cost reductions of new products;
- our suppliers’ inability to perform and deliver on time as a result of their financial condition, component shortages or other supply chain constraints;
- customer acceptance of new products;
- the ability of our subcontractors to timely perform;
- continued weakness in the global economy affecting customer spending;
- retention of our key personnel;
- our ability to manage and maintain key customer relationships;
- uncertain economic conditions in the telecommunications sector combined with operator and supplier consolidation;
- our failure to protect our intellectual property rights or defend against intellectual property infringement claims by others;
- the results of our restructuring efforts;
- the ability to preserve and use our net operating loss carryforwards;
- the effects of currency and interest rate risks;
- the conduct of unethical business practices in developing countries; and
- the impact of political turmoil in countries where we have significant business.

Other factors besides those listed here also could adversely affect us. See “Item 1A. Risk Factors” in this Annual Report on Form 10-K for more information regarding factors that may cause our results to differ materially from those expressed or implied by the forward-looking statements contained in this Annual Report on Form 10-K.

You should not place undue reliance on these forward-looking statements, which reflect our management’s opinions only as of the date of the filing of this Annual Report on Form 10-K. Forward-looking statements are made in reliance upon the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the

Securities Exchange Act of 1934, as amended, along with provisions of the Private Securities Litigation Reform Act of 1995, and we

3

---

Table of Contents

undertake no obligation, other than as imposed by law, to update any forward-looking statements to reflect further developments or information obtained after the date of filing of this Annual Report on Form 10-K or, in the case of any document incorporated by reference, the date of that document.

4

---

Table of Contents

PART I

Item 1. Business

Aviat Networks, Inc., together with its subsidiaries, is a global supplier of microwave networking solutions, backed by an extensive suite of professional services and support. Aviat Networks, Inc. may be referred to as “the Company,” “AVNW,” “Aviat Networks,” “we,” “us” and “our” in this Annual Report on Form 10-K.

We were incorporated in Delaware in 2006 to combine the businesses of Harris Corporation’s Microwave Communications Division (“MCD”) and Stratex Networks, Inc. (“Stratex”). On January 28, 2010, we changed our corporate name from Harris Stratex Networks, Inc. to Aviat Networks, Inc.

Our principal executive offices are located at 860 North McCarthy Boulevard, Suite 200, Milpitas, California 95035, and our telephone number is (408) 941-7100. Our common stock is listed on the NASDAQ Global Select Market under the symbol AVNW. As of June 30, 2017, we employed approximately 710 people, compared with approximately 720 people as of July 1, 2016.

Overview and Description of the Business

We design, manufacture and sell a range of wireless networking products, solutions and services to mobile and fixed public network operators, private network operators, Federal, State and Local government agencies, transportation, energy and utility companies, public safety agencies and broadcast network operators around the world. We sell products and services directly to our customers, and also, to a lesser extent, use agents and resellers.

Our products utilize microwave and millimeter wave technologies to create point to point wireless links for short, medium and long distance interconnections. Our products incorporate Ethernet switching and IP routing capabilities to form complete networking solutions. We also provide network management software tools to enable our customers to deploy, monitor and manage our systems; third party equipment such as antennas, routers, optical transmission equipment and other equipment necessary to build and deploy a complete telecommunications transmission network. We provide a full suite of professional services for planning, deployment, operations and maintenance of our customers’ networks.

Our wireless systems deliver urban, suburban, regional and country-wide communications links as the primary alternative to fiber optic connections. In dense urban and suburban areas, short range wireless solutions are faster to deploy and lower cost per mile than new fiber deployments. In developing nations, fiber infrastructure is scarce and wireless systems are used for both long and short distance connections. Wireless systems also have advantages over optical fiber in areas with rugged terrain, and to provide connections over bodies of water such as between islands or even oil and gas production platforms.

Revenue from our North America and international regions represented approximately 55% and 45%, respectively, of our revenue in fiscal 2017, 47% and 53%, respectively, of our revenue in fiscal 2016, and 46% and 54%, respectively, of our revenue in fiscal 2015. Information about our revenue attributable to our geographic regions is set forth in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and in “Note 9. Segment and Geographic Information” of the accompanying consolidated financial statements in this Annual Report on Form 10-K.

Market Overview

We believe that future demand for microwave and millimeter wave transmission systems will be influenced by a number of factors across several market segments.

Mobile Networks

As mobile networks expand, add subscribers and increase the number of wirelessly connected devices, sensors and machines, they require investment in backhaul infrastructure. Whether mobile network operators choose to self-build this backhaul infrastructure or lease backhaul services from other network providers, the evolution of the network drives demand for transmission technologies such as microwave and millimeter wave wireless backhaul. Within this overall scope there are multiple individual drivers for investment in backhaul infrastructure.

• **New RAN Technologies.** Mobile Radio Access Network (“RAN”) technologies are continually evolving. With evolution from 2G to 3G (HSPA), 4G (HSPA+ and LTE), and next 5G standards, technology is





## Table of Contents

rapidly advancing and providing subscribers with higher speed access to the Internet, social media, and video streaming services. The rapid increases in data to be transported through the RAN and across the backhaul infrastructure drives requirements for higher data transport links necessitating upgrades to or replacement of the existing backhaul infrastructure.

- **Subscriber Growth.** Traffic on the backhaul infrastructure increases as the number of unique subscribers grows.

**Connected Devices.** The number of devices such as smart phones and tablets connected to the mobile network is far greater than the number of unique subscribers and is continuing to grow as consumers adopt multiple mobile device types. There is also rapid growth in the number and type of wireless enabled sensors and machines being connected to the mobile network creating new revenue streams for network operators in healthcare, agriculture, transportation and education. As a result, the data traffic crossing the backhaul infrastructure continues to grow rapidly.

**IoT.** The Internet of Things (“IoT”) brings the potential of massive deployment of wireless end points for sensing and reporting data and remotely controlling machines and devices. The increase of data volume drives investment in network infrastructure.

**RAN Capacity.** RAN frequency spectrum is a limited resource and shared between all of the devices and users within the coverage area of each base station. Meeting the combined demand of increasing subscribers and devices will require the deployment of much higher densities of base stations with smaller and smaller range (small cells) each requiring backhaul.

**Geographic Coverage.** Expanding the geographic area covered by a mobile network requires the deployment of additional Cellular Base Station sites. Each additional base station site also needs to be connected to the core of the mobile network through expansion of the backhaul system.

**License Mandates.** Mobile Operators are licensed telecommunications service providers. Licenses will typically mandate a minimum geographic footprint within a specific period of time and/or a minimum proportion of a national or regional population served. This can pace backhaul infrastructure investment and cause periodic spikes in demand.

**Evolution to IP.** Network Infrastructure capacity, efficiency and flexibility is greatly enhanced by transitioning from legacy SDH (synchronous digital hierarchy) / SONET (synchronous optical network) / TDM (time division multiplexing) to IP (internet protocol) infrastructure. Our products offer integrated IP transport and routing functionality increasing the value they bring in the backhaul network.

**Expansion of Offered Services.** Mobile network operators especially in emerging markets now own and operate the most modern communications networks within their respective regions. These network assets can be further leveraged to provide high speed broadband services to fixed locations such as small, medium and large business enterprises, airports, hotels, hospitals, and educational institutions. Microwave and millimeter wave backhaul is ideally suited to providing high speed broadband connections to these end points due to the lack of fiber infrastructure.

### **Other Vertical Markets**

In addition to mobile backhaul, we see demand for microwave technology in other vertical markets, including utility, public safety, financial institutions and broadcast.

Many utility companies around the world are actively investing in Smart Grid solutions and energy demand management, which drive the need for network modernization and increased capacity of networks.

The investments in network modernization in the public safety market can significantly enhance the capabilities of security agencies. Improving border patrol effectiveness, enabling inter-operable emergency communications services for local or state police, providing access to timely information from centralized databases, or utilizing video and imaging devices at the scene of an incident requires a high bandwidth and reliable network. The mission critical nature of Public Safety and National security networks can require that these networks are built, operated and maintained independently of other public network infrastructure and microwave is very well suited to this environment because it is a cost-effective alternative to fiber.

Microwave technology can be used to engineer long distance and more direct connections than Optical Cable.

Microwave signals also travel through the air much faster than light through glass and the combined effect of shorter distance and higher speed reduces latency, which is valued for trading applications in the financial industry. Our products have already been used to create low latency connections between major centers in the United States (“U.S.”),

Europe and Asia and we see long-term interest in the creation of further low latency routes in various geographies around the world.

6

---

## Table of Contents

The enhancement of Border Security and Surveillance networks to counter terrorism and insurgency is aided by the use of wireless technologies including microwave backhaul.

These factors are combining to create a range of opportunities for continued investment in backhaul and transport networks favoring microwave and millimeter wave technologies. As we focus on our execution of the future generations of our technology, our goal is to make wireless a viable choice for an ever-broadening range of network types.

### Strategy

Over the past year, we focused on building a sustainably profitable business with future growth potential. We have invested in our people and processes to create a platform for operational excellence across sales, services, product development and supply chain areas while continuing to make investments in strengthening our product and services portfolio and expanding our reach into targeted market areas.

Our technology strategy has three main elements aligned to deliver a compelling Total Cost of Ownership (“TCO”) value proposition. The first is the integration of network routing functions into our wireless transport solution allowing our customers increased flexibility with a much better Total Cost. Second, we are expanding the data carrying capacity of our wireless products to address the increasing data demand in networks of all types. Third, in order to address the operational complexity of planning, deploying, owning and operating microwave networks, we are investing in a combination of software applications and services where our expertise can make a significant difference for our customers and partners.

We continued to develop our professional services portfolio as a key to our long-term strategy and differentiation. During the year, we continued to expand the number of customer networks managed from our North America Network Operations Center. We began offering cloud based network management to our customers and we continue to offer training and accreditation programs for microwave and IP network design, deployment and maintenance. Our strategy includes partnering with companies with technical expertise in areas outside of our core competencies to meet our customers’ demand for an end-to-end solution. Our partner product strategy enables us to go beyond wireless transmission to address the vendor consolidation trend whereby customers are “buying more from fewer vendors” and in doing so providing expanding market share opportunity. A comprehensive solutions portfolio comprised of our wireless product and intelligent partner products can allow us to compete with vendors that offer turnkey solution portfolios and serve to focus our research and development (“R&D”) efforts on core competency wireless innovations. Having a broader portfolio will enable us to further differentiate our offerings from other independent microwave equipment suppliers.

We expect to continue to serve and expand upon our existing customer base and develop business with new customers. We intend to leverage our customer base, our longstanding presence in many countries, our distribution channels, our comprehensive product line, our superior customer service and our turnkey solution capability to continue to sell existing and new products and services to current and future customers.

### Products and Solutions

Our strong product and solutions portfolio is key to building and maintaining our marquee base of customers. We offer a comprehensive product and solutions portfolio that meets the needs of service providers and network operators in every region of the world and addresses a broad range of applications, frequencies, capacities and network topologies.

**Broad product and solution portfolio.** We offer a comprehensive suite of wireless transmission networking systems for microwave and millimeter wave networking applications. Our solution consists of tailored offerings of our own wireless products and our own integrated ancillary equipment or that of other manufacturers and providers of element and network management systems and professional services. These solutions address a wide range of transmission frequencies, ranging from 2.4 GHz to 90 GHz, and a wide range of transmission capacities, ranging up to over 10 Gbps. The major product families included in these solutions are CTR 8000, WTM 4000 and AviatCloud. Our CTR 8000 platform merges the functionality of an indoor microwave modem unit and a cell site router into a single integrated solution, simplifying IP/MPLS deployments and creating a better performing network. The newest addition to our product portfolio is the WTM 4000, the highest capacity microwave radio ever produced and purpose built for SDN. To address the issues of operational complexity in our customers’ networks, AviatCloud is an app-based

platform to automate and virtualize networks and their operations.

7

---

## Table of Contents

Low total cost of ownership. Our wireless-based solutions are focused on low total cost of ownership, including savings on the combined costs of initial acquisition, installation and ongoing operation and maintenance. Our latest generation system designs reduce rack space requirements, require less power, are software-configurable to reduce spare parts requirements, and are simple to install, operate, upgrade and maintain. Our advanced wireless features can also enable operators to save on related costs, including spectrum fees and tower rental fees.

Futureproof network. Our solutions are designed to protect the network operator's investment by incorporating software-configurable capacity upgrades and plug-in modules that provide a smooth migration path to Carrier Ethernet and IP/MPLS (multiprotocol label switching)-based networking, without the need for costly equipment substitutions and additions. Our products include key technologies we believe will be needed by operators for their network evolution to support new broadband services.

Flexible, easily configurable products. We use flexible architectures with a high level of software configurable features. This design approach produces high-performance products with reusable components while at the same time allowing for a manufacturing strategy with a high degree of flexibility, improved cost and reduced time-to-market. The software features of our products offer our customers a greater degree of flexibility in installing, operating and maintaining their networks.

Comprehensive network management. We offer a range of flexible network management solutions, from element management to enterprise-wide network management and service assurance that we can optimize to work with our wireless systems.

Complete professional services. In addition to our product offerings, we provide network planning and design, site surveys and builds, systems integration, installation, maintenance, network monitoring, training, customer service and many other professional services. Our services cover the entire evaluation, purchase, deployment and operational cycle and enable us to be one of the few complete turnkey solution providers in the industry.

### Business Operations

#### Sales and Service

Our primary route to market is through our own direct sales, service and support organization. This provides us with the best opportunity to leverage our role as a technology specialist and differentiate ourselves from competitors. Our focus on key customers and geographies allows us to consistently achieve high customer satisfaction ratings leading to a high level of customer retention and repeat business. Our highest concentrations of Sales and Service resources are in the United States, Western and Southern Africa, the Philippines, and the European Union. We maintain a presence in a number of other countries, some of which are based on customer locations and include, but not limited to, Canada, Mexico, Kenya, India, Saudi Arabia, Australia, New Zealand, and Singapore.

In addition to our direct channel to market, we also have informal, and in some cases formal, relationships with original equipment manufacturers ("OEMs") and system integrators especially towards large and complex projects in National Security and Government related applications. Our role in these relationships ranges from equipment supply only to being a sub-contractor for a portion of the project scope where we will supply equipment and a variety of design, deployment and maintenance services.

We also use indirect sales channels, including dealers, resellers and sales representatives, in the marketing and sale of some lines of products and equipment on a global basis. These independent representatives may buy for resale or, in some cases, solicit orders from commercial or governmental customers for direct sales by us. Prices to the ultimate customer in many instances may be recommended or established by the independent representative and may be above or below our list prices. These independent representatives generally receive a discount from our list prices and are free to set the final sales prices paid by the customer.

We have repair and service centers in India, Nigeria, Ghana, Mexico, the Philippines, the United Kingdom and the United States. We have customer service and support personnel who provide customers with training, installation, technical support, maintenance and other services on systems under contract. We install and maintain customer equipment directly in some cases and contract with third-party service providers in other cases, depending on the equipment being installed and customer requirements.



Table of Contents

The specific terms and conditions of our product warranties vary depending upon the product sold and country in which we do business. On direct sales, warranty periods generally start on the delivery date and continue for one to three years.

**Manufacturing**

Our global manufacturing strategy follows an outsourced manufacturing model using contract manufacturing partners in both the United States and Asia. Our strategy is based on balancing cost and supplier performance as well as taking into account qualification for localization requirements of certain market segments such as the Buy America statute. In accordance with our global logistics requirements and customer geographic distribution, we are engaged with contract manufacturing partners in Asia and the United States. All manufacturing operations have been certified to International Standards Organization 9001, a recognized international quality standard. We have also been certified to the TL 9000 standard, a telecommunication industry-specific quality system standard.

**Backlog**

Our backlog by geographic region is as follows:

(In thousands)	June 30, 2017	July 1, 2016
North America	\$102,971	\$97,360
International	56,775	56,271
Total backlog	\$159,746	\$153,631

Our backlog consists primarily of contracts or purchase orders for both product and service deliveries and extended service warranties. Services include management's initial estimate of the value of a customer's commitment under a services contract. The calculation used by management involves estimates and judgments to gauge the extent of a customer's commitment, including the type and duration of the agreement, and the presence of termination charges or wind down costs. Contract extensions and increases in scope are treated as backlog only to the extent of the incremental new value. We regularly review our backlog to ensure that our customers continue to honor their purchase commitments and have the financial means to purchase and deploy our products and services in accordance with the terms of their purchase contracts. Backlog estimates are subject to change and are affected by several factors, including terminations, changes in the scope of contracts, periodic revalidations, adjustments for revenue not materialized and adjustments for currency.

We expect to substantially fill the backlog as of June 30, 2017 during fiscal 2018, but we cannot be assured that this will occur. Product orders in our current backlog are subject to changes in delivery schedules or to cancellation at the option of the purchaser without significant penalty. Accordingly, although useful for scheduling production, backlog as of any particular date may not be a reliable measure of sales for any future period because of the timing of orders, delivery intervals, customer and product mix and the possibility of changes in delivery schedules and additions or cancellations of orders. The backlog figures exclude advance payments and unearned income amounts.

**Customers**

Although we have a large customer base, during any given fiscal year or quarter, a small number of customers may account for a significant portion of our revenue.

During fiscal 2017, Mobile Telephone Networks Group ("MTN Group") in Africa accounted for 14% of our total revenue compared with 18% in fiscal 2016 and 14% in fiscal 2015. We have entered into separate and distinct contracts with MTN Group as well as separate arrangements with MTN Group subsidiaries. The loss of all or a substantial portion of MTN Group's business could adversely affect our results of operations, cash flows and financial position.

**Competition**

The microwave and millimeter wave wireless networking business is a specialized segment of the telecommunications industry that is sensitive to technological advancements and is extremely competitive. Our principal competitors include business units of large mobile and IP network infrastructure manufacturers such as Ericsson, Huawei, NEC and Nokia, as well as a number of smaller microwave specialist companies such as Ceragon and SIAE Microelectronica.





Table of Contents

Some of our larger competitors may have greater name recognition, broader product lines (some including non-wireless telecommunications equipment and managed services), a larger installed base of products and longer-standing customer relationships. They may from time to time leverage their extensive overall portfolios into completely outsourced and managed network offerings restricting opportunities for specialist suppliers. In addition, some competitors may offer seller financing, which can be a competitive advantage under certain economic climates. Some of our larger competitors may also act as systems integrators through which we sometimes distribute and sell products and services to end users.

The smaller independent private and public specialist competitors typically leverage new technologies and low products costs, but are generally less capable of offering a complete solution including professional services, especially in the North America and Africa regions which form the majority of our addressed market.

We concentrate on market opportunities that we believe are compatible with our resources, overall technological capabilities and objectives. Principal competitive factors are cost-effectiveness, product quality and reliability, technological capabilities, service, ability to meet delivery schedules and the effectiveness of dealers in international areas. We believe that the combination of our network and systems engineering support and service, global reach, technological innovation, agility and close collaborative relationships with our customers are the key competitive strengths for us. However, customers may still make decisions based primarily on factors such as price, financing terms and/or past or existing relationships, where it may be difficult for us to compete effectively or profitably.

**Research and Development**

We believe that our ability to enhance our current products, develop and introduce new products on a timely basis, maintain technological competitiveness and meet customer requirements is essential to our success. Accordingly, we allocate, and intend to continue to allocate, a significant portion of our resources to research and development efforts in key technology areas and innovation to differentiate our overall portfolio from our competition. The majority of such research and development resources will be focused on technologies in microwave and millimeter wave RF, digital single processing, networking protocols and software applications.

Our research and development expenditures totaled \$18.7 million, or 7.7% of revenue, in fiscal 2017, \$20.8 million, or 7.7% of revenue, in fiscal 2016, and \$25.4 million, or 7.6% of revenue, in fiscal 2015.

Research and development are primarily directed to the development of new products and to building technological capability. We are an industry innovator and intend to continue to focus significant resources on product development in an effort to maintain our competitiveness and support our entry into new markets.

Our product development teams numbered 142 employees as of