

Action Summary – 15 October 2019

Analyst Theodore R. O'Neill *is initiating coverage of Aviat Networks, Inc. (AVNW)*

- **We are initiating coverage of Aviat Networks, Inc. with a Buy rating and an \$18 price target.** AVNW is a full-service global provider of microwave communications equipment, products and services
- **Significantly improved financial profile.** AVNW had a history of unpredictable swings in earnings. This significantly improved when new management arrived in 2015 and changed the way the company forecasts and executes on customer demand
- **Deep discount relative to peers.** The shares trade at a deep discount to peers on at least eight metrics. We believe the robustness and sustainability of the company's business aren't well understood
- **Company executing on optimization of cost structure.** Market not focusing on internal cost re-alignment effects that will lever future earnings
- **Near-term earnings growth.** Our forecast for a nominal decline in earnings (FY21) is due to strong bookings and a mix of higher margin business expected in the next two quarters - not a reflection of slowing growth or demand - we expect revenue to increase next fiscal year

10/14 Closing price: \$13.95	Market cap: \$74 million	2020 P/E: 13	EV/2020 Sales: 0.21
Shares outstanding: 5.6 million	Insider ownership: 8.4%	Avg. trading volume: 8,400	Dividend/Yield: NA/NA

Adjusted GAAP estimates (EPS in dollars – Revenue in millions)

Period	Adj. EPS	Revenue	Op Margin
1Q19A	\$(0.12)	\$60.5	(2.5%)
2Q19A	\$0.54	\$65.1	4.4%
3Q19A	\$(0.33)	\$54.0	(4.5%)
4Q19A	<u>\$0.47</u>	<u>\$64.2</u>	<u>3.9%</u>
FY19A	<u>\$0.58</u>	<u>\$243.8</u>	<u>0.6%</u>
1Q20E	\$0.33	\$57.5	2.6%
2Q20E	\$0.57	\$61.8	4.6%
3Q20E	\$0.06	\$56.7	(0.1%)
4Q20E	<u>\$0.46</u>	<u>\$62.7</u>	<u>3.6%</u>
FY20E	<u>\$1.41</u>	<u>\$238.7</u>	<u>2.7%</u>
1Q21E	\$0.19	\$59.2	1.2%
2Q21E	\$0.30	\$62.5	2.2%
3Q21E	\$0.42	\$59.6	3.4%
4Q21E	<u>\$0.18</u>	<u>\$61.1</u>	<u>1.1%</u>
FY21E	<u>\$1.10</u>	<u>\$242.4</u>	<u>2.0%</u>

Note: Numbers may not add due to rounding. See our full model in the back of this report.

Cash balance (in millions)

• 2019A	• \$31.9
• 2020E	• \$48.8
• 2021E	• \$60.7

Debt (in millions)

• 2019A	• \$9.0
• 2020E	• \$9.0
• 2021E	• \$9.0

Adj. EBITDA (in millions)

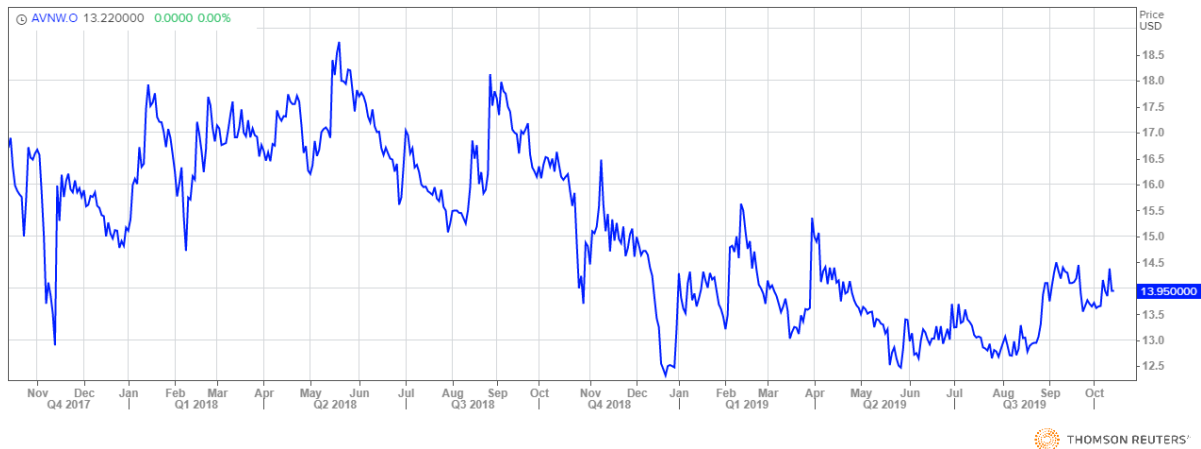
• 2019A	• \$8.1
• 2020E	• \$12.8
• 2021E	• \$9.8

Risks/Valuation

- Risks include: Highly competitive business; changes in customer demand
- Trading volume is low. The three-month average is 8,400 shares/day
- Our \$18 target is derived using a discounted future earnings model

Company description: Aviat Networks, Inc. (NASDAQ: AVNW) is a full-service global provider of microwave networking solutions transforming communications networks to handle the rapid growth of IP-centric, multi-Gigabit data services. With more than one million systems sold over 140 countries.

Figure 1 – Aviat Networks, Inc. - Trading snapshot



Source: Thomson Reuters Eikon

Investment Thesis

We are initiating coverage of Aviat Networks, Inc. with a Buy rating and an \$18 price target. AVNW is a full-service global provider of microwave communications equipment, products and services. We believe the shares have both a low relative and absolute valuation. Management has been proactive in reducing earnings volatility while developing new products. The end markets for both private network and Communications Service Provider (CSR) have been lumpy but growing. We believe the combination of all these factors make the shares attractive.

Significantly improved financial profile. AVNW had a history of unpredictable swings in earnings. This significantly improved when new management arrived in 2015 and changed the way the company forecasts and executes on customer demand. Beginning in the December 2016 quarter and continuing to the present, the standard deviation in quarterly earnings dropped five-fold to <\$2 million from \$10 million. We believe cutting the volatility will be a significant plus for the shares, especially given its relatively large discount to peers.

Deep discount relative to peers. The shares trade at a deep discount to peers on multiple metrics. We believe the robustness and sustainability of the company's business aren't well understood. Investors appear to believe that communications networks are moving exclusively to optical fiber and there isn't a place for microwave, but that simply isn't true. Microwave communications as part of a 5G backhaul or a private network are both showing growth in our opinion.

Company executing on optimization of cost structure. Market not focusing on internal cost re-alignment effects that will lever future earnings and when combined with its changed financial profile should result in improved margins.

Near-term earnings growth. Our forecast for a nominal decline in earnings (FY21) is due to strong bookings and a mix of higher margin business expected in the next two quarters - not a reflection of slowing growth or demand - we expect revenue to increase next fiscal year

Valuation Methodology

We believe AVNW is undervalued and we support that belief with a series of valuation techniques. We use two different techniques, below. For the purposes of determining our price target we use a discounted future earnings model. The following valuation techniques are being used:

- 1) The discounted value of all future earnings was used for our price target (see Figure 2)
- 2) Valuation relative to peers (see Figure 3)

Discounted Future Earnings – Basis for Price Target

Our 12-month price target of \$18 is based on a discounted earnings model. For valuation purposes, we sum up all future earnings discounted at 7%. We assume approximately 5% growth for earnings which steps down to GDP after 5-7 years. Our valuation model is shown in Exhibit 2 below. Note, this model understates future new products and growth through acquisitions and probably understates the tax benefits, but offsetting that, the earnings never have a down year. The implied share price is \$18.35 which we round down to \$18. This is approximately a 40% increase over the current price. We would point out that the stock has traded within 2 cents of this target in the last 13 months.

Figure 2 – Aviat Networks, Inc. – Price Target Calculation

Target Price: \$18.35		
Year	Forecast EPS	Discounted EPS
1	\$1.02	\$1.02
2	\$0.77	\$0.67
3	\$0.80	\$0.66
4	\$0.84	\$0.64
5	\$0.89	\$0.63
Terminal Value		\$14.74

Source: Litchfield Hills Research LLC

Valuation Relative to Peers

In Figure 3 we look at a summary of AVNW peers according to market cap. It is clear that on average, the multiples shrink with increased market cap. If we compare AVNW to a simple average of its peers, the shares sell at a significant discount on all measures ranging from 36% to 89%. These metrics indicate the stock price should be somewhere between 55% to more than 100% higher than where it is today. Details on each of the peers can be found in Figure 7 near the back of the report. In the detailed Figure 7, PE calculations are calendar.

Figure 3 – Aviat Networks, Inc. – Discount to Peers

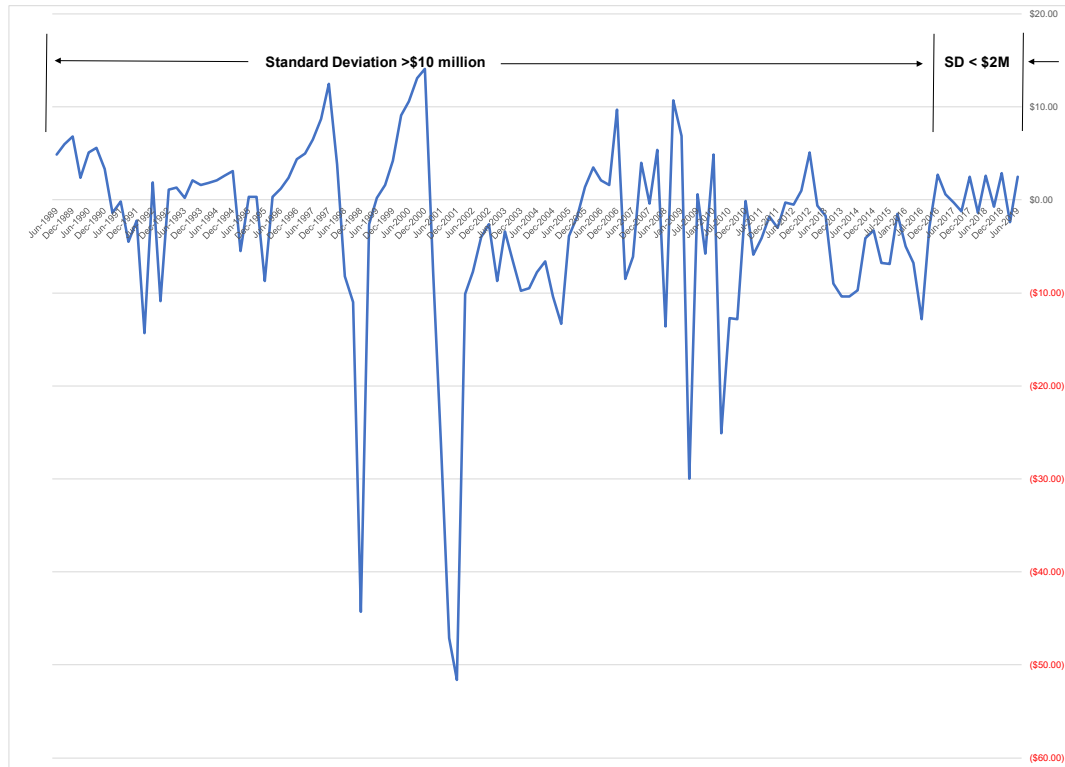
	2019 EV/Sales	2020 EV/Sales	2019 Sales Multiple	2019 EV/EBITDA	2019 Calendar PE
Average	1.89	1.65	1.79	15.62	30.74
AVNW	0.21	0.21	0.30	4.62	9.10
Discount to peers	-89%	-87%	-83%	-70%	-70%

Source: Litchfield Hills Research LLC and Refinitiv Eikon (Formerly Thomson Reuters Eikon)

Significantly Improved Financial Profile

The financial profile of AVNW improved dramatically after new management took control in 2015. As we show in Figure 4, normalized quarterly pre-tax net income prior to Dec 2016 was wildly unpredictable with a standard deviation of \$10 million/quarter. The standard deviation is now below \$2 million, a five-fold improvement. When new management (current CEO) began in 2015 it took a number of actions to stop the wild swings in earnings. It instituted a forecast and planning function across the organization. It also developed better internal capabilities to allow it to pivot more quickly to changes in customer demand. This gives us greater confidence in our forecasts.

Figure 4 – Aviat Networks, Inc. – Normalized Quarterly Pre-tax Net Income 1989-2019



Source: Litchfield Hills Research LLC and Thomson Reuters Eikon

Background on Micro and Millimeter Wave Communications

MICROWAVE PRIMER – THE ADVANTAGES

This isn't meant to be a technical review of microwave communications but it helps to understand a few basics in order to understand why large and small organizations would set up microwave communications and where it has significant advantages to optical fiber.

- 1) **It's easy to set up but you need a license.** Anyone can set up a microwave communication network but they can't operate it without a license from the Federal Communications Commission. The licensing has a number of reasons behind it but one of the most important is to keep your equipment from interfering with my equipment.
- 2) **It's simple and quick.** Setting up a microwave communications system can be relatively simple and quick to do. You mount two antennas, one where you want to send a signal and one where you want to receive and or send back a signal, point them at each other and boom, it's done. Unlike cable there is no need to dig a trench or go through the process of permitting a trench. In some places, like mountains or crossing a highway, you can't dig a trench anyway.
- 3) **It propagates signals a lot faster.** Communications speeds are important and you have to consider all the equipment in your network, but signals sent over optical fiber travel at about 2/3 the speed of microwave.
- 4) **It is more secure.** You can put an electrical fence around the tower with your antenna. You can't put an electrical fence around optical fiber. It may also be less susceptible to earthquake and fire.

- 5) **It can be cheaper.** Digging a trench to lay optical fiber doesn't scale. It's a fixed amount per mile. In many places where you could trench and lay optical fiber, it isn't worth the trouble. This is primarily true for shorter distances but there are lots of exceptions

What the FCC thinks about microwave telecommunications

Microwaves are very short waves in the upper range of the radio spectrum used mostly for point-to-point communications systems. Much of the technology was derived from radar developed during World War II. Initially, these systems carried multiplexed speech signals over networks that sold services to customers (e.g. AT&T) and military communications networks; but today they can handle all types of information, e.g. voice, data, facsimiles, and video, in either an analog or digital format.

Over the years, these systems have matured to the point that they have become major components of the nation's telecommunication networks. Private organizations use them to run specialized networks for their own use (e.g. Police and Fire departments) and to monitor their primary infrastructure (e.g. Electrical utility surveillance). As the nation's cellular and personal communications systems grows, point-to-point microwave facilities, serving as backhaul and backbone links, enable these wireless systems to serve the country's less populated areas on an economical basis.

Today's technology enables private users to employ microwave frequencies to operate and control equipment at remote sites, such as switches and valves associated with the operation of oil and gas pipelines, to gather data related to services, control traffic signals and to obtain toll data from moving vehicles, as well as other monitoring functions.

About Fixed Microwave Services

Early technology limited the operations of these systems to radio spectrum in the 1 GHz range; but due to improvements in solid state technology, commercial systems are transmitting in ranges up to 90 GHz. In recognition of these changes, the Federal Communications Commission (FCC) adopted rules allowing the use of spectrum above 40 GHz (See Millimeter Wave 70-80-90 GHz below). This spectrum offers a variety of possibilities, such as use in, among other things, short range, high capacity wireless systems that support educational and medical applications, wireless access to libraries or other information databases.

Private Operational Fixed Microwave

Private Operational Fixed stations are licensed to applicants for their own internal communications requirements. Private operational-fixed microwave systems serve many different purposes. They are meant to carry or relay voice, teletype, telemetering, facsimile and digital communications associated with Aviation, Marine, Public Safety, Industrial, and the Land Transportation Radio Services. For example, these systems are used to operate unattended equipment; open and close switches or valves; record data like pressure, temperature, or speed of machines; telemeter voltage and current in power lines; and perform other control or monitoring functions. Microwave systems are especially useful for controlling and monitoring various operations along installations like pipelines, railroads, and highways.

Common Carrier Microwave

Common Carrier microwave stations are licensed to applicants who intend to provide communications service to the public. Common Carrier microwave stations are generally used in a point-to-point configuration for long-haul backbone connections or to connect points on almost any communication network which cannot be connected using standard wire line or fiber optic because of cost or terrain. These systems are also used to connect cellular sites to the telephone network, and to relay television signals.

Millimeter Wave 70-80-90 GHz

The term "millimeter wave" derives from the wavelength of radio signals on frequencies between 30 GHz and 300 GHz, which ranges between 1 and 10 millimeters.

At these frequencies, radio signals attenuate more rapidly with distance than at other frequencies and antennas that can narrowly focus transmitted energy are practical and of modest size. While the limited range of such transmissions might appear to be a major disadvantage for many applications, it does allow the reuse of frequencies within very short distances and, thereby enables a higher concentration of transmitters to be located in a geographical area than is possible at lower frequencies.

Because of shorter wavelengths, the 71-76 GHz, 81-86 GHz, and 92-95 GHz (70/80/90 GHz) bands permit the use of smaller antennas, than would be required for similar circumstances in the lower bands. The immediate consequence of this high directivity, coupled with the high free space loss at these frequencies, is the possibility of a more efficient use of the spectrum for point-to-multipoint applications. Since a greater number of high directive antennas can be placed than less directive antennas in a given area, the net result is higher reuse of the spectrum, and higher density of users, as compared to lower frequencies. Furthermore, due to the fact that one can place more voice channels or

broadband information using a higher frequency to transmit the information, this spectrum could potentially be used as a replacement for or supplement to fiber optics

What Nokia thinks about microwave and millimeter wave in regards to 5G

While optical fiber gets the majority of attention whenever 5G is mentioned, microwave and millimeter wave communication equipment continue to evolve and will remain part of the 5G rollout.

According to Nokia (NOK-NR): “While transport will depend on a mix of technologies including IP, fiber and broadband, new microwave capabilities will offer compelling and cost competitive solutions and continue to play a vital role in mobile transport networks of almost all CSPs.”

5G is more than just an innovative radio technology using new spectrum. It introduces a new approach to network architecture that builds on new concepts such as densification, decomposition of network functions (e.g. the separation of user and control planes), programmable transport, end-to-end automation and orchestration, and network slicing to enable new service business models. A complex interworking of different network domains, technologies, components and services will be needed.

Fiber optic presence in transport networks has increased in the past years and this trend will continue as CSPs exploit the technology’s advantages. Nevertheless, wireless, including microwave transport connectivity is a key enabler for 5G use cases. **Consider the following examples where microwave makes sense:**

- Fiber may not be available in suburban/rural areas. Also, in urban areas, if the CSP is not incumbent, fiber leasing may be too expensive, especially in view of the evolution towards 10/25 Gbps interfaces
- In current mobile networks, microwave is used in more than 50 percent of cell sites. Providing fiber to these many sites would be a considerable, time and costly undertaking
- When a fiber Point of Presence (PoP) is a few hundred meters away from the radio access point, TCO evaluation tends to favor microwave connectivity primarily because fiber trenching costs are unlikely to shrink over time
- In dense urban environments it is common to have fiber access at building level, but not at street pole level
- Microwave technology can address 5G’s challenging capacity and latency requirements. This is because the speed of signal propagation in an optical fiber is 2/3 the speed of signal over-the-air. Propagation-medium induced latency depends on the density of the medium, so the latency of a wireless connection is fundamentally lower than that of a fiber cable of the same length. Equipment-induced latencies must, of course, be added into the equation
- Mission-critical applications (e.g. public safety use cases) require high resiliency network performance. Wireless connectivity is generally more reliable than fiber during major events such as earthquakes, fire, or simple road maintenance. Moreover, in these cases, the recovery time is much faster with a microwave connection
- Rapid deployment. A microwave link is substantially quicker to roll-out. No trenching of cable required.
- Inhospitable terrain. In areas where trenching would be impossible, e.g. through rock, microwave would be the only option

There are microwave solutions for most all 5G scenarios

From high traffic hotspots to rural coverage, there are strong arguments to support microwave solutions for every 5G network scenario (see Figure 5). For example, in ultra-dense urban areas, such as crowded squares, airports and stadiums, 5G networks will be deployed using a mmWave radio access layer (e.g., 26, 28 or 39 GHz), as shown in Figure 5. Very high capacity backhaul is needed (≥ 10 Gbps) with transport link lengths less than 1 km. Low visual impact is another consideration for deployments in dense urban environments, and microwave solutions with very small form factors will be integrated with RAN equipment. In the suburbs, where typical link distances range from 7 to 10 km, the access layer will be based on sub-6 GHz frequencies, with connectivity requirements not quite as extreme, yet still demanding capacity of 5 to 10 Gbps. This contrasts with rural settings, where the geographical coverage is larger, and the access network uses frequencies below 1 GHz. Here, the transport network must backhaul up to 2 Gbps, and link lengths will commonly exceed 10 km.

Figure 5 – Aviat Networks, Inc. – 5G Microwave Applications



Source: Nokia

To meet the 5G requirement for more capacity, new microwave solutions for optimizing the use of spectrum are already available. Carrier aggregation using multiple bands on the same link, more powerful and efficient power amplifiers that use wider channels and the availability of mmWave spectrum meet key requirements for future network solutions. For example, in today's frequency bands used for RAN backhaul (6 to 42 GHz), several suppliers already offer transceivers capable of 2.5 Gbps in a single box (including Aviat), thanks to 4096-QAM modulation in 2 x 112 MHz frequency channels. Beyond this, current E-Band solutions stand ready to satisfy the initial wave of 5G introductions that require up to 10 Gbps transport capacity and 20 μ s latency for urban environments. Combining E-Band with a traditional microwave frequency band between 6 and 42 GHz, it is possible to achieve longer distances while preserving high availability for the most valuable traffic. With efficient carrier aggregation, between 10 and 20 Gbps bi-directional capacity is achievable.

Looking further ahead, the telecommunications industry is considering the frequency bands above 100 GHz for the transport segment of future 5G networks. Recent activities reflect the highest interest at W-Band (92 to 114.25 GHz) and D-Band (130 to 174.8 GHz). While W-Band is viewed as a likely extension of E-Band, because the two share similar propagation behaviors, the peculiarities of D-Band enable innovative approaches to equipment design. Also, the very small form factor aids the integration of the radio and antenna - just a few centimeters square. Between transport and access products, this enables new network topologies such as point-to-multipoint and mesh connectivity combined with beam steering.

Guidance and Financial Forecasts

Company provided guidance for 1H20. The Company anticipates revenue in the first half of fiscal 2020 to be modestly down compared to the prior fiscal year period, but based on the mix of business, gross margins are expected to increase significantly and are tracking towards a higher sustainable run rate. The company sees non-GAAP gross margins trending upwards in the first half of fiscal 2020, and anticipating they will come north of 35% in both quarters. It will

continue to manage the operating expense side with a bias towards investing more in growth and value-added activities.

Our financial forecast assumes a modest revenue decline for FY20 followed by a modest increase in FY21. We have tried to take a conservative approach towards our estimates for FY21. Relative to our analysis showing a decline in the standard deviation of earnings, we have held to the <\$2 million/quarter SD (see Figure 4). We have also chosen to forecast non-GAAP or Adjusted EPS as the income tax accrual has significant volatility.

Company Overview

Aviat was 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, it changed Aviat's corporate name from Harris Stratex Networks, Inc. to Aviat Networks, Inc.

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 designs, manufactures and sells a range of wireless networking products, solutions and services to two principal customer types:

Communications Service Providers (CSPs): These include mobile and fixed telecommunications network operators, broadband and internet service providers and network operators which generate revenues from the communications services that they provide.

Private network operators: These are customers which do not resell communications services but build networks for reasons of economics, autonomy, and or security to support a wide variety of mission critical performance applications. Examples include, federal, state and local government agencies, transportation agencies, energy and utility companies, public safety agencies and broadcast network operators around the world.

It sells products and services directly to its customers, and, to a lesser extent, uses agents and resellers.

Aviat's products utilize microwave and millimeter wave technologies to create point to point wireless links for short, medium and long-distance interconnections. Aviat's products incorporate Ethernet switching and IP routing capabilities optimized for a microwave and millimeter wave environment and for hybrid applications of microwave and optical fiber transport, to form complete networking solutions. It provides software tools and applications to enable deployment, monitoring, network management and optimization of its systems as well as to automate network design and procurement. Aviat also sources, qualifies supply and support third party equipment such as antennas, routers, optical transmission equipment and other equipment necessary to build and deploy a complete telecommunications transmission network. It provides a full suite of professional services for planning, deployment, operations, optimization and maintenance for its customers' networks.

Aviat's 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 to offshore oil and gas production platforms. Through the air wireless transmission is also inherently lower in latency than transmission through optical cables and can be leveraged in time sensitive networking applications.

Revenue from Aviat's North America and international regions represented approximately 54% and 46%, respectively, of Aviat's revenue in fiscal 2019, 54% and 46%, respectively, of Aviat's revenue in fiscal 2018, and 55% and 45%, respectively, of Aviat's revenue in fiscal 2017.

Market Overview

We believe that future demand for microwave and millimeter wave transmission systems will be influenced by a number of factors that also drive demand for telecommunications equipment in general 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 ongoing 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 the evolution from 2G to 3G (HSPA), 4G (HSPA+ and LTE), and the rapidly emerging 5G standards, technology is continuously 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.

Network Densification. 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 interconnection and proportionally driving increased demand for wireless backhaul and or fronthaul solutions as the primary alternative to optical fiber connectivity.

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. Aviat’s 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. Aviat's 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.

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. Aviat's goal is to make wireless technology a viable choice for an ever-broadening range of network types.

Strategy

As it continues executing on its technology roadmap, it is engaging more deeply with customers on the evolution of use cases and applications as 5th Generation mobile and broadband networks edge closer to implementation and begin to factor more strongly in the vendor selection process. We are confident in Aviat's ability to address future 5G market needs.

Aviat's technology strategy has three main elements aligned to deliver a compelling Total Cost of Ownership ("TCO") value proposition:

- 1) First is the integration of network routing functions into its wireless transport solution allowing customers increased flexibility with a much better total cost solution.
- 2) Second, it is expanding the data-carrying capacity of its wireless products to address the increasing data demand in networks of all types.
- 3) Third, in order to address the operational complexity of planning, deploying, owning and operating microwave networks, it is investing in a combination of software applications, tools and services where simplification, process automation and its unique expertise in wireless technology can make a significant difference for its customers and partners.

As part of its long-term services strategy, it continues to expand the number of customer networks managed from its North America Network Operations Center. It began offering cloud-based network management for customers and it continues to offer training and accreditation programs for microwave and IP network design, deployment and maintenance.

Aviat's strategy also includes partnering with companies with technical expertise in areas outside of its core competencies to meet customer demands for an end-to-end solution. Aviat's partner product strategy (like the one with NEC) enables it 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 Aviat's wireless product and intelligent partner products can allow it to compete with vendors that offer turnkey solution portfolios and serve to focus its research and development ("R&D") efforts on core competency wireless innovations. Having a broader portfolio should enable Aviat to further differentiate its offerings from other independent microwave equipment suppliers.

We believe Aviat's longstanding presence in many countries, its distribution channels, product line, customer service and turnkey solution capability provide additional support to our view of long-term growth.

Products and Solutions

Aviat's product and solutions portfolio is key to building and maintaining its customers base. It offers a comprehensive product and solutions portfolio that meets the needs of service providers and network operators in every region of the world and that addresses a broad range of applications, frequencies, capacities and network topologies. Specifically, we believe its focus on broad product solutions, TCO and comprehensive/flexible/futureproof network design are key to its success.

Broad product and solution portfolio. Aviat offers a comprehensive suite of wireless transmission systems for microwave and millimeter wave networking applications. These solutions utilize a wide range of transmission frequencies, ranging from 5 GHz to 90 GHz, and can deliver a wide range of transmission capacities, ranging up to 20 Gigabits per second (Gbps). The major product families included in these solutions are CTR 8000, WTM 4000 and AviatCloud. Aviat's 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 Aviat's product portfolio is the WTM 4000, the highest capacity microwave radio ever produced, and purpose built for SDN. Aviat has recently introduced multiple important variants to the WTM 4000 platform; WTM4100 & 4200 providing single and dual frequency microwave links with advanced XPIC and MIMO capabilities; WTM4500 for multi-channel aggregation of microwave channels in long distance applications; WTM4800 is the latest addition to address 5G network requirements and is capable of operating in the 80GHz E Band at up to 20Gbps capacity, with the unique ability to operate in multi-band mode simultaneously using microwave and E Band frequencies for maximum robustness. To address the issues of operational complexity in Aviat's customers' networks, AviatCloud is an app-based platform to automate and virtualize networks and their operations.

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

Futureproof network. Aviat's 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. Aviat's products include key technologies we believe will be needed by operators for their network evolution to support new broadband services.

Flexible, easily configurable products. Aviat uses flexible architectures with a high level of software configurable features. This design approach should yield 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 Aviat's products offer its customers a substantial degree of flexibility in installing, operating and maintaining their networks.

Comprehensive network management. Aviat offers a range of flexible network management solutions, from element management to enterprise-wide network management and service assurance that it can optimize to work with Aviat's wireless systems.

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

Business Operations

Sales and Service

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

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

It also uses 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 Aviat. Prices to the ultimate customer in many instances may be recommended or established by the independent representative and may be above or below Aviat's list prices. These independent representatives generally receive a discount from Aviat's list prices and are free to set the final sales prices paid by the customer.

It recently introduced a direct online sales option through Aviat's online "AviatStore" for Aviat's WTM radio platform, initially in North America and targeted at wireless internet service providers delivering broadband services in rural and underserved areas. It provides online design tools for radio link planning and on-line ordering tools, which it fulfills directly from its AviatStore. At the AviatStore there are multiple options of product available for next day shipment. Shipments from AviatStore commenced late in 2018 and increased in Aviat's third and fourth fiscal quarters.

It maintains repair and service centers in India, Nigeria, Ghana, Mexico, the Philippines, the United Kingdom and the United States. It has customer service and support personnel who provide customers with training, installation, technical support, maintenance and other services on systems under contract. It installs and maintains 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.

The specific terms and conditions of Aviat's product warranties vary depending upon the product sold and country it is sold into. On direct sales, warranty periods generally start on the delivery date and continue for one to three years.

Manufacturing

Aviat's global manufacturing strategy follows an outsourced manufacturing model using contract manufacturing partners in both the United States and Asia. Aviat's 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 Aviat's global logistics requirements and customer geographic distribution, it is 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. It and its manufacturing channel has also been certified to the TL 9000 standard, a telecommunication industry-specific quality system standard.

Backlog

Aviat's backlog was approximately \$160.1 million at June 28, 2019 and \$145.4 million (adjusted for Accounting Standards Codification 606 adoption) at June 29, 2018 consisting 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 new incremental value. It regularly reviews its backlog to ensure that Aviat’s customers continue to honor their purchase commitments and have the financial means to purchase and deploy Aviat’s 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 revalidation, adjustments for revenue not materialized and adjustments for currency.

It currently expects to substantially fill the backlog as of June 28, 2019 during fiscal 2020, but cannot assure that this will happen. Product orders in Aviat’s 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.

Customers

Although it has a large customer base (see Figure 6), during any given fiscal year or quarter, a small number of customers may account for a significant portion of Aviat’s revenue.

During fiscal 2019 Mobile Telephone Networks Group (“MTN Group”) in Africa accounted for 11% of Aviat’s total revenue compared with 13% in fiscal 2018 and 14% in fiscal 2017. It has entered into separate and distinct contracts with MTN Group as well as separate arrangements with MTN Group subsidiaries.

Figure 6 – Aviat Networks, Inc. – Partial Customer List



Source: Aviat Networks, Inc. Presentation

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. Aviat’s principal competitors include business units of large mobile and IP network infrastructure manufacturers such as Ericsson, Huawei, NEC Corporation and Nokia Corporation, as well as a number of smaller microwave specialist companies such as Ceragon Networks Ltd. and SIAE Microelectronica S.p.A.

Some of Aviat's 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 Aviat's larger competitors may also act as systems integrators through which it sometimes distributes and sells 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 Aviat's addressed market.

Aviat concentrates on market opportunities that it believes are compatible with its 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.

Research and Development

We believe that Aviat's ability to enhance its current products, develop and introduce new products on a timely basis, maintain technological competitiveness and meet customer requirements is essential to its success. The majority of such research and development resources is focused on technologies in microwave and millimeter wave RF, digital signal processing, networking protocols and software applications and are primarily directed to the development of new products and building technological capability.

Aviat's research and development expenditures totaled \$21.1 million, or 8.7% of revenue, in fiscal 2019, \$19.8 million, or 8.1% of revenue, in fiscal 2018, and \$18.7 million, or 7.7% of revenue, in fiscal 2017.

Aviat's product development teams totaled 153 employees as of June 28, 2019, and were located in the United States, New Zealand, Slovenia and Canada.

Raw Materials and Supplies

Aviat's strategy for procuring raw material and supplies includes dual sourcing on strategic assemblies and components. In general, we believe this reduces Aviat's risk with regard to the potential financial difficulties in Aviat's supply base. In some instances, it is dependent upon one or a few sources, either because of the specialized nature of a particular item or because of local content preference requirements pursuant to which it operates on a given project. Examples of sole or limited source categories include metal fabrications and castings, for which Aviat owns the tooling and therefore limits Aviat's supplier relationships, ASIC's and MMICs (types of integrated circuit used in manufacturing microwave radios), which it procures at volume discount from a single source. Aviat's supply chain plan includes mitigation plans for alternative manufacturing sources and identified alternate suppliers.

Patents and Other Intellectual Property

Aviat owns a portfolio of patents, trade secrets, know-how, confidential information, trademarks, copyrights and other intellectual property. It also licenses intellectual property to and from third parties. As of June 28, 2019, it held 270 U.S. patents and 220 international patents and had 23 U.S. patent applications pending and 32 international patent applications pending.

Governmental Regulations

Radio communications are subject to governmental regulation. Equipment produced by Aviat is subject to domestic and international requirements to avoid interference among users of radio frequencies and to permit interconnection of telecommunications equipment.

Employees

As of June 28, 2019, Aviat employed 708 people compared with 704 people as of the end of fiscal 2018, and 710 as of the end of fiscal 2017. As of June 28, 2019, 268 of Aviat's employees are located in the U.S.

Management

Stan Gallagher is acting CEO. Mr. Gallagher joined Aviat Networks in June 2018 as Aviat's Senior Vice President, Chief Operating Officer and Principal Financial Officer. Mr. Gallagher is responsible for the operations, finance and IT organizations. Before joining Aviat, Mr. Gallagher was a Director and Operational Excellence/Supply Chain Management Lead at Synergetics Installations Worldwide, Inc. since 2012, and a Senior Consultant with LeadFirst Leadership Development Consultants since 2010. From 2007 to 2010, Mr. Gallagher held a number of leadership positions with various subsidiaries of General Electric.

Shaun McFall was appointed Senior Vice President, Corporate Development in July 2018. Mr. McFall was Chief Strategy Officer from 2015 to July 2018. He was Aviat's Chief Marketing Officer since July 2008. Previously, from 2000 to 2008, he served as Vice President, Marketing for Aviat Networks and Stratex Networks. He has been with Aviat since 1989.

Eric Chang, joined Aviat Networks in February 2016 as Aviat's Vice President, Corporate Controller and Principal Accounting Officer responsible for worldwide accounting, reporting, compliance and taxation. Prior to joining Aviat Networks, from 2013 to 2016, Mr. Chang was the Senior Director, Corporate Controller at Micrel, Incorporated. From 2007 to 2013, he served as Senior Director, Assistant Controller and Business Unit Controller at Atmel Corporation. From 2003 to 2007, he was at Ernst & Young LLP, most recent as Senior Audit Manager.

Figure 7 – Aviat Networks, Inc. – Comp Table

Ticker	Company Name	Price Intra-Day 10/10/19	Market Cap (\$MM)	EV (\$MM)	2019 PE	2020 PE	2019 Sales Multiple	2019 EV / EBITDA	2020 EV / EBITDA	2019 EV / Sales	2020 EV / Sales	Price to Book
NOK	Nokia Oyj	4.935	27,876.00	27,827.64	18.94	12.93	1.07	9.28	7.44	1.06	1.04	1.75
ERIC.O	Telefonaktiebolaget LM	8.235	27,416.68	26,763.43	22.83	16.13	1.15	8.23	7.00	1.12	1.09	3.21
000063.SZ	ZTE Corp	32.87	17,936.63	21,029.96	28.65	21.94	1.33	17.50	14.29	1.55	1.31	4.41
6701.T	NEC Corp	4,595.00	11,137.86	16,484.50	15.94	13.61	0.40	7.51	7.13	0.59	0.58	1.43
CIEN.K	Ciena Corp	37.31	5,770.17	5,618.99	17.22	14.47	1.62	9.66	8.43	1.57	1.48	2.73
600498.SS	Fiberhome Telecommu	27.76	4,560.85	5,662.73	31.91	25.75	1.20	24.80	20.27	1.48	1.24	3.06
MRCY.O	Mercury Systems Inc	74.25	4,082.33	3,824.40	35.24	31.11	5.34	22.92	19.60	5.00	4.53	3.11
002281.SZ	Accelink Technologies	29.25	2,776.82	2,695.23	51.11	38.08	3.67	37.76	27.40	3.56	2.90	4.62
002583.SZ	Hytera Communication	10.06	2,591.63	3,285.33	33.52	21.19	2.14	21.00	16.44	2.72	2.10	3.01
KTOS.O	Kratos Defense and Se	18.97	1,963.47	2,136.57	58.16	40.33	2.69	28.18	22.55	2.92	2.49	3.50
MXL	MaxLinear Inc	21.61	1,555.45	1,715.16	26.20	20.87	4.75	15.04	12.96	5.23	4.82	3.78
CMTL.O	Comtech Telecommuni	30.9	751.34	871.52	22.78	17.32	1.05	8.72	7.99	1.21	1.15	1.40
CASA.OQ	Casa Systems Inc	6.45	527.29	691.15	25.97	14.15	1.62	15.93	9.67	2.13	1.48	7.48
ADTN.O	ADTRAN Inc	8.89	521.79	409.68	48.24	30.66	0.93	7.41	4.63	0.73	0.69	1.17
GILT.OQ	Gilat Satellite Networks	8.2	463.94	432.36								2.00
DGII.OQ	Digi International Inc	13.38	374.36	288.01	41.09	27.83	1.49	11.15	8.42	1.15	1.06	1.08
CALX.K	Calix Inc	6.36	353.16	344.93		22.48	0.84			0.82	0.76	2.40
ADAG.DE	ADVA Optical Networki	6.11	336.20	407.02	26.98	19.20	0.56	5.27	4.84	0.68	0.64	1.23
CMBM.OQ	Cambium Networks Co	8.29	226.85	254.00	14.94	8.43	0.82	8.81	5.86	0.91	0.79	5.98
CRNT.OQ	Ceragon Networks Ltd	2.69	216.62	196.48	21.86	15.12	0.71			0.64	0.59	1.32
	Average				30.74	22.15	1.79	15.62	12.34	1.89	1.65	3.00
AVNW.O	Aviat Networks Inc	14.38	73.81	50.86	9.10	14.24	0.30	4.62	5.09	0.21	0.21	1.04
	Aviat Premium/(Discount) to Peers				-70%	-36%	-83%	-70%	-59%	-89%	-87%	-65%

Source: Litchfield Hills Research LLC and Refinitiv Eikon (formerly Thomson Reuters Eikon)

Figure 8 – Aviat Networks, Inc. – Income Statement

(\$ in thousands except per share)

June ending year	2017 Year	2018 Year	2019				2019 Year	2020E				2020E Year	2021E				2021E Year
			Q1	Q2	Q3	Q4		Q1E	Q2E	Q3E	Q4E		Q1E	Q2E	Q3E	Q4E	
Revenue from product sales	\$153,517	\$151,685	\$39,125	\$41,956	\$34,615	\$41,028	\$156,724	\$37,169	\$39,858	\$36,346	\$38,977	\$152,349	\$38,284	\$40,257	\$38,163	\$37,028	153,731
Revenue from services	88,357	90,821	21,379	23,132	19,422	23,201	87,134	20,310	21,975	20,393	23,665	86,344	20,919	22,195	21,413	24,138	88,666
Total revenue	\$241,874	\$242,506	\$60,504	\$65,088	\$54,037	\$64,229	\$243,858	\$57,479	\$61,834	\$56,739	\$62,642	\$238,693	\$59,203	\$62,452	\$59,576	\$61,166	\$242,397
Growth	-10%	0%	8%	5%	-13%	3%	1%	-5%	-5%	5%	-2%	-2%	3%	1%	5%	-2%	2%
Cost of product sales	105,183	100,112	26,799	26,159	23,712	26,847	103,517	23,000	25,000	23,500	26,000	97,500	24,500	26,000	23,500	26,000	100,000
Cost of services	61,219	61,891	15,780	16,439	14,070	14,782	61,071	13,500	14,000	13,500	14,000	55,000	14,000	15,000	14,000	14,000	57,000
Cost of Goods	166,402	162,003	42,579	42,598	37,782	41,629	164,588	36,500	39,000	37,000	40,000	152,500	38,500	41,000	37,500	40,000	157,000
Gross Profit	75,472	80,503	17,925	22,490	16,255	22,600	79,270	20,979	22,834	19,739	22,642	86,193	20,703	21,452	22,076	21,166	85,397
Gross Margin	31.2%	33.2%	29.6%	34.6%	30.1%	35.2%	32.5%	36.5%	36.9%	34.8%	36.1%	36.1%	35.0%	34.3%	37.1%	34.6%	35.2%
R&D	18,684	19,750	4,937	5,316	5,350	5,508	21,111	5,500	5,500	5,550	5,600	22,150	5,500	5,600	5,800	5,700	22,600
SG&A	57,184	58,157	13,706	14,291	13,408	14,650	56,055	14,000	14,500	14,250	14,800	57,550	14,500	14,500	14,250	14,800	58,050
One-time expenses/restructuring	589	1,279	796	0	0	(60)	736	0	0	0	0	0	0	0	0	0	0
Total Operating Expenses	76,457	79,186	19,439	19,607	18,758	20,098	77,902	19,500	20,000	19,800	20,400	79,700	20,000	20,100	20,050	20,500	80,650
Operating expense margins	32%	33%	32%	30%	35%	31%	32%	34%	32%	35%	33%	33%	34%	32%	34%	34%	33%
Operating Income	(985)	1,317	(1,514)	2,883	(2,503)	2,502	1,368	1,479	2,834	(61)	2,242	6,493	703	1,352	2,026	666	4,747
Operating Margin	-0.4%	0.5%	-2.5%	4.4%	-4.6%	3.9%	0.6%	2.6%	4.6%	-0.1%	3.6%	2.7%	1.2%	2.2%	3.4%	1.1%	2.0%
Total Other Items	178	(508)	46	(33)	65	104	182	178	178	178	178	712	178	178	178	178	712
Pre-Tax Income	(807)	809	(1,468)	2,850	(2,438)	2,606	1,550	1,657	3,012	117	2,420	7,205	881	1,530	2,204	844	5,459
Pre-Tax Margin	-0.3%	0.3%	-2.4%	4.4%	-4.5%	4.1%	0.6%	2.9%	4.9%	0.2%	3.9%	3.0%	1.5%	2.4%	3.7%	1.4%	2.3%
Taxes (benefit)	16	(1,036)	(718)	540	(6,777)	(1,233)	(8,188)	331	602	23	484	1,441	176	306	441	169	1,092
Tax Rate	-2.0%	-128.1%	48.9%	18.9%	278.0%	-47.3%	-528.3%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Net Income (loss)	(823)	1,845	(750)	2,310	4,339	3,839	9,738	1,325	2,409	93	1,936	5,764	705	1,224	1,763	675	4,367
Net Margin	-0.3%	0.8%	-1.2%	3.5%	8.0%	6.0%	4.0%	2.3%	3.9%	0.2%	3.1%	2.4%	1.2%	2.0%	3.0%	1.1%	1.8%
Adjusted EPS	(0.16)	0.68	(0.12)	0.54	(0.33)	0.47	0.58	0.33	0.57	0.06	0.46	1.41	0.19	0.30	0.42	0.18	1.10
Share count	5,292	5,647	5,366	5,627	5,577	5,578	5,618	5,650	5,660	5,670	5,680	5,665	5,690	5,700	5,710	5,720	5,705

Sources: Company reports and Litchfield Hills Research, LLC

Figure 9 – Aviat Networks, Inc. – Balance Sheet

(\$ in thousands)					
June ending year	2021E	2020E	2019	2018	2017
Balance sheet					
Current Assets					
Cash and S.T.I.	\$60,687	\$48,820	\$31,946	\$37,428	\$36,463
Accounts receivable	46,000	48,000	51,937	43,068	45,945
Inventories	10,000	12,000	8,573	21,290	21,794
Other assets	6,000	6,000	5,761	7,513	8,273
Total Current Assets	137,687	136,820	125,997	123,466	124,585
Net PP&E	17,500	17,500	17,255	17,179	16,406
Other non-current assets	21,000	22,000	25,941	15,416	11,585
Total Assets	\$176,187	\$176,320	\$169,193	\$156,061	\$152,576
Current Liabilities					
Accounts payable	\$30,000	\$32,000	\$35,605	\$30,878	\$33,606
Accrued expenses	36,000	38,000	36,517	45,164	41,937
Other current liabilities	10,000	10,500	10,089	10,426	10,475
Total current liabilities	76,000	80,500	82,211	86,468	86,018
Unearned revenue	10,000	11,000	9,662	6,593	7,062
Other non-current	6,000	6,000	5,804	5,484	5,156
Total Liabilities	92,000	97,500	97,677	98,545	98,236
Stockholders' Equity					
Preferred stock					
Total stockholders' equity	84,187	78,820	71,516	57,516	54,340
Total Liabilities and equity	\$176,187	\$176,320	\$169,193	\$156,061	\$152,576

Sources: Company reports and Litchfield Hills Research, LLC

Figure 10 – Aviat Networks, Inc. – Cash Flow

(\$ in thousands)				
	2021	2020E	2019	2018
Net Income	\$4,367	\$5,764	\$9,738	\$1,845
Accounts receivable	2,000	3,937	(8,869)	2,877
Unbilled receivables	7,000	5,780	(13,613)	(2,057)
Inventories	2,000	(3,427)	12,717	504
Other assets	0	(239)	1,752	760
PP&E	0	(245)	(76)	(773)
Other non-current	1,000	3,941	(10,525)	(3,831)
Accounts payable	(2,000)	(3,605)	4,727	(2,728)
Accrued expenses	(1,000)	445	(3,309)	3,931
Advanced payments	(1,000)	1,038	(5,338)	(704)
Other current liabilities	(500)	411	(337)	(49)
Unearned revenue	(1,000)	1,338	3,069	(469)
Other non-current	0	196	320	328
Preferred stock	0	0	0	0
Commons stock	0	0	0	1
Additional paid in capital	1,000	804	(1,230)	2,693
Accumulated other comp. loss and other	0	736	(131)	(1,363)
Dividend and/or tax adj.			5,623	
Total Cash Flow	\$11,867	\$16,874	(\$5,482)	\$965

Source: Litchfield Hills Research, LLC

Disclosures:

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We, the Litchfield Hills Research Department, hereby certify that the views expressed in this research report accurately reflect our personal views about the subject company and the underlying securities.

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AVNW-Buy-\$18 PT

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