



AstroNova

Year Ended January 31,

2017

A N N U A L R E P O R T

Bright ideas. Realized.

Who We Are:

AstroNova is a global leader in data visualization technologies, delivering solutions that transform data into images, text and graphics for an array of applications worldwide including commercial, industrial, consumer packaging, energy, aerospace and defense.

Through our **Product Identification** segment, we provide color label printers, specialty printers, software and accessories that enable customers to reach and grow their target audiences with speed, precision and cost-effectiveness. Our supplies group provides carefully matched consumables including inks, toners, thermal transfer ribbons and media to ensure our customers realize the highest quality imaging results. These products are marketed worldwide under the QuickLabel® and TrojanLabel™ brands.

Through our **Test & Measurement** segment, we provide networking products, aerospace printers and consumables under the AstroNova™ brand for commercial and military aircraft, business and regional jets and in-flight entertainment systems. Our customers include Airbus, Boeing, Honeywell, Rockwell Collins, Lockheed Martin, Gulfstream and Embraer. We also design and manufacture data acquisition instruments and supplies for the automotive, aerospace, energy, power monitoring, transportation, telemetry and general industrial markets.

AstroNova Operating System

The AstroNova Operating System (AOS) is a comprehensive business management process we began implementing in 2013 that allows us

to differentiate our products, distinguish our service and excel in our global markets. Built around our core values, AOS lean enterprise tools and customer-centric business processes drive operational excellence across our organization. It provides the framework for our team members to achieve continuous improvements in quality, delivery, cost and growth to support our strategic objectives.

AOS is built around our Core Values that guide our processes and practices.

Core Values:

- **Customer First** – superior customer satisfaction driven by the voice of the customer
- **One Global Team** – total employee involvement with integrity and mutual respect for all
- **Innovation** – rapid product and process development
- **Continuous Improvement** – accelerated by the use of AOS tools
- **Building Value** – through superior quality, delivery, cost and growth

We are dedicated to maintaining our reputation for quality and innovation. AstroNova is certified to both ISO9001 and AS9100 Quality Management System Standards. AstroNova also maintains FAA/EASA Part 145 Repair Station approval in relation to our aerospace products. We support our customers through locations in the USA, Canada, China, India, Latin America, Malaysia, Singapore, Spain, Western Europe and via channel partners in the rest of the world.



DEAR SHAREHOLDER,

We delivered record revenue of \$98.4 million in fiscal 2017, driven by growth in both our Product Identification and Test & Measurement segments. Operating income increased to \$6.3 million, reflecting our ability to accelerate product development, integrate process improvements and apply new IT systems to automate procedures. These initiatives are transforming our business operations and expanding our markets, allowing us to attract new customers and broaden our geographical reach.

Operating Highlights

Product Development

During the past four years, we have achieved average annual revenue growth of 13%. The AOS focus on efficiency and effectiveness and our systematic stage-gate product development process have been principal drivers of that success and reflect our commitment as an organization to work collaboratively, embrace innovation, drive continuous improvement and deliver value for our customers, employees and shareholders.

New IT Infrastructure

Our investments in new IT technology are beginning to provide valuable insights that will generate future growth. In fiscal 2017, we continued to advance our worldwide IT system upgrade program, which ultimately will serve as the foundation for managing our global operations and help drive customer engagement.

One example of how the upgraded system will benefit our customers is the installation of a major e-commerce package, which is on track to go live in the first quarter of fiscal 2018. This new user-friendly online platform will significantly improve customer service and enhance the customer experience, further reduce costs and create new opportunities to promote related products.

Business Segments

Revenue in fiscal 2017 in our Product Identification segment increased 4% from the prior year to \$69.9 million, marked by robust demand for our consumables and new hardware. We also improved the operating profit by 5.6% to \$9.8 million for the year, resulting in a 14.1% profit margin. The fourth-quarter launch of the QL-800 wide-format printer helped drive record placements for our color inkjet label printers. The QL-800, a completely new, next generation design, featuring higher speeds and resolutions than our prior products, was introduced at PACK EXPO International. The response has been terrific.

Revenue in our Test & Measurement segment was up 4% from fiscal 2016 to \$28.6 million, as softness caused by our transition to new data acquisition products was offset by healthy growth in our Aerospace products. Our T&M segment operating profit increased 20.1% for the year to \$4.4 million, providing a margin of 15.4%. We introduced several new data acquisition products during the year including the Daxus®, DDX100 SmartCorder® and EVX Chart Recorders. We further solidified our position at Boeing with the announcement that our narrow-format ToughWriter® 640 flight deck printer will

join our wide-format ToughWriter® 5 printer in the Boeing 737 catalog. Inclusion in the catalog is a significant achievement that creates opportunities for our products both on new aircraft and for upgrades of existing fleets. Furthermore, catalog inclusion is a prerequisite to doing business with most airlines.

Strategic Highlights

International Growth

Growth outside the United States is an integral part of our long-term strategic plan. We continued to execute that objective in fiscal 2017, increasing international revenue from 28% in fiscal 2016 to 29% in fiscal 2017.

In recent quarters, we have strengthened our direct presence in China, opened our first direct sales offices in Spain and India and added dealers in Latin America, Southeast Asia, Europe and Canada.

TrojanLabel Acquisition

Subsequent to our fiscal 2017 close, we completed the acquisition of TrojanLabel, a European-based manufacturer of products including digital color label presses and specialty printing systems for a broad range of end markets. This acquisition dovetails with our long-term strategic plan: incorporating a profitable growing business that directly complements one of our existing core business segments.

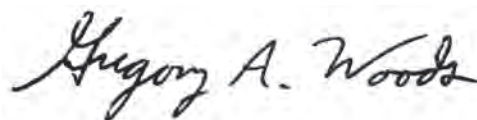
Among its key benefits, the TrojanLabel acquisition:

- Expands our product line with the addition of proven technologies, including the leading product line in a new market segment: Light-Duty Digital Label Press;
- Broadens our geographic footprint substantially by complementing our strong North American direct salesforce with TrojanLabel's formidable dealer network in Europe, the Middle East, Africa and Asia; and
- Creates significant cross-selling opportunities, enhancing our ability to deliver the best value proposition for customers.

Conclusion

As we move into fiscal 2018, we remain focused on executing on our long-term strategic growth initiatives. These initiatives are designed to expand our business through new product introductions, geographic channel expansion, complementary acquisitions and continued investments to strengthen our brands and improve our operational efficiency. On behalf of all of the AstroNova Team Members and the Board of Directors, I want to thank our customers, suppliers, and you, our shareholders, for your ongoing support of AstroNova.

Sincerely,



Gregory A. Woods
President and Chief Executive Officer

FINANCIAL HIGHLIGHTS

(\$ in millions, except share, per share and percentage amounts)	Years ended January 31,		
	2017	2016	2015
BOOKINGS	97.8	102.3	88.3
REVENUE	98.4	94.7	88.3
GROSS PROFIT	39.5	38.2	37.0
GROSS PROFIT MARGIN	40.1%	40.3%	41.9%
OPERATING INCOME	6.3	5.9	7.2
OPERATING MARGIN	6.4%	6.3%	8.2%
NET INCOME	4.2	4.5	4.7
NET INCOME PER SHARE – DILUTED	0.56	0.61	0.60
WEIGHTED AVERAGE NUMBER OF SHARES OUTSTANDING – DILUTED	7.6	7.5	7.8
CASH DIVIDENDS PER SHARE	0.28	0.28	0.28
CASH & MARKETABLE SECURITIES	24.8	20.4	23.1
FREE CASH FLOW (Non-GAAP) ²	5.7	4.7	(0.8)
BOOK VALUE PER COMMON SHARE ¹	9.50	9.18	8.76

¹Based on the number of shares outstanding at each year end.

²Free Cash Flow is a Non-GAAP measure and is calculated as follows:

	<u>January 31, 2017</u>	<u>January 31, 2016</u>	<u>January 31, 2015</u>
Net Cash Provided by Operating Activities	\$ 6.9	\$ 7.7	\$ 1.4
Less: Capital Expenditures	<u>(1.2)</u>	<u>(3.0)</u>	<u>(2.2)</u>
Free Cash Flow (Non-GAAP)	<u>\$ 5.7</u>	<u>\$ 4.7</u>	<u>\$ (0.8)</u>

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended January 31, 2017

OR

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

For the transition period from _____ to _____

Commission file number 0-13200

AstroNova, Inc.

(Exact name of registrant as specified in its charter)

Rhode Island

(State or other jurisdiction of
incorporation or organization)

05-0318215

(I.R.S. Employer Identification No.)

**600 East Greenwich Avenue,
West Warwick, Rhode Island**

(Address of principal executive offices)

02893

(Zip Code)

Registrant's telephone number, including area code: (401) 828-4000

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

Title of each class

Name of each exchange
on which registered

Common Stock, \$.05 Par Value

NASDAQ Global 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 Website, 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 checkmark if disclosure of delinquent filers pursuant to Item 405 of regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statement 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.

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

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

The aggregate market value of the registrant's voting common equity held by non-affiliates at July 29, 2016 was approximately \$85,985,000 based on the closing price on the Nasdaq Global Market on that date.

As of March 24, 2017 there were 7,525,046 shares of Common Stock (par value \$0.05 per share) of the registrant outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's definitive Proxy Statement for the 2017 Annual Meeting of Shareholders are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated.

ASTRONOVA, INC.
FORM 10-K ANNUAL REPORT
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ASTRONOVA, INC.

Forward-Looking Statements

Information included in this Annual Report on Form 10-K may contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are not statements of historical fact, but rather reflect our current expectations concerning future events and results. We generally use the words “believes,” “expects,” “intends,” “plans,” “anticipates,” “likely,” “continues,” “may,” “will,” and similar expressions to identify forward-looking statements. Such forward-looking statements, including those concerning our expectations, involve risks, uncertainties and other factors, some of which are beyond our control, which may cause our actual results, performance or achievements to be materially different from those expressed or implied by such forward-looking statements. These risks, uncertainties and factors include, but are not limited to, those factors set forth in this Annual Report on Form 10-K under “Item 1A. Risk Factors.” We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. The reader is cautioned not to unduly rely on such forward-looking statements when evaluating the information presented in this Annual Report on Form 10-K.

PART I

Item 1. Business

General

Unless otherwise indicated, references to “AstroNova,” the “Company,” “we,” “our,” and “us” in this Annual Report on Form 10-K refer to AstroNova, Inc. and its consolidated subsidiaries.

AstroNova designs, develops, manufactures and distributes a broad range of specialty printers and data acquisition and analysis systems, including both hardware and software, which incorporate advanced technologies in order to acquire, store, analyze, and present data in multiple formats. Target markets for hardware and software products of the Company include aerospace, apparel, automotive, avionics, chemicals, computer peripherals, communications, distribution, food and beverage, general manufacturing, packaging and transportation.

The Company’s products are distributed through its own sales force and authorized dealers in the United States. We sell to customers outside of the United States primarily through our branch offices in Canada, Europe and Asia as well as through independent dealers and representatives. Approximately 30% of the Company’s sales in fiscal 2017 were to customers located outside the United States.

We operate the business through two operating segments, Product Identification (previously known as the QuickLabel segment) and Test & Measurement (T&M). Financial information by business segment and geographic area appears in Note 13 to our audited consolidated financial statements included elsewhere in this report.

On June 19, 2015, we completed the asset purchase of the aerospace printer product line from Rugged Information Technology Equipment Corporation (RITEC). Our aerospace printer product line is part of the T&M product group and is reported as part of the T&M segment. We began shipment of the RITEC products in the third quarter of fiscal 2016. Refer to Note 2, “Acquisition,” in our audited consolidated financial statements included elsewhere in this report.

On February 1, 2017, AstroNova completed its acquisition of TrojanLabel ApS (TrojanLabel) a European manufacturer of digital color label presses and specialty printing systems for a broad range of end markets. TrojanLabel will be reported as part of our Product Identification segment beginning with the first quarter of fiscal year 2018. Refer to Note 20, “Subsequent Event,” in our audited consolidated financial statements included elsewhere in this report.

The following description of our business should be read in conjunction with “Management’s Discussion and Analysis of Financial Conditions and Results of Operations” on pages 17 through 27 of this Annual Report on Form 10-K.

Description of Business

Product Overview

AstroNova leverages its expertise in data visualization technologies to design, manufacture and market specialty printing systems, test and measurement systems and related services for select growing markets on a global basis. The business consists of two segments, Product Identification, which includes specialty printing systems sold under the brand name QuickLabel® and Test & Measurement (T&M), which includes test and measurement systems sold under the AstroNova™ brand name. Refer to Note 13, “Nature of Operations, Segment Reporting and Geographical Information,” in our audited consolidated financial statements elsewhere in this report for financial information regarding the Company’s segments.

Products sold under the QuickLabel brand are used in industrial and commercial product packaging, branding and labeling applications to digitally print custom labels and corresponding visual content on demand. Products sold under the AstroNova brand acquire and record visual and electronic signal data from local and networked data streams and sensors. The recorded data is processed and analyzed and then stored and presented in various visual output formats. In the aerospace market, the Company has a long history of using its data visualization technologies to provide high-resolution airborne printers.

Product Identification

QuickLabel brand products include tabletop and work cell-ready digital color label printers and specialty OEM printing systems as well as a full line of consumables including labels, tags, inks, toner and thermal transfer ribbons. In addition, the Product Identification segment sells special software used to design labels and print them on an automated basis and also provides training and support on a worldwide basis via highly trained service technicians.

Through the QuickLabel line, our Product Identification segment offers a broad range of entry-level, mid-range, and high-performance digital label printers, providing customers a continuous path to upgrade to new labeling solutions designed, manufactured and sold by the Company. Product Identification segment products are primarily sold to manufacturers, processors, and retailers who label products on a short-run basis. QuickLabel’s customers benefit from the efficiency, flexibility and cost-savings of digitally printing their own labels on-site and on-demand. Industry segments that commonly benefit from short-run label printing include chemicals, cosmetics, food and beverage, medical products, and pharmaceuticals, among many others.

Current QuickLabel models include the Kiaro! family of high-speed inkjet color label printers, the QL-111 industrial color label printer and the QL-800 wide format color label printer, as well as a family of barcode printers.

T&M

Products sold under the AstroNova T&M brand acquire and record visual and electronic signal data from local and networked data streams and sensors. The recorded data is processed and analyzed and then stored and presented in various visual output formats. The Company supplies a range of products and services that include hardware, software and consumables to customers who are in a variety of industries.

Our T&M products include the Daxus® portable data acquisition system, TMX® high-speed data acquisition system, DDX100 SmartCorder® portable data acquisition system, EVX multi-channel chart recording system, ToughWriter®, Miltope-brand and RITEC-brand airborne printers and ToughSwitch® ruggedized Ethernet switches.

AstroNova airborne printers are used in the flight deck and in the cabin of military, commercial and business aircraft to print hard copies of data required for the safe and efficient operation of aircraft, including navigation maps, arrival and departure procedures, flight itineraries, weather maps, performance data, passenger data, and various air traffic control data. ToughSwitch Ethernet switches are used in military aircraft and military vehicles to connect multiple computers or Ethernet devices. The airborne printers and Ethernet switches are ruggedized to comply with rigorous military and commercial flightworthiness standards for operation under extreme environmental conditions. The Company is currently furnishing ToughWriter airborne printers for numerous aircraft made by Airbus, Boeing, Embraer, Bombardier, Lockheed, Gulfstream and others.

The Company's family of portable data recorders is used in research and development (R&D) and maintenance applications in aerospace and defense, energy discovery and production operations, rapid rail, automotive, and a variety of other transportation and industrial applications. The TMX data acquisition system is designed for data capture of long-term testing where the ability to monitor high channel counts and view a wide variety of input signals, including time-stamped and synchronized video capture data and audio notation is important. The Daxus and DDX 100 SmartCorder are both powerful instruments designed for portability and ease of use in facilities maintenance applications, field work, test cells and transportation. Daxus and DDX100 SmartCorder can be linked to increase channel count and can also be networked for distributed data collection.

Technology

Our core technologies are data visualization technologies that relate to (1) acquiring data, (2) conditioning the data, (3) displaying the data on hard copy, monitor or electronic storage media, and (4) analyzing the data.

Patents and Copyrights

We hold a number of product patents in the United States and in foreign countries. We rely on a combination of copyright, patent, trademark and trade secret laws in the United States and other jurisdictions to protect our technology and brand name. While we consider our intellectual property to be important to the operation of our business, we do not believe that any existing patent, license, trademark or other intellectual property right is of such importance that its loss or termination would have a material adverse effect on the Company's business taken as a whole.

Manufacturing and Supplies

We manufacture many of the products that we design and sell. Raw materials and supplies are typically available from a wide variety of sources. We manufacture most of the sub-assemblies and parts in-house including printed circuit board assemblies, harnesses, machined parts, and general final assembly. Many parts are standard electronic items available from multiple sources. Other parts are designed by us and manufactured by outside vendors. There are a few parts that are sole source, but these parts could be sourced elsewhere with appropriate changes in the design of our product.

Product Development

We maintain an active program of product research and development. During fiscal 2017, 2016 and 2015, we spent \$6.3 million, \$6.9 million and \$5.8 million, respectively, on Company-sponsored product development. We are committed to continuous product development as essential to our organic growth and expect to continue our focus on research and development efforts in fiscal 2018 and beyond.

Marketing and Competition

The Company competes worldwide in multiple markets. In the specialty printing field, we believe we are a market leader in tabletop color label printing technology and in aerospace printers. In the data acquisition area, we believe that we are one of the leaders in portable high speed data acquisition systems.

We retain a leadership position by virtue of proprietary technology, product reputation, delivery, technical assistance, and service to customers. The number of competitors varies by product line. Our management believes that we have a market leadership position in many of the markets we serve. Key competitive factors vary among our product lines, but include technology, quality, service and support, distribution network, and breadth of product and service offerings.

Our products are sold by direct field salespersons as well as independent dealers and representatives. In the United States, the Company has factory-trained direct field salespeople located in major cities from coast to coast specializing in either Product Identification or AstroNova T&M products. Additionally, we have direct field sales or service centers in Canada, China, France, Germany, Mexico, Southeast Asia and the United Kingdom staffed by our own employees, some of whom are third party contractors. In the rest of the world, we utilize approximately 90 independent dealers and representatives selling and marketing our products in 57 countries.

No single customer accounted for 10% or more of our net revenue in either of the last three fiscal years.

International Sales

In fiscal 2017, 2016 and 2015, revenue from customers in various geographic areas outside the United States, primarily in Canada and Western Europe, amounted to \$28.6 million, \$26.4 million and \$26.8 million, respectively. Refer to Note 13, "Nature of Operations, Segment Reporting and Geographical Information," in our audited consolidated financial statements elsewhere in this report for further financial information by geographic areas.

Order Backlog

Our backlog varies regularly. It consists of a blend of orders for end-user customers as well as original equipment manufacturer customers. Manufacturing is geared to forecasted demands and applies a rapid turn cycle to meet customer expectations. Accordingly, the amount of order backlog may not indicate future sales trends. Backlog at January 31, 2017, 2016 and 2015 was \$17.6 million, \$18.2 million and \$18.3 million, respectively.

Employees

As of January 31, 2017, we employed 312 team members. We are generally able to satisfy our employment requirements. No employees are represented by a union. We believe that employee relations are good.

Other Information

The Company's business is not seasonal in nature. However, our revenue is impacted by the size of certain individual transactions, which can cause fluctuations in revenue from quarter to quarter.

Available Information

We make available on our website (www.astronovainc.com) the Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and, if applicable, amendments to those reports filed or furnished pursuant to Sections 13(a) or 15(d) of the Securities Exchange Act of 1934 as soon as reasonably practicable after the Company electronically files such material with, or furnishes it to, the Securities and Exchange Commission (SEC). These filings are also accessible on the SEC's website at <http://www.sec.gov>.

Item 1A. Risk Factors

The following risk factors should be carefully considered in evaluating AstroNova, because such factors may have a significant impact on our business, operating results, liquidity and financial condition. As a result of

the risk factors set forth below, actual results could differ materially from those projected in any forward-looking statements. Additional risks and uncertainties not presently known to us, or that we currently consider to be immaterial, may also impact our business operations.

AstroNova's operating results and financial condition could be harmed if the markets into which we sell our products decline or do not grow as anticipated.

Any decline in our customers' markets or in their general economic conditions would likely result in a reduction in demand for our products. For example, although we have continued to experience measured progress, as sales have increased steadily from prior years, we are still affected by the continued global economic uncertainty. Some of our customers may be reluctant to make capital equipment purchases or may defer certain of these purchases to future quarters. Some of our customers may also limit consumable product purchases to quantities necessary to satisfy immediate needs with no provisions to stock supplies for future use. Also, if our customers' markets decline, we may not be able to collect on outstanding amounts due to us. Such declines could harm our results of operations, financial position and cash flows and could limit our ability to continue to remain profitable.

AstroNova's future revenue growth depends on our ability to develop and introduce new products and services on a timely basis and achieve market acceptance of these new products and services.

The markets for our products are characterized by rapidly changing technologies and accelerating product introduction cycles. Our future success depends largely upon our ability to address the rapidly changing needs of our customers by developing and supplying high-quality, cost-effective products, product enhancements and services on a timely basis and by keeping pace with technological developments and emerging industry standards. The success of our new products will also depend on our ability to differentiate our offerings from our competitors' offerings, price our products competitively, anticipate our competitors' development of new products, and maintain high levels of product quality and reliability. AstroNova spends a significant amount of time and effort related to the development of our airborne and color printer products as well as our Test and Measurement data recorder products. Failure to further develop any of our new products and their related markets as anticipated could adversely affect our future revenue growth and operating results.

As we introduce new or enhanced products, we must also successfully manage the transition from older products to minimize disruption in customers' ordering patterns, avoid excessive levels of older product inventories and provide sufficient supplies of new products to meet customer demands. The introduction of new or enhanced products may shorten the life cycle of our existing products, or replace sales of some of our current products, thereby offsetting the benefit of even a successful product introduction and may cause customers to defer purchasing existing products in anticipation of the new products. Additionally, when we introduce new or enhanced products, we face numerous risks relating to product transitions, including the inability to accurately forecast demand, manage excess and obsolete inventories, address new or higher product cost structures, and manage different sales and support requirements due to the type or complexity of the new products. Any customer uncertainty regarding the timeline for rolling out new products or AstroNova's plans for future support of existing products may cause customers to delay purchase decisions or purchase competing products which would adversely affect our business and operating results.

AstroNova faces significant competition, and our failure to compete successfully could adversely affect our results of operations and financial condition.

We operate in an environment of significant competition, driven by rapid technological advances, evolving industry standards, frequent new product introductions and the demands of customers to become more efficient. Our competitors range from large international companies to relatively small firms. We compete on the basis of technology, performance, price, quality, reliability, brand, distribution and customer service and support. Our success in future performance is largely dependent upon our ability to compete successfully in the markets we

currently serve and to expand into additional market segments. Additionally, current competitors or new market entrants may develop new products with features that could adversely affect the competitive position of our products. To remain competitive, we must develop new products, services and applications and periodically enhance our existing offerings. If we are unable to compete successfully, we could lose market share and important customers to our competitors which could materially adversely affect our business, results of operations and financial position.

AstroNova is dependent upon contract manufacturers for some of our products. If these manufacturers do not meet our requirements, either in volume or quality, then we could be materially harmed.

We subcontract the manufacturing and assembly of certain of our products to independent third parties at facilities located in various countries. Relying on subcontractors involves a number of significant risks, including:

- Limited control over the manufacturing process;
- Potential absence of adequate production capacity;
- Potential delays in production lead times;
- Unavailability of certain process technologies; and
- Reduced control over delivery schedules, manufacturing yields, quality and costs.

If one of our significant subcontractors becomes unable or unwilling to continue to manufacture these products in required volumes or fails to meet our quality standards, we will have to identify qualified alternate subcontractors or we will have to take over the manufacturing ourselves. Additional qualified subcontractors may not be available, or may not be available on a timely or cost competitive basis. Any interruption in the supply or increase in the cost of the products manufactured by third party subcontractors or failure of a subcontractor to meet quality standards could have a material adverse effect on our business, operating results and financial condition.

For certain components, assembled products and consumables, AstroNova is dependent upon single or limited source suppliers. If these suppliers do not meet demand, either in volume or quality, then we could be materially harmed.

Although we use standard parts and components for our products where possible, we purchase certain components, assembled products and consumables used in the manufacture of our products from a single source or limited supplier sources. If the supply of a key component, assembled products or certain consumables were to be delayed or curtailed or, in the event a key manufacturing or sole vendor delays shipment of such components or assembled products, our ability to ship products in desired quantities and in a timely manner would be adversely affected. Our business, results of operations and financial position could also be adversely affected, depending on the time required to obtain sufficient quantities from the original source or, if possible, to identify and obtain sufficient quantities from an alternative source. Additionally, if any single or limited source supplier becomes unable or unwilling to continue to supply these components, assembled products or consumables in required volumes, we will have to identify and qualify acceptable replacements or redesign our products with different components. Alternative sources may not be available, or product redesign may not be feasible on a timely basis. Any interruption in the supply of or increase in the cost of the components, assembled products and consumables provided by single or limited source suppliers could have a material adverse effect on our business, operating results and financial condition.

Any future action by the U.S. Congress lowering the federal corporate income tax rate, and/or limiting deductions and credits, and/or eliminating the federal corporate alternative minimum tax could result in the reduction of our deferred tax asset and a corresponding charge against earnings.

The net deferred tax asset reported on our balance sheet represents the net amount of income taxes expected to be received upon the reversal of temporary differences between the bases of assets and liabilities as measured

by enacted tax laws, and their bases as reported in the financial statements. As of January 31, 2017, the Company's net deferred tax asset was computed using the federal statutory rate of 34%.

The President of the United States and members of Congress have announced plans to lower the federal corporate income tax rate from its current level of 35% and to eliminate the corporate alternative minimum tax. If these plans ultimately result in the enactment of new laws lowering the corporate income tax rate and/or eliminating the corporate alternative minimum tax, our net deferred tax asset would be re-measured resulting in a reduction of the deferred tax asset in the period of the law change and a corresponding charge against earnings.

The decision by British voters to exit the European Union may negatively impact our operations.

The June 2016 referendum by British voters to exit the European Union ("Brexit") adversely impacted global markets and resulted in a sharp decline in the value of the British pound, as compared to the U.S. dollar and other currencies. As the U.K. negotiates its exit from the European Union, volatility in exchange rates and in U.K. interest rates may continue. In the near term, a weaker British pound compared to the U.S. dollar during a reporting period causes local currency results of our U.K. operations to be translated into fewer U.S. dollars; a weaker British pound compared to other currencies increases the cost of goods imported into our U.K. operations and may decrease the profitability of our U.K. operations; and a higher U.K. interest rate may have a dampening effect on the U.K. economy. In the longer term, any impact from Brexit on our U.K. operations will depend, in part, on the outcome of tariff, trade, regulatory and other negotiations.

AstroNova has significant inventories on hand.

We maintain a significant amount of inventory. Although we have provided an allowance for slow-moving and obsolete inventory, any significant unanticipated changes in future product demand or market conditions, including obsolescence or the uncertainty in the global market, could have an impact on the value of inventory and adversely impact our business, operating results and financial condition.

Compliance with rules governing "conflict minerals" could adversely affect the availability of certain product components and our costs and results of operations could be materially harmed.

SEC rules require disclosures regarding the use of "conflict minerals" mined from the Democratic Republic of the Congo and adjoining countries necessary to the functionality or production of products manufactured or contracted to be manufactured. We have determined that we use gold, tin and tantalum, each of which are considered "conflict minerals" under the SEC rules, as they occur in electronic components supplied to us in the manufacture of our products. Because of this finding, we are required to conduct inquiries designed to determine whether any of the conflict minerals contained in our products originated or may have originated in the conflict region or come from recycled or scrap sources. There are costs associated with complying with these disclosure requirements, including performing due diligence in regards to the source of any conflict minerals used in our products, in addition to the cost of remediation or other changes to products, processes or services of supplies that may be necessary as a consequence of such verification activities. As we use contract manufacturers for some of our products, we may not be able to sufficiently verify the origins of the relevant minerals used in our products through the due diligence procedures that we implement. We may also encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free, which could place us at a competitive disadvantage if we are unable to do so. As a result, our business, operating results and financial condition could be harmed.

Economic, political and other risks associated with international sales and operations could adversely affect AstroNova's results of operations and financial position.

Because we sell our products worldwide, our business is subject to risks associated with doing business internationally. Revenue from international operations, which includes both direct and indirect sales to customers outside the U.S., accounted for approximately 30% of our total revenue for fiscal year 2017, and we anticipate

that international sales will continue to account for a significant portion of our revenue. In addition, we have employees, suppliers, job functions and facilities located outside the U.S. Accordingly, our business, operating results and financial condition could be harmed by a variety of factors, including:

- Interruption to transportation flows for delivery of parts to us and finished goods to our customers;
- Customer and vendor financial stability;
- Fluctuations in foreign currency exchange rates;
- Changes in a specific country's or region's environment including political, economic, monetary, regulatory or other conditions;
- Trade protection measures and import or export licensing requirements;
- Negative consequences from changes in tax laws;
- Difficulty in managing and overseeing operations that are distant and remote from corporate headquarters;
- Difficulty in obtaining and maintaining adequate staffing;
- Differing labor regulations;
- Differing protection of intellectual property;
- Unexpected changes in regulatory requirements; and
- Geopolitical turmoil, including terrorism and war.

AstroNova's profitability is dependent upon our ability to obtain adequate pricing for our products and to control our cost structure.

Our success depends on our ability to obtain adequate pricing for our products and services which provides a reasonable return to our shareholders. Depending on competitive market factors, future prices we obtain for our products and services may decline from previous levels. In addition, pricing actions to offset the effect of currency devaluations may not prove sufficient to offset further devaluations or may not hold in the face of customer resistance and/or competition. If we are unable to obtain adequate pricing for our products and services, our results of operations and financial position could be materially adversely affected.

We are continually reviewing our operations with a view towards reducing our cost structure, including but not limited to downsizing our employee base, exiting certain businesses, improving process and system efficiencies and outsourcing some internal functions. From time to time we also engage in restructuring actions to reduce our cost structure. If we are unable to maintain process and systems changes resulting from cost reduction and prior restructuring actions, our results of operations and financial position could be materially adversely affected.

AstroNova could incur liabilities as a result of installed product failures due to design or manufacturing defects.

AstroNova has incurred and could incur additional liabilities as a result of installed product failures due to design or manufacturing defects. Our products may have defects despite testing internally or by current or potential customers. These defects could result in among other things, a delay in recognition of sales, loss of sales, loss of market share, failure to achieve market acceptance or substantial damage to our reputation. We could be subject to material claims by customers, and may incur substantial expenses to correct any product defects.

In addition, through our acquisitions, we have assumed, and may in the future assume, liabilities related to products previously developed by an acquired company that have not been subjected to the same level of product development, testing and quality control processes used by us, and may have known or undetected errors.

Some types of errors may not be detected until the product is installed in a user environment. This may cause AstroNova to incur significant warranty and repair or re-engineering costs, may divert the attention of engineering personnel from product development efforts, and may cause significant customer relations problems such as reputational problems with customers resulting in increased costs and lower profitability.

AstroNova could experience disruptions in, or breach in security of our information technology system or fail to implement new systems or software successfully which could harm our business and adversely affect our results of operations.

We employ information technology systems to support our business. Any security breaches or other disruptions to our information technology infrastructure could interfere with operations, compromise our information and that of our customers and suppliers, and expose us to liability which could adversely impact our business and reputation. In the ordinary course of business, we rely on information technology networks and systems, some of which are managed by third parties, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities. We also collect and store certain data, including proprietary business information, and may have access to confidential or personal information that is subject to privacy and security laws, regulations and customer-imposed controls. While we continually work to safeguard our systems and mitigate potential risks, there is no assurance that such actions will be sufficient to prevent cyber attacks or security breaches and our information technology networks and infrastructure may still be vulnerable to damage, disruptions or shutdowns due to attack by hackers or breaches, employee error, power outages, computer viruses, telecommunication or utility failures, systems failures, natural disasters, catastrophic events or other unforeseen events. While we have experienced, and expect to continue to experience, these types of threats to our information technology networks and infrastructure, none of them to date has had a material impact. Any such events could result in legal claims or proceedings, liability or penalties under privacy laws, disruption in operations, and damage to the Company's brand and reputation, which could adversely affect our business, operating results and financial condition.

AstroNova is subject to laws and regulations; failure to address or comply with these laws and regulations could harm our business and adversely affect our results of operations.

Our operations are subject to laws, rules, regulations, including environmental regulations, government policies and other requirements in each of the jurisdictions in which we conduct business. Changes in laws, rules, regulations, policies or requirements could result in the need to modify our products and could affect the demand for our products, which may have an adverse impact on our future operating results. In addition, we must comply with regulations restricting our ability to include lead and certain other substances in our products. If we do not comply with applicable laws, rules and regulations we could be subject to costs and liabilities and our business may be adversely impacted.

Certain of our products require certifications by regulators or standards organizations, and our failure to obtain or maintain such certifications could negatively impact our business.

In certain industries and for certain products, such as those used in aircraft, we must obtain certifications for our products by regulators or standards organizations. If we fail to obtain required certifications for our products, or if we fail to maintain such certifications on our products after they have been certified, our business, financial condition, results of operations and cash flows could be materially and adversely affected.

Our operations are subject to anti-corruption laws, including the U.S. Foreign Corrupt Practices Act, and any determination that the Company or any of its subsidiaries has violated the Foreign Corrupt Practices Act could have a material adverse effect on our business.

The U.S. Foreign Corrupt Practices Act (FCPA), the UK Bribery Act and similar worldwide anti-corruption laws generally prohibit companies and their intermediaries from making improper payments to government officials and others for the purpose of obtaining or retaining business. Our internal policies mandate compliance

with these anti-corruption laws. We operate in parts of the world that have experienced governmental corruption to some degree, and in certain circumstances, strict compliance with anti-corruption laws may conflict with local customs and practices. Despite our training and compliance programs, there can be no assurance that our internal control policies and procedures will protect us from reckless or criminal acts committed by those of our employees or agents who violate our policies.

Certain of our operations and products are subject to environmental, health and safety laws and regulations, which may result in substantial compliance costs or otherwise adversely affect our business.

Our operations are subject to numerous federal, state, local and foreign laws and regulations relating to protection of the environment, including those that impose limitations on the discharge of pollutants into the air and water, establish standards for the use, treatment, storage and disposal of solid and hazardous materials and wastes, and govern the cleanup of contaminated sites. We have used and continue to use various substances in our products and manufacturing operations, and have generated and continue to generate wastes, which have been or may be deemed to be hazardous or dangerous. As such, our business is subject to and may be materially and adversely affected by compliance obligations and other liabilities under environmental, health and safety laws and regulations. These laws and regulations affect ongoing operations and require capital costs and operating expenditures in order to achieve and maintain compliance.

Adverse conditions in the global banking industry and credit markets may adversely impact the value of our investments or impair our liquidity.

At the end of fiscal 2017, we had approximately \$24.8 million of cash, cash equivalents and investments held for sale. Our cash and cash equivalents are held in a mix of money market funds, bank demand deposit accounts and foreign bank accounts. Disruptions in the financial markets may, in some cases, result in an inability to access assets such as money market funds that traditionally have been viewed as highly liquid. Any failure of our counterparty financial institutions or funds in which we have invested may adversely impact our cash and cash equivalent positions and, in turn, our financial position. Our investment portfolio consists of state and municipal securities with various maturity dates, all of which have a credit rating of AA or above at the original purchase date; however, defaults by the issuers of any of these securities may result in an adverse impact on our portfolio.

The agreements governing our indebtedness subject us to various restrictions that may limit our ability to pursue business opportunities.

On February 28, 2017, we entered into a secured credit facility with Bank of America, N.A., as lender, pursuant to which we borrowed a term loan in the amount of \$9.2 million and established a \$10.0 million revolving line of credit. All amounts borrowed pursuant to the credit facility are required to be paid in full no later than January 31, 2022.

The agreements governing our secured credit facility subject us to various restrictions on our ability to engage in certain activities, including, among other things, our ability to:

- Incur future indebtedness;
- Place liens on assets;
- Pay dividends or distributions on our and our subsidiaries' capital stock;
- Repurchase or acquire our capital stock;
- Conduct mergers or acquisitions;
- Sell assets; and/or
- Alter our or our subsidiaries' capital structure, to make investments and loans, to change the nature of their business, and to prepay subordinated indebtedness.

These restrictions may limit or restrict our cash flow and our ability to pursue business opportunities or strategies that we would otherwise consider to be in our best interests.

AstroNova may not realize the anticipated benefits of past or future acquisitions, divestitures and strategic partnerships, and integration of acquired companies or divestiture of businesses may negatively impact AstroNova's overall business.

We have made strategic investments in other companies, products and technologies, including our June 2015 acquisition of the aerospace printer business from RITEC. We may continue to identify and pursue acquisitions of complementary companies and strategic assets, such as customer bases, products and technology. However, there can be no assurance that we will be able to identify suitable acquisition opportunities. In any acquisition that we complete we cannot be certain that:

- We will successfully integrate the operations of the acquired business with our own;
- All the benefits expected from such integration will be realized;
- Management's attention will not be diverted or divided, to the detriment of current operations;
- Amortization of acquired intangible assets or possible impairment of acquired intangibles will not have a negative effect on operating results or other aspects of our business;
- Delays or unexpected costs related to the acquisition will not have a detrimental effect on our business, operating results and financial condition;
- Customer dissatisfaction with, or performance problems at, an acquired company will not have an adverse effect on our reputation; and
- Respective operations, management and personnel will be compatible.

In certain instances as permitted by applicable law and NASDAQ rules, acquisitions may be consummated without seeking and obtaining shareholder approval, in which case shareholders will not have an opportunity to consider and vote upon the merits of such an acquisition. Although we will endeavor to evaluate the risks inherent in a particular acquisition, there can be no assurance that we will properly ascertain or assess such risks.

We may also divest certain businesses from time to time. Divestitures will likely involve risks, such as difficulty splitting up businesses, distracting employees, potential loss of revenue and negatively impacting margins, and potentially disrupting customer relationships. A successful divestiture depends on various factors, including our ability to:

- Effectively transfer assets, liabilities, contracts, facilities and employees to the purchaser;
- Identify and separate the intellectual property to be divested from the intellectual property that we wish to keep; and
- Reduce fixed costs previously associated with the divested assets or business.

All of these efforts require varying levels of management resources, which may divert our attention from other business operations. Further, if market conditions or other factors lead us to change our strategic direction, we may not realize the expected value from such transactions.

If we are not able to successfully integrate or divest businesses, products, technologies or personnel that we acquire or divest, or able to realize expected benefits of our acquisitions, divestitures or strategic partnerships, AstroNova's business, results of operations and financial condition could be adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The following table sets forth information regarding the Company's principal owned properties, all of which are included in the consolidated balance sheet appearing elsewhere in this annual report.

<u>Location</u>	<u>Approximate Square Footage</u>	<u>Principal Use</u>
West Warwick, Rhode Island, USA	135,500	Corporate headquarters, research and development, manufacturing, sales and service

AstroNova also leases facilities in various other locations. The following information pertains to each location:

<u>Location</u>	<u>Approximate Square Footage</u>	<u>Principal Use</u>
Rodgau, Germany	8,300	Manufacturing, sales and service
Brossard, Quebec, Canada	4,500	Manufacturing, sales and service
Elancourt, France	4,150	Sales and service
Copenhagen, Denmark	2,434	Manufacturing, sales and service (T&M only)
Maidenhead, England	1,000	Sales and service
Schaumburg, Illinois, USA	630	Sales (Product Identification only)
Shanghai, China	170	Sales (T&M only)
Newport Beach, California, USA	150	Sales (Product Identification only)
Mexico City, Mexico	65	Sales (Product Identification only)

We believe our facilities are well maintained, in good operating condition and generally adequate to meet our needs for the foreseeable future.

Item 3. Legal Proceedings

There are no pending or threatened legal proceedings against the Company believed to be material to the financial position or results of operations of the Company.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

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

AstroNova common stock trades on the NASDAQ Global Market under the symbol "ALOT." The following table sets forth the range of high and low sales prices and dividend data, as furnished by NASDAQ, for each quarter in the years ended January 31:

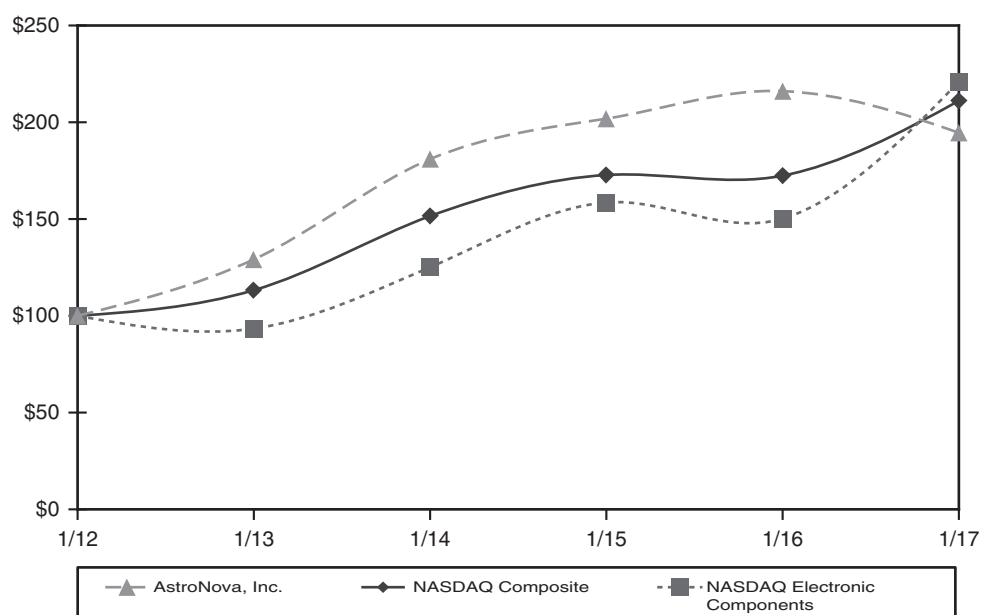
	High	Low	Dividends Per Share
2017			
First Quarter	\$15.69	\$11.18	\$0.07
Second Quarter	\$16.17	\$13.49	\$0.07
Third Quarter	\$16.41	\$14.40	\$0.07
Fourth Quarter	\$14.60	\$12.50	\$0.07
2016			
First Quarter	\$15.15	\$12.43	\$0.07
Second Quarter	\$15.20	\$13.66	\$0.07
Third Quarter	\$14.25	\$12.00	\$0.07
Fourth Quarter	\$15.94	\$12.68	\$0.07

AstroNova had approximately 288 shareholders of record as of March 24, 2017, which does not reflect shareholders with beneficial ownership in shares held in nominee name.

Stock Performance Graph

The graph below shows a comparison of the cumulative total return on the Company's common stock against the cumulative total returns for the NASDAQ Composite Index and the NASDAQ Electronic Components Index for the period of five fiscal years ended January 31, 2017. The NASDAQ Total Return Composite Index is calculated using all companies trading on the NASDAQ Global Select, NASDAQ Global Market and the NASDAQ Capital Markets. The Index is weighted by the current shares outstanding and assumes dividends are reinvested. The NASDAQ Electronic Components Index, designated as the Company's peer group index, is comprised of companies classified as electronic equipment manufacturers.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among AstroNova, Inc. the NASDAQ Composite
and the NASDAQ Electronic Components Index



	Cumulative Total Returns*					
	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
AstroNova, Inc.	\$100.00	\$129.33	\$180.99	\$202.05	\$216.33	\$194.83
NASDAQ Composite	\$100.00	\$113.29	\$151.56	\$172.90	\$172.62	\$211.07
NASDAQ Electronic Components	\$100.00	\$ 93.49	\$125.28	\$158.72	\$150.27	\$221.02

* \$100 invested on 1/31/12 in stock or index, including reinvestment of dividends.
Fiscal year ending January 31.

Dividend Policy

AstroNova began a program of paying quarterly cash dividends in fiscal 1992 and has paid a dividend for 102 consecutive quarters. During fiscal 2017, 2016 and 2015, we paid a dividend of \$0.07 per share in each quarter and anticipate that we will continue to pay comparable cash dividends on a quarterly basis.

Stock Repurchases

Pursuant to an authorization approved by AstroNova's Board of Directors in August 2011, the Company is currently authorized to repurchase up to 390,000 shares of common stock, subject to any increase or decrease by the Board of Directors at any time. This is an ongoing authorization without any expiration date.

There were no stock repurchases during the quarter ended January 31, 2017.

Item 6. Selected Financial Data

Historical Financial Summary

Income Statement Data

(In thousands, except per share data)

	For the Fiscal Years Ended January 31,				
	2017	2016	2015	2014	2013
Revenue	\$98,448	\$94,658	\$88,347	\$68,592	\$61,224
Gross profit	39,489	38,158	36,977	26,983	23,728
Operating income	6,281	5,934	7,231	1,533	2,926
Income from continuing operations	6,605	6,909	6,932	1,237	2,038
Income from discontinued operations	—	—	—	1,975	8,729
Net income	4,228	4,525	4,662	3,212	10,767
Net income per Common Share—Basic :					
Continuing operations	\$ 0.57	\$ 0.62	\$ 0.61	\$ 0.17	\$ 0.28
Discontinued operations	—	—	—	0.26	1.18
Net income per Common Share – Basic	<u>\$ 0.57</u>	<u>\$ 0.62</u>	<u>\$ 0.61</u>	<u>\$ 0.43</u>	<u>\$ 1.46</u>
Net income per Common Share – Diluted :					
Continuing operations	\$ 0.56	\$ 0.61	\$ 0.60	\$ 0.16	\$ 0.27
Discontinued operations	—	—	—	0.26	1.17
Net income per Common Share—Diluted	<u>\$ 0.56</u>	<u>\$ 0.61</u>	<u>\$ 0.60</u>	<u>\$ 0.42</u>	<u>\$ 1.44</u>
Dividends Declared per Common Share	<u>\$ 0.28</u>	<u>\$ 0.28</u>	<u>\$ 0.28</u>	<u>\$ 0.28</u>	<u>\$ 0.28</u>

Balance Sheet Data

(In thousands)

	As of January 31,				
	2017	2016	2015	2014	2013
Cash and Marketable Securities	\$24,821	\$20,419	\$23,132	\$27,107	\$39,508
Current Assets	61,697	54,514	59,289	65,034	70,122
Total assets	83,665	77,963	74,330	77,964	79,913
Current liabilities	11,985	9,548	9,569	9,892	13,525
Shareholders' equity	70,537	67,373	63,511	66,614	63,837

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview

AstroNova is a multi-national enterprise that leverages its proprietary data visualization technologies to design, develop, manufacture, distribute and service a broad range of products that acquire, store, analyze and present data in multiple formats. The Company organizes its structure around a core set of competencies, including research and development, manufacturing, service, marketing and distribution. It markets and sells its products and services through the following two segments:

- Product Identification (previously QuickLabel) – offers product identification and label printer hardware, software, servicing contracts, and consumable products.
- Test and Measurement Product Group (T&M) – offers a suite of products and services that acquire and record visual and electronic signal data from local and networked data stream and sensors as well as wired and wireless networks. The recorded data is processed and analyzed and then stored and presented in various visual output formats. The T&M segment also includes a line of aerospace printers that are used to print hard copies of data required for the safe and efficient operation of aircraft including navigation maps, arrival and departure procedures, flight itineraries, weather maps,

performance data, passenger data, and various air traffic control data. Aerospace products also include Ethernet switches which are used in military aircraft and military vehicles to connect multiple computers or Ethernet devices.

The Company markets and sells its products and services globally through a diverse distribution structure of direct sales personnel, manufacturers' representatives and authorized dealers that deliver a full complement of branded products and services to customers in our respective markets. Our growth strategy centers on organic growth through product innovation made possible by research and development initiatives, as well as strategic acquisitions that fit into or complement existing core businesses. Research and development activities were funded and expensed by the Company at approximately 6.4% of annual revenue for fiscal 2017. We also continue to invest in sales and marketing initiatives by expanding the existing sales force and using various marketing campaigns to achieve our goals of sales growth and increased profitability notwithstanding today's challenging economic environment.

On June 19, 2015, we completed the asset purchase of the aerospace printer product line from RITEC. AstroNova's aerospace printer product line is part of the T&M product group and is reported as part of the T&M segment. The Company began shipment of the RITEC products in the third quarter fiscal 2016. Refer to Note 2, "Acquisition," in the audited consolidated financial statements included elsewhere in this report.

On February 1, 2017, AstroNova completed its acquisition of TrojanLabel ApS (TrojanLabel), a European manufacturer of digital color label presses and specialty printing systems for a broad range of end markets. TrojanLabel will be reported as part of our Product Identification segment beginning with the first quarter of fiscal year 2018. Refer to Note 20, "Subsequent Event," in our consolidated financial statements included elsewhere in this report.

Results of Operations

Fiscal 2017 compared to Fiscal 2016

The following table presents the revenue of each of the Company's segments, as well as the percentage of total revenue and change from prior year.

(\$ in thousands)

	2017			2016	
	Revenue	As a % of Total Revenue	% Change Over Prior Year	Revenue	As a % of Total Revenue
Product Identification	\$69,862	71.0%	4.1%	\$67,127	70.9%
T&M	28,586	29.0%	3.8%	27,531	29.1%
Total	<u>\$98,448</u>	<u>100.0%</u>	<u>4.0%</u>	<u>\$94,658</u>	<u>100.0%</u>

Net revenue in fiscal 2017 was \$98.4 million, a 4.0% increase compared to prior year revenue of \$94.7 million. Revenue through domestic channels of \$69.9 million was a slight increase compared to prior year domestic revenue of \$68.3 million. International revenue of \$28.6 million increased 8.3% over prior year international revenue of \$26.4 million somewhat as a result of the earlier release of new QuickLabel products. The current year's international revenue includes an unfavorable foreign exchange rate impact of \$0.5 million.

Hardware revenue in fiscal 2017 was \$33.8 million, a 2.9% decrease compared to prior year's revenue of \$34.8 million. Hardware revenue in the Product Identification segment decreased 8.8% compared to prior year due to the anticipation of the introduction of new products in the third quarter of the current year and delayed traction for new products introduced. Hardware revenue in the T&M segment increased slightly to \$22.5 million from \$22.4 million in the prior year, as the overall decline in sales of data recorders was offset by a 6.0% increase in sales of the Aerospace product line due to fulfillment during fiscal 2017 of orders received in previous years.

Revenue from consumables in fiscal 2017 was \$56.2 million, representing an 8.5% increase compared to prior year revenue of \$51.8 million. The increase was primarily attributable to the increase in label and tag product sales, as well as digital color printer supplies in the Product Identification segment. The double-digit increase in sales of T&M's chart paper products also made a contribution to the overall increase in consumable revenue for the current year.

Service and other revenue in fiscal 2017 was \$8.4 million, a 5.1% increase compared to prior year revenue of \$8.1 million as the increase in parts revenue during the year was offset by declines in revenue from repairs service and freight.

The Company achieved gross profit of \$39.5 million for fiscal 2017, reflecting a 3.5% improvement compared to prior year's gross profit of \$38.2 million. The Company's gross profit margin of 40.1% in the current year reflects a decrease from the prior year's gross profit margin of 40.3%. The higher gross profit for the current year compared to the prior year is primarily attributable to increased revenue; the current year's decrease in gross margin is due to product mix and higher manufacturing and period costs.

Operating expenses for the current year were \$33.2 million, representing a 3.1% increase from the prior year's operating expenses of \$32.2 million. Specifically, selling and marketing expenses of \$19.0 million in fiscal 2017 increased 3.9% from prior year's amount of \$18.2 million. Selling and marketing expense for both fiscal 2017 and 2016 represent 19.3% of net revenue. Current year general and administrative (G&A) expenses increased by 12.9% from prior year to \$7.9 million primarily attributable to an increase in professional and outside service fees in fiscal 2017 related to non-recurring costs associated with the TrojanLabel acquisition. The increases in selling, marketing and G&A expenses for the current year were somewhat offset by a decrease in research & development (R&D) costs in fiscal 2017. R&D costs in fiscal 2017 of \$6.3 million decreased 9.1% from \$6.9 million in fiscal 2016, primarily due to a decrease in outside service costs related to the development and integration of the RITEC products. The R&D spending level for fiscal 2017 represents 6.4% of net revenue, a decrease compared to prior year's level of 7.3%.

Other income in fiscal 2017 was \$0.3 million compared to \$1.0 million in the prior year. In addition to interest income, other income in the current year includes a gain on sale of a property we owned in England of \$0.4 million and \$0.1 million related to an amount retained from the RITEC escrow, somewhat offset by \$0.2 million of foreign exchange loss for the year. Other income in fiscal 2016 included \$0.2 million of income recognized from a settlement in an escrow account related to our 2014 acquisition of the aerospace printer line from the Miltope Corporation.

During fiscal 2017 the Company recognized a \$2.4 million income tax expense and had an effective tax rate of 36.0%. Current year income tax expense included a \$0.2 million tax expense related to non-deductible transaction costs for the TrojanLabel acquisition and a \$0.2 million tax expense related to the increase for unrecognized tax benefits. This compares to an income tax expense of \$2.4 million in fiscal 2016 and related effective tax rate of 34.5%. Prior year's income tax expense included a \$0.1 million tax expense related to an increase in valuation allowance.

Net income for fiscal 2017 was \$4.2 million, providing a return of 4.3% on revenue and EPS of \$0.56 per diluted share. On a comparable basis, net income for fiscal 2016 was \$4.5 million, a return on revenue of 4.8% and EPS of \$0.61 per diluted share.

Fiscal 2016 compared to Fiscal 2015

The following table presents the revenue of each of the Company's segments, as well as the percentage of total revenue and change from prior year.

(\$ in thousands)

	2016			2015	
	Revenue	As a % of Total Revenue	% Change Over Prior Year	Revenue	As a % of Total Revenue
Product Identification	\$67,127	70.9%	12.3%	\$59,779	67.7%
T&M	27,531	29.1%	(3.6)%	28,568	32.3%
Total	<u>\$94,658</u>	<u>100.0%</u>	<u>7.1%</u>	<u>\$88,347</u>	<u>100.0%</u>

Revenue in fiscal 2016 was \$94.7 million, a 7.1% increase compared to the prior year's revenue of \$88.3 million. Domestic revenue in fiscal 2016 of \$68.3 million increased 11.1% from the prior year revenue of \$61.5 million. International revenue of \$26.4 million in fiscal 2016 reflects a 1.9% decrease compared to the prior year revenue of \$26.8 million. International revenue for fiscal 2016 included an unfavorable foreign exchange rate impact of \$3.0 million.

Hardware revenue in fiscal 2016 was \$34.8 million, a 10.0% decrease compared to the prior year's revenue of \$38.7 million. Hardware revenue in both the T&M and Product Identification segments contributed to the lower volume of hardware shipments. Fiscal 2016 T&M hardware revenue decreased 8.9% compared to the prior year attributable to the decline in revenue from aerospace printers, as some customers were deferring the shipments of orders to later periods, and the decline in data recorder revenue due to the Company's delay in the release of a new product. Product Identification hardware revenue declined 11.9% in fiscal 2016 compared to the prior year, primarily as a result of lower OEM monochrome and other color printer revenue. These declines in hardware revenue were slightly offset by increases in revenue from T&M's data acquisition product line, as well as an increase in revenue from the Kiaro! series printers in the Product Identification segment.

Revenue from consumables in fiscal 2016 was \$51.8 million, representing an 18.8% increase compared to the prior year revenue of \$43.5 million. The increase was primarily attributable to the double-digit increase in both digital color printer supplies and label and tag product revenue in the Product Identification segment. The increase in consumable product revenue for Kiaro! related products also made a contribution to the overall increase in consumable revenue for the current year.

Service and other revenue in fiscal 2016 was \$8.1 million, a 32.4% increase compared to prior year revenue of \$6.1 million, primarily due to increases in repairs and parts revenue related to the T&M suite of products.

The Company achieved gross profit of \$38.2 million for fiscal 2016, reflecting a 3.2% improvement compared to the prior year's gross profit of \$37.0 million. The Company's gross profit margin of 40.3% in fiscal 2016 reflected a decrease from the prior year's gross profit margin of 41.9%. The higher gross profit for fiscal 2016 compared to the prior year is primarily attributable to increased revenue, while the decrease in gross margin is due to product mix, higher manufacturing costs and lower factory absorption.

Operating expenses for fiscal 2016 were \$32.2 million, representing an 8.3% increase from prior year's operating expenses of \$29.7 million. Selling and marketing expenses in fiscal 2016 remained relatively flat from the prior year at \$18.2 million, representing 19.3% of revenue, compared to \$18.3 million or 20.7% of revenue in the prior year. G&A expenses in fiscal 2016 increased by 24.3% from the prior year to \$7.0 million, primarily due to an increase in stock-based compensation expense, as well as professional fees related to both the Company's name change and branding initiative as well as the costs associated with the acquisition of the RITEC business. R&D expenses in fiscal 2016 increased 19.7% to \$6.9 million compared to fiscal 2015, primarily due to an increase in outside service costs related to the development of new products as well as RITEC transitional R&D costs. The R&D spending level for fiscal 2016 represent 7.3% of net revenue, an increase of 6.6% compared to the prior year level.

Other income in fiscal 2016 was \$1.0 million compared to other expense of \$0.3 million in the prior year. In addition to interest income, the current year other income included \$0.2 million of income recognized from a

settlement in an escrow account related to our 2014 acquisition of the aerospace printer line from Miltope Corporation. Other expense in fiscal 2015 included \$0.3 million write-down of inventory in connection with the 2013 sale of our Grass Technologies Product Group.

During fiscal 2016 the Company recognized \$2.4 million income tax expense and had an effective tax rate of 34.5%. Fiscal 2016 income tax expense included \$0.1 million tax expense related to an increase in the valuation allowance. This compared to an income tax expense of \$2.3 million in fiscal 2015 and related effective tax rate of 32.7%. The effective tax rate for fiscal 2015 was primarily impacted by the domestic production deduction, research and development credits and foreign tax credits.

Net income for fiscal 2016 was \$4.5 million, indicating a return of 4.8% on revenue and EPS of \$0.61 per diluted share and included (a) an after-tax expense of \$0.2 million, equal to \$0.02 per diluted share, related to the Company's rebranding initiatives; (b) an after-tax expense of \$0.7 million, equal to \$0.09 per diluted share, related to non-recurring costs associated with the RITEC acquisition and transition; and (c) an after-tax expense of \$0.4 million, equal to \$0.05 per diluted share, related to the 2016 Long-Term Incentive Plan Share Based Compensation. On a comparable basis, net income for fiscal 2015 was \$4.7 million, indicating a return of 5.3% on revenue and EPS of \$0.60 per diluted share and includes (a) an after-tax expense of \$0.1 million, equal to \$0.02 per diluted share, related to the write-down to market value of the Company's former Rockland facility; (b) an after-tax expense of \$0.1 million, equal to \$0.01 per diluted share, related to costs associated with the repurchase of the Company's common stock from the estate of the Company's founder and former chief executive officer, and (c) an after-tax expense of \$0.2 million, or \$0.02 per diluted share related to a write down of inventory in connection with the sale of our former Grass Technologies Product Group.

Segment Analysis

We report two segments consistent with our product revenue groups: Product Identification and Test & Measurement (T&M). Segment performance is evaluated based on the operating segment's profit before corporate and financial administration expenses.

The following table summarizes selected financial information by segment.

(\$ in thousands)	Revenue			Segment Operating Profit			Segment Operating Profit as a % of Revenue		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Product Identification	\$69,862	\$67,127	\$59,779	\$ 9,821	\$ 9,300	\$ 7,259	14.1%	13.9%	12.1%
T&M	28,586	27,531	28,568	4,399	3,664	5,627	15.4%	13.3%	19.7%
Total	<u>\$98,448</u>	<u>\$94,658</u>	<u>\$88,347</u>	14,220	12,964	12,886	<u>14.4%</u>	<u>13.7%</u>	<u>14.6%</u>
Corporate Expenses				7,939	7,030	5,655			
Operating Income				6,281	5,934	7,231			
Other Income (Expense), Net				324	975	(299)			
Income Before Income Taxes				6,605	6,909	6,932			
Income Tax Provision				2,377	2,384	2,270			
Net Income				<u>\$ 4,228</u>	<u>\$ 4,525</u>	<u>\$ 4,662</u>			

Product Identification

Revenue from the Product Identification segment increased 4.1% in fiscal 2017 with revenue of \$69.9 million compared to revenue of \$67.1 million in the prior year. The current year's revenue reflected the continued growth from the Product Identification consumables products line which posted a 7.1% growth rate over the prior year due to the strong demand for label and tag products as well as digital color printer ink supplies

products. Product Identification current year segment operating profit was \$9.8 million, reflecting a profit margin of 14.1%, a 5.6% increase from prior year segment profit of \$9.3 million and related profit margin of 13.9%. The increase in Product Identification current year segment operating profit and related margin is due to higher revenue and product mix.

Revenue from the Product Identification segment increased 12.3% in fiscal 2016 over fiscal 2015 with revenue of \$67.1 million compared to revenue of \$59.8 million in fiscal 2015. The fiscal 2016 revenue reflected the continued growth from Product Identification consumables products line which posted a 19.5% growth rate over the prior year due to the strong demand for label and tag products as well as digital color printer ink supplies products for the new Kiaro! printers. Product Identification fiscal 2016 segment operating profit was \$9.3 million, reflecting a profit margin of 13.9%, a 28.1% increase from prior year segment profit of \$7.3 million and related profit margin of 12.1%. The increase in Product Identification segment operating profit and related margin was due to higher revenue and product mix.

Test & Measurement

Revenue from the T&M product group was \$28.6 million for fiscal 2017, a 3.8% increase compared to revenue of \$27.5 million in the prior year. The increase is primarily attributable to the increase in revenue of aerospace printer sales due to fulfilment of orders received in previous years. Revenue growth for fiscal 2017 was tempered by lower sales in the data acquisition product line, as well as decreases in parts and repairs revenue during the year. T&M's segment operating profit for the current fiscal year was \$4.4 million which resulted in a 15.4% profit margin compared to the prior year's segment operating profit of \$3.7 million and related operating margin of 13.3%. The higher segment operating profit and related margin were due to product mix.

Revenue from the T&M product group was \$27.5 million for fiscal 2016, a 3.6% decrease compared to revenue of \$28.6 million in fiscal 2015. The decrease was primarily attributable to the decline in revenue from aerospace printers due to certain aerospace customers deferring shipments to later dates. Revenue growth in the data acquisition product line, as well as increases in parts and repairs revenue during the year tempered the lower revenue volume somewhat. T&M's segment operating profit for the 2016 fiscal year was \$3.7 million which resulted in a 13.3% profit margin as compared to the prior year segment operating profit of \$5.6 million and related operating margin of 19.7%. The lower segment operating profit and related margin were due to product mix and higher manufacturing and operating costs associated with the RITEC transaction.

Liquidity and Capital Resources

Based upon our current working capital position, current operating plans and expected business conditions, we expect to fund our short and long-term working capital needs, capital expenditures and acquisition requirements primarily using internal funds, and we believe that cash provided by operations will be sufficient to meet our operating and capital needs for at least the next 12 months.

We may also utilize amounts available under our secured credit facility, as described below, to fund a portion of our capital expenditures, contractual contingent consideration obligations, and future acquisitions.

On February 28, 2017, we entered into a credit agreement with Bank of America, N.A., which provided for a secured credit facility consisting of a \$9.2 million term loan and a \$10.0 million revolving credit facility. No amount has been drawn under the revolving credit facility as of the date of this report. See Note 20, "Subsequent Event," to our audited consolidated financial statements included elsewhere in this annual report for additional information regarding our new secured credit facility.

The term loan bears interest at a rate per annum equal to the LIBOR rate plus a margin that varies within a range of 1.0% to 1.5% based on the Company's consolidated leverage ratio. In connection with our entry into the credit agreement, a subsidiary of the Company entered into a hedging arrangement to manage the variable interest rate risk and currency risk associated with its payments in respect of the term loan. Under these arrangements, payments of principal and interest in respect of approximately \$8.9 million of the principal of the

term loan will be made in Danish Krone, and interest on such principal amount will be payable at a fixed rate of 0.67% per annum for the entire term, subject only to potential increases of 0.25% or 0.50% per annum based on the Company's consolidated leverage ratio.

Amounts borrowed under the revolving credit facility bear interest at a rate per annum equal to, at the Company's option, either (a) the LIBOR rate, plus a margin that varies within a range of 1.0% to 1.5% based on the Company's consolidated leverage ratio, or (b) a fluctuating reference rate equal to the highest of (i) the federal funds rate plus 0.50%, (ii) Bank of America's publicly-announced prime rate or (iii) the LIBOR rate plus 1.00%, plus a margin that varies within a range of 0.0% to 0.5% based on the Company's consolidated leverage ratio. In addition to certain other fees and expenses that the Company is required to pay to the Lender, the Company is required to pay a commitment fee on the undrawn portion of the revolving credit facility at the rate of 0.25% per annum.

The statements of cash flows for the years ended January 31, 2017, 2016 and 2015 are included on page 42 of this Form 10-K. Net cash provided by operating activities was \$7.0 million in fiscal 2017 compared to net cash provided by operating activities of \$7.7 million in the previous year. The decrease in net cash from operations for the current year is primarily due to increased net income adjusted for non-cash effects, offset by increased cash used for working capital. The combination of changes in accounts receivable, inventory, and accounts payable and accrued expenses decreased cash by \$3.6 million in fiscal 2017, compared to a decrease of \$0.5 million in fiscal 2016. The year-over-year decline was due to increased inventory and purchasing volume in fiscal 2017. The accounts receivable collection cycle decreased to 49 days of revenue at January 31, 2017 compared to 50 days of revenue at the prior year end. Inventory days on hand increased to 114 days at the end of the current fiscal year from 92 days at the prior year end.

Net cash provided by investing activities for fiscal 2017 was \$3.1 million, which included \$4.0 million of proceeds from maturities of securities available for sale and proceeds of \$0.5 million related to the sale of the UK property. Cash used for investing activities for fiscal 2017 included capital expenditures of \$1.2 million, consisting of \$0.4 million for land and building improvements; \$0.3 million for information technology; \$0.3 million for machinery and equipment; \$0.1 million for tools and dies; and \$0.1 million for furniture, fixtures and other capital expenditures.

Net cash provided by operating activities was \$7.7 million in fiscal 2016 compared to net cash provided by operating activities of \$1.5 million in fiscal 2015. The increase in net cash from operations for fiscal 2016 is primarily related to increased net income adjusted for non-cash effects and less cash used for working capital in fiscal 2016, and the fiscal 2015 tax payments made in connection with the gain on the 2013 sale of our Grass Technologies Product Group. The combination of accounts receivable, inventory and accounts payable and accrued expenses decreased cash by \$0.5 million in fiscal 2016, compared to a decrease of \$2.3 million in fiscal 2015. The accounts receivable collection cycle decreased to 50 days revenue outstanding at January 31, 2016 compared to 52 days outstanding at January 31, 2015. Inventory days on hand decreased to 92 days at the end of the fiscal 2016 from 106 days at the end of fiscal 2015.

Net cash used by investing activities for fiscal 2016 was \$3.5 million, which included \$10.0 million of proceeds from the sales and maturities of securities available for sale, which was partially offset by \$5.2 million of cash used to purchase securities available for sale, and \$7.4 million of cash used to purchase the RITEC aerospace printer business. Cash used for investing activities in fiscal 2016 also included cash used for capital expenditures of \$3.1 million, consisting of \$0.9 million for land and building improvements; \$0.7 million for information technology primarily related to the purchase and implementation of the Company's new Enterprise Resource Planning system; \$0.7 million for machinery and equipment; \$0.6 million for tools and dies; and \$0.2 million for furniture, fixtures and other capital expenditures.

Net cash used in financing activities included dividends paid of \$2.1 million in fiscal 2017, \$2.0 million in fiscal 2016 and \$2.1 million in fiscal 2015. The Company's annual dividend per share was \$0.28 in fiscal 2017,

2016 and 2015. The Company did not repurchase any shares of its common stock in fiscal 2017 or fiscal 2016. In fiscal 2015, the Company repurchased 500,000 shares of its common stock at a per share price of \$12.50, for an aggregate repurchase price of \$6.3 million. The purchase of these shares was from the estate of the former founder and chief executive officer of the Company and did not impact the shares available as part of the Company's stock buyback program. At January 31, 2016, there is an ongoing authorization by the Company's Board of Directors for the purchase of 390,000 shares of the Company's common stock.

Contractual Obligations, Commitments and Contingencies

At January 31, 2017, the Company's contractual obligations with initial remaining terms in excess of one year were as follows:

(In thousands)	<u>Total</u>	<u>Less than 1 Year</u>	<u>1-3 Years</u>	<u>3-5 Years</u>	<u>More than 5 Years</u>
Purchase Commitments*	\$19,271	\$17,848	\$1,352	\$—	\$ 71
Operating Lease Obligations	706	371	331	4	—
	<u>\$19,977</u>	<u>\$18,219</u>	<u>\$1,683</u>	<u>\$ 4</u>	<u>\$ 71</u>

*Purchase commitments consist primarily of inventory and equipment purchase orders made in the ordinary course of business.

The Company is also subject to contingencies, including legal proceedings and claims arising out of its businesses that cover a wide range of matters, such as: contract and employment claims; workers compensation claims; product liability claims; warranty claims; and claims related to modification, adjustment or replacement of component parts of units sold. While it is impossible to ascertain the ultimate legal and financial liability with respect to contingent liabilities, including lawsuits, we believe that the aggregate amount of such liabilities, if any, in excess of amounts provided or covered by insurance, will not have a material adverse effect on our consolidated financial position or results of operations. It is possible, however, that results of operations for any particular future period could be materially affected by changes in our assumptions or strategies related to these contingencies or changes out of the Company's control.

Critical Accounting Policies and Estimates

Our discussion and analysis of financial condition and results of operations are based upon the Company's consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. Certain of our accounting policies require the application of judgment in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. We periodically evaluate the judgments and estimates used for our critical accounting policies to ensure that such judgments and estimates are reasonable for our interim and year-end reporting requirements. These judgments and estimates are based on the Company's historical experience, current trends and information available from other sources, as appropriate. If different conditions result from those assumptions used in our judgments, the results could be materially different from our estimates. We believe the following critical accounting policies require significant judgments and estimates in the preparation of our consolidated financial statements:

Revenue Recognition: Our product revenue is recognized when all of the following criteria have been met: persuasive evidence of an arrangement exists; price to the buyer is fixed or determinable; delivery has occurred and legal title and risk of loss have passed to the customer; and collectability is reasonably assured. When other significant obligations remain after products are delivered, revenue is recognized only after such obligations are fulfilled. Returns and customer credits are infrequent and are recorded as a reduction to revenue. Rights of return are not included in revenue arrangements. Revenue associated with products that contain specific customer acceptance criteria is not recognized before the customer acceptance criteria are satisfied. When a sale arrangement involves training or installation, the deliverables in the arrangement are evaluated to determine

whether they represent multiple element arrangements. This evaluation occurs at inception of the arrangement and as each item in the arrangement is delivered. The total fee from the arrangement is allocated to each unit of accounting based on its relative fair value. Fair value for each element is established generally based on the revenue price charged when the same or similar element is sold separately. We allocate revenue to each element in our multiple-element arrangements based upon their relative selling prices. We determine the selling price for each deliverable based on a selling price hierarchy. The selling price for a deliverable is based on our vendor specific objective evidence (VSOE) if available, third-party evidence (TPE) if VSOE is not available, or estimated selling price (ESP) if neither VSOE nor TPE is available. Revenue allocated to each element is then recognized when the basic revenue recognition criteria for that element have been met. The amount of product revenue recognized is affected by our judgments as to whether an arrangement includes multiple elements.

We recognize revenue for non-recurring engineering (NRE) fees, as necessary, for product modification orders upon completion of agreed-upon milestones. Revenue is deferred for any amounts received prior to completion of milestones. Certain of our NRE arrangements include formal customer acceptance provisions. In such cases, we determine whether we have obtained customer acceptance for the specific milestone before recognizing revenue.

Infrequently, the Company receives requests from customers to hold product being purchased from us for the customers' convenience. We recognize revenue for such bill and hold arrangements provided the transaction meets the following criteria: a valid business purpose for the arrangement exists; risk of ownership of the purchased product has transferred to the buyer; there is a fixed delivery date that is reasonable and consistent with the buyer's business purpose; the product is ready for shipment; the payment terms are customary; we have no continuing performance obligation in regards to the product; and the product has been segregated from our inventories.

The majority of our equipment contains embedded operating systems and data management software which are included in the purchase price of the equipment. The software is deemed incidental to the systems as a whole as it is not sold separately or marketed separately and its production costs are minor as compared to those of the hardware system. Therefore, the Company's hardware appliances are considered non-software elements and are not subject to the industry-specific software revenue recognition guidance.

Warranty Claims and Bad Debts: Provisions for the estimated costs for future product warranty claims and bad debts are recorded in cost of revenue and general and administrative expense, respectively. The amounts recorded are generally based upon historically derived percentages while also factoring in any new business conditions that might impact the historical analysis such as new product introduction for warranty and bankruptcies of particular customers for bad debts. We also periodically evaluate the adequacy of reserves for warranty and bad debts recorded in our consolidated balance sheet as a further test to ensure the adequacy of the recorded provisions. Warranty and bad debt analysis often involves subjective analysis of a particular customer's ability to pay. As a result, significant judgment is required in determining the appropriate amounts to record, and such judgments may prove to be incorrect in the future. We believe that our procedures for estimating such amounts are reasonable and historically have not resulted in material adjustments in subsequent periods when the estimates are adjusted to the actual amounts.

Inventories: Inventories are stated at the lower of cost (first-in, first-out) or market. The Company records provisions to write-down obsolete and excess inventory to its estimated net realizable value. The process for evaluating obsolete and excess inventory consists of analyzing the inventory supply on hand and estimating the net realizable value of the inventory based on historical experience, current business conditions and anticipated future revenue. We believe that our procedures for estimating such amounts are reasonable and historically have not resulted in material adjustments in subsequent periods when the estimates are adjusted to actual experience.

Income Taxes: A valuation allowance is established when it is "more-likely-than-not" that all or a portion of deferred tax assets will not be realized. A review of all available positive and negative evidence must be considered, including our performance, the market environment in which we operate, length of carryforward periods, existing revenue backlog and future revenue projections. If actual factors and conditions differ

materially from the estimates made by management, the actual realization of the net deferred tax assets or liabilities could vary materially from the amounts previously recorded. At January 31, 2017, the Company has provided valuation allowances for future state tax benefits resulting from certain R&D tax credits which could expire unused.

The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions. Although guidance on the accounting for uncertain income taxes prescribes the use of a recognition and measurement model, the determination of whether an uncertain tax position has met those thresholds will continue to require significant judgment by management. If the ultimate resolution of tax uncertainties is different from what we have estimated, our income tax expense could be materially impacted.

Intangible and Long-Lived Assets: Long-lived assets, such as definite-lived intangible assets and property, plant and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. If the projected undiscounted cash flows are less than the carrying value, then an impairment charge would be recorded for the excess of the carrying value over the fair value, which is determined by the discounting of future cash flows.

Goodwill: Management evaluates the recoverability of goodwill annually or more frequently if events or changes in circumstances, such as declines in revenue, earnings or cash flows, or material adverse changes in the business climate, indicate that the carrying value of an asset might be impaired. Goodwill is first qualitatively assessed to determine whether further impairment testing is necessary. Factors that management considers in this assessment include macroeconomic conditions, industry and market considerations, overall financial performance (both current and projected), changes in management and strategy and changes in the composition or carrying amount of net assets. If this qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, a two step process is then performed. Step one compares the fair value of the reporting unit with its carrying value, including goodwill. If the carrying amount exceeds the fair value of the reporting unit, step two is required to determine if there is an impairment of the goodwill. Step two compares the implied fair value of the reporting unit goodwill to the carrying amount of the goodwill. We estimate the fair value of our reporting units using the income approach based upon a discounted cash flow model. We believe that this approach is appropriate because it provides a fair value estimate based upon the reporting unit's expected long term operating cash flow performance. In addition, we use the market approach, which compares the reporting unit to publicly-traded companies and transactions involving similar businesses, to support the conclusions based upon the income approach. The income approach requires the use of many assumptions and estimates including future revenue, expenses, capital expenditures, and working capital, as well as discount factors and income tax rates.

Share-Based Compensation: Share-based compensation expense is measured based on the estimated fair value of the share-based award when granted and is recognized as an expense over the requisite service period (generally the vesting period of the equity grant). We have estimated the fair value of each option on the date of grant using the Black-Scholes option-pricing model. Our estimate of share-based compensation requires a number of complex and subjective assumptions including our stock price volatility, employee exercise patterns (expected life of the options), the risk-free interest rate and the Company's dividend yield. The stock price volatility assumption is based on the historical weekly price data of our common stock over a period equivalent to the weighted-average expected life of our options. Management evaluated whether there were factors during that period which were unusual and would distort the volatility figure if used to estimate future volatility and concluded that there were no such factors. In determining the expected life of the option grants, the Company has observed the actual terms of prior grants with similar characteristics and the actual vesting schedule of the grants and assessed the expected risk tolerance of different option groups. The risk-free interest rate used in the model is based on the actual U.S. Treasury zero coupon rates for bonds matching the expected term of the option as of the option grant date. The dividend assumption is based upon the prior year's average dividend yield. No compensation expense is recognized for options that are forfeited for which the employee does not render the

requisite service. Our accounting for share-based compensation for restricted stock awards (RSA) and restricted stock units (RSU) is also based on the fair value method. The fair value of the RSUs and RSAs is based on the closing market price of the Company's common stock on the date of grant. Reductions in compensation expense associated with forfeited awards are estimated at the date of grant, and this estimated forfeiture rate is adjusted periodically based on actual forfeiture experience.

Recent Accounting Pronouncements

Reference is made to Note 1 of our audited consolidated financial statements included elsewhere in this report.

Item 7A. *Quantitative and Qualitative Disclosures about Market Risk*

We have exposure to financial market risks, including changes in foreign currency exchange rates and interest rates.

Financial Exchange Risk

The functional currencies of our foreign subsidiaries and branches are the local currencies – the British Pound in the UK, the Canadian Dollar in Canada and the Euro in France and Germany. Accordingly, the effects of exchange rate fluctuations on the net assets of these foreign subsidiaries' operations are accounted for as translation gains or losses in accumulated other comprehensive income (loss) within stockholders' equity. We do not believe that a change of 10% in such foreign currency exchange rates would have a material impact on our consolidated financial position or results of operations.

Interest Rate Risk

At January 31, 2017, we had cash and cash equivalents of \$18.1 million, of which \$3.0 million is held for working capital, \$5.0 million is held in foreign bank accounts and \$10.0 million is held in highly liquid money market funds with original maturities of 90 days or less. We also have \$6.7 million of securities available for sale which include state and municipal securities with maturities ranging from one month to two years. We do not enter into investments for trading or speculative purposes. We do not believe that we have material exposure to changes in fair value of these investments as a result of changes in interest rates due to the short-term nature of these investments.

Item 8. Financial Statements and Supplementary Data

The consolidated financial statements required under this item are submitted as a separate section of this report on the pages indicated at Item 15(a)(1).

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures*Evaluation of Disclosure Controls and Procedures*

Our management has evaluated, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K pursuant to Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on that evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that our disclosure controls and procedures were effective at January 31, 2017 to ensure that the information required to be disclosed in our Exchange Act reports is (1) recorded, processed, summarized and reported in a timely manner and (2) accumulated and communicated to our management, including our Chief Executive Officer and our Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act). The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of published financial statements in accordance with generally accepted accounting principles.

Because of the inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions, or the degree of compliance may deteriorate.

Management conducted its evaluation of the effectiveness of its internal control over financial reporting as of January 31, 2017. In making this assessment, management used the criteria set forth in the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this assessment, the principal executive officer and principal financial officer believe that as of January 31, 2017, the Company's internal control over financial reporting was effective based on criteria set forth by COSO in "Internal Control-Integrated Framework."

The attestation report of the Company's registered public accounting firm regarding internal control over financial reporting appears in Part IV, Item 15 of this Form 10-K and is incorporated herein by reference.

Changes in Internal Controls over Financial Reporting

There have been no changes in the Company's internal control over financial reporting during our most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated herein by reference to the Company's definitive proxy statement for the 2017 Annual Meeting of Shareholders.

The following sets forth certain information with respect to all executive officers of the Company. All officers serve at the pleasure of the Board of Directors.

Name	Age	Position
Gregory A. Woods	58	President, Chief Executive Officer and Director
John P. Jordan	71	Vice President, Chief Financial Officer and Treasurer
Michael M. Morawetz	57	Vice President—International Branches
Stephen M. Petrarca	54	Vice President—Operations
Eric E. Pizzuti	50	Vice President and General Manager—QuickLabel
Michael J. Natalizia	53	Vice President and Chief Technology Officer

Mr. Woods has served as Chief Executive Officer of the Company since February 1, 2014. Mr. Woods joined the Company in September 2012 as Executive Vice President and Chief Operating Officer and was appointed President and Chief Operating Officer on August 29, 2013. Prior to joining the Company, Mr. Woods served from January 2010 to August 2012 as Managing Director of Medfield Advisors, LLC, an advisory firm located in Medfield, Massachusetts focused on providing corporate development and strategy guidance to technology driven manufacturing firms. From 2008 to 2010, Mr. Woods served as President of Performance Motion Devices, a specialty semiconductor and electronics manufacturer located in Lincoln, Massachusetts.

Mr. Jordan was appointed Vice President, Chief Financial Officer and Treasurer of the Company on August 1, 2016. Since February 2015, Mr. Jordan has served as the president of FreshFoodsVI.com, an on-line grocery delivery service. From February 2011 to October 2014, Mr. Jordan served as chief financial officer, vice president and treasurer of Zygo Corporation, a company that manufactures and designs advanced optical metrology systems and optical components and assemblies. From March 2007 to February 2011, Mr. Jordan served as chief financial officer, vice president, and treasurer of Baldwin Technology Company, Inc., a supplier of process automation equipment and related consumables for the print media industry.

Mr. Morawetz was appointed Vice President International Branches in 2006. He was previously the General Manager of Branch Operations for the Company's German subsidiary, having joined the Company in 1989.

Mr. Petrarca was appointed Vice President of Operations in 1998. He has previously held positions as General Manager of Manufacturing, Manager of Grass Operations and Manager of Grass Sales. He has been with the Company since 1980.

Mr. Eric E. Pizzuti was appointed Vice President and General Manager of the Company's Product Identification business segment on March 9, 2012. Prior to this appointment, Mr. Pizzuti held the position of Vice President and Worldwide Director of Sales for QuickLabel Systems from March 2010 and Worldwide Director of Sales from March 2006 through March 2010. Mr. Pizzuti has held various other positions since joining the Company in 1996.

Mr. Natalizia was appointed Vice President and Chief Technology Officer of the Company on March 9, 2012. Prior to this appointment, Mr. Natalizia held the position of Director of Product Development of the Company since 2005.

Code of Ethics

The Company has adopted a Code of Conduct which applies to all directors, officers and employees of the Company, including the Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO") and principal accounting officer which meets the requirements of a "code of ethics" as defined in Item 406 of Regulation S-K.

A copy of the Code of Conduct will be provided to shareholders, without charge, upon request directed to Investor Relations or can be obtained on the Company's website, (www.astronovainc.com), under the heading "Investors—Corporate Governance—Governance Documents." The Company intends to disclose any amendment to, or waiver of, a provision of the Code of Conduct for the CEO, CFO, principal accounting officer or controller, or persons performing similar functions by posting such information on its website.

Item 11. Executive Compensation

The information required by this item is incorporated herein by reference to the Company's definitive Proxy Statement for the 2017 Annual Meeting of Shareholders.

The information set forth under the heading "Compensation Committee Report" in the Company's definitive Proxy Statement is furnished and shall not be deemed filed for purposes of Section 18 of the Exchange Act, nor be incorporated by reference in any filing under the Securities Act of 1933, as amended.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item is incorporated herein by reference to the Company's definitive Proxy Statement for the 2017 Annual Meeting of Shareholders.

Equity Compensation Plan Information

The following table sets forth information about the Company's equity compensation plans as of January 31, 2017:

<u>Plan Category</u>	<u>Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u>	<u>Weighted- Average Exercise Price of Outstanding Options, Warrants and Rights</u>	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans</u>
Equity Compensation Plans Approved by Shareholders	841,250(1)	\$11.96(2)	285,200(3)
Equity Compensation Plans Not Approved by Shareholders	—	—	—
Total	<u>841,250(1)</u>	<u>\$11.96(2)</u>	<u>285,200</u>

- (1) Includes 30,700 shares issuable upon exercise of outstanding options granted under the Company's 1997 incentive stock option plan; 26,500 shares issuable upon exercise of outstanding options granted under the Company's 1998 non-qualified stock option plan; 526,456 shares issuable upon exercise of outstanding options granted under the Company's 2007 Equity Incentive Plan; and 101,800 shares issuable upon exercise of outstanding options granted and 189,794 restricted stock units outstanding under the Company's 2015 Equity Incentive Plan.
- (2) Does not include restricted stock units.
- (3) Represents 239,976 shares available for grant under the AstroNova, Inc. 2007 and 2015 Equity Incentive Plans and 45,224 shares available for purchase under the Employee Stock Purchase Plan. This balance does not include 24,073 shares issued pursuant to outstanding unvested restricted stock awards which are subject to forfeiture.

Additional information regarding these equity compensation plans is contained in Note 11, "Share-Based Compensation," in the Company's Consolidated Financial Statements included in Item 15 hereto.

Item 13. *Certain Relationships, Related Transactions and Director Independence*

The information required by this item is incorporated herein by reference to the Company's definitive Proxy Statement for the 2017 Annual Meeting of Shareholders.

Item 14. *Principal Accountant Fees and Services*

The information required by this item is incorporated herein by reference to the Company's definitive Proxy Statement for the 2017 Annual Meeting of Shareholders.

PART IV

Item 15. Exhibits and Financial Statement Schedule

(a)(1) Financial Statements:

The following documents are included as part of this Annual Report filed on Form 10-K:

	<u>Page</u>
Report of Independent Registered Public Accounting Firm	37
Consolidated Balance Sheets as of January 31, 2017 and 2016	38
Consolidated Statements of Income—Years Ended January 31, 2017, 2016 and 2015	39
Consolidated Statements of Comprehensive Income—Years Ended January 31, 2017, 2016 and 2015 ...	40
Consolidated Statements of Changes in Shareholders' Equity—Years Ended January 31, 2017, 2016 and 2015	41
Consolidated Statements of Cash Flows—Years Ended January 31, 2017, 2016 and 2015	42
Notes to Consolidated Financial Statements	43-65

(a)(2) Financial Statement Schedule:

Schedule II—Valuation and Qualifying Accounts and Reserves—Years Ended January 31, 2017, 2016 and 2015	66
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All other schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore, have been omitted.

Item 16. Form 10-K Summary

Not Applicable.

(a)(3) *Exhibits:*

**Exhibit
Number**

- (2.1) Share Purchase Agreement, dated January 7, 2017, as amended, by and among ANI ApS, Trojan Holding ApS, as a Seller and as the Sellers' Representative, and Li Wei Chong.*
- (2.2) Asset Purchase Agreement dated June 18, 2015 by and among AstroNova, Inc., and Rugged Information Technology Equipment Corp. filed as Exhibit 2.3 to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2016 and incorporated by reference herein.*
- (3A) Restated Articles of Incorporation of the Company and all amendments thereto filed as Exhibit 3A to the Company's Quarterly Report on Form 10-Q for the quarter ended April 30, 2016 and incorporated by reference herein.
- (3B) By-laws of the Company as amended to date filed as Exhibit 3B to the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2008 (File No. 000-13200) and incorporated by reference herein.
- (4) Specimen form of common stock certificate of the Company filed as Exhibit 4 to the Company's Quarterly Report on Form 10-Q for the quarter ended April 30, 2016 and incorporated by reference herein.
- (10.1) AstroNova, Inc. Non-Employee Director Stock Plan filed as Exhibit 4.3 to Registration Statement on Form S-8 filed on March 28, 1997, Registration No. 333-24123, and incorporated by reference herein.**
- (10.2) AstroNova, Inc. 1997 Incentive Stock Option Plan, as amended, filed as Exhibit 4.3 to Registration Statements on Form S-8 filed on August 28, 1998, Registration No. 333-93565, and incorporated by reference herein.**
- (10.3) AstroNova, Inc. 1998 Non-Qualified Stock Option Plan, as amended, filed as Exhibit 4.3 to Registration Statement on Form S-8 filed on August 28, 1998, Registration No. 333-62431 and incorporated by reference herein.**
- (10.4) AstroNova, Inc. 2007 Equity Incentive Plan as filed as Appendix A to the Definitive Proxy Statement filed on April 25, 2007 on Schedule 14A (File No. 000-13200) for the 2007 annual shareholders meeting and incorporated by reference herein.**
- (10.5) AstroNova, Inc. Management Bonus Plan (Group III) filed as Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the period ended May 3, 2014 incorporated by reference herein.**
- (10.6) AstroNova, Inc. Management Bonus Plan—Vice President International Branches filed as Exhibit 10.9 to the Company's Annual Report on Form 10-K (File No. 000-13200) for the year ended January 31, 2009 and incorporated by reference herein.**
- (10.7) AstroNova, Inc. Amended and Restated Non-Employee Directors Compensation Program filed as Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the period ended May 3, 2014 and incorporated by reference herein.**
- (10.8) Form of Performance-Based Restricted Stock Unit Award Agreement filed as Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q for the period ended April 28, 2012 and incorporated by reference herein.**
- (10.9) Three-Year Revolving Line of Credit Agreement dated September 5, 2014 by and between the Company and Wells Fargo Bank filed as Exhibit 10.12 to the Company's Quarterly Report on Form 10-Q for the period ended November 1, 2014 and incorporated by reference herein.

**Exhibit
Number**

- (10.10) Equity Incentive Award Agreement dated as of November 24, 2014 by and between the Company and Gregory A. Woods filed as Exhibit 10.12 to the Company's Annual Report on Form 10-K for the year ended January 31, 2015 and incorporated by reference herein.**
- (10.11) Change in Control Agreement dated as of November 24, 2014 by and between the Company and Gregory A. Woods filed as Exhibit 10.13 to the Company's Annual Report on Form 10-K for the year ended January 31, 2015 and incorporated by reference herein.**
- (10.12) Stock Repurchase Agreement dated as of December 4, 2014 by and among AstroNova, Inc. and Albert W. Ondis III, Alexis Ondis and April Ondis, each in his or her capacity as a Co-Executor of the Estate of Albert W. Ondis filed on Form 8-K on December 4, 2014 and incorporated by reference herein.
- (10.13) Senior Executive Short Term Incentive Plan adopted March 27, 2015 filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended May 2, 2015 and incorporated by reference herein.**
- (10.14) General Manager Employment Contract dated November 18, 2014 by and among AstroNova, Inc. and Michael Morawetz filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended May 2, 2015 and incorporated by reference herein.**
- (10.15) Form of Indemnification Agreement for directors and officers filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended October 31, 2015 and incorporated by reference herein.**
- (10.16) Credit Agreement dated February 28, 2017 among AstroNova, Inc., as the U.S. Borrower, ANI APS, as the Danish Borrower, Certain Subsidiaries of the U.S. Borrower, as the Guarantors and Bank of America, N.A.
- (10.18) Security and Pledge Agreement dated February 28, 2017 among AstroNova, Inc. as the U.S. Borrower and such other parties that become Grantors hereunder after the date hereof and Bank of America, N.A.
- (10.19) AstroNova, Inc. Amended and Restated Non-Employee Director Annual Compensation Program filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.20) Form of Restricted Stock Agreement granted under the Amended and Restated Non-Employee Director Annual Compensation Program filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.21) Form of Incentive Stock Option Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.22) Form of Non-Statutory Stock Option Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.23) Form of Non-Employee Director Non-Statutory Stock Option Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.24) Form of Restricted Stock Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**

**Exhibit
Number**

- (10.25) Form of Non-Employee Director Restricted Stock Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.26) Form of Time-Based Restricted Stock Unit Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.8 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (10.27) Form of Performance Restricted Stock Unit Agreement granted under the 2015 Equity Incentive Plan filed as Exhibit 10.9 to the Company's Quarterly Report on Form 10-Q for the period ended July 30, 2016 and incorporated by reference herein.**
- (21) List of Subsidiaries of the Company.
- (23.1) Consent of Wolf & Company, P.C.
- (31.1) Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- (31.2) Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
- (32.1) Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- (32.2) Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- (101) The following materials from Registrant's Annual Report on Form 10-K for the year ended January 31, 2017, formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Income, (iii) the Consolidated Statements of Comprehensive Income, (iv) the Consolidated Statements of Changes in Shareholders' Equity, (v) the Consolidated Statements of Cash Flows, and (vi) the Notes to Consolidated Financial Statements. Filed electronically herein.

* Schedules to this Exhibit have been omitted in reliance on Item 601(b)(2) of Regulation S-K. The Company will furnish copies of any such schedules to the SEC upon request.

** Management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ASTRONOVA, INC.
(Registrant)

Date: April 6, 2017

By: /s/ GREGORY A. WOODS
(Gregory A. Woods, Chief Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Name	Title	Date
<u> /s/ GREGORY A. WOODS </u> Gregory A. Woods	President, Chief Executive Officer and Director (Principal Executive Officer)	April 6, 2017
<u> /s/ JOHN P. JORDAN </u> John P. Jordan	Vice President, Chief Financial Officer and Treasurer (Principal Accounting and Financial Officer)	April 6, 2017
<u> /s/ HERMANN VIETS </u> Hermann Viets	Chairman of the Board of Directors and Director	April 6, 2017
<u> /s/ EVERETT V. PIZZUTI </u> Everett V. Pizzuti	Director	April 6, 2017
<u> /s/ GRAEME MACLETCHIE </u> Graeme MacLetchie	Director	April 6, 2017
<u> /s/ MITCHELL I. QUAIN </u> Mitchell I. Quain	Director	April 6, 2017
<u> /s/ HAROLD SCHOFIELD </u> Harold Schofield	Director	April 6, 2017
<u> /s/ APRIL ONDIS </u> April Ondis	Director	April 6, 2017

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Shareholders of
AstroNova, Inc.

We have audited the accompanying consolidated balance sheets of AstroNova, Inc. (the “Company”) as of January 31, 2017 and 2016, and the related consolidated statements of income, comprehensive income, changes in shareholders’ equity and cash flows for each of the three years in the period ended January 31, 2017, and the financial statement schedule listed in Item 15(a)(2)(collectively, the financial statements). We also have audited AstroNova, Inc.’s internal control over financial reporting as of January 31, 2017, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. The Company’s management is responsible for these financial statements and for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company’s internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (a) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (b) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (c) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of AstroNova, Inc. as of January 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended January 31, 2017, in conformity with accounting principles generally accepted in the United States of America, and in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, present fairly, in all material respects, the information set forth therein. Also in our opinion, AstroNova, Inc. maintained, in all material respects, effective internal control over financial reporting as of January 31, 2017, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013.

/s/ Wolf & Company, P.C.

Boston, Massachusetts
April 6, 2017

ASTRONOVA, INC.
CONSOLIDATED BALANCE SHEETS
As of January 31
(In Thousands, Except Share Data)

	<u>2017</u>	<u>2016</u>
<u>ASSETS</u>		
CURRENT ASSETS		
Cash and Cash Equivalents	\$ 18,098	\$ 10,043
Securities Available for Sale	6,723	10,376
Accounts Receivable, net of reserves of \$266 in 2017 and \$404 in 2016	15,702	15,325
Inventories	19,506	14,890
Prepaid Expenses and Other Current Assets	1,394	3,880
Total Current Assets	61,423	54,514
PROPERTY, PLANT AND EQUIPMENT		
Land and Improvements	967	967
Buildings and Improvements	11,266	11,350
Machinery and Equipment	28,145	27,396
Total Property, Plant and Equipment, net	40,378	39,713
Less Accumulated Depreciation	(31,098)	(29,906)
Total Property, Plant and Equipment, net	9,280	9,807
OTHER ASSETS		
Identifiable Intangibles, net	5,264	5,980
Goodwill	4,521	4,521
Deferred Tax Assets	2,811	3,049
Other	366	92
Total Other Assets	12,962	13,642
TOTAL ASSETS	\$ 83,665	\$ 77,963
<u>LIABILITIES AND SHAREHOLDERS' EQUITY</u>		
CURRENT LIABILITIES		
Accounts Payable	\$ 4,957	\$ 3,192
Accrued Compensation	2,936	3,436
Other Accrued Expenses	2,171	2,209
Deferred Revenue	472	529
Income Taxes Payable	1,449	182
Total Current Liabilities	11,985	9,548
Deferred Tax Liabilities	11	78
Other Long Term Liabilities	1,132	964
TOTAL LIABILITIES	13,128	10,590
Commitments and Contingencies (See Note 18)		
SHAREHOLDERS' EQUITY		
Preferred Stock, \$10 Par Value, Authorized 100,000 shares, None Issued	—	—
Common Stock, \$0.05 Par Value, Authorized 13,000,000 shares; Issued 9,834,906 shares in 2017 and 9,666,290 shares in 2016	492	483
Additional Paid-in Capital	47,524	45,675
Retained Earnings	44,358	42,212
Treasury Stock, at Cost, 2,375,076 shares in 2017 and 2,323,545 shares in 2016	(20,781)	(20,022)
Accumulated Other Comprehensive Loss, Net of Tax	(1,056)	(975)
TOTAL SHAREHOLDERS' EQUITY	70,537	67,373
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	\$ 83,665	\$ 77,963

See Notes to the Consolidated Financial Statements.

ASTRONOVA, INC.
CONSOLIDATED STATEMENTS OF INCOME
For the years ended January 31
(In Thousands, Except Per Share Data)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Revenue	\$98,448	\$94,658	\$88,347
Cost of Revenue	<u>58,959</u>	<u>56,500</u>	<u>51,370</u>
Gross Profit	39,489	38,158	36,977
Costs and Expenses:			
Selling and Marketing	18,955	18,249	18,289
Research and Development	6,314	6,945	5,802
General and Administrative	<u>7,939</u>	<u>7,030</u>	<u>5,655</u>
Operating Expenses	<u>33,208</u>	<u>32,224</u>	<u>29,746</u>
Operating Income	6,281	5,934	7,231
Other Income (Expense):			
Investment Income	78	72	81
Other, Net	<u>246</u>	<u>903</u>	<u>(380)</u>
	<u>324</u>	<u>975</u>	<u>(299)</u>
Income before Income Taxes	6,605	6,909	6,932
Income Tax Provision	<u>2,377</u>	<u>2,384</u>	<u>2,270</u>
Net Income	<u>\$ 4,228</u>	<u>\$ 4,525</u>	<u>\$ 4,662</u>
Net Income Per Common Share—Basic	<u>\$ 0.57</u>	<u>\$ 0.62</u>	<u>\$ 0.61</u>
Net Income Per Common Share—Diluted	<u>\$ 0.56</u>	<u>\$ 0.61</u>	<u>\$ 0.60</u>
Weighted Average Number of Common Shares Outstanding—Basic	7,421	7,288	7,612
Dilutive Effect of Common Stock Equivalents	<u>151</u>	<u>183</u>	<u>222</u>
Weighted Average Number of Common Shares Outstanding—Diluted	<u>7,572</u>	<u>7,471</u>	<u>7,834</u>
Dividends Declared Per Common Share	<u>\$ 0.28</u>	<u>\$ 0.28</u>	<u>\$ 0.28</u>

See Notes to the Consolidated Financial Statements.

ASTRONOVA, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
For the years ended January 31
(In Thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Net Income	\$4,228	\$4,525	\$4,662
Other Comprehensive Loss, net of taxes and reclassification adjustments:			
Foreign currency translation adjustments	(65)	(269)	(866)
Unrealized loss on securities available for sale	<u>(16)</u>	<u>(7)</u>	<u>(9)</u>
Other Comprehensive Loss	<u>(81)</u>	<u>(276)</u>	<u>(875)</u>
Comprehensive Income	<u>\$4,147</u>	<u>\$4,249</u>	<u>\$3,787</u>

See Notes to the Consolidated Financial Statements.

ASTRONOVA, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(\$ In Thousands)

	<u>Common Stock</u>		<u>Additional</u>	<u>Retained</u>	<u>Treasury</u>	<u>Accumulated</u>	<u>Total</u>
	<u>Shares</u>	<u>Amount</u>	<u>Paid-in</u>	<u>Earnings</u>	<u>Stock</u>	<u>Other</u>	<u>Shareholders'</u>
			<u>Capital</u>			<u>Comprehensive</u>	<u>Equity</u>
						<u>Income (Loss)</u>	
Balance January 31, 2014	9,291,225	\$465	\$41,235	\$37,201	\$(12,463)	\$ 176	\$66,614
Share-based compensation	—	—	511	—	—	—	511
Employee option exercises	227,512	11	1,887	—	(889)	—	1,009
Tax benefit of employee stock options	—	—	107	—	—	—	107
Restricted stock awards vested, net	26,127	1	(140)	—	—	—	(139)
Repurchases of common stock	—	—	—	—	(6,250)	—	(6,250)
Dividends paid	—	—	—	(2,128)	—	—	(2,128)
Net income	—	—	—	4,662	—	—	4,662
Other comprehensive loss	—	—	—	—	—	(875)	(875)
Balance January 31, 2015	9,544,864	\$477	\$43,600	\$39,735	\$(19,602)	\$ (699)	\$63,511
Share-based compensation	—	—	1,209	—	—	—	1,209
Employee option exercises	98,734	5	802	—	(371)	—	436
Tax benefit of employee stock options	—	—	65	—	—	—	65
Restricted stock awards vested, net	22,692	1	(1)	—	(49)	—	(49)
Dividends paid	—	—	—	(2,048)	—	—	(2,048)
Net income	—	—	—	4,525	—	—	4,525
Other comprehensive loss	—	—	—	—	—	(276)	(276)
Balance January 31, 2016	9,666,290	\$483	\$45,675	\$42,212	\$(20,022)	\$ (975)	\$67,373
Share-based compensation	—	—	1,019	—	—	—	1,019
Employee option exercises	93,483	5	834	—	(451)	—	388
Restricted stock awards vested, net	75,133	4	(4)	—	(308)	—	(308)
Dividends paid	—	—	—	(2,082)	—	—	(2,082)
Net income	—	—	—	4,228	—	—	4,228
Other comprehensive loss	—	—	—	—	—	(81)	(81)
Balance January 31, 2017	<u>9,834,906</u>	<u>\$492</u>	<u>\$47,524</u>	<u>\$44,358</u>	<u>\$(20,781)</u>	<u>\$(1,056)</u>	<u>\$70,537</u>

See Notes to the Consolidated Financial Statements.

ASTRONOVA, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
For the years ended January 31
(In Thousands)

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Cash Flows from Operating Activities:			
Net Income	\$ 4,228	\$ 4,525	\$ 4,662
Adjustments to Reconcile Net Income to Net Cash Provided By Operating Activities:			
Depreciation and Amortization	2,431	2,065	2,063
Share-Based Compensation	1,019	1,209	511
Deferred Income Tax Provision (Benefit)	174	(292)	(397)
Excess Tax Benefit From Share-Based Compensation	—	(65)	(107)
Gain on Sale of UK Property	(419)	—	—
Write-down of Asset Held for Sale	—	—	220
Changes in Assets and Liabilities, Net of Impact of Acquisitions:			
Accounts Receivable	(416)	(1,285)	(2,741)
Inventories	(4,659)	600	(404)
Accounts Payable and Accrued Expenses	1,426	151	810
Income Taxes Payable	2,187	412	(1,747)
Other	982	407	(1,379)
Net Cash Provided by Operating Activities	<u>6,953</u>	<u>7,727</u>	<u>1,491</u>
Cash Flows from Investing Activities:			
Proceeds from Maturities of Securities Available for Sale	4,029	9,978	12,885
Purchases of Securities Available for Sale	(400)	(5,192)	(9,306)
Proceeds from Sale of UK Property	474	—	—
Acquisition of RITEC's Aerospace Printer Business	—	(7,360)	—
Net Proceeds Received for Sale of Asset Held for Sale	—	1,698	—
Release of Funds Held in Escrow From Sale of Grass	—	—	1,800
Proceeds Received on Disposition of Grass Inventory	—	—	2,355
Payments Received on Line of Credit and Note Receivable	256	395	258
Additions to Property, Plant and Equipment	(1,238)	(3,061)	(2,247)
Net Cash Provided (Used) by Investing Activities	<u>3,121</u>	<u>(3,542)</u>	<u>5,745</u>
Cash Flows from Financing Activities:			
Net Proceeds from Common Shares Issued Under Employee Benefit Plans and Employee Stock Option Plans, Net of Payment of Minimum Tax Withholdings	79	387	870
Purchase of Treasury Stock	—	—	(6,250)
Excess Tax Benefit from Share-Based Compensation	—	65	107
Dividends Paid	(2,082)	(2,048)	(2,128)
Net Cash Used in Financing Activities	<u>(2,003)</u>	<u>(1,596)</u>	<u>(7,401)</u>
Effect of Foreign Exchange Rate Changes on Cash and Cash Equivalents	(16)	(504)	(218)
Net Increase (Decrease) in Cash and Cash Equivalents	8,055	2,085	(383)
Cash and Cash Equivalents, Beginning of Year	10,043	7,958	8,341
Cash and Cash Equivalents, End of Year	<u>\$18,098</u>	<u>\$10,043</u>	<u>\$ 7,958</u>
Supplemental Information:			
Cash Paid (Received) During the Period for:			
Income Taxes, Net of Refunds	\$ (84)	\$ 2,257	\$ 4,566

See Notes to the Consolidated Financial Statements.

ASTRONOVA, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
January 31, 2017, 2016 and 2015

Note 1—Summary of Significant Accounting Policies

Basis of Presentation: The accompanying financial data have been prepared by us pursuant to the rules and regulations of the U.S. Securities and Exchange Commission (SEC) and are presented in conformity with U.S. generally accepted accounting principles (U.S. GAAP). Our fiscal year end is January 31. Unless otherwise stated, all years and dates refer to our fiscal year.

Principles of Consolidation: The consolidated financial statements include the accounts of AstroNova, Inc. and its subsidiaries. All material intercompany accounts and transactions are eliminated in consolidation.

Reclassification: Certain amounts in prior year financial statements have been reclassified to conform to the current year's presentation.

Use of Estimates: The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect these financial statements and accompanying notes. Some of the more significant estimates relate to the allowances for doubtful accounts, inventory valuation, valuation and estimated lives of intangible assets, impairment of long-lived assets, goodwill, income taxes, share-based compensation and warranty reserves. Management's estimates are based on the facts and circumstances available at the time estimates are made, past historical experience, risk of loss, general economic conditions and trends, and management's assessments of the probable future outcome of these matters. Consequently, actual results could differ from those estimates.

Cash and Cash Equivalents: Highly liquid investments with an original maturity of 90 days or less are considered to be cash equivalents. Similar investments with original maturities beyond three months are classified as securities available for sale. Cash of \$5.1 million and \$3.0 million was held in foreign bank accounts at January 31, 2017 and 2016, respectively.

Securities Available for Sale: Securities available for sale are carried at fair value based on quoted market prices, where available. The difference between cost and fair value, net of related tax effects, is recorded as a component of accumulated other comprehensive loss in shareholders' equity.

Inventories: Inventories are stated at the lower of cost (first-in, first-out) or market and include material, labor and manufacturing overhead.

Property, Plant and Equipment: Property, plant and equipment are stated at cost less accumulated depreciation. Depreciation is provided on the straight-line basis over the estimated useful lives of the assets (land improvements—10 to 20 years; buildings and improvements—10 to 45 years; machinery and equipment—3 to 10 years). Depreciation expense was \$1.7 million for fiscal 2017; \$1.6 million for fiscal 2016 and \$1.4 million for 2015.

Revenue Recognition: Product revenue is recognized when all of the following criteria have been met: persuasive evidence of an arrangement exists; price to the buyer is fixed or determinable; delivery has occurred and legal title and risk of loss have passed to the customer; and collectability is reasonably assured. Returns and customer credits are infrequent and are recorded as a reduction to revenue. Rights of return are not included in revenue arrangements. Revenue associated with products that contain specific customer acceptance criteria is not recognized before the customer acceptance criteria are satisfied. Revenue is recorded net of any discounts from list price. Amounts billed to customers for shipping and handling fees are included in revenue, while related shipping and handling costs are included in cost of revenue.

The majority of our hardware products contain embedded operating systems and data management software which is included in the purchase price of the equipment. The software is deemed incidental to the systems as a

whole as it is not sold or marketed separately and its production costs are minor compared to those of the hardware system. Therefore, the Company's hardware appliances are considered non-software elements and are not subject to industry-specific software revenue recognition guidance.

Our multiple-element arrangements are generally comprised of a combination of equipment, software, installation and/or training services. Hardware and software elements are typically delivered at the same time and revenue is recognized when all the revenue recognition criteria for each unit are met. Delivery of installation and training services vary based on certain factors such as the complexity of the equipment, staffing availability in a geographic location and customer preferences, and can range from a few days to a few months. Service revenue is deferred and recognized over the contractual period or as services are rendered and accepted by the customer.

We have evaluated the deliverables in our multiple-element arrangements and concluded that they are separate units of accounting if the delivered item or items have value to the customer on a standalone basis and delivery or performance of the undelivered item(s) is considered probable and substantially in our control. We allocate revenue to each element in our multiple-element arrangements based upon their relative selling prices. We determine the selling price for each deliverable based on a selling price hierarchy. The selling price for a deliverable is based on vendor specific objective evidence (VSOE) if available, third-party evidence (TPE) if VSOE is not available, or estimated selling price (ESP) if neither VSOE nor TPE is available. Revenue allocated to each element is then recognized when the basic revenue recognition criteria for that element have been met.

Infrequently, we recognize revenue for non-recurring engineering (NRE) fees for product modification orders upon completion of agreed-upon milestones. Revenue is deferred for any amounts received prior to completion of milestones. Certain of our NRE arrangements include formal customer acceptance provisions. In such cases, we determine whether we have obtained customer acceptance for the specific milestone before recognizing revenue. NRE fees have not been significant in the periods presented herein.

We also receive infrequent requests from customers to hold product purchased from us for the customer's convenience. Revenue is recognized for such bill and hold arrangements in accordance with the requirements of SEC Staff Accounting Bulletin No. 104 which requires, among other things, the existence of a valid business purpose for the arrangement; the transfer of ownership of the purchased product; a fixed delivery date that is reasonable and consistent with the buyer's business purpose; the readiness of the product for shipment; the use of customary payment terms; no continuing performance obligation by us; and segregation of the product from our inventories.

Research and Development Costs: We charge costs to expense in the period incurred, and these expenses are presented in the consolidated statement of income. The following costs are included in research and development expense: salaries and benefits, external engineering service costs, engineering related information costs and supplies.

Foreign Currency Translation: The financial statements of foreign subsidiaries and branches are measured using the local currency as the functional currency. Foreign currency-denominated assets and liabilities are translated into U.S. dollars at year-end exchange rates with the translation adjustment recorded as a component of accumulated comprehensive income (loss) in shareholders' equity. Revenues and expenses are translated at the monthly average exchange rates. We do not provide for U.S. income taxes on foreign currency translation adjustments associated with our German subsidiary since its undistributed earnings are considered to be permanently invested. Our net foreign exchange losses were \$0.2 million; \$0.3 million and \$0.2 million for fiscal 2017, 2016 and 2015, respectively.

Advertising: The Company expenses advertising costs as incurred. Advertising costs including advertising production, trade shows and other activities are designed to enhance demand for our products and amounted to approximately \$1.3 million; \$1.1 million and \$1.7 million in fiscal 2017, 2016 and 2015, respectively.

Long-Lived Assets: Long-lived assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination

of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. If the projected undiscounted cash flows are less than the carrying value, then an impairment charge would be recorded for the excess of the carrying value over the fair value, as determined by the discounting of future cash flows. For 2017, 2016 and 2015, there were no impairment charges for long-lived assets.

Intangible Assets: Intangible assets include the value of customer relationships and non-competition agreements acquired in connection with business acquisitions and are stated at cost (fair value at acquisition) less accumulated amortization. These intangible assets have a definite life and are amortized over the assets' useful lives using a systematic and rational basis which is representative of the assets' use. Intangible assets with a definite life are tested for impairment whenever events or circumstances indicate that the carrying amount of an asset (asset group) may not be recoverable. If necessary, an impairment loss is recognized when the carrying amount of an asset exceeds the estimated undiscounted cash flows used in determining the fair value of the asset. The amount of the impairment loss recorded is calculated by the excess of the asset's carrying value over its fair value. Fair value is generally determined using a discounted cash flow analysis. For 2017, 2016 and 2015, there were no impairment charges for intangible assets.

Goodwill: Management evaluates the recoverability of goodwill annually or more frequently if events or changes in circumstances, such as declines in revenue, earnings or cash flows, or material adverse changes in the business climate indicate that the carrying value of an asset might be impaired. Goodwill is first qualitatively assessed to determine whether further impairment testing is necessary. Factors that management considers in this assessment include macroeconomic conditions, industry and market considerations, overall financial performance (both current and projected), changes in management and strategy and changes in the composition or carrying amount of net assets. If this qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying amount, a two-step process is then performed. Step one compares the fair value of the reporting unit with its carrying value, including goodwill. If the carrying amount exceeds the fair value of the reporting unit, step two is required to determine if there is an impairment of the goodwill. Step two compares the implied fair value of the reporting unit goodwill to the carrying amount of the goodwill. We estimate the fair value of our reporting units using the income approach based upon a discounted cash flow model. We believe that this approach is appropriate because it provides a fair value estimate based upon the reporting unit's expected long-term operating cash flow performance. In addition, the Company uses the market approach, which compares the reporting unit to publicly-traded companies and transactions involving similar business, to support the conclusions based upon the income approach. The income approach requires the use of many assumptions and estimates including future revenue, expenses, capital expenditures, and working capital, as well as discount factors and income tax rates.

We performed a qualitative assessment for our 2017 analysis of goodwill. Based on this assessment, management does not believe that it is more likely than not that the carrying value of the reporting units exceed their fair values. Accordingly, no further testing was performed, as management believes that there are no impairment issues in regards to goodwill at this time.

Income Taxes: We use the liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial reporting basis and tax basis of the assets and liabilities and are measured using statutory tax rates that will be in effect when the differences are expected to reverse. An allowance against deferred tax assets is recognized when it is more-likely-than-not that some portion or all of the deferred tax assets will not be realized. At January 31, 2017 and 2016, a valuation allowance was provided for deferred tax assets attributable to certain state R&D credit carryforwards.

AstroNova accounts for uncertain tax positions in accordance with the guidance provided in ASC 740, "Accounting for Income Taxes." This guidance describes a recognition threshold and measurement attribute for the financial statement disclosure of tax positions taken or expected to be taken in a tax return and requires recognition of tax benefits that satisfy a more-likely-than-not threshold. ASC 740 also provides guidance on de-recognition, classification, interest and penalties, accounting in interim periods and disclosure.

In fiscal 2015, the Company adopted the guidance in ASU 2015-17, “Income Taxes (Topic 740)” and accordingly has presented the Company’s deferred taxes as non-current in the accompanying consolidated balance sheet.

Net Income Per Common Share: Basic net income per share is based on the weighted average number of shares outstanding during the period. Diluted net income per share is based on the basic weighted average number of shares and potential common equivalent shares for stock options, restricted stock awards and restricted stock units outstanding during the period using the treasury stock method. In fiscal years 2017, 2016 and 2015, there were 459,700, 425,200 and 156,600, respectively, of common equivalent shares that were not included in the computation of diluted net income per common share because their inclusion would be anti-dilutive.

Allowance for Doubtful Accounts: In circumstances where we are aware of a customer’s inability to meet its financial obligations, an allowance is established. Accounts are individually evaluated on a regular basis and allowances are established to state such receivables at their net realizable value. The remainder of the allowance is based upon historical write-off experience and current market assessments.

Fair Value of Financial Instruments: Our financial instruments consist of cash and cash equivalents, investment securities, accounts receivable and accounts payable. The carrying amount reflected in the consolidated balance sheets for cash and cash equivalents, accounts receivable and accounts payable approximates fair value due to the short-term nature of these items. Investment securities, all of which are available for sale, are carried in the consolidated balance sheets at fair value based on quoted market prices, when available.

Share-Based Compensation: Share-based compensation expense is measured based on the estimated fair value of the share-based award when granted and is recognized as an expense over the requisite service period (generally the vesting period of the equity grant). We have estimated the fair value of each option on the date of grant using the Black-Scholes option-pricing model. Our estimate of share-based compensation requires a number of complex and subjective assumptions including our stock price volatility, employee exercise patterns (expected life of the options), the risk-free interest rate and the Company’s dividend yield. The stock price volatility assumption is based on the historical weekly price data of our common stock over a period equivalent to the weighted average expected life of our options. Management evaluated whether there were factors during that period which were unusual and would distort the volatility figure if used to estimate future volatility and concluded that there were no such factors. In determining the expected life of the option grants, the Company has observed the actual terms of prior grants with similar characteristics and the actual vesting schedule of the grant and has assessed the expected risk tolerance of different option groups. The risk-free interest rate is based on the actual U.S. Treasury zero coupon rates for bonds matching the expected term of the option as of the option grant date. The dividend assumption is based upon the prior year’s average dividend yield. No compensation expense is recognized for options that are forfeited for which the employee does not render the requisite service. Our accounting for share-based compensation for restricted stock awards (RSA) and restricted stock units (RSU) is also based on the fair value method. The fair value of the RSUs and RSAs is based on the closing market price of the Company’s common stock on the grant date. Reductions in compensation expense associated with forfeited awards are estimated at the date of grant, and this estimated forfeiture rate is adjusted periodically based on actual forfeiture experience.

In the first quarter of fiscal 2017, the Company prospectively adopted the provisions of ASU 2016-09, and, as such, the cash flow from tax benefits that are a result of tax deductions in excess of the compensation cost recognized for those options (excess tax benefits) is classified with other income tax cash flows as an operating activity for the year ended January 31, 2017. Tax deductions from certain stock option exercises are treated as being realized when they reduce tax expense and taxes payable in accordance with relevant tax law.

Recent Accounting Pronouncements:

Statement of Cash Flows

In August 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-15, "Classification of Certain Cash Receipts and Cash Payments (Topic 230)." ASU 2016-15 addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice for certain cash receipts and cash payments. The standard is effective for interim and annual reporting periods beginning after December 15, 2017 (Q1 fiscal 2019 for AstroNova), with early adoption permitted. The Company does not believe the adoption of this guidance will have a material impact on the Company's consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)." ASU 2014-09 completes the joint effort by the FASB and International Accounting Standards Board to improve financial reporting by creating common revenue recognition guidance for U.S. GAAP and International Financial Reporting Standards. ASU 2014-09 applies to all companies that enter into contracts with customers to transfer goods or services. In August 2015, the FASB modified ASU 2014-09 to be effective for annual reporting periods beginning after December 15, 2017 (Q1 fiscal 2019 for AstroNova), including interim periods within that reporting period. As modified, the FASB permits the adoption of the new revenue standard early, but not before annual periods beginning after December 15, 2016. Entities have the choice to apply ASU 2014-09 either retrospectively to each reporting period presented or by recognizing the cumulative effect of applying ASU 2014-09 at the date of initial application and not adjusting comparative information.

In March 2016, the FASB issued ASU 2016-08, "Revenue from Contracts with Customers (Topic 606) – Principal versus Agent Consideration." In April 2016, the FASB issued ASU 2016-10, "Revenue from Contracts with Customers (Topic 606) – Identifying Performance Obligations and Licensing." In May 2016, the FASB issued ASU 2016-11, "Revenue from Contracts with Customers (Topic 606) and Derivatives and Hedging (Topic 815) – Rescission of SEC Guidance Because of ASU 2014-09 and 2014-16" and ASU 2016-12, "Revenue from Contracts with Customers (Topic 606) – Narrow Scope Improvements and Practical Expedients." All of these ASUs do not change the core principle of the guidance in Topic 606 (as amended by ASU 2014-09), but rather provide further guidance to improve the operability and understandability of the implementation guidance included in ASU 2014-09. The effective date for all of these ASUs is the same as the effective date of ASU 2014-09 as amended by ASU 2015-14, for annual reporting periods beginning after December 15, 2017, including interim periods within those years (Q1 fiscal 2019 for AstroNova). The Company does not expect the adoption of this guidance to have a material impact on the Company's consolidated financial statements.

Share-Based Compensation

In March 2016, the FASB issued ASU 2016-09, "Compensation – Stock Compensation (Topic 718) – Improvements to Employee Share-Based Payment Accounting." ASU 2016-09 simplifies several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For public entities, ASU 2016-09 is effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods (Q1 fiscal 2018 for AstroNova) and early adoption is allowed. As permitted by ASU 2016-09, the Company adopted this guidance prospectively in fiscal 2017 and the adoption of this guidance did not have a material effect on the Company's consolidated financial statements.

Leases

In February 2016, the FASB issued ASU 2016-02, "Leases (Topic 842)." ASU 2016-02 supersedes current guidance related to accounting for leases and is intended to increase transparency and comparability among organizations by requiring lessees to recognize assets and liabilities in the balance sheet for operating leases with

lease terms greater than twelve months. The update also requires improved disclosures to help users of financial statements better understand the amount, timing and uncertainty of cash flows arising from leases. ASU 2016-02 will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years (Q1 fiscal 2020 for AstroNova), with early adoption permitted. At adoption, this update will be applied using a modified retrospective approach. The Company is currently evaluating the effect of this new guidance on the Company's consolidated financial statements.

Inventory

In July 2015, the FASB issued ASU 2015-11, "Inventory (Topic 330)." ASU 2015-11 requires inventory to be measured at the lower of cost and net realizable value instead of at lower of cost or market. This guidance does not apply to inventory that is measured using last-in, first out (LIFO) or the retail inventory method but applies to all other inventory, including inventory measured using first-in, first-out (FIFO) or the average cost method. ASU 2015-11 will be effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years (Q1 fiscal 2018 for AstroNova) and should be applied prospectively. Early adoption is permitted as of the beginning of an interim or annual reporting period. The Company does not believe the adoption of this guidance will have a material impact on the Company's consolidated financial statements.

Note 2—Acquisition

On June 19, 2015, we completed the acquisition of the aerospace printer product line for civil and commercial aircraft from Rugged Information Technology Equipment Corporation (RITEC) under the terms of an Asset Purchase Agreement dated June 18, 2015. The products of RITEC consist of aerospace printers for use in commercial aircraft sold primarily to aircraft manufacturers, tier one contractors and directly to airlines around the world. Our aerospace printer product line is part of the Test & Measurement (T&M) product group and is reported as part of the T&M segment. The Company began shipment of the RITEC products in the third quarter of fiscal 2016.

The purchase price of the acquisition was \$7.4 million which was funded using available cash and investment securities. The Company withheld \$0.8 million of the purchase price in escrow for twelve months following the acquisition date to support the sellers' indemnifications in the event of any breach in the representations, warranties or covenants of RITEC. The Company retained \$0.1 million from the escrow, which was recorded as other income in the consolidated statement of income for the period ended January 31, 2017.

The assets acquired consist principally of accounts receivable and certain intangible assets. Acquisition related costs of approximately \$0.1 million are included in the general and administrative expenses in the Company's consolidated statements of income for fiscal year ended 2016. The acquisition was accounted for under the acquisition method in accordance with the guidance provided by FASB ASC 805, "Business Combinations."

The Company also entered into a Transition Services Agreement, under which RITEC provided transition services and continued to manufacture products in the acquired product line until the Company transitioned the manufacturing to its West Warwick, Rhode Island facility. The TSA concluded in the third quarter of fiscal 2017 and AstroNova purchased the remaining inventory held by RITEC for \$0.2 million.

Also as part of the Asset Purchase Agreement, the Company entered into a License Agreement, which grants RITEC certain rights to use the intellectual property acquired by the Company in the design, development, marketing, manufacture, sale and servicing of aerospace printers for aircraft sold to the military end-user market and printers sold to other non-aircraft market segments. RITEC will pay royalties equal to 7.5% of the revenue price on all products sold into the military end-user aircraft market during the first five years of the License Agreement. No royalty revenue was accrued in fiscal 2017.

The purchase price of the acquisition has been allocated on the basis of the fair value as follows:

(In thousands)	
Accounts Receivable	\$ 50
Identifiable Intangible Assets	3,780
Goodwill	<u>3,530</u>
Total Purchase Price	<u>\$7,360</u>

The fair value of the intangible assets acquired was estimated by applying the income approach. This fair value measurement is based on significant inputs that are not observable in the market and therefore, represent a Level 3 measurement as defined in ASC 820, "Fair Value Measurement and Disclosure." Key assumptions include (1) a weighted average cost of capital of 15.5%; (2) a range of earnings projections from \$0.1-\$0.7 million and (3) a range of contract renewal probability from 30%-100%.

Goodwill of \$3.5 million, which is deductible for tax purposes, represents the excess of the purchase price over the estimated fair value assigned to the tangible and identifiable intangible assets acquired from RITEC. The carrying amount of the goodwill was allocated to the T&M segment of the Company.

The following table reflects the fair value of the acquired identifiable intangible assets and related estimated useful lives:

(In thousands)	Fair Value	Useful Life (Years)
Customer Contract Relationships	\$2,830	10
Non-Competition Agreement	<u>950</u>	<u>5</u>
Total	<u>\$3,780</u>	

Assuming the acquisition of RITEC occurred on February 1, 2014, the impact on net revenue, net income and earnings per share would not have been material to the Company for the years ended January 31, 2017, 2016 and 2015.

Note 3—Intangible Assets

Intangible assets are as follows:

(In thousands)	January 31, 2017			January 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Miltope:						
Customer Contract Relationships	\$3,100	\$(1,108)	\$1,992	\$3,100	\$(758)	\$2,342
RITEC:						
Customer Contract Relationships	2,830	(207)	2,623	2,830	(31)	2,799
Non-Competition Agreement	<u>950</u>	<u>(301)</u>	<u>649</u>	<u>950</u>	<u>(111)</u>	<u>839</u>
Intangible assets, net	<u>\$6,880</u>	<u>\$(1,616)</u>	<u>\$5,264</u>	<u>\$6,880</u>	<u>\$(900)</u>	<u>\$5,980</u>

There were no impairments to intangible assets during the periods ended January 31, 2017, 2016 and 2015. Amortization expense of \$0.7 million; \$0.5 million and \$0.7 million with regard to acquired intangibles has been included in the consolidated statements of income for years ended January 31, 2017, 2016 and 2015, respectively.

Estimated amortization expense for the next five years is as follows:

(In thousands)	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Estimated amortization expense	\$774	\$769	\$803	\$706	\$633

Note 4—Securities Available for Sale

Pursuant to our investment policy, securities available for sale include state and municipal securities with various contractual or anticipated maturity dates ranging from one month to two years. These securities are carried at fair value, with unrealized gains and losses reported as a component of accumulated other comprehensive income (loss), net of taxes in shareholders' equity until realized. Realized gains and losses from the sale of available for sale securities, if any, are determined on a specific identification basis. A decline in the fair value of any available for sale security below cost that is determined to be other than temporary will result in a write-down of its carrying amount to fair value. No such impairment charges were recorded for any period presented. All short-term investment securities have original maturities greater than 90 days.

The fair value, amortized cost and gross unrealized gains and losses of the securities are as follows:

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Value</u>
(In thousands)				
January 31, 2017				
State and Municipal Obligations	<u>\$ 6,732</u>	<u>\$—</u>	<u>\$(9)</u>	<u>\$ 6,723</u>
January 31, 2016				
State and Municipal Obligations	<u>\$10,363</u>	<u>\$ 15</u>	<u>\$(2)</u>	<u>\$10,376</u>

The contractual maturity dates of these securities are as follows:

	<u>January 31 2017</u>	<u>2016</u>
(In thousands)		
Less than one year	\$3,563	\$ 3,833
One to two years	3,160	6,543
	<u>\$6,723</u>	<u>\$10,376</u>

Actual maturities may differ from contractual dates as a result of revenue or earlier issuer redemptions.

Note 5—Inventories

The components of inventories are as follows:

	<u>January 31 2017</u>	<u>2016</u>
(In thousands)		
Materials and Supplies	\$11,865	\$10,197
Work-in-Progress	1,216	1,025
Finished Goods	10,270	7,491
	<u>23,351</u>	<u>18,713</u>
Inventory Reserve	<u>(3,845)</u>	<u>(3,823)</u>
Balance at January 31	<u>\$19,506</u>	<u>\$14,890</u>

Finished goods inventory includes \$1.6 million and \$1.4 million of demonstration equipment at January 31, 2017 and 2016, respectively.

Note 6—Accrued Expenses

Accrued expenses consisted of the following:

	January 31	
	2017	2016
(In thousands)		
Professional Fees	\$ 584	\$ 328
Warranty	515	400
Product Replacement Cost Reserve	174	278
Dealer Commissions	180	221
Other	718	982
	<u>\$2,171</u>	<u>\$2,209</u>

Note 7—Line of Credit

At January 31, 2017 the Company had a \$10.0 million revolving line of credit available to be used as needed for ongoing working capital requirements, business acquisitions or general corporate purposes. Any borrowings made under the line of credit would bear interest at a fluctuating variable rate of either (i) the Prime Rate plus an agreed upon margin of between 0% and 0.50%, based upon the consolidated leverage ratio (funded debt: EBITDA, as defined); or (ii) the Eurocurrency Rate (LIBOR) plus an agreed-upon margin of between 1.00% and 1.50%, based upon the consolidated leverage ratio. In addition, the agreement provides for two financial covenant requirements: Total Funded Debt to Adjusted EBITDA (as defined) of not greater than 3 to 1 and a Fixed Charge Coverage Ratio (as defined) of not less than 1.25 to 1, both measured at the end of each quarter on a rolling four quarter basis. As of January 31, 2017, there had been no borrowings against this line of credit and the Company was in compliance with its financial covenants. Under the terms, the line of credit would have expired on August 30, 2017. Subsequent to year-end, this \$10.0 million revolving line of credit was terminated. As part of a new credit facility, the Company entered into a \$10.0 million revolving credit facility with a different Lender. Refer to Note 20 for additional details.

Note 8—Sale of Property

In December of 2016, we sold our Slough UK real estate and related machinery, computers and equipment at that location. Proceeds from the sale amounted to \$0.5 million (0.4 million in British Pounds) and a gain of \$0.4 million was recognized in other income in the Company's consolidated statement of income for the period ended January 31, 2017. Our UK branch is currently leasing property for its operations in Maidenhead, UK.

Note 9—Accumulated Other Comprehensive Loss

The changes in the balance of accumulated other comprehensive loss by component are as follows:

(In thousands)	Foreign Currency Translation Adjustments	Unrealized Holding Gain (Loss) on Available for Sale Securities	Total
Balance at January 31, 2014	\$ 152	\$ 24	\$ 176
Other Comprehensive Loss	(866)	(9)	(875)
Amounts Reclassified to Net Income	—	—	—
Net Other Comprehensive Loss	(866)	(9)	(875)
Balance at January 31, 2015	(714)	15	(699)
Other Comprehensive Loss	(269)	(7)	(276)
Amounts Reclassified to Net Income	—	—	—
Net Other Comprehensive Loss	(269)	(7)	(276)
Balance at January 31, 2016	\$ (983)	\$ 8	\$ (975)
Other Comprehensive Loss	(65)	(16)	(81)
Amounts Reclassified to Net Income	—	—	—
Net Other Comprehensive Loss	(65)	(16)	(81)
Balance at January 31, 2017	\$(1,048)	\$ (8)	\$(1,056)

The amounts presented above in other comprehensive loss are net of taxes except for translation adjustments associated with our German subsidiary.

Note 10—Shareholders' Equity

During fiscal 2017, 2016 and 2015, certain of the Company's employees delivered a total of 51,531, 29,939 and 62,797 shares, respectively, of the Company's common stock to satisfy the exercise price and related taxes for stock options exercised and restricted stock vesting. The shares delivered were valued at a total of \$0.8 million, \$0.4 million and \$0.9 million, respectively, and are included in treasury stock in the accompanying consolidated balance sheets at January 31, 2017, 2016 and 2015. These transactions did not impact the number of shares authorized for repurchase under the Company's current repurchase program.

During fiscal 2015, the Company repurchased 500,000 shares of the Company's common stock from the Estate of Albert W. Ondis for an aggregate purchase price of \$6.3 million. Prior to entering into the Stock Purchase Agreement, the Company obtained an opinion from an independent investment banking firm as to the fairness, from a financial point of view, to the public shareholders of the Company other than the selling shareholders, of the consideration paid by the Company in the transaction. The purchase was funded using existing cash on hand. This transaction did not impact the number of shares authorized for repurchase under the Company's current repurchase program.

As of January 31, 2017, the Company's Board of Directors has authorized the purchase of up to an additional 390,000 shares of the Company's common stock on the open market or in privately negotiated transactions.

Note 11—Share-Based Compensation

The Company maintains the following share-based compensation plans:

Stock Plans:

We have two equity incentive plans – the 2007 Equity Incentive Plan (the “2007 Plan”) and the 2015 Equity Incentive Plan (the “2015 Plan”). Under these plans, the Company may grant incentive stock options,

non-qualified stock options, stock appreciation rights, time or performance-based restricted stock units (RSUs), restricted stock awards (RSAs), and other stock-based awards to executives, key employees, directors and other eligible individuals. At January 31, 2017, 87,989 shares were available for grant under the 2007 Plan, of which 50,000 are reserved for stock options that the Company is obligated to issue to its CEO in fiscal 2018 pursuant to an Equity Incentive Award Agreement dated as of November 24, 2014 (the “CEO Equity Incentive Agreement”). The 2007 Plan will expire in May 2017. The 2015 Plan authorizes the issuance of up to 500,000 shares (subject to adjustment for stock dividends and stock splits), and at January 31, 2017, 151,987 shares were available for grant under the 2015 Plan. The 2015 Plan will expire in May 2025. Options granted to date to employees under both plans vest over four years and expire after ten years. The exercise price of each stock option is established at the discretion of the Compensation Committee; however, any incentive stock options granted under the 2007 Plan, and all options granted under the 2015 Plan, must be issued at an exercise price of not less than the fair market value of the Company’s common stock on the date of grant.

Under the plans, each non-employee director receives an automatic annual grant of ten-year options to purchase 5,000 shares of stock upon the adjournment of each annual shareholders meeting. Each such option is exercisable at the fair market value of the Company’s common stock as of the grant date, and vests immediately prior to the next succeeding annual shareholders’ meeting. Accordingly, on May 18, 2016, 30,000 options were issued to the non-employee directors.

In addition to the plans, the Company has a Non-Employee Director Annual Compensation Program (the “Program”). Prior to August 1, 2016, this program provided that each non-employee director was entitled to an annual cash retainer of \$7,000 (the “Annual Cash Retainer”), plus \$500 for each Board and committee meeting attended. In addition, the Chairman of the Board received an annual retainer of \$6,000, and the Chairs of the Audit and Compensation Committees each received an annual retainer of \$4,000 (“Chair Retainer”). The non-employee directors could elect, for any fiscal year, to receive all or a portion of the Annual Cash Retainer and/or Chair Retainer (collectively the “Cash Retainer”) in the form of common stock of the Company, which was issued under one of the Plans. If a non-employee director elected to receive all or a portion of the Cash Retainer in the form of common stock, such shares were issued in four quarterly installments on the first day of each fiscal quarter, and the number of shares of common stock issued was based on the fair market value of the Company’s common stock on the date such installment was payable. The common stock received in lieu of such Cash Retainer was fully vested upon issuance. However, a non-employee director who received common stock in lieu of all or a portion of the Cash Retainer could not sell, transfer, assign, pledge or otherwise encumber the common stock prior to the first anniversary of the date on which such shares were issued. In the event of the death or disability of a non-employee director, or a change in control of the Company, any shares of common stock issued in lieu of the Cash Retainer would no longer be subject to such restrictions on transfer. During fiscal 2017 and 2016, a total of 1,168 and 2,947 shares were awarded to non-employee directors in lieu of the Cash Retainer. In addition, under the Program, each non-employee director received RSAs with a value equal to \$20,000 (the “Equity Retainer”) upon the adjournment of the annual shareholders’ meeting. The Equity Retainer vests on the earlier of 12 months after the grant date or the date immediately prior to the next annual meeting of the shareholders following the meeting at which such RSAs were granted. However, a non-employee director could not sell, transfer, assign, pledge or otherwise encumber the vested common stock prior to the second anniversary of the vesting date. In the event of the death or disability of a non-employee director, or a change in control of the Company, the RSAs would immediately vest and would no longer be subject to such restrictions on transfer. During the second quarter of fiscal 2017, 8,262 shares were awarded as the Equity Retainer to the non-employee directors.

Effective August 1, 2016, the Non-Employee Director Annual Compensation Program was amended. Under the amended Program, and commencing on the first business day of the third fiscal quarter of fiscal 2017, each non-employee director receives an automatic grant of RSAs on the first business day of each fiscal quarter. The number of whole shares to be granted each quarter is equal to 25% of the number calculated by dividing the director compensation amount by the fair market value of the Company’s stock on such day. The director annual compensation amount is \$55,000 for the remainder of fiscal year 2017, \$65,000 for fiscal 2018, and \$75,000 for fiscal 2019. In addition, the Chairman of the Board receives RSAs with an aggregate value of \$6,000, and the

Chairs of the Audit and Compensation Committees each receive RSAs with an aggregate value of \$4,000, also issued in quarterly installments and calculated in the same manner as the directors' RSA grants. RSAs granted pursuant to the amended Program become fully vested on the first anniversary of the date of grant. A total of 11,379 shares were awarded to the non-employee directors as compensation under the amended Program in fiscal 2017.

In April 2013 (fiscal year 2014), the Company granted options and RSUs to officers ("2014 RSUs"). The 2014 RSUs vested as follows: twenty-five percent vested on the third anniversary of the grant date, fifty percent vested upon the Company achieving its cumulative budgeted net revenue target for fiscal years 2014 through 2016 (the "Measurement Period"), and twenty-five percent vested upon the Company achieving a target average annual ORONA (operating income return on net assets as calculated under the Domestic Management Bonus Plan) for the Measurement Period. The grantee may not sell, transfer or otherwise dispose of more than fifty percent of the common stock issued upon vesting of the 2014 RSUs until the first anniversary of the vesting date. In April 2016, 9,300 of the 2014 RSUs vested, as the Company achieved the targeted average annual ORONA, as defined in the plan, for the Measurement Period and another 9,300 vested as a result of the third year anniversary date of the grant. Additionally, on February 1, 2014, the Company accelerated the vesting of 4,166 of the 2014 RSUs held by Everett Pizzuti in connection with his retirement.

In March 2015 (fiscal year 2016), the Company granted 50,000 options and 537 RSAs to its CEO pursuant to the CEO Equity Incentive Agreement, and 35,000 options to other key employees. The options and RSAs vest in four equal annual installments commencing on the first anniversary of the grant date.

In May 2015 (fiscal year 2016), the Company granted an aggregate of 80,000 time-based and 155,000 performance-based RSUs ("2016 RSUs") to certain officers of the Company. The time-based 2016 RSUs vest in four equal annual installments commencing on the first anniversary of the grant date. The performance-based 2016 RSUs vest over three years based upon the increase in revenue, if any, achieved each fiscal year relative to a three-year revenue increase goal. Performance-based 2016 RSUs that are earned based on organic revenue growth are fully vested when earned, while those earned based on revenue growth via acquisitions vest annually over a three-year period following the fiscal year in which the revenue growth occurs. Any performance-based 2016 RSUs that have not been earned at the end of the three-year performance period will be forfeited. The expense for such shares is recognized in the fiscal year in which the results are achieved, however, the shares are not fully earned until approved by the Compensation Committee in the first quarter of the following fiscal year. Based upon revenue in fiscal 2016, 15,810 of the performance based 2016 RSUs were earned in the first quarter of fiscal 2017 based on revenue in fiscal 2017, 9,025 of the performance based 2016 RSUs will be earned in the first quarter of 2018.

In March 2016 (fiscal year 2017), the Company granted 50,000 options and 4,030 RSAs to its CEO pursuant to the CEO Equity Incentive Agreement. The options and RSAs vest in four equal annual installments commencing on the first anniversary of the grant date.

In May 2016, the Company granted 37,000 options to certain key employees. On August 1, 2016 the Company granted 5,000 options to its Chief Financial Officer. The options vest in four equal installments commencing on the first anniversary of the grant date.

Share-Based Compensation:

Share-based compensation expense has been recognized as follows:

	Years Ended January 31		
	2017	2016	2015
(In thousands)			
Stock Options	\$ 321	\$ 286	\$234
Restricted Stock Awards and Restricted Stock Units	685	912	270
Employee Stock Purchase Plan	13	11	7
Total	<u>\$1,019</u>	<u>\$1,209</u>	<u>\$511</u>

Stock Options:

Aggregated information regarding stock options granted under the plans is summarized below:

	Number of Shares	Weighted-Average Exercise Price Per Share
Options Outstanding, January 31, 2014	736,647	\$ 8.63
Options Granted	158,600	\$13.99
Options Exercised	(224,275)	\$ 8.29
Options Forfeited	(8,975)	\$11.84
Options Cancelled	(5,986)	\$ 8.70
Options Outstanding, January 31, 2015	656,011	\$10.01
Options Granted	115,000	\$13.95
Options Exercised	(93,344)	\$ 7.95
Options Forfeited	(5,550)	\$12.75
Options Cancelled	(14,181)	\$ 8.82
Options Outstanding, January 31, 2016	657,936	\$11.00
Options Granted	122,000	\$14.82
Options Exercised	(87,107)	\$ 8.73
Options Forfeited	(4,250)	\$13.91
Options Cancelled	(3,123)	\$ 8.95
Options Outstanding, January 31, 2017	685,456	\$11.96

Set forth below is a summary of options outstanding at January 31, 2017:

Outstanding				Exercisable		
Range of Exercise prices	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life
\$5.00-10.00	190,706	\$ 7.85	3.9	190,706	\$ 7.85	3.9
\$10.01-15.00	439,750	\$13.36	6.6	241,950	\$12.79	5.3
\$15.01-20.00	55,000	\$15.07	9.2	—	\$ —	—
	685,456	\$11.96	6.1	432,656	\$10.61	4.7

The fair value of each stock option granted was estimated on the grant date using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	Years Ended January 31		
	2017	2016	2015
Risk-Free Interest Rate	1.4%	1.6%	1.6%
Expected Life (years)	5	5	5
Expected Volatility	28.3%	22.7%	26.5%
Expected Dividend Yield	1.9%	2.0%	2.0%

The weighted-average estimated fair value of options granted during fiscal 2017, 2016 and 2015 was \$3.22; \$2.43 and \$2.85, respectively. As of January 31, 2017, there was \$0.5 million of unrecognized compensation expense related to the unvested stock options granted under the plans. This expense is expected to be recognized over a weighted-average period of 2.3 years.

As of January 31, 2017, the aggregate intrinsic value (the aggregate difference between the closing stock price of the Company's common stock on January 31, 2017, and the exercise price of the outstanding options) that would have been received by the option holders if all options had been exercised was \$1.4 million for all exercisable options and \$1.5 million for all options outstanding. The total aggregate intrinsic value of options exercised during fiscal 2017, 2016 and 2015 was \$0.6 million; \$0.6 million and \$1.1 million, respectively.

Restricted Stock Units (RSUs) and Restricted Stock Awards (RSAs):

Aggregated information regarding RSUs and RSAs granted under the Plan is summarized below:

	RSAs & RSUs	Weighted-Average Grant Date Fair Value
Outstanding at January 31, 2014	106,496	\$ 9.12
Granted	7,245	13.80
Vested	(35,662)	8.75
Forfeited	(5,834)	10.07
Outstanding at January 31, 2015	72,245	\$ 9.70
Granted	246,335	14.05
Vested	(22,692)	14.02
Forfeited	(2,800)	10.07
Outstanding at January 31, 2016	293,088	\$13.02
Granted	24,839	14.89
Vested	(75,133)	12.05
Forfeited	(28,926)	11.49
Outstanding at January 31, 2017	<u>213,868</u>	<u>\$13.78</u>

As of January 31, 2017, there was \$0.9 million of unrecognized compensation expense related to unvested RSUs and RSAs. This expense is expected to be recognized over a weighted average period of 2.1 years.

Employee Stock Purchase Plan (ESPP):

AstroNova's ESPP allows eligible employees to purchase shares of common stock at a 15% discount from fair market value on the date of purchase. A total of 247,500 shares were initially reserved for issuance under this plan. Summarized plan activity is as follows:

	Years Ended January 31		
	2017	2016	2015
Shares Reserved, Beginning	51,600	57,005	60,242
Shares Purchased	(6,376)	(5,405)	(3,237)
Shares Reserved, Ending	<u>45,224</u>	<u>51,600</u>	<u>57,005</u>

Note 12—Income Taxes

The components of income before income taxes are as follows:

	2017	January 31 2016	2015
(In thousands)			
Domestic	\$4,026	\$5,982	\$5,401
Foreign	2,579	927	1,531
	<u>\$6,605</u>	<u>\$6,909</u>	<u>\$6,932</u>

The components of the provision for income taxes are as follows:

	2017	January 31 2016	2015
(In thousands)			
Current:			
Federal	\$1,269	\$1,930	\$1,666
State	209	470	466
Foreign	725	276	535
	<u>2,203</u>	<u>2,676</u>	<u>2,667</u>
Deferred:			
Federal	\$ 150	\$ (402)	\$ (290)
State	37	126	(107)
Foreign	(13)	(16)	—
	<u>174</u>	<u>(292)</u>	<u>(397)</u>
	<u>\$2,377</u>	<u>\$2,384</u>	<u>\$2,270</u>

The Company's effective tax rate for 2017 was 36.0% compared to 34.5% in 2016 and 32.7% in 2015. The increase from 2016 is primarily related to non-deductible transaction costs and increased unrecognized tax benefits. The increase in 2016 from 2015 is primarily related to the change in valuation allowance. The provision for income taxes differs from the amount computed by applying the United States federal statutory income tax rate of 34% to income before income taxes. The reasons for this difference were due to the following:

	2017	January 31 2016	2015
(In thousands)			
Income Tax Provision at Statutory Rate	\$2,246	\$2,349	\$2,357
Capitalized Transaction Costs	179	—	—
Unrecognized Tax Benefits	165	(67)	23
State Taxes, Net of Federal Tax Effect	162	277	233
Domestic Production Deduction	(103)	(134)	(164)
R&D Credits	(168)	(176)	(135)
Other	(104)	135	(44)
	<u>\$2,377</u>	<u>\$2,384</u>	<u>\$2,270</u>

The components of deferred income tax expense arise from various temporary differences and relate to items included in the statement of income. The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and liabilities are as follows:

	January 31	
	2017	2016
(In thousands)		
Deferred Tax Assets:		
Inventory	\$2,151	\$1,948
State R&D Credits	679	583
Share-Based Compensation	546	830
Foreign Tax Credit	508	426
Compensation Accrual	281	346
Unrecognized State Tax Benefits	241	237
Warranty Reserve	192	149
Deferred Service Contract Revenue	176	200
Other	348	383
	<u>5,122</u>	<u>5,102</u>
Deferred Tax Liabilities:		
Accumulated Tax Depreciation in Excess of Book Depreciation	1,380	1,355
Other	263	193
	<u>1,643</u>	<u>1,548</u>
Subtotal	3,479	3,554
Valuation Allowance	(679)	(583)
Net Deferred Tax Assets	<u>\$2,800</u>	<u>\$2,971</u>

As of January 31, 2017 there are \$0.5 million of foreign tax credit carryforwards which are expected to be utilized prior to their expiration. Carryforwards will expire during fiscal years 2024 to 2027.

The valuation allowance of \$0.7 million at January 31, 2017 and \$0.6 million at January 31, 2016 related to state research and development tax credit carryforwards which are expected to expire unused. The valuation allowance increased \$0.1 million in 2017 and \$0.3 million in 2016 due to the generation of research and development credits in excess of the Company's ability to currently utilize credits, and the decision to fully reserve for the state tax benefits of all R&D tax credit carryforwards, net of federal benefit. The Company has reached this conclusion after considering the availability of taxable income in prior carryback years, tax planning strategies, and the likelihood of future taxable income exclusive of reversing temporary differences and carryforwards in the relevant state jurisdiction.

The Company believes that it is reasonably possible that some unrecognized tax benefits, accrued interest and penalties could decrease income tax expense in the next year due to either the review of previously filed tax returns or the expiration of certain statutes of limitation. The changes in the balances of unrecognized tax benefits, excluding interest and penalties are as follows:

	2017	2016	2015
(In thousands)			
Balance at February 1	\$591	\$ 707	\$715
Increases in prior period tax positions	75	—	—
Increases in current period tax positions	133	49	87
Reductions related to lapse of statute of limitations	(91)	(165)	(95)
Balance at January 31	<u>\$708</u>	<u>\$ 591</u>	<u>\$707</u>

If the \$0.7 million balance as of January 31, 2017 is recognized, \$0.5 million would decrease the effective tax rate in the period in which each of the benefits is recognized and the remainder would be offset by a reversal of deferred tax assets.

During fiscal 2017, 2016 and 2015, the Company recognized an expense of \$52,000, a benefit of \$87,000 and an expense of \$43,000, respectively, related to change in interest and penalties, which are included as a component of income tax expense in the accompanying statements of income. The Company has accrued potential interest and penalties of \$0.4 million at the end of both January 31, 2017 and 2016.

The Company and its subsidiaries file income tax returns in U.S. federal jurisdictions, various state jurisdictions, and various foreign jurisdictions. The Company is no longer subject to U.S. federal tax examinations for fiscal years ended prior to January 2014.

U.S. income taxes have not been provided on \$4.7 million of undistributed earnings of the Company's German subsidiary since it is the Company's intention to permanently reinvest such earnings offshore or to repatriate them only when it is tax efficient to do so. It is impracticable to estimate a total tax liability or benefit, if any, created by the future distribution of all or portions of these earnings due to complexities related to taxation and foreign tax credit benefits. If circumstances change and it becomes apparent that some, or all of these undistributed earnings as of January 31, 2017 will not be indefinitely reinvested, the provision for the tax consequence, if any, will be recorded in the period when circumstances change.

Note 13—Nature of Operations, Segment Reporting and Geographical Information

The Company's operations consist of the design, development, manufacture and sale of specialty printers and data acquisition and analysis systems, including both hardware and software and related consumable supplies. The Company organizes and manages its business as a portfolio of products and services designed around a common theme of data acquisition and information output. The Company has two reporting segments consistent with its revenue product groups: Product Identification and Test & Measurement (T&M).

The Product Identification segment produces an array of tabletop, high-technology digital color and monochrome label printers, labeling software and consumables for a variety of commercial industries worldwide. T&M produces data recording equipment used worldwide for a variety of recording, monitoring and troubleshooting applications for many industries including aerospace, automotive, defense, rail, energy, industrial and general manufacturing.

Business is conducted in the United States and through foreign affiliates in Canada, Europe, China Southeast Asia and Mexico. Manufacturing activities are primarily conducted in the United States. Revenue and service activities outside the United States are conducted through wholly-owned entities and, to a lesser extent, through authorized distributors and agents. Transfer prices are intended to produce gross profit margins as would be associated with an arms-length transaction.

On June 19, 2015, AstroNova completed the asset purchase of the aerospace printer product line from RITEC. AstroNova's aerospace printer product line is part of the T&M product group and is reported as part of the T&M segment. The Company began shipment of the RITEC products in the third quarter of fiscal 2016. Refer to Note 2, "Acquisition," for further details.

The accounting policies of the reporting segments are the same as those described in the summary of significant accounting policies herein. The Company evaluates segment performance based on the segment profit before corporate and financial administration expenses.

Summarized below are the Revenue and Segment Operating Profit (both in dollars and as a percentage of Revenue) for each reporting segment:

(\$ in thousands)	Revenue			Segment Operating Profit			Segment Operating Profit % of Revenue		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Product Identification	\$69,862	\$67,127	\$59,779	\$ 9,821	\$ 9,300	\$ 7,259	14.1%	13.9%	12.1%
T&M	28,586	27,531	28,568	4,399	3,664	5,627	15.4%	13.3%	19.7%
Total	<u>\$98,448</u>	<u>\$94,658</u>	<u>\$88,347</u>	14,220	12,964	12,886	<u>14.4%</u>	<u>13.7%</u>	<u>14.6%</u>
Corporate Expenses				7,939	7,030	5,655			
Operating Income				6,281	5,934	7,231			
Other Income (Expense)				324	975	(299)			
Income before Income Taxes				6,605	6,909	6,932			
Income Tax Provision				2,377	2,384	2,270			
Net Income				<u>\$ 4,228</u>	<u>\$ 4,525</u>	<u>\$ 4,662</u>			

No customer accounted for greater than 10% of net revenue in fiscal 2017, 2016 and 2015.

Other information by segment is presented below:

(In thousands)	Assets	
	2017	2016
Product Identification	\$30,624	\$27,143
T&M	28,129	28,570
Corporate*	24,912	22,250
Total	<u>\$83,665</u>	<u>\$77,963</u>

* Corporate assets consist principally of cash, cash equivalents and securities available for sale.

(In thousands)	Depreciation and Amortization			Capital Expenditures		
	2017	2016	2015	2017	2016	2015
Product Identification	\$ 885	\$ 690	\$ 678	\$ 767	\$2,284	\$1,408
T&M	1,546	1,375	1,385	471	777	839
Total	<u>\$2,431</u>	<u>\$2,065</u>	<u>\$2,063</u>	<u>\$1,238</u>	<u>\$3,061</u>	<u>\$2,247</u>

Geographical Data

Presented below is selected financial information by geographic area:

(In thousands)	Revenue			Long-Lived Assets*	
	2017	2016	2015	2017	2016
United States	\$69,850	\$68,316	\$61,494	\$8,940	\$9,310
Europe	18,848	16,830	18,181	168	290
Canada	5,008	4,487	3,934	172	207
Central and South America	3,053	2,436	1,919	0	—
Asia	1,664	1,741	1,408	0	—
Other	25	848	1,411	0	—
Total	<u>\$98,448</u>	<u>\$94,658</u>	<u>\$88,347</u>	<u>\$9,280</u>	<u>\$9,807</u>

* Long-lived assets excludes goodwill assigned to the T&M segment of \$4.5 million at both January 31, 2017 and 2016.

Note 14—Employee Benefit Plans

Employee Stock Ownership Plan (ESOP):

AstroNova has an ESOP providing retirement benefits to all eligible employees. Annual contributions in amounts determined by the Company's Board of Directors are invested by the ESOP's Trustees in shares of common stock of AstroNova. Contributions may be in cash or stock. The Company did not make a contribution to the ESOP in fiscal 2017 or 2016. The Company's contribution of \$0.1 million in fiscal 2015 was recorded as compensation expense. All shares owned by the ESOP have been allocated to participants. On January 23, 2017, the Compensation Committee of the Board of Directors has voted to terminate the ESOP.

Profit-Sharing Plan:

AstroNova sponsors a Profit-Sharing Plan (the "Plan") which provides retirement benefits to all eligible domestic employees. The Plan allows participants to defer a portion of their cash compensation and contribute such deferral to the Plan through payroll deductions. The Company makes matching contributions up to specified levels. The deferrals are made within the limits prescribed by Section 401(k) of the Internal Revenue Code.

All contributions are deposited into trust funds. It is the policy of the Company to fund any contributions accrued. The Company's annual contribution amounts are determined by the Board of Directors. Contributions paid or accrued amounted to \$0.5 million in fiscal 2017 and \$0.3 million in both 2016 and 2015.

Note 15—Product Warranty Liability

AstroNova offers a manufacturer's warranty for the majority of its hardware products. The specific terms and conditions of warranty vary depending upon the products sold and country in which the Company does business. For products sold in the United States, the Company provides a basic limited warranty, including parts and labor. The Company estimates the warranty costs based on historical claims experience and records a liability in the amount of such estimates at the time product revenue is recognized. The Company regularly assesses the adequacy of its recorded warranty liabilities and adjusts the amounts as necessary. Activity in the product warranty liability, which is included in other accrued expenses in the accompanying consolidated balance sheet, is as follows:

	2017	January 31 2016	2015
(In thousands)			
Balance, beginning of the year	\$ 400	\$ 375	\$ 355
Provision for Warranty Expense	971	887	546
Cost of Warranty Repairs	(856)	(862)	(526)
Balance, end of the year	<u>\$ 515</u>	<u>\$ 400</u>	<u>\$ 375</u>

Note 16—Product Replacement Costs

In April 2013, tests conducted by the Company revealed that one of its suppliers had been using a non-conforming material in certain models of AstroNova's Test & Measurement printers. No malfunctions have been reported by customers as a result of the non-conforming material.

Upon identifying this issue, we immediately suspended production of the printers, notified all customers and contacted the supplier who confirmed the problem. We are continuing to work with our customers to replace the non-conforming material on existing printers with conforming material. The estimated costs associated with the replacement program were \$0.7 million, which was based upon the number of printers shipped during the period the non-conforming material was used. Those costs were recognized and recorded in the first quarter of fiscal

2014. As of January 31, 2017, the Company had expended \$0.4 million in replacement costs which have been charged against this reserve and has adjusted the reserve amount to reflect the estimate of remaining cost associated with the replacement program. The remaining reserve amount of \$0.2 million is included in other accrued expenses in the accompanying consolidated balance sheet as of January 31, 2017.

Since the supplier deviated from the agreed upon specifications for the power supply while providing certificates of conformance to the original specifications, AstroNova received a \$0.5 million settlement from the supplier in January 2014 for recovery of the costs and expense associated with this issue. In addition to this cash settlement, the Company received lower product prices from the supplier through the first quarter of fiscal 2017.

Note 17—Concentration of Risk

Credit is generally extended on an uncollateralized basis to almost all customers after review of credit worthiness. Concentration of credit and geographic risk with respect to accounts receivable is limited due to the large number and general dispersion of accounts which constitute the Company's customer base. The Company periodically performs on-going credit evaluations of its customers. The Company has not historically experienced significant credit losses on collection of its accounts receivable.

Excess cash is invested principally in investment grade government and state municipal securities. The Company has established guidelines relative to diversification and maturities that maintain safety of principal, liquidity and yield. These guidelines are periodically reviewed and modified to reflect changes in market conditions. The Company has not historically experienced any significant losses on its cash equivalents or investments.

During the years ended January 31, 2017, 2016 and 2015, one vendor accounted for 33.2%, 23.7% and 21.9% of purchases, and 42.7%, 16.7% and 55.1% of accounts payable, respectively.

Note 18—Commitments and Contingencies

Contractual Obligations

The following table summarizes our contractual obligations:

(In thousands)	<u>Total</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022 and Thereafter</u>
Purchase Commitments*	\$19,271	\$17,848	\$—	\$1,352	\$—	\$ 71
Operating Lease Obligations	706	371	214	101	20	—
	<u>\$19,977</u>	<u>\$18,219</u>	<u>\$214</u>	<u>\$1,453</u>	<u>\$ 20</u>	<u>\$ 71</u>

*Purchase commitments consist primarily of inventory and equipment purchase orders made in the ordinary course of business.

The Company is also subject to contingencies, including legal proceedings and claims arising in the normal course of business that cover a wide range of matters including, among others, contract and employment claims; workers compensation claims; product liability; warranty and modification; and adjustment or replacement of component parts of units sold.

Direct costs associated with the estimated resolution of contingencies are accrued at the earliest date at which it is deemed probable that a liability has been incurred and the amount of such liability can be reasonably estimated. While it is impossible to ascertain the ultimate legal and financial liability with respect to contingent liabilities, including lawsuits, the Company believes that the aggregate amount of such liabilities, if any, in excess of amounts provided or covered by insurance, will not have a material adverse effect on the consolidated financial position or results of operations. It is possible, however, that future results of operations for any particular future period could be materially affected by changes in our assumptions or strategies related to these contingencies or changes out of the Company's control.

Note 19—Fair Value Measurements

We measure our financial assets at fair value on a recurring basis in accordance with the guidance provided in ASC 820, “Fair Value Measurement and Disclosures,” which defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In addition, ASC 820 establishes a three-tiered hierarchy for inputs used in management’s determination of fair value of financial instruments that emphasizes the use of observable inputs over the use of unobservable inputs by requiring that observable inputs be used when available. Observable inputs are inputs that reflect management’s belief about the assumptions market participants would use in pricing a financial instrument based on the best information available in the circumstances.

The fair value hierarchy is summarized as follows:

- Level 1—Quoted prices in active markets for identical assets or liabilities;
- Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities; and
- Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities

Cash and cash equivalents, accounts receivable, accounts payable, accrued compensation and other expenses and income tax payable are reflected in the consolidated balance sheet at carrying value, which approximates fair value due to the short term nature of these instruments.

Assets measured at fair value on a recurring basis are summarized below:

<u>January 31, 2017</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
(In thousands)				
Money market funds (included in cash and cash equivalents)	\$ 2	\$ —	\$—	\$ 2
State and municipal obligations (included in securities available for sale)	—	6,723	—	6,723
Total	<u>\$ 2</u>	<u>\$ 6,723</u>	<u>\$—</u>	<u>\$ 6,725</u>
 <u>January 31, 2016</u>	 <u>Level 1</u>	 <u>Level 2</u>	 <u>Level 3</u>	 <u>Total</u>
(In thousands)				
Money market funds (included in cash and cash equivalents)	\$4,340	\$ —	\$—	\$ 4,340
State and municipal obligations (included in securities available for sale)	—	10,376	—	10,376
Total	<u>\$4,340</u>	<u>\$10,376</u>	<u>\$—</u>	<u>\$14,716</u>

For our money market funds and state and municipal obligations, we utilize the market approach to measure fair value. The market approach is based on using quoted market prices for similar assets.

Non-financial assets such as goodwill, intangible assets, and property, plant and equipment are required to be measured at fair value only when an impairment loss is recognized. The Company did not record an impairment loss related to these assets during the periods ended January 31, 2017, 2016 or 2015.

Note 20—Subsequent Event

On February 1, 2017, our wholly-owned Danish subsidiary, ANI ApS, completed the acquisition of the issued and outstanding equity interests of TrojanLabel ApS, a Danish private limited liability company, pursuant to the terms of a Share Purchase Agreement, dated January 7, 2017, by and among the ANI ApS,

Holdingselskabet af 20. marts 2014 ApS (“Holding”), a Danish private limited liability company and Li Wei Chong, an individual (Holding, together with Li Wei Chong, the “Sellers”). Based in Copenhagen, Denmark, TrojanLabel ApS is a manufacturer of products including digital color label presses and specialty printing systems for a broad range of end markets. Upon the consummation of the acquisition, TrojanLabel ApS became an indirect wholly-owned subsidiary of AstroNova.

The purchase price of this acquisition was DKK 62.9 million (approximately \$9.1 million), of which DKK 6.4 million (approximately \$0.9 million) was placed in escrow to secure certain post-closing working capital adjustments and indemnification obligations of the Sellers. The Sellers may be entitled to additional contingent consideration if 80% of specified earnings targets are achieved by Trojanlabel ApS during the seven years following the closing, subject to certain closing working capital adjustments and potential offsets to satisfy the Sellers’ indemnification obligations. The contingent consideration consists of potential earn-out payments to the Sellers of between DKK 32.5 million (approximately \$5 million) if 80% of the specified earnings targets are achieved, DKK 40.6 million (approximately \$5.8 million) if 100% of the specified earnings targets are achieved, and a maximum of DKK 48.7 million (approximately \$7 million) if 120% of the specified earnings targets are achieved. Transaction costs related to this acquisition of \$0.6 million are included in the general and administrative expenses in the consolidated statement of income for the period ended January 31, 2017. The Company is currently in the process of completing the purchase accounting allocations and does not expect this transaction to have a material impact on the consolidated financial statements.

On February 28, 2017, ANI ApS, entered into a Credit Agreement with Bank of America, N.A. (the “Lender”), ANI ApS, and Trojanlabel ApS. The Company also entered into a related Security and Pledge Agreement with the Lender. The Credit Agreement provides for a term loan to AstroNova in the amount of \$9.2 million. The Credit Agreement also provides for a \$10.0 million revolving credit facility available to the Company for general corporate purposes. Revolving credit loans may be borrowed, at the Company’s option, in U.S. Dollars or, subject to certain conditions, Euros, British Pounds, Canadian Dollars or Danish Krone. No amount was drawn under the revolving credit facility as of the filing of this Annual Report on 10-K.

In connection with the Credit Agreement, AstroNova entered into certain hedging arrangements with the Lender to manage the variable interest rate risk and currency risk associated with its payments in respect of the term loan. Under these arrangements, payments of principal and interest in respect of approximately \$8.9 million of the principal of the term loan will be made in Danish Krone, and interest on such principal amount will be payable at a fixed rate of 0.67% per annum for the entire term, subject only to potential increases of 0.25% or 0.50% per annum based on the Company’s consolidated leverage ratio. The obligations of ANI ApS under these arrangements are guaranteed by the Company.

In connection with the entry into the Credit Agreement on February 28, 2017, the Company’s existing Credit Agreement, dated as of September 5, 2014, among the Company, as borrower, and Wells Fargo Bank was terminated. No loans or other amounts were outstanding or owed under the existing Credit Agreement with Wells Fargo Bank at the time of termination.

SUPPLEMENTARY DATA

Quarterly Financial Information (Unaudited)

	2017				2016			
<i>(In thousands, except per share data)</i>	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Revenue	\$24,110	\$25,339	\$23,342	\$25,657	\$22,206	\$23,938	\$24,753	\$23,761
Cost of Goods Sold	14,637	15,034	13,701	15,586	13,176	14,092	14,601	14,631
Gross Profit	9,473	10,305	9,641	10,071	9,030	9,846	10,152	9,130
	39.3%	40.7%	41.3%	39.3%	40.7%	41.1%	41.0%	38.4%
Operating Expenses:								
Selling & Marketing	\$ 4,831	\$ 4,777	\$ 4,578	\$ 4,770	\$ 4,329	\$ 4,664	\$ 4,563	\$ 4,694
Research & Development	1,444	1,755	1,338	1,776	1,796	1,565	1,839	1,745
General & Administrative	1,651	2,025	1,891	2,373	1,457	1,783	1,891	1,898
Total Operating Expenses	7,926	8,557	7,807	8,919	7,582	8,012	8,293	8,337
Operating Income	1,547	1,748	1,834	1,152	1,448	1,834	1,859	793
	6.4%	6.9%	7.9%	4.5%	6.5%	7.7%	7.5%	3.3%
Other Income (Expense), Net . . .	(52)	40	(60)	396	234	21	333	387
Income Before Taxes	1,495	1,788	1,774	1,548	1,682	1,855	2,192	1,180
Income Tax Provision	476	496	623	782	471	687	873	352
Net income	\$ 1,019	\$ 1,292	\$ 1,151	\$ 766	\$ 1,211	\$ 1,168	\$ 1,319	\$ 828
Net Income per Common Share—Basic	\$ 0.14	\$ 0.17	\$ 0.15	\$ 0.10	\$ 0.17	\$ 0.16	\$ 0.18	\$ 0.11
Weighted Average Number of Common Shares—Basic	7,358	7,418	7,444	7,463	7,280	7,278	7,295	7,320
Net Income per Common Share—Diluted	\$ 0.14	\$ 0.17	\$ 0.15	\$ 0.10	\$ 0.16	\$ 0.16	\$ 0.18	\$ 0.11
Weighted Average Number of Common Shares—Diluted . . .	7,524	7,587	7,594	7,586	7,454	7,569	7,466	7,494

Annual totals may not agree to the summation of quarterly information due to insignificant rounding and the required calculation conventions.

ASTRONOVA, INC.

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS AND RESERVES

Description	Balance at Beginning of Year	Provision/ (Benefit) Charged to Operations	Deductions(2)	Balance at End of Year
Allowance for Doubtful Accounts(1): (In thousands)				
Year Ended January 31,				
2017	\$404	\$ (80)	\$(58)	\$266
2016	\$343	\$112	\$(51)	\$404
2015	\$370	\$ 60	\$(87)	\$343

(1) The allowance for doubtful accounts has been netted against accounts receivable in the balance sheets as of the respective balance sheet dates.

(2) Uncollectible accounts written off, net of recoveries. Also includes foreign exchange adjustment.

CORPORATE AND SHAREHOLDER INFORMATION

DIRECTORS

Gregory A. Woods

President and Chief Executive Officer, AstroNova, Inc.

Hermann Viets, Ph.D

Chairman of the Board, AstroNova, Inc.

Retired President, Milwaukee School of Engineering

Graeme MacLetchie

Retired Director, Deutsche Bank Alex Brown

(Private Client Division)

April L. Ondis

Director of Marketing,

Mt. Wachusett Community College

Everett V. Pizzuti

Retired Chief Executive Officer, AstroNova, Inc.

Mitchell I. Quain

Senior Advisor, The Carlyle Group

Harold Schofield

Principal, Schofield Imaging Associates, LLC

GENERAL COUNSEL

Foley Hoag LLP

Boston, Massachusetts 02210

REGISTERED PUBLIC ACCOUNTING FIRM

Wolf & Company, P.C.

Boston, Massachusetts 02110

TRANSFER AGENT AND REGISTRAR

Computershare Trust Company, N.A.

P.O. Box 30170

College Station, TX 77842

877-373-6374

www.computershare.com

ANNUAL MEETING

The Annual Meeting of Shareholders will be held at 10:00 a.m. on Wednesday, May 17, 2017 at the offices of the Company, located at 600 East Greenwich Avenue, West Warwick, Rhode Island, USA.

CORPORATE HEADQUARTERS

600 East Greenwich Avenue

West Warwick, Rhode Island 02893 USA

800-343-4039

COMMON STOCK

AstroNova, Inc. common stock is listed on the Nasdaq Global Market.

Ticker Symbol: ALOT

The closing price on March 31, 2017 was \$15.25.

DIVIDENDS

Quarterly dividends on AstroNova common stock are paid on or about the fourth day of January, April, July and October. The Company has paid 102 consecutive quarterly dividends.

INVESTOR INQUIRIES

Securities analysts, portfolio managers and other interested investors seeking information about the Company may visit our website at:

www.astronovainc.com or send inquiries to: investorrelations@astronovainc.com.

PRODUCT INFORMATION

For information about AstroNova products and services, please call us at 800-343-4039 (toll-free USA & Canada) or 401-828-4000 or visit our websites:

www.astronovainc.com

www.quicklabel.com



Bright ideas. Realized.

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SPAIN

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Spain

UNITED KINGDOM

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John P. Jordan
Vice President,
Chief Financial Officer,
Treasurer and Controller
jjordan@astronovainc.com



A N N U A L R E P O R T