

**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
or
 TRANSITION REPORT PURSUANT TO SECTION 13 OR 15 (d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
For the Fiscal Year Ended December 31, 2021
Commission File Number 0-7087

Astronics Corporation

(Exact Name of Registrant as Specified in its Charter)

New York
(State or other jurisdiction of
incorporation or organization)

16-0959303
(I.R.S. Employer
Identification No.)

130 Commerce Way, East Aurora, NY 14052
(Address of principal executive office)

Registrant's telephone number, including area code (716) 805-1599

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, \$.01 par value per share	ATRO	NASDAQ Stock Market

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of "large accelerated filer", an "accelerated filer", a "non-accelerated filer" and a

"smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

As of March 2, 2022, 31,521,806 shares were outstanding, consisting of 25,145,029 shares of Common Stock \$.01 par value and 6,376,777 shares of Class B Stock \$.01 par value. The aggregate market value, as of the last business day of the Company's most recently completed second fiscal quarter, of the shares of Common Stock and Class B Stock of Astronics Corporation held by non-affiliates was approximately \$494,000,000 (assuming conversion of all of the outstanding Class B Stock into Common Stock and assuming the affiliates of the Registrant to be its directors, executive officers and persons known to the Registrant to beneficially own more than 10% of the outstanding capital stock of the Corporation).

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Proxy Statement for the 2022 Annual Meeting of Shareholders to be held May 23, 2022 are incorporated by reference into Part III of this Report.

Table of Contents

ASTRONICS CORPORATION
Index to Annual Report
on Form 10-K

Year Ended December 31, 2021

	Page
<u>PART I</u>	
Item 1.	Business 4
Item 1A.	Risk Factors 8
Item 1B.	Unresolved Staff Comments 16
Item 2.	Properties 16
Item 3.	Legal Proceedings 17
Item 4.	Mine Safety Disclosures 17
<u>PART II</u>	
Item 5.	Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities 18
Item 6.	[Reserved] 20
Item 7.	Management’s Discussion and Analysis of Financial Condition and Results of Operations 20
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk 31
Item 8.	Financial Statements and Supplementary Data 32
Item 9.	Changes In and Disagreements with Accountants on Accounting and Financial Disclosure 76
Item 9A.	Controls and Procedures 76
Item 9B.	Other Information 76
<u>PART III</u>	
Item 10.	Directors, Executive Officers and Governance 77
Item 11.	Executive Compensation 77
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters 77
Item 13.	Certain Relationships and Related Transactions and Director Independence 77
Item 14.	Principal Accountant Fees and Services 78
<u>PART IV</u>	
Item 15.	Exhibits and Financial Statement Schedules 79
Item 16.	Form 10-K Summary 83

FORWARD LOOKING STATEMENTS

Information included or incorporated by reference in this report that does not consist of historical facts, including statements accompanied by or containing words such as “may,” “will,” “should,” “believes,” “expects,” “expected,” “intends,” “plans,” “projects,” “approximate,” “estimates,” “predicts,” “potential,” “outlook,” “forecast,” “anticipates,” “presume” and “assume,” are forward-looking statements. Such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future performance and are subject to several factors, risks and uncertainties, the impact or occurrence of which could cause actual results to differ materially from the expected results described in the forward-looking statements. Certain of these factors, risks and uncertainties are discussed in the sections of this report entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.” New factors, risks and uncertainties may emerge from time to time that may affect the forward-looking statements made herein. Given these factors, risks and uncertainties, investors should not place undue reliance on forward-looking statements as predictive of future results. We disclaim any obligation to update the forward-looking statements made in this report.

PART I

ITEM 1. BUSINESS

Astronics Corporation (“Astronics” or the “Company”) is a leading provider of advanced technologies to the global aerospace, defense and other mission-critical industries. Our products and services include advanced, high-performance electrical power generation, distribution and seat motion systems, lighting and safety systems, avionics products, systems and certification, aircraft structures and automated test systems.

We have principal operations in the United States (“U.S.”), Canada, France and England, as well as engineering offices in the Ukraine and India.

Impact of the COVID-19 Pandemic

The spread of the COVID-19 outbreak has disrupted businesses on a global scale. On March 11, 2020, the World Health Organization classified the outbreak as a pandemic. COVID-19 has caused disruption and volatility in the global capital markets, and has authored an economic slowdown in the Aerospace industry in particular. As we entered this crisis, the Company established two clear priorities: first and foremost the health and safety of our employees and their families, and second, continuing to meet the needs of our customers and secure the financial well-being of the Company. Substantially all of our operations and production activities have, to-date, remained operational. In response to the COVID-19 crisis, we implemented changes in our work practices to maintain a safe working environment for production employees at our facilities, while enabling other employees to productively work from home. As we bring employees back to the workplace and return to in-person meetings with customers and suppliers, we have adopted a flexible work approach. This allows for a smooth transition from COVID-19 conditions to a future that better meets the needs of the business and the interests of our employees. In terms of maintaining our financial health and liquidity, in early 2020, we implemented workforce reduction activities to align capacity with expected demand. We also implemented significant cost conservation measures, and we continue to closely monitor spending priorities. As economic activity recovers, we continue to monitor the situation, to assess further possible implications on our operations, supply chain, liquidity, cash flow and customer orders, and to take actions in an effort to mitigate adverse consequences. While the industry is seeing some improvement on rising vaccination rates and easing travel restrictions, the ultimate impact of COVID-19 on our business, results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic, vaccination rates and efficacy and the related length of impact on the global economy, supply chain and the aerospace industry, which are uncertain and cannot be predicted at this time. We believe that our existing financial arrangements are sufficient to meet our operating needs.

See Part I, Item 1A, Risk Factors, for an additional discussion of risk related to supply chain disruptions and the recent government vaccine mandates.

The Company qualified for government subsidies from the Canadian and French governments as a result of the COVID-19 pandemic’s impact on our foreign operations. The Canadian and French subsidies are income-based grants intended to reimburse the Company for certain employee wages. The grants are recognized as income over the periods in which the Company recognizes as expenses the costs the grants are intended to defray.

In September 2021 the Company was awarded a grant of up to \$14.7 million from the U.S. Department of Transportation (“USDOT”) under the Aviation Manufacturing Jobs Protection Program (“AMJP”). The Company received \$7.4 million under the grant in 2021, and expects to receive the remainder in 2022. The receipt of the full award is primarily conditioned upon the Company committing to not furlough, lay off or reduce the compensation levels of a defined group of employees during the six-month period of performance between September 2021 and March 2022. The grant benefit is being recognized ratably over the six-month performance period as a reduction to cost of products sold in proportion to the compensation expense that the award is intended to defray. During the year ended December 31, 2021, the Company recognized \$8.7 million of the award.

For additional details regarding the subsidies and grants, and their impact on consolidated results of operations and financial position, see Note 1 to the consolidated financial statements in Item 8 of this report.

Acquisitions

On July 1, 2019, the Company acquired Freedom Communication Technologies, Inc. (“Freedom”) for \$21.8 million, net of \$0.6 million in cash acquired. Freedom is a leader in wireless communication testing, primarily for the civil land mobile radio market and is included in our Test Systems segment.

On October 4, 2019, the Company acquired mass transit and defense market test solution provider, Diagnosys Test Systems Limited, for \$7.0 million in cash. Contingent purchase consideration (“earnout”), estimated at a fair value of \$2.5 million at acquisition, was reduced to zero in 2021 based on actual and forecasted order levels. Diagnosys Inc. and its affiliates

(“Diagnosys”) is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India.

Divestitures

On February 13, 2019, the Company completed a divestiture of its semiconductor test business within the Test Systems segment. The business was not core to the future of the Test Systems segment. The total proceeds of the divestiture amounted to \$103.8 million. The Company recorded a pre-tax gain on the sale of \$80.1 million in the first quarter of 2019. The Company recorded income tax expense relating to the gain of \$19.7 million.

The transaction also includes two elements of contingent earnouts. No earnout was payable to the Company for calendar 2019 activity. In December 2021, the Company agreed to a payment of \$10.7 million for the calendar 2020 earnout, which was recorded in the fourth quarter of 2021 and was received by the Company in early January 2022. On February 14, 2022, the Company was notified by the purchaser that they have calculated \$11.2 million as being payable for the calendar 2021 earnout. We are in the process of reviewing the calculation, and expect to record the additional gain on the sale related to the 2021 earnout and receive the payment in the first quarter of 2022. For further information, see Note 22 of Item 8, Financial Statements and Supplementary Data in this report.

On July 12, 2019, the Company sold intellectual property and certain assets associated with its Airfield Lighting product line for \$1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, was not core to the business and represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately \$1.3 million.

On October 6, 2021, the Company sold one of its Aerospace facilities for \$9.2 million. Net cash proceeds were approximately \$8.8 million and a gain on sale of approximately \$5.0 million was recorded.

Products and Customers

Our Aerospace segment designs and manufactures products for the global aerospace industry. Product lines include lighting and safety systems, electrical power generation, distribution and motions systems, aircraft structures, avionics products, systems certification, and other products. Our Aerospace customers are the airframe manufacturers (“OEM”) that build aircraft for the commercial, military and general aviation markets, suppliers to those OEM’s, aircraft operators such as airlines, suppliers to the aircraft operators, and branches of the U.S. Department of Defense. During 2021, this segment’s sales were divided 55% to the commercial transport market, 19% to the military aircraft market, 16% to the business jet market and 10% to other markets. As a result of the COVID-19 pandemic and its adverse impact on air travel worldwide, the commercial aerospace industry has been significantly disrupted. Most of this segment’s sales are a result of contracts or purchase orders received from customers, placed on a day-to-day basis or for single year procurements rather than long-term multi-year contract commitments. On occasion, the Company does receive contractual commitments or blanket purchase orders from our customers covering multiple-year deliveries of hardware to our customers.

Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the aerospace and defense, communications and mass transit industries as well as training and simulation devices for both commercial and military applications. In the Test Systems segment, Astronics’ products are sold to a global customer base including OEM’s and prime government contractors for both electronics and military products. The nature of our Test Systems business is such that it pursues large, often multi-year, projects.

Sales by segment, geographic region, major customer and foreign operations are provided in Note 20 of Item 8, Financial Statements and Supplementary Data in this report.

We have historically had a significant concentration of business with two major customers; Panasonic Avionics Corporation (“Panasonic”) and The Boeing Company (“Boeing”). While sales to Panasonic accounted for less than 10% of sales in 2021, they accounted for 11.1% of sales in 2020, and 13.0% of sales in 2019. Sales to Boeing accounted for 10.0% of sales in 2021, 9.5% of sales in 2020, and 13.6% of sales in 2019. Sales to Panasonic and Boeing are primarily in the Aerospace segment.

Strategy

Our strategy is to increase our value by developing technologies and capabilities either internally or through acquisition, and use those capabilities to provide innovative solutions to the aerospace and defense and other markets where our technology can be beneficial.

Practices as to Maintaining Working Capital

Liquidity is discussed in Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, in the Liquidity and Capital Resources section of this report.

Competitive Conditions

We experience considerable competition in the market sectors we serve, principally with respect to product performance and price, from various competitors, many of which are substantially larger and have greater resources. Success in the markets we serve depends upon product innovation, customer support, responsiveness and cost management. We continue to invest in developing the technologies and engineering support critical to competing in our markets.

Government Contracts

All U.S. government contracts, including subcontracts where the U.S. government is the ultimate customer, may be subject to termination at the election of the government. Our revenue stream relies on military spending. Approximately 18% of our 2021 consolidated sales were made to government-related markets.

Raw Materials

Materials, supplies and components are purchased from numerous sources. We believe that the loss of any one source, although potentially disruptive in the short-term, would not materially affect our operations in the long-term. The COVID-19 pandemic has significantly disrupted the global supply chain for certain components. See further discussion within the Risk Factor discussion in Item 1A.

Seasonality

Our business is typically not seasonal.

Backlog

At December 31, 2021, our consolidated backlog was \$415.7 million. At December 31, 2020, our backlog was \$283.4 million. The increase in backlog is driven primarily by recovering demand from our commercial aerospace and business jet customers, with increased OEM build rates and increased spending by commercial airlines on fleet improvements.

Backlog in the Aerospace segment was \$334.7 million at December 31, 2021, of which \$299.4 million is expected to be recognized as revenue in 2022. Backlog in the Test Systems segment was \$81.0 million at December 31, 2021. The Test Systems segment expects to recognize \$40.5 million of backlog as revenue in 2022.

Patents

We have a number of patents. While the aggregate protection of these patents is of value, our only material business that is dependent upon the protection afforded by these patents is our cabin power distribution products. Our patents and patent applications relate to electroluminescence, instrument panels, cord reels and handsets, and a broad patent covering the cabin power distribution technology. We regard our expertise and techniques as proprietary and rely upon trade secret laws and contractual arrangements to protect our rights. We have trademark protection in our major markets.

Research, Development and Engineering Activities

We are engaged in a variety of engineering and design activities as well as basic research and development activities directed to the substantial improvement or new application of our existing technologies. These costs are expensed when incurred and included in cost of products sold. Research, development and engineering costs amounted to approximately \$85.3 million in 2021, \$86.8 million in 2020 and \$108.9 million in 2019.

Human Capital Resources

Human Capital Management and Corporate Culture

As of December 31, 2021, we employed approximately 2,100 employees, of whom approximately 1,700 were employed in the United States and approximately 400 were employed outside of the United States. We have approximately 70 hourly production employees at PECO who are subject to collective bargaining agreements. We also leverage temporary workers to provide flexibility for our business and manufacturing needs.

We greatly value our employees and recognize that, without them, the Company would not have achieved the success it has accomplished since inception. We strive to provide a positive, supportive work culture with a clear global vision and a collaborative work style. We strongly believe that a focus on learning and supporting career development can lead to success. Astronics Corporation regularly earns “best employer” awards.

As it relates to customers, investors, suppliers and partners, our Company is dedicated to conducting business with integrity and responsibility for the greater good. We promote honest and ethical conduct, compliance with applicable government regulations and accountability by all of its directors, officers and employees.

When considering an acquisition or partnership, we embed questions specific to human capital management within our due diligence approach. These questions are in the areas of culture, equal employment opportunity, compliance with governing bodies, ethics, as well as employee benefits. We ask these in an effort to ensure that the acquisition candidate is a positive cultural fit and to minimize any risk when assessing the acquisition candidate.

In addition, our Corporate Governance Guidelines outline expectations that the Board establish and promote policies that encourage a positive, supportive work culture. The Board recognizes that culture is critical to the long-term success of Astronics and our strategy.

Compensation Programs and Employee Benefits

We believe that future success largely depends upon our continued ability to attract and retain highly skilled employees. We provide employees with competitive salaries and bonuses, opportunities for equity ownership, development programs that enable continued learning and growth and a robust employment package that promotes well-being across all aspects of their lives, including:

- Health and dental insurance
- Generous paid time off
- 401K, profit sharing, and bonus programs
- Flexible spending accounts
- Employee stock purchase plan
- Disability and life insurance
- Commute reduction, fitness, tuition programs
- Community service opportunities

The COVID-19 pandemic had a sudden and significant impact on the global economy, and particularly in the aerospace industry, causing us to make difficult cost conservation measures including workforce reductions activities to align capacity with expected demand as well as suspension of certain benefit programs. These measures were taken to maintain the financial health and liquidity of the business. We are continuously evaluating the impact of the COVID-19 pandemic, which is dependent on future developments, including the duration of the pandemic and the its impact on the global economy and the aerospace industry, which are uncertain and cannot be predicted at this time. While we have already reinstated several of the previously-suspended benefits, we will continue to strive to return to a normal level of employment opportunity and benefit offerings for the valued employees of Astronics.

Employee Engagement

The lifeblood of any organization is its employee base. We rely on our individual subsidiaries to regularly gather employee feedback, using the method each subsidiary believes is most appropriate. In some instances that feedback is obtained through “Town Hall” formats; in other instances, it is obtained through surveys. We also expect our managers to solicit and, where applicable, use employee feedback to improve its business practices and working environment. We are proud to have received numerous awards, recognizing both product quality as well as the ability to provide an excellent work environment.

Diversity and Inclusion

The Company believes that diversity and inclusion is critical for the attraction and retention of top talent and employs policies and procedures to recruit women and minority talent as well as policies to ensure pay equality. Astronics has an Equal Employment Opportunity Policy whereby the Company commits to providing equal employment opportunity for all qualified employees and applicants without regard to race, color, sex, sexual orientation, gender identity, religion, national origin, disability, veteran status, age, marital status, pregnancy, genetic information or other legally protected status.

Health and Safety

Astronics is committed to the safety of our customers and our employees. Each Astronics operation maintains environmental, health and safety policies that seek to promote the operation of its businesses in a manner that is protective of the health and safety of the public and its employees, particularly in the response to the global COVID-19 pandemic. We have implemented actions to maintain the health of our employees including social distancing measures, the use of masks, restricting visitors and unnecessary travel, and working from home whenever possible.

Our operations offer several health and welfare programs to employees to promote fitness and wellness and to encourage preventative healthcare. In addition, our employees are offered a confidential employee assistance program that provides professional counseling to employees and their family members. Also, many of our operations offer green space for employees to use during their breaks.

Available information

We file our financial information and other materials as electronically required with the Securities and Exchange Commission (“SEC”). These materials can be accessed electronically via the Internet at www.sec.gov. Such materials and other information about the Company are also available through our website at www.astronics.com.

ITEM 1A. RISK FACTORS

Covid-19 Pandemic Risks

Our business, financial results, and prospects are dependent on global aerospace demand. The continuing effects of the COVID-19 pandemic have had and are expected to continue to have a significant negative impact on aerospace demand, our business and our industry, including any potential impacts of vaccination requirements. Other epidemics or outbreaks of infectious diseases may have a similar impact. As previously disclosed, we face risks related to outbreaks of infectious diseases, including the ongoing COVID-19 pandemic. The COVID-19 coronavirus pandemic has caused significant volatility in financial markets, including the market price of our stock, and the aerospace industry. The continuing effects of the COVID-19 pandemic have had and are expected to continue to have a significant negative impact on aviation demand, our business, our supply chain and our industry, including any potential impacts of vaccination requirements.

The extent to which the pandemic will continue to negatively affect our business and results of operations will depend on many changing factors and developments including, without limitation, the following:

- the severity, extent, and duration of the pandemic including emerging variants of the virus, its impact on the aircraft industry and aviation and related aftermarket demand, and any additional production suspensions or reductions relating to the pandemic;
- the effectiveness of vaccines and treatments against emerging variant strains of COVID-19 and over the long-term;
- continued travel restrictions and bans, bans on public gatherings, and closures of non-essential businesses;
- any potential impacts of vaccination requirements and the ability to retain and recruit the workforce required to meet production requirements;
- economic stimulus efforts;
- economic recessions resulting from the pandemic;
- any inability of significant portions of our workforce to work effectively, including because of illness, remote work, quarantines, social distancing, government actions, or other restrictions in connection with the COVID-19 pandemic;
- potential lawsuits or regulatory actions due to COVID-19 spread in the workplace;
- our ability to maintain our compliance practices and procedures, financial reporting processes and related controls, and manage the complex accounting issues presented by the COVID-19 pandemic;
- the impact on the Company’s vendors and outsourced business processes and their process and controls documentation;
- potential failure or reduced capacity of third parties on which the Company relies, including suppliers, lenders, and other business partners, to meet the Company’s obligations and needs;

- the impact of the pandemic on the financial position of our customers;
- the impact of the pandemic on the availability and cost of materials;
- the impact on our contracts with our customers and suppliers, including force majeure provisions;
- the impact on the financial markets, including volatility in the financial markets;
- the availability and cost of credit to the Company; and
- the impact of government health and protection policies on future air traffic demand.

Several of these effects have already occurred and any or all of these items may occur or recur, which could have a material adverse effect on our business, financial condition, results of operations and cash flows. While the Company has taken action to reduce costs, increase liquidity and strengthen its financial position in light of the COVID-19 pandemic, there can be no assurance that our actions will mitigate the impact of the pandemic on our business.

We expect that the COVID-19 pandemic will continue to have a significant negative impact on our business for the duration of the pandemic and for an indeterminate time thereafter until demand grows closer to 2019 levels and supply chain challenges abate. Our business improvement depends on OEM production of aircraft at sufficient levels, which depends upon the public's willingness to use aircraft travel, the success of vaccination programs across the globe, sufficient OEM demand and orders (without suspension) from airlines, and the ability of airlines to weather the crisis and expand. Further, we expect that the pandemic recovery time for wide-body aircraft may be longer than for narrow-body aircraft due to reduced traveler demand and lower volumes of international travel. If the pandemic worsens or there is significant uncertainty on the commercial aerospace industry's recovery, we may find it difficult to obtain additional financing and/or fund our operations and meet our debt repayment obligations. Recognizing the unprecedented nature, scale and uncertainty associated with this global health crisis, the duration and extent of the on-going impacts cannot be reasonably estimated at this time.

Market Risks

The loss of Boeing or Panasonic as major customers or a significant reduction in business with either of those customers would reduce our sales and earnings.In 2021, we had a concentration of sales to Boeing representing approximately 10.0% of our sales. In 2020 and 2019, we also had a concentration of sales to Panasonic in excess of 10% of sales in those years. The loss of these customers or a significant reduction in business with them would significantly reduce our sales and earnings.

In October 2018 and March of 2019, two commercial aircraft accidents led to the grounding by the Federal Aviation Administration and other regulators of the Boeing 737 MAX aircraft, on which we have significant content, and which represented our largest OEM production program before the pandemic. The grounding of the Boeing 737 MAX, which started in March of 2019, caused the production rate of that aircraft to be lower than expected in fiscal year 2019 and 2020. The 737 MAX grounding affected our business both because of the production pause, impacting our line-fit content, and because it left many of our airline customers short of capacity, particularly in 2019 but continuing into 2020, which made them reluctant to take other aircraft out of service to install the types of retrofit products they buy from us. Although the 737 MAX was re-certified in the United States in November 2020 and in Europe in January 2021, if production rates do not materialize as anticipated, our Aerospace segment sales could be significantly impacted in the near or long-term, which could have a material adverse effect on our business, financial condition, results of operations, and cash flows. Even as deliveries of the 737 MAX program resume, demand for the aircraft could be lower than was expected prior to the initial grounding of the aircraft due to the continuing effects of the COVID-19 pandemic.

The markets we serve are cyclical and sensitive to domestic and foreign economic conditions and events, which may cause our operating results to fluctuate.Demand for our products is, to a large extent, dependent on the demand and success of our customers' products where we are a supplier to an OEM. In our Aerospace segment, demand by the business jet markets for our products is dependent upon several factors, including capital investment, product innovations, economic growth and wealth creation and technology upgrades. In addition, the commercial airline industry is highly cyclical and sensitive to such things as fuel price increases, labor disputes, global economic conditions, availability of capital to fund new aircraft purchases and upgrades of existing aircraft and passenger demand, all of which have been significantly impacted by the ongoing COVID-19 pandemic. A change in any of these factors could result in a further reduction in the amount of air travel and the ability of airlines to invest in new aircraft or to upgrade existing aircraft. These factors would reduce orders for new aircraft and would likely reduce airlines' spending for cabin upgrades for which we supply products, thus reducing our sales and profits. A reduction in air travel may also result in our commercial airline customers being unable to pay our invoices on a timely basis or not at all.

We are a supplier on various new aircraft programs just entering or expected to begin production in the future. As with any new program, there is risk as to whether the aircraft or program will be successful and accepted by the market. As is customary for our business, we purchase inventory and invest in specific capital equipment to support our production requirements generally based on delivery schedules provided by our customer. If a program or aircraft is not successful, we may have to write-off all or

a part of the inventory, accounts receivable and capital equipment related to the program. A write-off of these assets could result in a significant reduction of earnings and cause covenant violations relating to our debt agreements. This could result in our being unable to borrow additional funds under our bank credit facility or being obliged to refinance or renegotiate the terms of our bank indebtedness.

In our Test Systems segment, the market for our products is concentrated with a limited number of significant customers accounting for a substantial portion of the purchases of test equipment. In any one reporting period, a single customer or several customers may contribute an even larger percentage of our consolidated sales. In addition, our ability to increase sales will depend, in part, on our ability to obtain orders from current or new significant customers. The opportunities to obtain orders from these customers may be limited, which may impair our ability to grow sales. We expect that sales of our Test Systems products will continue to be concentrated with a limited number of significant customers for the foreseeable future. Additionally, demand for some of our test products is dependent upon government funding levels for our products, our ability to compete successfully for those contracts and our ability to develop products to satisfy the demands of our customers.

Our products are sold in highly competitive markets. Some of our competitors are larger, more diversified corporations and have greater financial, marketing, production and research and development resources. As a result, they may be better able to withstand the effects of periodic economic downturns. Our operations and financial performance will be negatively impacted if our competitors:

- develop products that are superior to our products;
- develop products that are more competitively priced than our products;
- develop methods of more efficiently and effectively providing products and services; or
- adapt more quickly than we do to new technologies or evolving customer requirements.

We believe that the principal points of competition in our markets are product quality, price, design and engineering capabilities, product development, conformity to customer specifications, quality of support after the sale, timeliness of delivery and effectiveness of the distribution organization. Maintaining and improving our competitive position will require continued investment in manufacturing, engineering, quality standards, marketing, customer service and support and our distribution networks. If we do not maintain sufficient resources to make these investments, or are not successful in maintaining our competitive position, our operations and financial performance will suffer.

We depend on government contracts and subcontracts with defense prime contractors and subcontractors that may not be fully funded, may be terminated, or may be awarded to our competitors. The failure to be awarded these contracts, the failure to receive funding or the termination of one or more of these contracts could reduce our sales. Sales to the U.S. government and its prime contractors and subcontractors represent a significant portion of our business. The funding of these programs is generally subject to annual congressional appropriations, and congressional priorities are subject to change. In addition, government expenditures for defense programs may decline or these defense programs may be terminated. A decline in governmental expenditures or the termination of existing contracts may result in a reduction in the volume of contracts awarded to us. We have resources applied to specific government contracts and if any of those contracts were terminated, we may incur substantial costs redeploying those resources.

Contracting in the defense industry is subject to significant regulation, including rules related to bidding, billing and accounting kickbacks and false claims, and any non-compliance could subject us to fines and penalties or possible debarment. Like all government contractors, we are subject to risks associated with this contracting. These risks include the potential for substantial civil and criminal fines and penalties. These fines and penalties could be imposed for failing to follow procurement integrity and bidding rules, employing improper billing practices or otherwise failing to follow cost accounting standards, receiving or paying kickbacks or filing false claims. We have been, and expect to continue to be, subjected to audits and investigations by government agencies. The failure to comply with the terms of our government contracts could harm our business reputation. It could also result in suspension or debarment from future government contracts.

Strategic Risks

We may incur losses and liabilities as a result of our acquisition strategy. Growth by acquisition involves risks that could adversely affect our financial condition and operating results, including:

- the potential exposure to unanticipated liabilities;
- the potential that expected benefits or synergies are not realized and that operating costs increase;
- the risks associated with incurring additional acquisition indebtedness, including that additional indebtedness could limit our cash flow availability for operations and our flexibility;
- difficulties in integrating the operations and personnel of acquired companies;
- the potential loss of key employees, suppliers or customers of acquired businesses; and

- diversion of management time and attention from our core business.

In addition, any acquisition, once successfully integrated, could negatively impact our financial performance if it does not perform as planned, does not increase earnings, or does not prove otherwise to be beneficial to us.

If we are unable to adapt to technological change, demand for our products may be reduced. The technologies related to our products have undergone, and in the future may undergo, significant changes. To succeed in the future, we will need to continue to design, develop, manufacture, assemble, test, market and support new products and enhancements on a timely and cost-effective basis. Our competitors may develop technologies and products that are more effective than those we develop or that render our technology and products obsolete or uncompetitive. Furthermore, our products could become unmarketable if new industry standards emerge. We may have to modify our products significantly in the future to remain competitive, and new products we introduce may not be accepted by our customers.

Our new product development efforts may not be successful, which would result in a reduction in our sales and earnings. We may experience difficulties that could delay or prevent the successful development of new products or product enhancements, and new products or product enhancements may not be accepted by our customers. In addition, the development expenses we incur may exceed our cost estimates, and new products we develop may not generate sales sufficient to offset our costs. If any of these events occur, our sales and profits could be adversely affected.

Operational Risks

Our business and operations could be adversely impacted in the event of a failure of our information technology infrastructure or adversely impacted by a successful cyber-attack. We are dependent on various information technologies throughout our Company to administer, store and support multiple business activities. We routinely experience various cybersecurity threats, threats to our information technology infrastructure, unauthorized attempts to gain access to our Company sensitive information, and denial-of-service attacks as do our customers, suppliers and subcontractors. We conduct regular periodic training of our employees as to the protection of sensitive information which includes security awareness training intended to prevent the success of “phishing” attacks.

The threats we face vary from attacks common to most industries to more advanced and persistent, highly organized adversaries, including nation states, which target us and other defense contractors because we protect sensitive information. If we are unable to protect sensitive information, our customers or governmental authorities could question the adequacy of our threat mitigation and detection processes and procedures, and depending on the severity of the incident, our customers’ data, our employees’ data, our intellectual property, and other third-party data (such as subcontractors, suppliers and vendors) could be compromised. As a consequence of their persistence, sophistication and volume, we may not be successful in defending against all such attacks. Due to the evolving nature of these security threats, the impact of any future incident cannot be predicted.

Although we work cooperatively with our customers, suppliers, and subcontractors to seek to minimize the impact of cyber threats, other security threats or business disruptions, we must rely on the safeguards put in place by these entities, which may affect the security of our information. These entities have varying levels of cybersecurity expertise and safeguards and their relationships with U.S. government contractors, such as Astronics, may increase the likelihood that they are targeted by the same cyber threats we face.

Our inability to adequately enforce and protect our intellectual property or defend against assertions of infringement could prevent or restrict our ability to compete. We rely on patents, trademarks and proprietary knowledge and technology, both internally developed and acquired, in order to maintain a competitive advantage. Our inability to defend against the unauthorized use of these rights and assets could have an adverse effect on our results of operations and financial condition. Litigation may be necessary to protect our intellectual property rights or defend against claims of infringement. This litigation could result in significant costs and divert our management’s focus away from operations. Refer to the risk factor related to pending patent infringement litigation below and Note 19 to the consolidated financial statements in Item 8 of this report for further discussion.

If critical components or raw materials used to manufacture our products or used in our development programs become scarce or unavailable, then we may incur delays in manufacturing and delivery of our products and in completing our development programs, which has damaged, and could continue to damage, our business, results of operations and financial condition. Due to increased demand across a range of industries, the global supply chain for certain critical components or raw materials used in the manufacture of our products and used in our development programs has experienced significant strain in recent periods. Particularly, the market for electronic components is experiencing increased demand, creating substantial uncertainty regarding our suppliers’ continued production of key components for our products. The COVID-19 pandemic has also contributed to and exacerbated this strain. This constrained supply environment has adversely

affected, and could further affect, availability, lead times and cost of components, and could impact our ability to complete development programs, respond to accelerated or quick-turn delivery requests from customers, or meet customer demand and product delivery dates for our end customers where we cannot timely secure adequate supply of these components. Moreover, if any of our suppliers become financially unstable, or otherwise unable or unwilling to provide us with raw materials or components, then we may have to find new suppliers. It may take several months to locate alternative suppliers, if required, or to redesign our products to accommodate components from different suppliers. We may experience significant delays in manufacturing and shipping our products to customers and incur additional development, manufacturing and other costs to establish alternative sources of supply if we lose any of these sources or are required to redesign our products. We cannot predict if we will be able to obtain replacement components within the time frames that we require at an acceptable cost, if at all.

In an effort to mitigate these risks, in some cases, we have incurred higher costs to secure available inventory, or have extended or placed non-cancellable purchase commitments with suppliers, which introduces inventory risk if our forecasts and assumptions prove inaccurate. While we may attempt to recover the increased costs through price increases to our customers, we may be unable to mitigate the effect on our results of operations. We have also multi-sourced and pre-ordered components and raw materials inventory in some cases in an effort to reduce the impact of the adverse supply chain conditions we have experienced. Despite our attempts to mitigate the impact on our business, these constrained supply conditions are expected to adversely impact our costs of goods sold, including our ability to continue to reduce the cost to produce our products in a manner consistent with prior periods. In addition, some suppliers have indicated that, as a result of current shortages, they intend to cease manufacture of certain components used in our products. Limits on manufacturing availability or capacity or delays in production or delivery of components or raw materials due to COVID-related restrictions could further delay or inhibit our ability to obtain supply of components and produce finished goods. There can be no assurance that the impacts of the pandemic on the supply chain will not continue, or worsen, in the future. These supply chain constraints and their related challenges could result in shortages, increased material costs or use of cash, engineering design changes, and delays in new product introductions, each of which could adversely impact our growth, gross margin and financial results. These types of negative financial impacts on our business may become more acute as supply chain pressures increase.

Our financial results could be adversely impacted by the escalation of labor and benefit costs. Consistent with the experience of other employers, our labor, medical and workers' compensation costs have increased substantially in recent years and are expected to continue to rise. If this trend continues, the cost of labor and to provide healthcare and other benefits to our employees could increase, adversely impacting profitability. As the labor market recovers from the effects of the COVID-19 pandemic, competition for employees has escalated which has increased costs associated with attracting and retaining employees. We cannot be certain that we will be able to maintain an adequately skilled labor force necessary to operate efficiently or that our labor costs will not increase as a result of a shortage in the availability of skilled employees. Changes to healthcare regulations involving the Patient Protection and Affordable Care Act may also increase the cost of providing such benefits to our employees. We cannot predict the ultimate content, timing, or effect of any healthcare reform legislation or the impact of potential legislation or related proposals and policies on our results. Any significant increases in the costs attributable to our self-insured health and workers' compensation plans could adversely impact our business, results of operations, financial condition and cash flows.

Government vaccine mandates could result in workforce attrition for us and our suppliers which could adversely affect our operations and supply chain. On September 9, 2021, President Biden issued an executive order requiring all employers with U.S. Government contracts to ensure that their U.S.-based employees, contractors, and subcontractors, that work in affected facilities or work on or in support of U.S. Government contracts are fully vaccinated. The deadline for vaccination was initially December 8, 2021, but the White House announced on November 4, 2021 that the deadline would be extended to January 4, 2022. The executive order includes on-site and remote U.S.-based employees, contractors and subcontractors and permits only limited exceptions for medical and religious reasons. Substantially all of our subsidiaries are either directly subject to the executive order, or will be required to comply with the executive order via flowdown from our affected customers. It is currently not possible to predict with certainty the impact the executive order will have on our workforce, or on our suppliers who may also be impacted. As a U.S. Government contractor, and as a supplier to customers who are U.S. Government contractors, we took steps to comply with the executive order mandating COVID-19 vaccines across our U.S.-based workforce, contractors and subcontractors that service or support our U.S. Government contracts, and who do not qualify for medical or religious exemptions, to be fully vaccinated by January 4, 2022, until it was enjoined by a federal court in December 2021. The vaccine mandate currently remains enjoined and the Government has announced that it will take no efforts to enforce it, absent further notice from the contracting agency, where the place of performance is a U.S. state or an excluded outlying area. If the vaccine mandate is revived, the Company will resume efforts to work with employees who have not yet either submitted proof of vaccination or requested an accommodation. Additional vaccine mandates may be announced in jurisdictions in which our businesses operate. Implementation of these requirements may result in attrition, including attrition of critically skilled labor, and difficulty securing future labor needs, which could have a material adverse effect on our business, financial condition, and

results of operations. Further, implementation of these requirements by our suppliers may result in workforce attrition at our suppliers, which may result in disruption to our supply chain which, in turn, may have a negative impact on our revenues and results of operations by impacting ability to acquire certain raw materials and components used in the manufacture of our products and in our development programs.

If our subcontractors fail to perform their contractual obligations, our prime contract performance and our ability to obtain future business could be materially and adversely impacted. Many of our contracts involve subcontracts with other companies upon which we rely to perform a portion of the services we must provide to our customers. There is a risk that we may have disputes with our subcontractors, including disputes regarding the quality and timeliness of work performed by the subcontractor or customer concerns about the subcontractor. Failure by our subcontractors to satisfactorily provide, on a timely basis, the agreed-upon supplies or perform the agreed-upon services may materially and adversely impact our ability to perform our obligations with our customer and could result in the assessment of late delivery penalties. Subcontractor performance deficiencies could result in a customer terminating our contract for default. A default termination could expose us to liability and substantially impair our ability to compete for future contracts and orders.

Some of our contracts contain late delivery penalties Failure to deliver in a timely manner due to supplier problems, development schedule slides, manufacturing difficulties, or similar schedule-related events could have a material adverse effect on our business. No significant penalties have been incurred to date.

Our results of operations are affected by our fixed-price contracts, which could subject us to losses in the event that we have cost overruns. For the year ended December 31, 2021, fixed-price contracts represented almost all of the Company's sales. On fixed-price contracts, we agree to perform the scope of work specified in the contract for a predetermined price. Depending on the fixed price negotiated, these contracts may provide us with an opportunity to achieve higher profits based on the relationship between our costs and the contract's fixed price. However, we bear the risk that increased or unexpected costs may reduce our profit.

The failure of our products may damage our reputation, necessitate a product recall or result in claims against us that exceed our insurance coverage, thereby requiring us to pay significant damages. Defects in the design and manufacture of our products may necessitate a product recall. We include complex system design and components in our products that could contain errors or defects, particularly when we incorporate new technology into our products. If any of our products are defective, we could be required to redesign or recall those products or pay substantial damages or warranty claims. Such an event could result in significant expenses, disrupt sales and affect our reputation and that of our products. We are also exposed to product liability claims. We carry aircraft and non-aircraft product liability insurance consistent with industry norms. However, this insurance coverage may not be sufficient to fully cover the payment of any potential claim. A product recall or a product liability claim not covered by insurance could have a material adverse effect on our business, financial condition and results of operations.

Financial Risks

We are subject to debt covenant restrictions. The terms of our credit facility may restrict our current and future operations, particularly our ability to take certain actions. Our credit facility contains certain financial covenants. An unexpected decline in our operating income could cause us to violate our covenants. A covenant violation could result in a default under the revolving credit facility. If any such default occurs, the lenders may elect to declare all outstanding borrowings, together with accrued interest and other amounts payable thereunder, to be immediately due and payable. The lenders also have the right in these circumstances to terminate any commitments they have to provide further borrowings. In addition, following an event of default, the lenders under the credit facility will have the right to proceed against the collateral granted to them to secure the debt, which includes our available cash. If the debt under the credit facility were to be accelerated, we cannot assure that our assets would be sufficient to repay in full our debt.

Additionally, our credit facility also contains a number of restrictive covenants that impose significant operating and financial restrictions on the Company and may limit our ability to engage in acts that may be in our long-term best interests. The credit facility includes covenants restricting, among other things, the ability of the Company to:

- incur additional indebtedness;
- pay dividends on or repurchase our capital stock;
- make certain acquisitions or investments;
- sell assets; and
- engage in certain business activities.

The amount of debt we have outstanding, as well as any debt we may incur in the future, could have an adverse effect on our operational and financial flexibility. As of December 31, 2021, we had approximately \$163.0 million of long-term debt outstanding. Changes to our level of debt subsequent to December 31, 2021 could have significant consequences to our business, including the following:

- Depending on interest rates and debt maturities, a substantial portion of our cash flow from operations could be dedicated to paying principal and interest on our debt, thereby reducing funds available for our acquisition strategy, capital expenditures or other purposes;
- A significant amount of additional debt could make us more vulnerable to changes in economic conditions or increases in prevailing interest rates;
- Our ability to obtain additional financing for acquisitions, capital expenditures or for other purposes could be impaired;
- The increase in the amount of debt we have outstanding and the associated interest expense increases the risk of non-compliance with some of the covenants in our debt agreements which require us to maintain specified financial ratios; and
- We may be more leveraged than some of our competitors, which may result in a competitive disadvantage.

Our inability to refinance our existing long-term debt maturing in 2023 on terms that are favorable to us may materially and adversely impact our operations and future growth and expansion initiatives. Our credit facility, of which \$163.0 million is outstanding as of December 31, 2021, is currently scheduled to mature in 2023. While we expect to be able to refinance, replace or extend the maturity date of our credit facility before it matures, we cannot be sure that we will be able to obtain such debt refinancing on commercially reasonable terms or at all. The extent to which we will be able to effect such refinancing, replacement or maturity extension on terms that are favorable to us or at all is dependent on a number of highly uncertain factors, including then-prevailing credit and other market conditions, economic conditions, particularly in the aerospace and defense markets, disruptions or volatility caused by factors such as COVID-19, regional conflicts, inflation, and supply chain disruptions. In addition, rising interest rates could limit our ability to refinance our existing credit facility when it matures or cause us to pay higher interest rates upon refinancing. As the Company's long-term debt approaches maturity, if the Company is unable to refinance, replace or extend the maturity on its credit facility, the Company's liquidity, results of operations, and financial condition could be materially adversely impacted.

Furthermore, certain covenants and other terms of our existing credit facility impose significant restrictions on our operational flexibility. In connection with debt refinancing, our ability to negotiate more favorable and flexible covenants and terms, including financial covenants, is highly uncertain. An inability to complete our debt refinancing on terms that are more favorable to us than the covenants and terms in effect under our existing credit facility could materially and adversely impact our business, operations and future growth and expansion initiatives. In particular, if the covenants and terms under our refinanced indebtedness were to remain unchanged as compared to those under our current credit facility, we may be required to take certain operational measures or decline to pursue certain growth initiatives in order to maintain compliance with these restrictive covenants and terms, which could materially and adversely affect our business, results of operations and financial condition.

A write-off of all or part of our goodwill or other intangible assets could adversely affect our operating results and net worth. At December 31, 2021, goodwill and net intangible assets were approximately 9.6% and 15.5% of our total assets, respectively. In 2020, we recorded goodwill impairment charges associated with four Aerospace reporting units, totaling \$86.3 million. In 2019, we recorded goodwill and intangible asset impairment charges of \$1.6 million and \$6.2 million related to our AeroSat antenna business, respectively. We had no such impairment charges during 2021. Our goodwill and other intangible assets may increase in the future since our strategy includes growing through acquisitions. We may have to write-off all or part of our goodwill or purchased intangible assets if their value becomes impaired. Although this write-off would not result in an outlay of cash, it could reduce our earnings and net worth significantly.

We are subject to financing and interest rate exposure risks that could adversely affect our business, liquidity and operating results. Changes in the availability, terms and cost of capital, and increases in interest rates could cause our cost of doing business to increase and place us at a competitive disadvantage. At December 31, 2021, all of our debt was subject to variable interest rates.

The potential phase out of LIBOR may negatively impact our debt agreements and financial position, results of operations and liquidity. On July 27, 2017, the Financial Conduct Authority (the authority that regulates LIBOR) announced that it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021 and it is unclear whether new methods of calculating LIBOR will be established. If LIBOR ceases to exist after 2021, a comparable or successor reference rate as approved by the Administrative Agent under the Credit Agreement will apply or such other reference rate as may be agreed by the Company and the lenders under the Credit Agreement. Prior to its amendment on March 1, 2022, the interest rate under our Amended Credit Facility was calculated using LIBOR. In conjunction with the amendment, our Amended Credit Facility is now based on the Secured Overnight Financing Rate ("SOFR"), rather than LIBOR. However, that agreement

expires in May 2023 and it is unclear at this time whether different benchmark rates used to price indebtedness will develop. We cannot predict the impact that an alternative benchmark rate may have on the terms of our future indebtedness or interest cost. However, an increase in our cost of borrowing could result in an adverse effect on our financial position, results of operations, and liquidity.

Our future operating results could be impacted by estimates used to calculate impairment losses on long-lived assets. The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make significant and subjective estimates and assumptions that may affect the reported amounts of tangible and intangible long-lived assets in the financial statements. These estimates are integral in the determination of whether a potential non-cash impairment loss exists as well as the calculation of that loss. Actual future results could differ from those estimates. As discussed in Note 23 to the consolidated financial statements in Item 8 of this report, we recorded a long-lived asset impairment charge of approximately \$0.7 million and \$9.5 million in the years ending December 31, 2020 and 2019, respectively. We had no such impairment charges in 2021.

Changes in discount rates and other estimates could affect our future earnings and equity. Our goodwill asset impairment evaluations are determined using valuations that involve several assumptions, including discount rates, cash flow estimates, growth rates and terminal values. Certain of these assumptions, particularly the discount rate, are based on market conditions and are outside of our control. Changes in these assumptions could affect our future earnings and equity.

Additionally, pension obligations and the related costs are determined using actual results and actuarial valuations that involve several assumptions. The most critical assumption is the discount rate. Other assumptions include mortality, salary levels and retirement age. The discount rate assumptions are based on current market conditions and are outside of our control. Changes in these assumptions could affect our future earnings and equity.

Legal and Compliance Risks

We currently are involved or may become involved in the future, in legal proceedings that, if adversely adjudicated or settled, could materially impact our financial condition. As an aerospace company, we may become a party to litigation in the ordinary course of our business, including, among others, matters alleging product liability, warranty claims, breach of commercial or government contract or other legal actions. In general, litigation claims can be expensive and time consuming to bring or defend against and could result in settlements or damages that could significantly impact results of operations and financial condition.

Currently, our subsidiary, AES is a defendant in actions filed in various jurisdictions by Lufthansa Technik AG relating to an allegation of patent infringement and based on rulings to date we have concluded that losses related to these proceedings are probable. If these actions are decided adversely against the Company, the associated damages could result in a material adverse effect on our results of operations or financial condition.

Refer to Note 19 of our consolidated financial statements in Item 8 of this report for discussion on this and other legal proceedings. Other than these proceedings, we are not party to any significant pending legal proceedings that management believes will result in a material adverse effect on our results of operations or financial condition.

Our operations in foreign countries expose us to political and currency risks and adverse changes in local legal and regulatory environments. In 2021, approximately 8% of our sales were made by our subsidiaries in foreign countries, predominately in our subsidiaries in France and Canada. Net assets held by our foreign subsidiaries total \$40.5 million at December 31, 2021. Approximately 21% of our consolidated sales in 2021 were made to customers outside of the United States. Our financial results may be adversely affected by fluctuations in foreign currencies and by the translation of the financial statements of our foreign subsidiaries from local currencies into U.S. dollars. We expect international operations and export sales to continue to contribute to our earnings for the foreseeable future. Both the sales from international operations and export sales are subject in varying degrees to risks inherent in doing business outside of the U.S. Such risks include the possibility of unfavorable circumstances arising from host country laws or regulations, changes in tariff and trade barriers and import or export licensing requirements, and political or economic reprioritization, insurrection, civil disturbance or war.

Government regulations could limit our ability to sell our products outside the U.S. and could otherwise adversely affect our business. Certain of our sales are subject to compliance with U.S. export regulations. Our failure to obtain, or fully adhere to the limitations contained in, the requisite licenses, meet registration standards or comply with other government export regulations would hinder our ability to generate sales of our products outside the U.S. Compliance with these government regulations may also subject us to additional fees and operating costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position. In order to sell our products in European Union countries, we must satisfy certain technical requirements. If we are unable to comply with those requirements with respect to a significant quantity of our products, our sales in Europe would be restricted. Doing business internationally also subjects us to numerous

U.S. and foreign laws and regulations, including regulations relating to import-export control, technology transfer restrictions, foreign corrupt practices and anti-boycott provisions. Our failure, or failure by an authorized agent or representative that is attributable to us, to comply with these laws and regulations could result in administrative, civil or criminal liabilities and could, in the extreme case, result in monetary penalties, suspension or debarment from government contracts or suspension of our export privileges, which would have a material adverse effect on us.

General Risks

Our future success depends to a significant degree upon the continued contributions of our management team and technical personnel. The loss of members of our management team could have a material and adverse effect on our business. In addition, competition for qualified technical personnel in our industry is intense, and we believe that our future growth and success will depend on our ability to attract, train and retain such personnel.

Future terror attacks, war, or other civil disturbances could negatively impact our business. Continued terror attacks, war or other disturbances could lead to economic instability and decreases in demand for our products, which could negatively impact our business, financial condition and results of operations. Terrorist attacks world-wide have caused instability from time to time in global financial markets and the aviation industry. The long-term effects of terrorist attacks on us are unknown. These attacks and the U.S. government's continued efforts against terrorist organizations may lead to additional armed hostilities or to further acts of terrorism and civil disturbance in the U.S. or elsewhere, which may further contribute to economic instability.

If we fail to meet expectations of securities analysts or investors due to fluctuations in our sales or operating results, our stock price could decline significantly. Our sales and earnings may fluctuate from quarter to quarter due to a number of factors, including delays or cancellations of programs and the impacts of the ongoing COVID-19 pandemic on revenues and costs. It is likely that in some future quarters our operating results may fall below the expectations of securities analysts or investors. In this event, the trading price of our stock could decline significantly.

Our stock price is volatile. For the year ended December 31, 2021, our stock price ranged from a low of \$10.04 to a high of \$20.51. The price of our common stock has been and likely will continue to be subject to wide fluctuations in response to a number of events and factors, such as:

- quarterly variations in operating results;
- variances of our quarterly results of operations from securities analyst estimates;
- changes in financial estimates;
- announcements of technological innovations and new products;
- news reports relating to trends in our markets;
- the cancellation of major contracts or programs with our customers; and
- impacts of the COVID-19 pandemic on the aerospace industry and our Company.

In addition, the stock market in general, and the market prices for companies in the aerospace and defense industry in particular, have experienced significant price and volume fluctuations that often have been unrelated to the operating performance of the companies affected by these fluctuations. These broad market fluctuations may adversely affect the market price of our common stock, regardless of our operating performance. Global health crises, such as the current COVID-19 pandemic, with the breadth of its impact worldwide, and particularly on the aerospace industry, could also cause significant volatility in the market price.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None

ITEM 2. PROPERTIES

On December 31, 2021, we own or lease 1.3 million square feet of space, distributed by segment as follows:

	Owned	Leased	Total
Aerospace	625,000	518,000	1,143,000
Test Systems	—	140,000	140,000
Total Square Feet	<u>625,000</u>	<u>658,000</u>	<u>1,283,000</u>

We have principal operations in the U.S., Canada, France and the UK, as well as engineering offices in the Ukraine and India.

Upon the expiration of our current leases, we believe that we will be able to either secure renewal terms or enter into leases for or purchases of alternative locations at market terms. We believe that our properties have been adequately maintained and are generally in good condition.

ITEM 3. LEGAL PROCEEDINGS

Currently, we are involved in legal proceedings relating to allegations of patent infringement and, based on rulings to date, we have concluded that losses related to certain of these proceedings are probable. For a discussion of contingencies related to legal proceedings, see Note 19 to our consolidated financial statements in Item 8 of this report.

ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The table below sets forth the range of prices for the Company's Common Stock, traded on the NASDAQ National Market System, for each quarterly period during the last two years. The approximate number of shareholders of record as of March 2, 2022, was 705 for Common Stock and 1,946 for Class B Stock.

<u>2021</u>	<u>High</u>	<u>Low</u>
First	\$ 19.00	\$ 12.14
Second	\$ 20.51	\$ 15.50
Third	\$ 19.25	\$ 12.61
Fourth	\$ 14.55	\$ 10.04
<u>2020</u>	<u>High</u>	<u>Low</u>
First	\$ 28.92	\$ 7.15
Second	\$ 15.46	\$ 7.14
Third	\$ 10.80	\$ 7.60
Fourth	\$ 13.64	\$ 6.40

The Company has not paid any cash dividends in the three-year period ended December 31, 2021. The Company has no plans to pay cash dividends as it plans to retain all cash from operations as a source of capital to service debt and finance working capital and growth in the business.

The following table summarizes our purchases of our common stock for the quarter ended December 31, 2021:

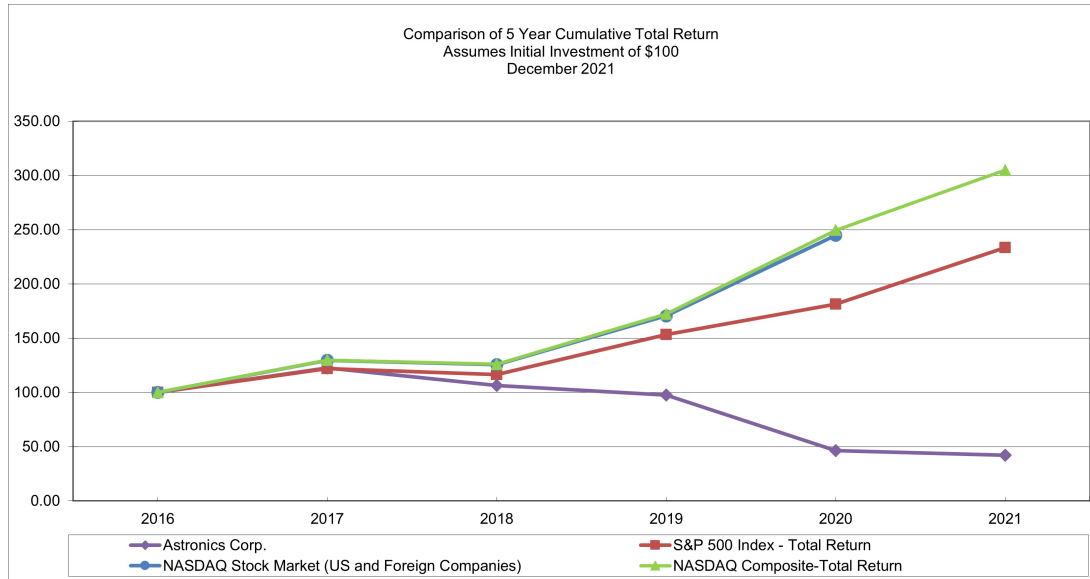
<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid Per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Maximum Dollar Value of Shares that may yet be Purchased Under the Program</u>
October 3 - October 30 (1)	729	\$ 14.38	—	\$ 41,483,815
October 31 - November 27	—	\$ —	—	\$ 41,483,815
November 28 - December 31	—	\$ —	—	\$ 41,483,815
Total	729	\$ 14.38	—	

(1) On October 4, 2021, we accepted delivery of 729 shares at \$14.38 in connection with the issuance of restricted stock units.

Previously, the Board of Directors authorized share repurchase programs that authorized repurchases up to certain monetary limits in accordance with applicable securities laws on the open market or through privately negotiated transactions. Under those programs, we purchased approximately 3,498,000 shares for \$100 million.

On September 17, 2019, the Board of Directors authorized an additional share repurchase program. This program authorizes repurchases of up to \$50 million of common stock. Cumulative repurchases under this plan were approximately 310,000 shares at a cost of \$8.5 million before the 10b5-1 plan associated with the share repurchase program was terminated on February 3, 2020. There have been no repurchases since that date.

The following graph compares the Company's annual percentage change in cumulative total return on common shares over the past five years with the cumulative total return of companies comprising the S&P 500 Index and the NASDAQ Composite Index. This presentation assumes that \$100 was invested in shares of the relevant issuers on December 31, 2016, and that dividends received were immediately invested in additional shares. The graph plots the value of the initial \$100 investment at one-year intervals for the fiscal years shown. The NASDAQ Composite Index replaces the CRSP NASDAQ Stock Market (US and Foreign Companies) Index in this analysis and going forward, as the CRSP Index data is no longer accessible. The CRSP index has been included with data through 2020.



		2016	2017	2018	2019	2020	2021
Astronics Corp.	Return %	—	22.55	(13.30)	(8.21)	(52.67)	(9.30)
	Cum \$	100.00	122.55	106.25	97.52	46.16	41.87
S&P 500 Index - Total Returns	Return %	—	21.83	(4.38)	31.49	18.40	28.71
	Cum \$	100.00	121.83	116.49	153.17	181.35	233.41
NASDAQ Stock Market (US and Foreign Companies)	Return %	—	29.37	(2.95)	35.78	43.55	—
	Cum \$	100.00	129.37	125.54	170.46	244.69	—
NASDAQ Composite-Total Return	Return %	—	29.64	(2.84)	36.69	44.92	22.18
	Cum \$	100.00	129.64	125.96	172.18	249.51	304.85

ITEM 6. [Reserved]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

OVERVIEW

Astronics Corporation, through its subsidiaries, is a leading supplier of advanced technologies and products to the global aerospace and defense industries. Our products and services include advanced, high-performance electrical power generation and distribution systems, seat motion solutions, lighting and safety systems, avionics products, aircraft structures, systems certification, and automated test systems.

We have two reportable segments, Aerospace and Test Systems. Our Aerospace segment has principal operating facilities in the United States, Canada and France. Our Test Systems segment has principal operating facilities in the United States and the United Kingdom. We have engineering offices in the Ukraine and India.

Our Aerospace segment designs and manufactures products for the global aerospace industry. Product lines include lighting and safety systems, electrical power generation, distribution and seat motions systems, aircraft structures, avionics products, systems certification, and other products. Our primary Aerospace customers are the airframe manufacturers ("OEM") that build aircraft for the commercial, military and general aviation markets, suppliers to those OEM's, aircraft operators such as airlines, suppliers to the aircraft operators, and branches of the U.S. Department of Defense ("USDOD"). Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the aerospace and defense, communications and mass transit industries as well as training and simulation devices for both commercial and military applications. In the Test Systems segment, Astronics' products are sold to a global customer base including OEM's and prime government contractors for both electronics and military products.

Our strategy is to increase our value by developing technologies and capabilities, either internally or through acquisition, and using those capabilities to provide innovative solutions to our targeted markets where our technology can be beneficial.

Important factors affecting our growth and profitability are the ongoing impacts of the COVID-19 pandemic and the timing and extent of recovery (as discussed more fully below), supply chain pressures, the rate at which new aircraft are produced, government funding of military programs, our ability to have our products designed into new aircraft and the rates at which aircraft owners, including commercial airlines, refurbish or install upgrades to their aircraft. New aircraft build rates and aircraft owners spending on upgrades and refurbishments is cyclical and dependent on the strength of the global economy. Once designed into a new aircraft, the spare parts business is frequently retained by the Company. Future growth and profitability of the Test Systems business is dependent on developing and procuring new and follow-on business. The nature of our Test Systems business is such that it pursues large, often multi-year, projects. There can be significant periods of time between orders in this business which may result in large fluctuations of sales and profit levels and backlog from period to period. Test Systems segment customers include the USDOD, prime contractors to the USDOD, mass transit operators and prime contractors to mass transit operators.

Each of the markets that we serve presents opportunities that we expect will provide growth for the Company over the long-term. We continue to look for opportunities in all of our markets to capitalize on our core competencies to expand our existing business and to grow through strategic acquisitions.

Challenges which continue to face us include the ongoing COVID-19 pandemic and its continued impact on the aerospace industry and improving shareholder value through increasing profitability. Increasing profitability is dependent on many things, primarily sales growth, both acquired and organic, and the Company's ability to control operating expenses and to identify means of creating improved productivity. Sales are driven by increased build rates for existing aircraft, market acceptance and economic success of new aircraft and our products, continued government funding of defense programs, the Company's ability to obtain production contracts for parts we currently supply or have been selected to design and develop for new aircraft platforms and continually identifying and winning new business for our Test Systems segment.

Reduced aircraft build rates driven by a weak economy, aircraft groundings, tight credit markets, reduced air passenger travel and an increasing supply of used aircraft on the market would likely result in reduced demand for our products, which will result in lower profits. Reduction of defense spending may result in fewer opportunities for us to compete, which could result in lower profits in the future. Many of our newer development programs are based on new and unproven technology and at the same time we are challenged to develop the technology on a schedule that is consistent with specific programs. Delays in delivery schedules and incremental costs resulting from supply chain pressures can also result in lower profits. We will

continue to address these challenges by working to improve operating efficiencies and focusing on executing on the growth opportunities currently in front of us.

In September 2021, the Company entered into an agreement with the U.S. Department of Transportation (“USDOT”) under the Aviation Manufacturing Jobs Protection Program (“AMJP”) for a grant of up to \$14.7 million. The Company received \$7.4 million under the grant in 2021. The Company expects to receive a second installment of approximately \$5.2 million in the first quarter of 2022 and a final installment in the second or third quarter of 2022 upon final confirmation from the USDOT of the Company meeting its grant commitments. The receipt of the full award is primarily conditioned upon the Company committing to not furlough, lay off or reduce the compensation levels of a defined group of employees during the six-month period of performance between September 2021 and March 2022. The grant benefit will be recognized ratably over the six-month performance period as a reduction to cost of products sold in proportion to the compensation expense that the award is intended to defray. During the year ended December 31, 2021, the Company recognized \$8.7 million of the award and expects to recognize the remaining \$6.0 million in the first quarter of 2022.

The COVID-19 pandemic caused a significant impact on our sales and net income for fiscal 2021 and 2020. The pandemic adversely impacted customer demand for all market channels, with commercial transport (both OEM and aftermarket channels) being the most adversely impacted due to the pandemic's impact on air travel worldwide. As a result, the Company executed restructuring activities in the form of workforce reduction to better align capacity with expected demand. Restructuring charges in severance expense totaling \$0.6 million, associated primarily with the Aerospace segment, were recorded in the year ended December 31, 2021, compared with \$4.9 million recorded in the year ended December 31, 2020.

In the fourth quarter of 2019, in an effort to reduce the significant operating losses at our AeroSat business, we initiated a restructuring plan to reduce costs and minimize losses of our AeroSat antenna business. The plan focused the initiatives for the AeroSat business on near-term opportunities pertaining to business jet connectivity. The plan resulted in a downsized manufacturing operation remaining in New Hampshire, with significantly reduced personnel and operating expenses. Impairments and restructuring charges recorded in 2019 as a result of the restructuring plan amounted to \$28.8 million, all of which is included in the Aerospace segment. The Company incurred an impairment charge to right-of-use assets of approximately \$0.7 million and \$0.4 million in restructuring charges associated with severance at AeroSat during the year ended December 31, 2020.

ACQUISITIONS

On July 1, 2019, the Company acquired all of the issued and outstanding capital stock of Freedom Communication Technologies, Inc. (“Freedom”). Freedom, located in Kilgore, Texas, is a leader in wireless communication testing, primarily for the civil land mobile radio market. Freedom is included in our Test Systems segment. The total consideration for the transaction was \$21.8 million, net of \$0.6 million in cash acquired.

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited, for \$7.0 million in cash, plus earnouts estimated at a fair value of \$2.5 million at acquisition. Diagnosys Inc. and its affiliates (“Diagnosys”) is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India. The terms of the acquisition allowed for a potential earnout of up to an additional \$13.0 million over the three years post-acquisition based on achievement of new order levels of over \$72.0 million during that period. Based on actual and forecasted new orders, the fair value of the earnout was reduced to zero in the 2021 second quarter.

DIVESTITURES

On February 13, 2019, the Company completed a divestiture of its semiconductor test business within the Test Systems segment. The total proceeds of the divestiture amounted to \$103.8 million plus certain contingent purchase consideration (“earnout”).

The transaction included two elements of contingent earnouts. In the fourth quarter of 2021, the Company agreed to an earnout payment of \$10.7 million for the calendar 2020 earnout, which was recorded in 2021 as a separate line item below operating loss and was received by the Company in early January 2022. On February 14, 2022, the Company was notified by the purchaser that they had calculated \$11.2 million as being payable for the calendar 2021 earnout. We are in the process of reviewing the calculation, and expect to record the additional gain on the sale, and receive the payment, in the first quarter of 2022. See further information in Note 22 of Item 8, Financial Statements and Supplementary Data in this report.

On July 12, 2019, the Company sold intellectual property and certain assets associated with its Airfield Lighting product line for \$1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, was not core to the business and represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately \$1.3 million.

On October 6, 2021, as part of a planned consolidation effort, the Company sold one of its Aerospace facilities for \$9.2 million. Net cash proceeds were approximately \$8.8 million. A gain on sale of approximately \$5.0 million was recorded in 2021. The business of that facility will be relocated to one of the Company's other operations.

MARKETS

Commercial Transport Market

The commercial transport market is our largest end market with sales driven by new aircraft production and aftermarket airline retrofit programs. In the commercial transport market, while many of our key long-term fundamentals remain intact, we continue to see near-term market pressure due to COVID-19. Despite solid progress on the vaccine front, 2022 will remain very challenging for our commercial transport products with improvement expected throughout 2022 driven by the planned increased production rate of the 737 MAX and an expectation of improved activity with our airline customers. Aircraft build rates are expected to improve modestly during 2022 from current levels as production of the 737 MAX and A-320 picks up, and the aftermarket is expected to strengthen over the course of the year as aircraft utilization and load factors increase. On the other hand, wide-body production rates and usage are expected to remain depressed throughout 2022 and possibly for several years due to low international travel demand caused by the pandemic.

Sales to the commercial transport market include sales of lighting and safety systems, electrical power generation, distribution and motions systems, aircraft structures, avionics products and systems certification. Sales to this market totaled approximately \$202.0 million or 45.4% of our consolidated sales in 2021. As a result of the COVID-19 pandemic and its adverse impact on air travel worldwide, the commercial aerospace industry has been significantly disrupted.

Maintaining and growing sales to the commercial transport market will depend not only on market recovery from the impacts of the COVID-19 pandemic, but also on airlines' capital spending budgets for cabin upgrades as well as the purchase of new aircraft by global airlines. This spending by the airlines is impacted by their profits, cash flow and available financing as well as competitive pressures between the airlines to improve the travel experience for their passengers. We expect that new aircraft will be equipped with more passenger and aircraft connectivity and in-seat power than previous generation aircraft which drives demand for our avionics and power products. This market has historically experienced strong growth from airlines installing in-seat passenger power systems on their existing and newly delivered aircraft. Our ability to maintain and grow sales to this market depends on our ability to maintain our technological advantages over our competitors and maintain our relationships with major in-flight entertainment suppliers and global airlines.

Military Aerospace Market

Sales to the military aerospace market include sales of lighting & safety products, avionics products, electrical power & motion products and structures products. Sales to this market totaled approximately 15.8% of our consolidated sales and amounted to \$70.3 million in 2021.

The military market is dependent on governmental funding which can change from year to year. Risks are that overall spending may be reduced in the future, specific programs may be eliminated or that we fail to win new business through the competitive bid process. Astronics does not have significant reliance on any one program such that cancellation of a particular program will cause material financial loss. We believe that we will continue to have opportunities similar to past years regarding this market.

Business Jet Market

The business jet market has also been impacted by the pandemic with new aircraft build rates significantly lower than pre-pandemic levels. Most of our sales in this market are line-fit products driven by aircraft build rates although there are some aftermarket sales as well. We expect improvement in 2022 as build rates are expected to increase.

Sales to the business jet market include sales of lighting & safety products, avionics products, and electrical power & motion products. Sales to this market totaled approximately 12.7% of our consolidated sales in 2021 and amounted to \$56.7 million.

Sales to the business jet market are driven by our ship set content on new aircraft and build rates of new aircraft. Business jet OEM build rates are impacted by global wealth creation and corporate profitability. We continue to see opportunities on new aircraft currently in the design phase to employ our lighting & safety, electrical power and avionics technologies in this market. There is risk involved in the development of any new aircraft including the risk that the aircraft will not ultimately be produced

or that it will be produced in lower quantities than originally expected and thus impacting our return on our engineering and development efforts.

Tests Systems Products

Sales by our Test Systems segment accounted for approximately 17.9% of our consolidated sales in 2021 and amounted to \$79.7 million. This segment designs, develops, manufactures and maintains automated test systems that support the aerospace and defense, communications and mass transit industries as well as training and simulation devices for both commercial and military applications. Sales to the aerospace & defense market were approximately \$62.9 million in 2021. Sales to the mass transit market were approximately \$16.8 million.

Sales to the military market are subject to fluctuations resulting from changes in governmental spending, elimination of certain programs, or failure to win new business through the competitive bid process. Consistent with the Aerospace segment, the Test Systems segment does not significantly rely on any one program such that cancellation of a particular program will cause material financial loss, and we believe that we will continue to have opportunities similar to past years regarding this market.

CRITICAL ACCOUNTING POLICIES

Our financial statements and accompanying notes are prepared in accordance with U.S. generally accepted accounting principles. The preparation of the Company's financial statements requires management to make estimates, assumptions and judgments that affect the amounts reported. These estimates, assumptions and judgments are affected by management's application of accounting policies, which are discussed in the Notes to Consolidated Financial Statements, Note 1 of Item 8, Financial Statements and Supplementary Data of this report. The critical accounting policies have been reviewed with the Audit Committee of our Board of Directors.

Revenue Recognition

Astronics recognizes revenue when it transfers control of a promised good or service to a customer in an amount that reflects the consideration it expects to receive in exchange for the good or service. Our performance obligations are satisfied and control is transferred either at a point-in-time or over-time. The majority of our revenue is recognized at a point-in-time when control is transferred, which is generally evidenced by the shipment or delivery of the product to the customer, a transfer of title, a transfer of the significant risks and rewards of ownership, and customer acceptance. For certain contracts under which we produce products with no alternative use and for which we have an enforceable right to recover costs incurred plus a reasonable profit margin for work completed to date and for certain other contracts under which we create or enhance a customer-owned asset while performing repair and overhaul services, control is transferred to the customer over-time. The Company recognizes revenue using an over-time recognition model for these types of contracts.

We utilize the cost-to-cost method as a measure of progress for performance obligations that are satisfied over-time as we believe this input method best represents the transfer of control to the customer. Under the cost-to-cost method, the extent of progress toward completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. These projections require management to make numerous assumptions and estimates relating to items such as the complexity of design and related development costs, performance of subcontractors, availability and cost of materials, labor productivity and cost, overhead, capital costs, and manufacturing efficiency. We review our cost estimates on a periodic basis, or when circumstances change and warrant a modification to a previous estimate. Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections.

See Note 2 to the consolidated financial statements in Item 8 of this report for a further description of revenue recognition under ASC 606.

Reviews for Impairment of Goodwill

Our goodwill is the result of the excess of purchase price over net assets acquired from acquisitions. As of December 31, 2021 and December 31, 2020, we had approximately \$58.3 million of goodwill.

We identify our reporting units by assessing whether the components of our operating segments constitute businesses for which discrete financial information is available and segment management regularly reviews the operating results of those components. The Test Systems operating segment is its own reporting unit while the other reporting units are one level below our Aerospace operating segment.

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

We use the discounted cash flow method to estimate the fair value of each of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected sales growth rates, operating profit margins and cash flows, the terminal growth rate and the discount rate. Management projects sales growth rates, operating margins and cash flows based on each reporting unit's current business, expected developments and operational strategies. If the carrying value of the reporting unit exceeds its fair value, goodwill is considered impaired and the impairment loss is recorded for the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill.

The Company's four reporting units remaining with goodwill as of the first day of our fourth quarter were subject to the annual goodwill impairment test. Based on our quantitative assessments of our reporting units, we concluded that goodwill was not impaired in 2021.

As a result of the qualitative factors related to the COVID-19 pandemic that surfaced during the first quarter of 2020, we performed interim quantitative assessments for the eight reporting units which had goodwill as of March 28, 2020, and an additional quantitative assessment for our PECO reporting unit as of June 27, 2020 driven by reductions from previously forecasted aircraft build rates. Based on our quantitative assessments, the Company recorded goodwill impairment charges associated with four Aerospace reporting units, totaling \$86.3 million in the December 31, 2020 Consolidated Statements of Operations. No additional goodwill impairment charges were incurred as a result of the annual goodwill impairment test in 2020.

CONSOLIDATED RESULTS OF OPERATIONS, PERFORMANCE AND OUTLOOK

(In thousands, except percentages, employees and per share data)	2021	2020
RESULTS OF OPERATIONS:		
Sales	\$ 444,908	\$ 502,587
Gross Margin	14.7 %	19.3 %
SG&A Expenses as a Percentage of Sales	22.3 %	22.0 %
Net Gain on Sale of Facility	\$ 5,014	\$ —
Impairment Loss	\$ —	\$ 87,016
Loss from Operations	\$ (28,674)	\$ (100,701)
Operating Margin	(6.4)%	(20.0)%
Net Gain on Sale of Businesses	\$ 10,677	\$ —
Other Expense, Net of Other Income	\$ 2,159	\$ 4,968
Interest Expense, Net	\$ 6,804	\$ 6,741
Effective Tax Rate	5.1 %	(3.0)%
Net Loss	\$ (25,578)	\$ (115,781)
Net Loss Margin	(5.7)%	(23.0)%
Diluted Loss Per Share	\$ (0.82)	\$ (3.76)
Weighted Average Shares Outstanding – Diluted	31,061	30,795
OTHER YEAR-END DATA:		
Number of Employees	2,100	2,200

A discussion by segment can be found at "Segment Results of Operations and Outlook" in this MD&A.

CONSOLIDATED OVERVIEW OF OPERATIONS

2021 Compared With 2020

Consolidated sales were down \$57.7 million to \$444.9 million compared to the prior year. Aerospace sales were down \$52.8 million and continue to be negatively affected by the continued impacts of the COVID-19 pandemic, while the prior-year period was inclusive of the pre-pandemic levels during the first quarter. Test System sales decreased \$4.9 million.

Consolidated cost of products sold were down \$26.2 million to \$379.5 million in 2021 from \$405.7 million in the prior year. The decrease was primarily due to lower volume related to the continued impacts of the COVID-19 pandemic on the global aerospace industry. The current year period benefited from \$8.7 million recognized as an offset to cost of products sold related to the AMJP award, but was negatively impacted by higher warranty expenses of \$3.9 million.

Selling, general and administrative (“SG&A”) expenses were \$99.1 million compared with \$110.5 million for the prior year period. The decrease in 2021 was due to the cost control measures implemented at the onset of the pandemic late in the first quarter of 2020 which resulted in lower labor costs and discretionary spending. The Company incurred \$0.6 million in restructuring-related severance charges in the current year and \$5.3 million in the prior year, primarily in the Aerospace segment. SG&A in the current year also benefited from a \$2.2 million non-cash reduction of the fair value of a contingent consideration liability. However, in January 2022, the Company was notified of an adverse ruling in its long-running intellectual property dispute with Lufthansa Technik, which has been in litigation since 2010 in the U.S., France, Germany and the United Kingdom. Most recently, the U.K. Court has ruled that the subject patent is valid and that the Company has been infringing the expired patent. Based on the information currently available, the Company accrued \$8.4 million relative to the U.K. matter in 2021, although the actual amount of damages will not be known until the damages trial is completed, which is expected to occur sometime in 2023. This amount was recorded within SG&A in the fourth quarter of 2021.

On October 6, 2021, the Company sold one of its Aerospace facilities for \$9.2 million. Net cash proceeds were approximately \$8.8 million. A gain on sale of approximately \$5.0 million was recorded in the fourth quarter of 2021.

Non-cash goodwill and long-lived asset impairment charges of \$87.0 million in the Aerospace segment were recognized in 2020 due to reduced expectations of future operating results caused by the COVID-19 pandemic.

In 2021, the Company recorded a gain of \$10.7 million as additional gain on the sale of the Company’s former semiconductor business resulting from the contingent earnout for the 2020 calendar year.

Other Expense, Net of Other Income decreased \$2.8 million when compared to 2020. The prior year included a \$3.5 million impairment of an equity investment.

The effective tax rate for 2021 was 5.1%, compared with (3.0)% in 2020. The tax rate in 2021 was impacted by State and Foreign income taxes as well as changes in the valuation allowance previously recorded against U.S. Federal and most State deferred tax assets. The effective tax rate in 2020 was impacted by a \$21.5 million valuation allowance against federal deferred tax assets as well as permanently non-deductible goodwill impairments. See Note 11 of the consolidated financial statements at Item 8 of this report for additional information regarding the valuation allowance recorded in 2020.

Consolidated net loss was \$(25.6) million, or \$(0.82) per diluted share, compared with net loss of \$(115.8) million, or \$(3.76) per diluted share in the prior year. The after-tax impact of the impairment loss in 2020 was \$(2.64) per diluted share.

2020 Compared With 2019

For a comparison of our results of operations for the years ended December 31, 2020 and 2019, see Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on March 1, 2021.

Income Taxes

Our effective tax rates for 2021 and 2020 were 5.1% and (3.0)%, respectively. In addition to state income taxes, the following items had the most significant impact on the difference between our statutory U.S. federal income tax rate (21% in 2021 and 2020) and our effective tax rate:

2021:

- Recognition of approximately \$6.8 million of valuation allowance against federal deferred tax assets. See Note 11 of the consolidated financial statements at Item 8 of this report for additional information.
- Recognition of approximately \$2.6 million of 2021 U.S. R&D tax credits which were offset by the federal valuation allowance recognized during the year.

2020:

- Recognition of approximately \$21.5 million of valuation allowance against federal deferred tax assets. See Note 11 of the consolidated financial statements at Item 8 of this report for additional information.
- Permanently non-deductible goodwill impairment.
- Recognition of approximately \$1.8 million of 2020 U.S. R&D tax credits.

COVID-19 Impacts on Our Business

In early 2020, we implemented workforce reduction activities to align capacity with expected demand. We also implemented significant cost conservation measures, and we continue to closely monitor spending priorities. As economic activity recovers, we continue to monitor the situation, to assess further possible implications on our operations, supply chain, liquidity, cash flow

and customer orders, and to take actions in an effort to mitigate adverse consequences. While the industry is seeing some improvement on rising vaccination rates and easing travel restrictions, the ultimate impact of COVID-19 on our business results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic, vaccination rates and efficacy and the related length of impact on the global economy, supply chain and the aerospace industry, which are uncertain and cannot be predicted at this time. We believe that our existing financial arrangements are sufficient to meet our operating needs, and have adequate borrowings availability under our Credit Agreement that could provide additional relief if necessary.

See Part I, Item 1A, Risk Factors, for an additional discussion of risk related to supply chain disruptions and the recent government vaccine mandates.

2022 Outlook

In 2021, we experienced an increase in bookings, however we have also been impacted by supply chain pressures that we expect will continue to impact delivery schedules and costs, limiting the Company's ability to respond to accelerated or quick-turn delivery requests from customers and delaying shipments that otherwise would have been made in 2021. We estimate that we had backlog at the end of the year of \$15 million to \$17 million that would have shipped if our supply chain had been functioning normally. Our initial expectation is that 2022 revenue will be in the range of \$550 million to \$600 million for the year, which includes what we consider reasonable allowances for continued supply chain and labor disruptions. We expect the first quarter to show a modest volume increase over the fourth quarter, with a stronger ramp in the latter half of the year, though supply chain and the tight labor market are risk items.

Based on current estimates, we expect the AMJP to contribute approximately \$6.0 million to gross profit to be recorded in the first quarter of 2022. The six-month period of performance over which the grant is recognized will conclude in March 2022. We also expect a benefit in the first quarter of 2022 of approximately \$11.2 million related with the calendar 2021 earnout from the sale of the semiconductor business based on the earnout statement provided to us in February 2022.

Given our forecast expectations, and the structure of our credit agreement, combined with AMJP proceeds, tax refunds and the earnouts from the sale of the semiconductor business, we expect to have sufficient liquidity to operate through the COVID-19 pandemic and its economic impacts. We expect to remain compliant with our debt covenants for the duration of the agreement based on our current financial projections, and expect the Company to generate cash in 2022, which will be used to reduce debt.

At December 31, 2021, our consolidated backlog was \$415.7 million. At December 31, 2020, our backlog was \$283.4 million. Backlog in the Aerospace segment was \$334.7 million at December 31, 2021, of which \$299 million is expected to be recognized as revenue in 2022. Backlog in the Test Systems segment was \$81.0 million at December 31, 2021. The Test Systems segment expects to recognize \$41 million of backlog as revenue in 2022.

Cash taxes related to 2022 are expected to be in the range of \$0.5 million to \$1.0 million.

Capital equipment spending in 2022 is expected to be in the range of \$15 million to \$20 million, up from \$6.0 million in 2021, due to investments in customer programs.

While core aerospace markets have strengthened as vaccination rates rise and passenger traffic accelerated, the ultimate impact of COVID-19 on our business, results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic, virus variants, vaccination rates and efficacy and the related length of impact on the global economy, supply chain and specifically on the markets we are active in, which are uncertain and cannot be predicted at this time.

SEGMENT RESULTS OF OPERATIONS AND OUTLOOK

Operating profit, as presented below, is sales less cost of products sold and other operating expenses, excluding interest expense, other corporate expenses and other non-operating sales and expenses. Cost of products sold and other operating expenses are directly identifiable to the respective segment. Operating loss is reconciled to loss before income taxes in Note 20 of Item 8, Financial Statements and Supplementary Data, of this report.

AEROSPACE SEGMENT

(In thousands, except percentages)

	2021	2020
Sales	\$ 365,238	\$ 417,988
Operating Loss	\$ (8,614)	\$ (89,833)
Operating Margin	(2.4)%	(21.5)%

	2021	2020
Total Assets	\$ 458,334	\$ 484,885
Backlog	\$ 334,659	\$ 191,081

Sales by Market	2021	2020
Commercial Transport	\$ 201,990	\$ 262,636
Military	70,312	67,944
Business Jet	56,673	60,437
Other	36,263	26,971
Total	\$ 365,238	\$ 417,988

Sales by Product Line	2021	2020
Electrical Power & Motion	\$ 141,746	\$ 179,245
Lighting & Safety	103,749	118,928
Avionics	64,901	76,113
Systems Certification	13,050	6,899
Structures	5,529	9,832
Other	36,263	26,971
Total	\$ 365,238	\$ 417,988

2021 Compared With 2020

Aerospace segment sales decreased \$52.8 million, or 12.6%, to \$365.2 million. In particular, commercial aerospace sales remained below pre-pandemic levels, declining \$60.6 million, or 23.1%. While improving domestic travel, increased production rates including the 737 MAX and higher fleet utilization drove increased demand for commercial aerospace products in the second half of 2021, sales continued to be negatively affected by supply chain pressures resulting in delays in fulfilling orders. General Aviation sales were down \$3.8 million, or 6.2%, due to lower VVIP activity, offset by improvements in the business jet market. The Company expects the strong demand being realized in the business jet industry to translate into higher demand for its products as production levels begin to increase in 2022. Military Aircraft sales increased \$2.4 million, or 3.5%. Other revenues increased \$9.3 million, driven by higher contract manufacturing programs. The prior-year period was inclusive of the pre-pandemic levels during the first quarter of the year.

Electrical Power & Motion sales decreased \$37.5 million compared with the prior-year period. Additionally, Lighting & Safety sales decreased \$15.2 million and Avionics sales decreased by \$11.2 million.

Aerospace segment operating loss was \$8.6 million compared with operating loss of \$89.8 million in the same period last year. 2021 results benefited from \$8.7 million related to the AMJP grant and a \$5.0 million gain related to the sale of a facility. These benefits were offset by accruals related to the Lufthansa dispute totaling \$8.4 million and increased warranty charges of \$4.0 million in the Aerospace segment. Leverage lost on reduced commercial aircraft sales combined with supply chain pressures and costs significantly impacted operating results. Aerospace operating loss in the prior-year period was impacted by impairment charges of \$87.0 million, of which \$86.3 million was related to goodwill, and restructuring-related severance charges of \$5.3 million.

2020 Compared With 2019

For a comparison of Aerospace segment results for the years ended December 31, 2020 and 2019, see Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on March 1, 2021.

2022 Outlook for Aerospace

The Aerospace segment’s backlog at December 31, 2021 was \$334.7 million, compared to \$191.1 million at December 31, 2020. Approximately \$299 million of the December 31, 2021 backlog is expected to be recognized as revenue over the next 12 months.

TEST SYSTEMS SEGMENT

(In thousands, except percentages)

	2021	2020
Sales	\$ 79,670	\$ 84,599
Operating (Loss) Profit	\$ (3,765)	\$ 5,549
Operating Margin	(4.7)%	6.6 %

	2021	2020
Total Assets	\$ 105,335	\$ 105,079
Backlog	\$ 81,033	\$ 92,337

Sales by Market

	2021	2020
Semiconductor	\$ —	\$ 3,483
Aerospace & Defense	79,670	81,116
Total	<u>\$ 79,670</u>	<u>\$ 84,599</u>

2021 Compared With 2020

Test Systems segment sales were \$79.7 million, down \$4.9 million compared with the prior year. Aerospace & Defense sales decreased \$1.4 million. Sales from the divested semiconductor business contributed \$3.5 million in the prior year.

Test Systems operating loss was \$3.8 million, or 4.7% of sales, compared with operating profit of \$5.5 million, or 6.6% of sales, in 2020. Operating results in 2021 were negatively affected by COVID-related delays and low volume and \$3.3 million in legal fees related to infringement claims and contractual disputes. Operating results in 2020 benefited from \$3.5 million in semiconductor warranty revenue.

In 2021, the Company reached an agreement with the buyer of its former semiconductor test business, which was sold in 2019, related to earnout payments. For its calendar 2020 earnout payment, the Company agreed to an earnout amount of \$10.7 million, which was recorded in the fourth quarter of 2021 and was paid to the Company in early January.

2020 Compared With 2019

For a comparison of Test Systems segment results for the years ended December 31, 2020 and 2019, see Item 7 “Management’s Discussion and Analysis of Financial Condition and Results of Operations” of our Annual Report on Form 10-K for the year ended December 31, 2020 filed with the SEC on March 1, 2021.

2022 Outlook for Test Systems

Backlog in the Test Systems segment was \$81.0 million at December 31, 2021, compared to \$92.3 million at December 31, 2019. The Test Systems segment expects to recognize \$41 million of backlog as revenue in 2022.

We do not have material off-balance sheet arrangements that have or are reasonably likely to have a material future effect on our results of operations or financial condition.

CONTRACTUAL OBLIGATIONS AND OTHER COMMITMENTS

For further information on our contractual obligations and other commitments as of December 31, 2021 and estimated timing thereof, see the notes referenced below, of Item 8, Financial Statements and Supplementary Data, of this report.

Long-term Debt and Interest Payments — Refer to Note 8, Long-Term Debt in this report. Future current and long-term interest payments of \$6.0 million and \$0.7 million, respectively, have been calculated using the applicable interest rate of each debt facility based on actual borrowings as of December 31, 2021. Actual future borrowings and rates may differ from these estimates. The current credit facility expires on May 30, 2023.

Purchase Obligations — Purchase obligations are comprised of the Company's commitments for goods and services in the normal course of business and amount to approximately \$134.0 million payable in the coming year.

Supplemental Retirement Plan and Post Retirement Obligations — Anticipated payments related with the Company's defined benefit plans are detailed in Note 13, Retirement Plans and Related Post Retirement Benefits.

Lease Obligations — Refer to Note 10, Leases, for details on obligations and timing of expected future lease payments, including a five-year maturity schedule. In January 2022, the Company entered into a lease which is expected to become effective in December 2022 and will require annual payments of approximately \$1.5 million through 2031.

Legal Reserves — Refer to Note 19, Legal Proceedings, for management's estimate of damages to be paid related to our ongoing litigation with Lufthansa Technik and timing thereof.

LIQUIDITY AND CAPITAL RESOURCES

(In thousands)	2021	2020
CASH FLOW DATA:		
Net Cash Flows from:		
Operating Activities	\$ (5,530)	\$ 37,335
Investing Activities	\$ 3,179	\$ (5,797)
Financing Activities	\$ (7,505)	\$ (24,576)
YEAR-END FINANCIAL POSITION:		
Working Capital (1)	\$ 221,248	\$ 223,211
Indebtedness	\$ 163,000	\$ 173,000
OTHER YEAR-END DATA:		
Capital Expenditures	\$ 6,034	\$ 7,459

(1) Working capital is calculated as the difference between Current Assets and Current Liabilities.

Our cash flow from operations and available borrowing capacity provide us with the financial resources needed to run our operations and reinvest in our business.

Our ability to maintain sufficient liquidity is highly dependent upon achieving expected operating results. Failure to achieve expected operating results could have a material adverse effect on our liquidity, our ability to obtain financing, and our operations in the future.

Operating Activities

Cash used for operating activities totaled \$5.5 million in 2021, as compared with \$37.3 million cash provided by operating activities in 2020. Cash flow from operating activities decreased compared with the 2020 due to lower net income adjusted for non-cash or non-operating expense or income items, coupled with changes in net operating assets, primarily increases in accounts receivable and inventories. Non-cash items in 2021 include the \$10.7 million earnout from the sale of the semiconductor business, the \$5.0 million net gain on the sale of facilities within the Aerospace segment, as well as the \$8.4 million incremental reserve for estimated impacts of the intellectual property dispute with Lufthansa Technik.

Our cash flows from operations are primarily dependent on our net income adjusted for non-cash expenses and the timing of collections of receivables, level of inventory and payments to suppliers and employees. Sales and operating results of our Aerospace segment are influenced by the impact in 2021 and 2020 of the COVID-19 pandemic on the aerospace industry, in particular, build rates of new aircraft, which are subject to general economic conditions, airline passenger travel and spending

for government and military programs. Our Test Systems segment sales depends in part on capital expenditures of the aerospace & defense industry which, in turn, depend on current and future demand for those products. A reduction in demand for our customers' products would adversely affect our operating results and cash flows.

We expect cash flows from operations in 2022 to continue to be impacted by the COVID-19 pandemic and continued supply chain pressures, particularly in the first half of the year. We expect to receive a second installment of approximately \$5.2 million associated with the AMJP grant in the first quarter of 2022, with a final installment of approximately \$2.1 million anticipated in the second or third quarter of 2022 upon final confirmation from the USDOT of the Company meeting its grant commitments. The Company also expects to receive approximately \$9.0 million in tax refunds in early 2022. We will continue to maintain a credit facility sufficient to fund our short and long-term capital requirements including working capital, acquisitions and share repurchase efforts.

Investing Activities

Cash provided by investing activities in 2021 was \$3.2 million, primarily the result of \$9.2 million in proceeds from the sale of assets within the Aerospace segment, offset by purchases of property, plant and equipment ("PP&E") of \$6.0 million.

Cash used for investing activities in 2020 was \$5.8 million, primarily the result of PP&E of \$7.5 million, partially offset by proceeds from sales of PP&E.

Our expectation for 2022 is that we will invest between \$15 million and \$20 million for PP&E. Future requirements for PP&E depend on numerous factors, including expansion of existing product lines and introduction of new products. Management believes that our cash flow from operations and current borrowing arrangements will provide for these capital expenditures. We expect to continue to evaluate acquisition opportunities in the future. Investing cash flows in 2022 will be positively impacted by the receipt of \$10.7 million related with the calendar 2020 earnout from the sale of the semiconductor business and approximately \$11.2 million related with the calendar 2021 earnout, which is expected to be received in the first quarter of 2022.

Financing Activities

Cash used for financing activities totaled \$7.5 million for 2021, as compared with \$24.6 million for 2020. The Company made net repayments towards our senior credit facility of \$10.0 million in 2021 compared with net repayments of \$15.0 million in 2020. Cash used in 2020 also included \$7.7 million of share repurchases before the 10b-5 plan associated with the share repurchase program was terminated.

The Company's Fifth Amended and Restated Credit Agreement (the "Agreement") was amended in May 2020 (the "Amended Facility") and reduced the revolving credit line from \$500 million to \$375 million. The Amended Facility suspended the application of the leverage ratio up through and including the second quarter of 2021 (the "suspension period"). The maximum net leverage ratio, which represents the ratio of funded debt, net of cash to adjusted EBITDA (as defined in the Agreement) was set at 6.00 to 1 for the third quarter of 2021, 5.50 to 1 for the fourth quarter of 2021, 4.50 to 1 for the first quarter of 2022, and returns to 3.75 to 1 for each quarter thereafter. Through the second quarter of 2021, the Company was also required to maintain a minimum interest coverage ratio. As noted above, the maximum net leverage ratio was set at 5.50 to 1 for the quarter ended December 31, 2021. During the suspension period, the Company paid interest on the unpaid principal amount of the Amended Facility at a rate of 3.25% and a commitment fee of 0.35% on the undrawn portion of the Amended Facility. After the suspension period, the Company pays interest on the unpaid principal amount of the Amended Facility at LIBOR (of at least 1.00%) plus between 1.00% to 2.25% and a commitment fee of 0.10% to 0.35% on the undrawn portion of the Amended Facility, both based upon the Company's leverage ratio. The Amended Facility provided for the payment of a consent fee of 15 basis points of the commitment for each consenting lender.

At December 31, 2021, there was \$163.0 million outstanding on the revolving credit facility and there remained \$210.9 million available subject to the minimum liquidity covenant discussed below, net of outstanding letters of credit. The credit facility allocates up to \$20 million of the \$375 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2021, outstanding letters of credit totaled \$1.1 million.

On March 1, 2022, the Company executed an amendment to the Amended Facility, which reduced the revolving credit line from \$375 million to \$225 million and extended the maturity date of the loans under the facility from February 16, 2023 to May 30, 2023. Interest will be payable on the unpaid principal amount of the facility at a rate equal to the Secured Overnight Financing Rate ("SOFR", which shall be at least 1.00%), plus between 1.50% to 3.25% based upon the Company's leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to 0.10% to 0.40% on the undrawn portion of the Amended Facility, based upon the Company's leverage ratio. The amendment provided for the payment of a consent fee of 10 basis points of the commitment for each consenting lender.

The amendment will require the Company to maintain minimum liquidity, defined as unrestricted cash plus the unused revolving credit commitments, of \$35 million. The maximum net leverage ratio is set at 4.75 to 1 for the first and second quarters of 2022 and 3.75 to 1 thereafter, and the definition of Adjusted EBITDA has been modified to exclude income from earnout payments and asset sales. The Company was in compliance with its financial covenants at December 31, 2021.

The Amended Facility continues the temporary restrictions on certain activities, including dividend payments, acquisitions and share repurchases, through the third quarter of 2022. The Company's obligations under the Amended Facility are jointly and severally guaranteed by each domestic subsidiary of the Company other than non-material subsidiaries. The obligations are secured by a first priority lien on substantially all of the Company's and the guarantors' assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Amended Facility automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the agent the option to declare all such amounts immediately due and payable.

Refer to Note 8 of our consolidated financial statements in Item 8, Financial Statement and Supplementary Data, of this report for additional information regarding our credit facility.

We intend to refinance the amended agreement with a new long-term financing facility in the coming months.

DIVIDENDS

Management believes that it should retain the capital generated from operating activities for investment in advancing technologies, acquisitions and debt retirement. Accordingly, there are no plans to institute a cash dividend program.

BACKLOG

At December 31, 2021, our consolidated backlog was \$415.7 million. At December 31, 2020, our backlog was \$283.4 million. Backlog in the Aerospace segment was \$334.7 million at December 31, 2021, of which \$299.4 million is expected to be recognized as revenue in 2022. Backlog in the Test Systems segment was \$81.0 million at December 31, 2021, of which \$40.5 million is expected to be recognized as revenue of in 2022.

RELATED-PARTY TRANSACTIONS

Information regarding certain relationships and related transactions is incorporated herein by reference to the information included in the Company's 2022 Proxy Statement which will be filed with the Commission within 120 days after the end of the Company's 2021 fiscal year.

RECENT ACCOUNTING PRONOUNCEMENTS

See Note 1 of the consolidated financial statements at Item 8 of this report.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

The Company has limited exposure to fluctuation in foreign currency exchange rates to U.S. dollar, primarily in Canadian dollars and Euros currency. Approximately 92% of the Company's consolidated sales are transacted in U.S. dollars. Net assets held in or measured in Canadian dollars amounted to \$11.6 million at December 31, 2021. A 10% change in the value of the U.S. dollar versus the Canadian dollar would have had a \$0.8 million impact to 2021 net income. Net assets held in or measured in Euros amounted to \$26.5 million at December 31, 2021. A 10% change in the value of the U.S. dollar versus the Euros would have had a \$0.1 million impact to 2021 net income.

Risk due to fluctuation in interest rates is a function of the Company's floating rate debt obligations, which total approximately \$163.0 million at December 31, 2021. A change of 1% in interest rates of all variable rate debt would impact annual net income by approximately \$1.6 million, before income taxes.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Astronics Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Astronics Corporation (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive (loss) income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2)(collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated March 4, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Description of the Matter

Valuation of Goodwill

As of December 31, 2021, the Company's goodwill balance was \$58.3 million. As discussed in Notes 1 and 7 of the consolidated financial statements, the Company tests goodwill for impairment at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. For each reporting unit, the Company performed a quantitative test using the discounted cash flow method to estimate fair value. The discounted cash flow method incorporates various assumptions, the most significant being projected revenue growth rates and the weighted-average cost of capital. If the carrying value of the reporting unit exceeds its fair value, goodwill impairment is measured as the amount by which the reporting unit's carrying value exceeds its fair value, not to exceed the carrying value of goodwill.

Auditing management's assumptions was especially challenging due to the estimation required in determining the fair value of certain of the Company's reporting units with goodwill. The fair value estimates for certain reporting units were sensitive to the significant assumptions of the revenue growth rate and the weighted-average cost of capital. These assumptions are affected by expectations about the pace of global economic recovery from the COVID-19 pandemic, which affects future market and economic conditions, particularly those in the aerospace industry.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's goodwill impairment testing process. This included the determination of the underlying significant assumptions described above, and the completeness and accuracy of the impairment analysis.

To test the estimated fair value of the Company's reporting units, we performed audit procedures with the assistance of our valuation professionals that included, among others, assessing the methodology used, testing the significant assumptions discussed above and testing the underlying data used in the impairment analysis. We compared the significant assumptions used by management to current industry and economic trends, historical trends of the Company, and other relevant factors. We assessed the historical accuracy of management's estimates, taking into consideration the effects of COVID-19, and performed sensitivity analyses of significant assumptions to evaluate the changes in the fair value of the reporting units that would result from changes in the assumptions. We also involved our valuation professionals to assist in our evaluation of the weighted-average cost of capital used in the fair value estimates. In addition, we tested the reconciliation of the fair value of the Company's reporting units to the market capitalization of the Company as of the annual impairment testing date. We also assessed the appropriateness of the disclosures in the consolidated financial statements.

<i>Description of the Matter</i>	<p>Revenue Recognition</p> <p>For the year ended December 31, 2021, the Company’s revenues totaled \$444.9 million. As discussed in Note 2 to the consolidated financial statements, some of the Company’s contracts with customers contain multiple performance obligations. The majority of the Company’s revenue from contracts with customers is recognized at a point in time when the customer obtains control of the product, which is generally upon delivery and acceptance by the customer. For contracts with customers in which the Company satisfies its promise to the customer to provide a service or a product that has no alternative use to the Company and the Company has enforceable rights to payment for progress completed to date inclusive of profit, the Company satisfies the performance obligation and recognizes revenue over time. The Company uses costs incurred to date relative to total estimated costs at completion to measure progress.</p>
<i>How We Addressed the Matter in Our Audit</i>	<p>Auditing management’s evaluation of contracts with customers was especially challenging due to the effort required to analyze the terms and conditions of the Company’s various customer contracts given that such terms and conditions are nonstandard. This included the identification and determination of the performance obligations and the timing of revenue recognition.</p> <p>We obtained an understanding, evaluated the design, and tested the operating effectiveness of controls over the Company’s revenue recognition process. For example, we tested controls over management’s review of the terms and conditions of contracts with customers which included an analysis of the distinct performance obligations and a review of the conclusion as to whether revenue from such performance obligations should be recognized over time or at a point in time. We also tested management’s centralized monitoring control over completeness of the contract reviews and appropriateness of the accounting conclusions.</p> <p>We performed procedures to test the identification and determination of the performance obligations and the timing of revenue recognition which included reading a sample of executed contracts and purchase orders to understand the contract, performing an independent assessment of the identification of distinct performance obligations and the appropriate timing of revenue recognition, testing the mathematical accuracy of revenue recognized based on costs incurred to date relative to total estimated costs at completion and comparing our assessment to that of management. We tested the completeness and accuracy of the Company’s contract summary documentation, specifically related to the identification and determination of distinct performance obligations and the timing of revenue recognition. We also assessed the appropriateness of the disclosures in the consolidated financial statements.</p>

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 1992.
Buffalo, New York
March 4, 2022

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rule 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of our management, including the Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2021 based upon the framework in Internal Control – Integrated Framework originally issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, our management concluded that our internal control over financial reporting is effective as of December 31, 2021.

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in this Annual Report on Form 10-K and, as part of their audit, has issued their report, included herein, on the effectiveness of our internal control over financial reporting.

By:	<u>/s/ Peter J. Gundermann</u>	<u>March 4, 2022</u>
	Peter J. Gundermann President & Chief Executive Officer (Principal Executive Officer)	
	<u>/s/ David C. Burney</u>	<u>March 4, 2022</u>
	David C. Burney Executive Vice President and Chief Financial Officer (Principal Financial Officer)	

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and Board of Directors of Astronics Corporation

Opinion on Internal Control Over Financial Reporting

We have audited Astronics Corporation's internal control over financial reporting as of December 31, 2021, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Astronics Corporation (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive (loss) income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 2021, and the related notes and financial statement schedule listed in the Index at Item 15(a)(2) and our report dated March 4, 2022 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ Ernst & Young LLP

Buffalo, New York
March 4, 2022

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share data)	Year Ended December 31,		
	2021	2020	2019
Sales	\$ 444,908	\$ 502,587	\$ 772,702
Cost of Products Sold	379,545	405,744	616,560
Gross Profit	65,363	96,843	156,142
Selling, General and Administrative Expenses	99,051	110,528	143,358
Net Gain on Sale of Facility	5,014	—	—
Impairment Loss	—	87,016	11,083
(Loss) Income from Operations	(28,674)	(100,701)	1,701
Net Gain on Sale of Businesses	10,677	—	78,801
Other Expense, Net of Other Income	2,159	4,968	6,058
Interest Expense, Net of Interest Income	6,804	6,741	6,141
(Loss) Income Before Income Taxes	(26,960)	(112,410)	68,303
(Benefit from) Provision for Income Taxes	(1,382)	3,371	16,286
Net (Loss) Income	\$ (25,578)	\$ (115,781)	\$ 52,017
Basic (Loss) Earnings Per Share	\$ (0.82)	\$ (3.76)	\$ 1.62
Diluted (Loss) Earnings Per Share	\$ (0.82)	\$ (3.76)	\$ 1.60

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME

(In thousands)	Year Ended December 31,		
	2021	2020	2019
Net (Loss) Income	\$ (25,578)	\$ (115,781)	\$ 52,017
Other Comprehensive Income (Loss):			
Foreign Currency Translation Adjustments	(939)	2,574	114
Retirement Liability Adjustment – Net of Tax	2,894	(3,396)	(2,413)
Other Comprehensive Income (Loss)	1,955	(822)	(2,299)
Comprehensive (Loss) Income	\$ (23,623)	\$ (116,603)	\$ 49,718

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data)	December 31,	
	2021	2020
ASSETS		
Current Assets:		
Cash and Cash Equivalents	\$ 29,757	\$ 40,412
Accounts Receivable, Net of Allowance for Estimated Credit Losses	107,439	93,056
Inventories	157,576	157,059
Prepaid Expenses and Other Current Assets	45,089	26,420
Total Current Assets	339,861	316,947
Property, Plant and Equipment, Net of Accumulated Depreciation	95,236	106,678
Operating Right-of-Use Assets	16,169	18,953
Other Assets	5,270	8,999
Intangible Assets, Net of Accumulated Amortization	94,320	109,886
Goodwill	58,282	58,282
Total Assets	\$ 609,138	\$ 619,745
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	\$ 34,860	\$ 26,446
Accrued Payroll and Employee Benefits	19,607	16,285
Accrued Income Taxes	2,621	1,017
Current Operating Lease Liabilities	6,778	4,998
Other Accrued Expenses	27,391	20,419
Customer Advanced Payments and Deferred Revenue	27,356	24,571
Total Current Liabilities	118,613	93,736
Long-term Debt	163,000	173,000
Supplemental Retirement Plan and Other Liabilities for Pension Benefits	31,199	32,437
Long-term Operating Lease Liabilities	12,018	16,637
Other Liabilities	26,283	30,655
Deferred Income Taxes	1,421	2,909
Total Liabilities	352,534	349,374
Shareholders' Equity:		
Common Stock, \$.01 par value, Authorized 40,000,000 Shares 28,910,605 Shares Issued and 25,102,545 Outstanding at December 31, 2021 27,824,766 Shares Issued and 24,016,706 Outstanding at December 31, 2020	289	278
Convertible Class B Stock, \$.01 par value, Authorized 15,000,000 Shares 6,375,392 Shares Issued and Outstanding at December 31, 2021 6,877,437 Shares Issued and Outstanding at December 31, 2020	64	69
Additional Paid-in Capital	92,037	82,187
Accumulated Other Comprehensive Loss	(14,495)	(16,450)
Retained Earnings	287,225	312,803
Treasury Stock, 3,808,060 Shares at December 31, 2021 and 2020	(108,516)	(108,516)
Total Shareholders' Equity	256,604	270,371
Total Liabilities and Shareholders' Equity	\$ 609,138	\$ 619,745

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Cash Flows from Operating Activities			
Net (Loss) Income	\$ (25,578)	\$ (115,781)	\$ 52,017
Adjustments to Reconcile Net (Loss) Income to Cash from Operating Activities, Excluding the Effects of Acquisitions and Divestitures:			
Non-cash Items:			
Depreciation and Amortization	29,005	31,854	33,049
Provision for Losses on Inventory and Receivables	3,942	6,079	16,947
Equity-based Compensation Expense	6,460	5,184	3,843
Deferred Tax (Benefit) Expense	(441)	15,553	(14,385)
Operating Lease Non-cash Expense	5,198	4,500	4,208
Net Gain on Sales of Assets	(5,083)	—	—
Contingent Consideration Liability Fair Value Adjustment	(2,200)	—	—
Non-cash 401K Contribution	4,199	—	—
Net Gain on Sale of Businesses, Before Taxes	(10,677)	—	(78,801)
Impairment Loss	—	87,016	11,083
Accrued Litigation Claim	8,374	—	19,619
Equity Investment Other Than Temporary Impairment	—	3,493	5,000
Restructuring Activities	267	1,173	6,539
Deferral of Federal Payroll Taxes	—	5,877	—
Other	3,912	2,157	1,610
Cash Flows from Changes in Operating Assets and Liabilities:			
Accounts Receivable	(14,832)	53,928	34,083
Inventories	(5,150)	(13,614)	(12,711)
Prepaid Expenses and Other Current Assets	20	(45)	(1,160)
Accounts Payable	8,610	(9,930)	(16,617)
Accrued Expenses	(5,037)	(17,667)	(10,737)
Income Taxes Payable/Receivable	156	(10,440)	3,371
Customer Advanced Payments and Deferred Revenue	(235)	(7,043)	(11,919)
Operating Lease Liabilities	(6,036)	(4,556)	(3,840)
Supplemental Retirement Plan and Other Liabilities	(404)	(403)	1,490
Cash Flows from Operating Activities	(5,530)	37,335	42,689
Cash Flows from Investing Activities			
Acquisitions of Businesses, Net of Cash Acquired	—	—	(28,907)
Proceeds from Sale of Businesses and Assets	9,213	—	106,946
Capital Expenditures	(6,034)	(7,459)	(12,083)
Other Investing Activities	—	1,662	(1,326)
Cash Flows from Investing Activities	\$ 3,179	\$ (5,797)	\$ 64,630

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS, CONTINUED

(In thousands)

	Year Ended December 31,		
	2021	2020	2019
Cash Flows from Financing Activities			
Proceeds from Long-term Debt	\$ 20,000	\$ 155,000	\$ 117,000
Principal Payments on Long-term Debt	(30,000)	(170,228)	(156,107)
Purchase of Outstanding Shares for Treasury	—	(7,732)	(50,784)
Debt Acquisition Costs	—	(360)	—
Stock Award and Employee Stock Purchase Plan (“ESPP”) activity	3,396	666	(545)
Finance Lease Principal Payments	(901)	(1,922)	(1,746)
Cash Flows From Financing Activities	(7,505)	(24,576)	(92,182)
Effect of Exchange Rates on Cash	(799)	1,544	147
(Decrease) Increase in Cash and Cash Equivalents	(10,655)	8,506	15,284
Cash and Cash Equivalents at Beginning of Year	40,412	31,906	16,622
Cash and Cash Equivalents at End of Year	\$ 29,757	\$ 40,412	\$ 31,906
Supplemental Cash Flow Information:			
Interest Paid	\$ 5,951	\$ 5,829	\$ 5,707
Income Taxes (Refunded) Paid, Net of Refunds	(1,250)	(1,536)	27,343

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Year Ended December 31,		
	2021	2020	2019
Common Stock			
Beginning of Year	\$ 278	\$ 269	\$ 260
Net Exercise of Stock Options, including ESPP	5	1	1
Net Issuance of Common Stock for Restricted Stock Units ("RSU's")	1	—	—
Class B Stock Converted to Common Stock	5	8	8
End of Year	<u>\$ 289</u>	<u>\$ 278</u>	<u>\$ 269</u>
Convertible Class B Stock			
Beginning of Year	\$ 69	\$ 76	\$ 83
Net Exercise of Stock Options	—	1	1
Class B Stock Converted to Common Stock	(5)	(8)	(8)
End of Year	<u>\$ 64</u>	<u>\$ 69</u>	<u>\$ 76</u>
Additional Paid in Capital			
Beginning of Year	\$ 82,187	\$ 76,340	\$ 73,044
Net Exercise of Stock Options, including ESPP, and Equity-based Compensation Expense	10,029	5,847	3,296
Tax Withholding Related to Issuance of RSU's	(179)	—	—
End of Year	<u>\$ 92,037</u>	<u>\$ 82,187</u>	<u>\$ 76,340</u>
Accumulated Other Comprehensive Loss			
Beginning of Year	\$ (16,450)	\$ (15,628)	\$ (13,329)
Foreign Currency Translation Adjustments	(939)	2,574	114
Retirement Liability Adjustment – Net of Taxes	2,894	(3,396)	(2,413)
End of Year	<u>\$ (14,495)</u>	<u>\$ (16,450)</u>	<u>\$ (15,628)</u>
Retained Earnings			
Beginning of Year	\$ 312,803	\$ 428,584	\$ 376,567
Net (Loss) Income	(25,578)	(115,781)	52,017
End of Year	<u>\$ 287,225</u>	<u>\$ 312,803</u>	<u>\$ 428,584</u>
Treasury Stock			
Beginning of Year	\$ (108,516)	\$ (100,784)	\$ (50,000)
Purchase of Shares	—	(7,732)	(50,784)
End of Year	<u>\$ (108,516)</u>	<u>\$ (108,516)</u>	<u>\$ (100,784)</u>
Total Shareholders' Equity	<u><u>\$ 256,604</u></u>	<u><u>\$ 270,371</u></u>	<u><u>\$ 388,857</u></u>

See notes to consolidated financial statements.

ASTRONICS CORPORATION
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY, CONTINUED

(Share data, in thousands)	Year Ended December 31,		
	2021	2020	2019
Common Stock			
Beginning of Year	27,825	26,874	25,978
Net Issuance of Common Stock for RSU's	70	45	18
Net Issuance from Exercise of Stock Options, including ESPP	485	48	63
Class B Stock Converted to Common Stock	531	858	815
End of Year	<u>28,911</u>	<u>27,825</u>	<u>26,874</u>
Convertible Class B Stock			
Beginning of Year	6,877	7,650	8,290
Net Issuance of Restricted Stock	4	—	—
Net Issuance from Exercise of Stock Options	25	85	175
Class B Stock Converted to Common Stock	(531)	(858)	(815)
End of Year	<u>6,375</u>	<u>6,877</u>	<u>7,650</u>
Treasury Stock			
Beginning of Year	3,808	3,526	1,675
Purchase of Shares	—	282	1,851
End of Year	<u>3,808</u>	<u>3,808</u>	<u>3,526</u>

See notes to consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 — SUMMARY OF SIGNIFICANT ACCOUNTING PRINCIPLES AND PRACTICES

Description of the Business

Astronics Corporation (“Astronics” or the “Company”) is a leading provider of advanced technologies to the global aerospace, defense and electronics industries. Our products and services include advanced, high-performance electrical power generation, distribution and motion systems, lighting and safety systems, avionics products, systems and certification, aircraft structures and automated test systems.

We have principal operations in the United States (“U.S.”), Canada, France and England, as well as engineering offices in the Ukraine and India.

The Company has two reportable segments, Aerospace and Test Systems. The Aerospace segment designs and manufactures products for the global aerospace and defense industry. Our Test Systems segment designs, develops, manufactures and maintains automated test systems that support the aerospace and defense, communications and mass transit industries as well as training and simulation devices for both commercial and military applications.

See Notes 21 and 22 for details of our acquisition and divestiture activities in 2021, 2020 and 2019.

Impact of the COVID-19 Pandemic

In December 2019, a novel strain of coronavirus (“COVID-19”) surfaced in Wuhan, China, and has since spread to other countries, including the United States. On March 11, 2020, the World Health Organization classified the COVID-19 outbreak as a pandemic. The COVID-19 pandemic had a sudden and significant impact on the global economy, and particularly in the aerospace industry, resulting in the grounding of the majority of the global commercial transportation fleet and significant cost cutting and cash preservation actions by the global airlines. This in turn has resulted in a significant reduction in airlines spending for both new aircraft and on upgrading their existing fleet with the Company’s products. This low level of investment by the airlines has continued through 2021, and while the industry is seeing some improvement on rising vaccination rates and easing travel restrictions, the ultimate impact of COVID-19 on our business results of operations, financial condition and cash flows is dependent on future developments, including the duration of the pandemic, vaccination rates and efficacy and the related length of impact on the global economy and the aerospace industry, which are uncertain and cannot be predicted at this time.

In response to the global COVID-19 pandemic, we took immediate and aggressive action early in 2020 to minimize the spread of COVID-19 in our workplaces and reduce costs. Since the early days of the pandemic, we have been following guidance from the World Health Organization and the U.S. Center for Disease Control to protect employees and prevent the spread of the virus within all of our facilities globally. Some of the actions implemented include: social distancing; appropriate personal protective equipment; facility deep cleaning; flexible work-from-home scheduling; pre-shift temperature screenings, where allowed by law; and restrictions on facility visitors and unnecessary travel. Material actions to reduce costs included: (1) reducing our workforce to align operations with customer demand; (2) suspension of certain benefit programs; and (3) delaying non-essential capital projects and minimizing discretionary spending. At the same time, we addressed the ongoing needs of our business to continue to serve our customers. In addition to these measures, we amended our revolving credit facility in May 2020, as further described in Note 8. We are also monitoring the impacts of COVID-19 on the fair value of assets. Refer to Note 7 for a discussion of goodwill impairment charges recorded in 2020. No goodwill impairment charges were required in 2021. Should future changes in sales, earnings and cash flows differ significantly from our expectations, long-lived assets to be held and used and goodwill could become impaired in the future.

The Company qualified for government subsidies from the Canadian and French governments as a result of the COVID-19 pandemic’s impact on our foreign operations. The Canadian and French subsidies are income-based grants intended to reimburse the Company for certain employee wages. The grants are recognized as income over the periods in which the Company recognizes as expenses the costs the grants are intended to defray.

In September 2021 the Company also entered into an agreement with the U.S. Department of Transportation (“USDOT”) under the Aviation Manufacturing Jobs Protection Program (“AMJP”) for a grant of up to \$14.7 million. The Company received \$7.4 million in cash under the grant in 2021. The remaining balance due to be received of \$7.3 million has been classified within Prepaid Expenses and Other Current Assets on the Consolidated Condensed Balance Sheets as of December 31, 2021. The Company expects to receive a second installment of approximately \$5.2 million in the first quarter of 2022, and a final installment in the second or third quarter of 2022 upon final confirmation from the USDOT of the Company meeting its grant commitments. The receipt of the full award is primarily conditioned upon the Company committing to not furlough, lay off or

reduce the compensation levels of a defined group of employees during the six-month period of performance between September 2021 and March 2022. We account for the proceeds from the grant by analogy to International Accounting Standard (“IAS 20”), *Accounting for Government Grants and Disclosure of Government Assistance* and its principles surrounding the recognition of grants related to income. The grant benefit will be recognized ratably over the six-month performance period as a reduction to cost of products sold in proportion to the compensation expense that the award is intended to defray. During the year ended December 31, 2021, the Company recognized \$8.7 million of the award. The unearned portion of the AMJP award of \$6.0 million has been reported within Accrued Expenses and Other Current Liabilities in the Consolidated Balance Sheet at December 31, 2021.

The following table presents the COVID-19 related government assistance, including AMJP, recorded during the years ended December 31, 2021 and 2020:

(In thousands)	Year Ended December 31,	
	2021	2020
Cost of Products Sold	\$ 10,682	\$ 2,383
Selling, General and Administrative Expenses	228	278
Total	\$ 10,910	\$ 2,661

Restructuring Activities

The COVID-19 pandemic has significantly impacted the global economy, and particularly the aerospace industry, resulting in reduced expectations of the Company’s future operating results. As a result, the Company executed restructuring activities in the form of workforce reduction, primarily in the second quarter of 2020, to align capacity with expected demand.

In the fourth quarter of 2019, in an effort to reduce the significant operating losses at our AeroSat business, we initiated a restructuring plan to reduce costs and minimize losses of our AeroSat antenna business. The plan narrows the initiatives for the AeroSat business to focus primarily on near-term opportunities pertaining to business jet connectivity. The plan has a downsized manufacturing operation remaining in New Hampshire, with significantly reduced personnel and operating expenses.

For more information regarding these restructuring plans see Note 23.

Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany transactions and balances have been eliminated.

Acquisitions are accounted for under the acquisition method and, accordingly, the operating results for the acquired companies are included in the Consolidated Statements of Operations from the respective dates of acquisition.

For additional information on the acquired businesses, see Note 21.

Cost of Products Sold, Engineering and Development and Selling, General and Administrative Expenses

Cost of products sold includes the costs to manufacture products such as direct materials and labor and manufacturing overhead as well as all engineering and developmental costs. The Company is engaged in a variety of engineering and design activities as well as basic research and development activities directed to the substantial improvement or new application of the Company’s existing technologies. These costs are expensed when incurred and included in cost of products sold. Research and development, design and related engineering expenses amounted to \$85.3 million in 2021, \$86.8 million in 2020 and \$108.9 million in 2019. SG&A expenses include costs primarily related to our sales, marketing and administrative departments. Interest expense is shown net of interest income. Interest income was insignificant for the years ended December 31, 2021, 2020 and 2019.

Shipping and Handling

Shipping and handling costs are included in costs of products sold.

Equity-Based Compensation

The Company accounts for its stock options following Accounting Standards Codification (“ASC”) Topic 718, *Compensation – Stock Compensation* (“ASC Topic 718”). This Topic requires all equity-based payments to employees, including grants of

employee stock options and restricted stock units (“RSU’s”), to be recognized in the statement of earnings based on the grant date fair value of the award. For awards with graded vesting, the Company uses a straight-line method of attributing the value of stock-based compensation expense, subject to minimum levels of expense, based on vesting. The Company accounts for forfeitures as they occur.

Under ASC Topic 718, stock compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Equity-based compensation expense is included in SG&A expenses.

Cash and Cash Equivalents

All highly liquid instruments with a maturity of three months or less at the time of purchase are considered cash equivalents.

Accounts Receivable and Allowance for Estimated Credit Losses

Accounts receivable are composed of trade and contract receivables recorded at either the invoiced amount or costs in excess of billings, are expected to be collected within one year, and do not bear interest. The Company records a valuation allowance to account for estimated credit losses. The estimate for credit losses is based on the Company’s assessment of the collectability of customer accounts. The Company regularly reviews the allowance by considering factors such as the age of the receivable balances, historical experience, credit quality, current economic conditions, and reasonable and supportable forecasts of future economic conditions that may affect a customer’s ability to pay. Balances are written off when determined to be uncollectible.

The Company’s exposure to credit losses may increase if its customers are adversely affected by global economic recessions, disruption associated with the current COVID-19 pandemic, industry conditions, or other customer-specific factors. Although the Company has historically not experienced significant credit losses, it is possible that there could be a material adverse impact from potential adjustments of the carrying amount of trade receivables and contract assets as airlines and other aerospace company’s cash flows are impacted by the COVID-19 pandemic.

Inventories

We record our inventories at the lower of cost or net realizable value. We determine the cost basis of our inventory on a first-in, first-out or weighted average basis using a standard cost methodology that approximates actual cost. The Company records reserves to provide for excess, slow moving or obsolete inventory. In determining the appropriate reserve, the Company considers the age of inventory on hand, the overall inventory levels in relation to forecasted demands as well as reserving for specifically identified inventory that the Company believes is no longer salable or whose value has diminished.

Property, Plant and Equipment

Property, plant and equipment are recorded at cost less accumulated depreciation. Depreciation of property, plant and equipment (“PP&E”) is computed using the straight-line method for financial reporting purposes and using accelerated methods for income tax purposes. Estimated useful lives of the assets are as follows: buildings, 25-40 years; machinery and equipment, 4-10 years. Leased buildings and associated leasehold improvements are amortized over the shorter of the terms of the lease or the estimated useful lives of the assets, with the amortization of such assets included within depreciation expense.

The cost of properties sold or otherwise disposed of and the accumulated depreciation thereon are eliminated from the accounts and the resulting gain or loss, as well as maintenance and repair expenses, is reflected within operating income. Replacements and improvements are capitalized.

Depreciation expense was approximately \$12.7 million, \$13.3 million and \$13.7 million in 2021, 2020 and 2019, respectively.

Long-Lived Assets

Long-lived assets to be held and used are initially recorded at cost. The carrying value of these assets is evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying amount may not be recoverable. Impairments are recognized if future undiscounted cash flows from operations are not expected to be sufficient to recover long-lived assets. The carrying amounts are then reduced to fair value, which is typically determined by using a discounted cash flow model.

In conjunction with the deteriorating economic conditions associated with the COVID-19 pandemic, we recorded an impairment charge to right-of-use assets of approximately \$0.7 million incurred in one reporting unit in the Aerospace segment within the Impairment Loss line in the Consolidated Statements of Operations in 2020. Additionally, we recorded a long-lived asset impairment charge of approximately \$9.5 million in 2019 related to PP&E, intangible assets and right-of-use assets in

conjunction with the AeroSat restructuring. See Note 23 for further information regarding the restructuring and impairment charges.

Assets held for sale are to be reported at lower of its carrying amount or fair value less cost to sell. Judgment is required in estimating the sales price of assets held for sale and the time required to sell the assets. These estimates are based upon available market data and operating cash flows of the assets held for sale. During the fourth quarter of 2021, we sold a facility resulting in a gain of \$5.0 million. Refer to Note 22.

Goodwill

The Company tests goodwill at the reporting unit level on an annual basis or more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

We may elect to perform a qualitative assessment that considers economic, industry and company-specific factors for all or selected reporting units. If, after completing the assessment, it is determined that it is more likely than not that the fair value of a reporting unit is less than its carrying value, we proceed to a quantitative test. We may also elect to perform a quantitative test instead of a qualitative test for any or all of our reporting units.

Quantitative testing requires a comparison of the fair value of each reporting unit to its carrying value. We use the discounted cash flow method to estimate the fair value of our reporting units. The discounted cash flow method incorporates various assumptions, the most significant being projected sales growth rates, operating margins and cash flows, the terminal growth rate and the weighted average cost of capital. If the carrying value of the reporting unit exceeds its fair value, the shortfall up to the carrying value of the goodwill represents the amount of goodwill impairment.

The 2021 assessment indicated no impairment to the carrying value of goodwill in any of the Company's reporting units and no impairment charge was recognized. See Note 7 for further information regarding the goodwill impairment charges in 2020 and 2019.

Intangible Assets

The estimated fair values of acquired intangibles are generally determined based upon future economic benefits such as earnings and cash flows. Acquired identifiable intangible assets are recorded at fair value and are amortized over their estimated useful lives. Acquired intangible assets with an indefinite life are not amortized, but are reviewed for impairment at least annually or more frequently whenever events or changes in circumstances indicate that the carrying amounts of those assets are below their estimated fair values.

Impairment is tested under ASC Topic 350, *Intangibles - Goodwill and Other*, as amended by Accounting Standards Update ("ASU") 2012-2. In 2019, the undiscounted cash flows of the AeroSat reporting unit were determined to be insufficient to recover the carrying value of the long-lived assets. The Company recorded a full impairment charge of approximately \$6.2 million in the December 31, 2019 Consolidated Statements of Operations associated with intangible assets of the AeroSat reporting unit in conjunction with restructuring activities.

Financial Instruments

The Company's financial instruments consist primarily of cash and cash equivalents, accounts receivable, accounts payable and long-term debt. The Company performs periodic credit evaluations of its customers' financial condition and generally does not require collateral. The Company does not hold or issue financial instruments for trading purposes. Due to their short-term nature, the carrying values of cash and equivalents, accounts receivable and accounts payable approximate fair value. The carrying value of the Company's variable rate long-term debt instruments also approximates fair value due to the variable rate feature of these instruments.

From time to time, the Company makes long-term, strategic equity investments in companies to promote business and strategic objectives. These investments are classified within Other Assets in the Consolidated Balance Sheets. For investments requiring equity method accounting, we recognize our share of the investee's earnings or losses within Other Expense, Net of Other Income in the Consolidated Statements of Operations. Such amounts were immaterial in 2021, 2020 and 2019. For investments not requiring equity method accounting, if the investment has no readily determinable fair value, we have elected the practicability exception of ASU 2016-01, under which the investment is measured at cost, less impairment, plus or minus observable price changes from orderly transactions of an identical or similar investment of the same issuer.

In 2020, the Company determined there were indicators of impairment over one of its investments as a result of the investee's deteriorating operating performance and limited access to capital. We determined that the fair value of this investment was de minimis and a full impairment charge of \$3.5 million was recorded within Other Expense, Net of Other Income in the

accompanying Consolidated Statement Operations for the year ended December 31, 2020. A full impairment charge of \$5.0 million for an additional investment was recorded in 2019.

Deferred Tax Asset Valuation Allowance

As a result of the COVID-19 pandemic and its adverse effects on the global economy and aerospace industry that began to take shape in the first quarter of fiscal 2020, the Company generated a significant taxable loss for the year ended December 31, 2020, which can be carried back under the CARES Act to recover previously paid income taxes. The Company records a valuation allowance against the deferred tax assets if and to the extent it is more likely than not that the Company will not recover the deferred tax assets. In evaluating the need for a valuation allowance, the Company weights all relevant positive and negative evidence, and considers among other factors, historical financial performance, projected future taxable income, scheduled reversals of deferred tax liabilities, the overall business environment, and tax planning strategies. Losses in recent periods and cumulative pre-tax losses in the three-year period ending with the current year, combined with the significant uncertainty brought about by the COVID-19 pandemic, is collectively considered significant negative evidence under ASC 740 when assessing whether an entity can use projected income as a basis for concluding that deferred tax assets are realizable on a more-likely-than-not basis. For purposes of assessing the recoverability of deferred tax assets, the Company determined that it could not include future projected earnings in the analysis due to recent history of losses and therefore had insufficient objective positive evidence that the Company will generate sufficient future taxable income to overcome the negative evidence of cumulative losses. Accordingly, during the years ended December 31, 2021 and 2020, the Company determined that a portion of its deferred tax assets are not expected to be realizable in the future. As a result, the Company recorded a valuation allowance against its U.S. federal deferred tax assets of approximately \$6.0 million and \$23.3 million during the years ended December 31, 2021 and 2020 respectively. In addition, during the year ended December 31, 2021, the Company recorded a valuation allowance against certain foreign deferred tax assets of approximately \$1.3 million.

Use of Estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities and the reported amounts of sales and expenses during the reporting periods in the financial statements and accompanying notes. Actual results could differ from those estimates.

Foreign Currency Translation

The Company accounts for its foreign currency translation in accordance with ASC Topic 830, *Foreign Currency Translation*. The aggregate transaction gains and losses included in operations were insignificant in 2021, 2020, and 2019.

Dividends

The Company has not paid any cash dividends in the three-year period ended December 31, 2021.

Loss Contingencies

Loss contingencies may from time to time arise from situations such as claims and other legal actions. Loss contingencies are recorded as liabilities when it is probable that a liability has been incurred and the amount of the loss is reasonably estimable. In all other instances, legal fees are expensed as incurred. Disclosure is required when there is a reasonable possibility that the ultimate loss will exceed the recorded provision. Contingent liabilities are often resolved over long time periods. In recording liabilities for probable losses, management is required to make estimates and judgments regarding the amount or range of the probable loss. Management continually assesses the adequacy of estimated loss contingencies and, if necessary, adjusts the amounts recorded as better information becomes known.

Acquisitions

The Company accounts for its acquisitions under ASC Topic 805, *Business Combinations and Reorganizations* (“ASC Topic 805”). ASC Topic 805 provides guidance on how the acquirer recognizes and measures the consideration transferred, identifiable assets acquired, liabilities assumed, non-controlling interests, and goodwill acquired in a business combination. ASC Topic 805 also expands required disclosures surrounding the nature and financial effects of business combinations. See Note 21 regarding the acquisitions in 2019.

Newly Adopted and Recent Accounting Pronouncements

Recent Accounting Pronouncements Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
ASU No. 2018-14 <i>Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20)</i>	The standard includes updates to the disclosure requirements for defined benefit plans including several additions, deletions and modifications to the disclosure requirements. The provisions of this ASU are effective for years beginning after December 15, 2020, with early adoption permitted.	This ASU did not have a significant impact on our consolidated financial statements, as it only includes changes to disclosure requirements. Date of adoption: Q1 2021
ASU No. 2019-12 <i>Income Taxes (Topic 740), Simplifying the Accounting for Income Taxes</i>	The amendments in this update simplify the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 and improve consistent application by clarifying and amending existing guidance. The amendments of this standard are effective for fiscal years beginning after December 15, 2020, including interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period for which financial statements have not been issued, with the amendments to be applied on a respective, modified retrospective or prospective basis, depending on the specific amendment.	This ASU simplified the accounting for income taxes by, among other things, eliminating certain existing exceptions related to the general approach in ASC 740 relating to franchise taxes, reducing complexity in the interim-period accounting for year-to-date loss limitations and changes in tax laws, and clarifying the accounting for transactions outside of business combination that result in a step-up in the tax basis of goodwill. As we do not have material activity associated with items such as franchise taxes or the types of transactions described above, we did not have any significant impact from relevant loss limitations and are not currently addressing enacted tax law changes for which this ASU applies. This ASU did not have a material impact on its consolidated results of operations and financial condition. Date of adoption: Q1 2021
ASU No. 2021-10 <i>Government Assistance (Topic 832): Disclosures by Business Entities about Government Assistance</i>	This ASU is a new topic issued to increase the transparency for government assistance transactions and disclosures due to a lack of specific authoritative guidance in GAAP. This ASU requires disclosures about government assistance in the notes to the financial statements that will provide comparable and transparent information to investors and other financial statement users to enable them to understand an entity's financial results and prospects of future cash flows. This ASU is effective for annual periods beginning after December 15, 2021, with early adoption permitted.	This ASU did not have a significant impact on our consolidated financial statements, as it only includes changes to disclosure requirements. Date of adoption: Q4 2021

Recent Accounting Pronouncements Not Yet Adopted

Standard	Description	Financial Statement Effect or Other Significant Matters
ASU No. 2021-08 <i>Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers</i>	This amendment requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with Topic 606, <i>Revenue from Contracts with Customers</i> , as if it had originated the contracts. Under the current business combinations guidance, such assets and liabilities are recognized by the acquirer at fair value on the acquisition date. The standard will not impact acquired contract assets or liabilities from business combinations occurring prior to the adoption date.	This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The impact of adoption on the Company's consolidated financial statements will be prospective only and depend on the magnitude of future business acquisitions. Planned date of adoption: Q1 2023

We consider the applicability and impact of all ASUs. ASUs not listed above were assessed and determined to be either not applicable, or had and are expected to have minimal impact on our financial statements and related disclosures.

NOTE 2 — REVENUE

Revenue is recognized when, or as, the Company transfers control of promised products or services to a customer in an amount that reflects the consideration the Company expects to be entitled in exchange for transferring those products or services. Sales shown on the Company's Consolidated Statements of Operations are from contracts with customers.

Payment terms and conditions vary by contract, although terms generally include a requirement of payment within a range from 30 to 90 days after the performance obligation has been satisfied; or in certain cases, up-front deposits. In circumstances where the timing of revenue recognition differs from the timing of invoicing, the Company has determined that the Company's contracts generally do not include a significant financing component. Taxes collected from customers, which are subsequently remitted to governmental authorities, are excluded from sales.

The Company recognizes an asset for the incremental, material costs of obtaining a contract with a customer if the Company expects the benefit of those costs to be longer than one year and the costs are expected to be recovered. These incremental costs include, but are not limited to, sales commissions incurred to obtain a contract with a customer. As of December 31, 2021, the Company does not have material incremental costs on any open contracts with an original expected duration of greater than one year.

The Company recognizes an asset for certain, material costs to fulfill a contract if it is determined that the costs relate directly to a contract or an anticipated contract that can be specifically identified, generate or enhance resources that will be used in satisfying performance obligations in the future, and are expected to be recovered. Such costs are amortized on a systematic basis that is consistent with the transfer to the customer of the goods to which the asset relates. Start-up costs are expensed as incurred. Capitalized fulfillment costs are included in Inventories in the accompanying Consolidated Balance Sheets. Should future orders not materialize or it is determined the costs are no longer probable of recovery, the capitalized costs are written off. As of December 31, 2021 and 2020, the Company did not have material capitalized fulfillment costs.

A performance obligation is a promise in a contract to transfer a distinct good or service to the customer, and is the unit of account. The majority of our contracts have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts which are, therefore, not distinct. Thus, the contract's transaction price is the revenue recognized when or as that performance obligation is satisfied. Promised goods or services that are immaterial in the context of the contract are not separately assessed as performance obligations.

Some of our contracts have multiple performance obligations, most commonly due to the contract covering multiple phases of the product lifecycle (development, production, maintenance and support). For contracts with multiple performance obligations, the contract's transaction price is allocated to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling price is the expected cost plus margin approach, under which expected costs are forecast to satisfy a performance obligation and then an appropriate margin is added for that distinct good or service. Shipping and handling activities that occur after the customer has obtained control of the good are considered fulfillment activities, not performance obligations.

Some of our contracts offer price discounts or free units after a specified volume has been purchased. The Company evaluates these options to determine whether they provide a material right to the customer, representing a separate performance obligation. If the option provides a material right to the customer, revenue is allocated to these rights and recognized when those future goods or services are transferred, or when the option expires.

Contract modifications are routine in the performance of our contracts. Contracts are often modified to account for changes in contract specifications or requirements. In most instances, contract modifications are for goods or services that are distinct, and, therefore, are accounted for as new contracts. The effect of modifications has been reflected when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price.

The majority of the Company's revenue from contracts with customers is recognized at a point in time, when the customer obtains control of the promised product, which is generally upon delivery and acceptance by the customer. These contracts may provide credits or incentives, which may be accounted for as variable consideration. Variable consideration is estimated at the most likely amount to predict the consideration to which the Company will be entitled, and only to the extent it is probable that a subsequent change in estimate will not result in a significant revenue reversal when estimating the amount of revenue to recognize. Variable consideration is treated as a change to the sales transaction price and based on an assessment of all information (i.e., historical, current and forecasted) that is reasonably available to the Company, and estimated at contract inception and updated at the end of each reporting period as additional information becomes available. Most of our contracts do not contain rights to return product; where this right does exist, it is evaluated as possible variable consideration.

For contracts that are subject to the requirement to accrue anticipated losses, the Company recognizes the entire anticipated loss in the period that the loss becomes probable.

For contracts with customers in which the Company promises to provide a product to the customer that has no alternative use to the Company and the Company has enforceable rights to payment for progress completed to date inclusive of profit, the Company satisfies the performance obligation and recognizes revenue over time, using costs incurred to date relative to total estimated costs at completion to measure progress toward satisfying our performance obligations. Incurred cost represents work performed, which corresponds with, and thereby best depicts, the transfer of control to the customer. Contract costs include labor, material and overhead.

The Company also recognizes revenue from service contracts (including service-type warranties) over time. The Company recognizes revenue over time during the term of the agreement as the customer is simultaneously receiving and consuming the benefits provided throughout the Company's performance. The Company typically recognizes revenue on a straight-line basis throughout the contract period.

On December 31, 2021, we had \$415.7 million of remaining performance obligations, which we refer to as total backlog. We expect to recognize approximately \$339.9 million of our remaining performance obligations as revenue in 2022.

Costs in excess of billings includes unbilled amounts resulting from revenues under contracts with customers that are satisfied over time and when the cost-to-cost measurement method of revenue recognition is utilized and revenue recognized exceeds the amount billed to the customer, and right to payment is not just subject to the passage of time. Amounts may not exceed their net realizable value. Costs in excess of billings are classified as current assets, within Accounts Receivable, Net of Allowance for Estimated Credit Losses on our Consolidated Balance Sheets.

Billings in excess of cost includes billings in excess of revenue recognized as well as other elements of deferred revenue, which includes advanced payments, up-front payments, and progress billing payments. Billings in excess of cost are reported in our Consolidated Balance Sheets classified as current liabilities, within Customer Advance Payments and Deferred Revenue, and non-current liabilities, within Other Liabilities. To determine the revenue recognized in the period from the beginning balance of billings in excess of cost, the contract liability as of the beginning of the period is recognized as revenue on a contract-by-contract basis when the Company satisfies the performance obligation related to the individual contract. Once the beginning contract liability balance for an individual contract has been fully recognized as revenue, any additional payments received in the period are recognized as revenue once the related costs have been incurred.

We recognized \$18.2 million and \$23.5 million during the year ended December 31, 2021 and 2020, respectively, in revenues that were included in the contract liability balance at the beginning of the period.

The Company's contract assets and contract liabilities consist of costs and profits in excess of billings and billings in excess of cost and profits, respectively. The following table presents the beginning and ending balances of contract assets and contract

liabilities:

(In thousands)

	Contract Assets		Contract Liabilities	
Beginning Balance, January 1, 2021	\$	17,697	\$	28,641
Ending Balance, December 31, 2021	\$	25,941	\$	28,495

The increase in contract assets reflects the net impact of new revenue recognized in excess of billings exceeding billing of previously unbilled revenue during the period. The decrease in contract liabilities reflects the net impact of revenue recognized in excess of additional customer advances or deferred revenues recorded.

The following table presents our revenue disaggregated by Market Segments as of December 31 as follows:

(In thousands)

	2021	2020	2019
Aerospace Segment			
Commercial Transport	\$ 201,990	\$ 262,636	\$ 523,921
Military	70,312	67,944	76,542
Business Jet	56,673	60,437	67,541
Other	36,263	26,971	24,605
Aerospace Total	365,238	417,988	692,609
Test Systems Segment			
Semiconductor	—	3,483	9,692
Aerospace & Defense	79,670	81,116	70,401
Test Systems Total	79,670	84,599	80,093
Total	\$ 444,908	\$ 502,587	\$ 772,702

The following table presents our revenue disaggregated by Product Lines as of December 31 as follows:

(In thousands)

	2021	2020	2019
Aerospace Segment			
Electrical Power & Motion	\$ 141,746	\$ 179,245	\$ 338,237
Lighting & Safety	103,749	118,928	185,462
Avionics	64,901	76,113	106,787
Systems Certification	13,050	6,899	14,401
Structures	5,529	9,832	23,117
Other	36,263	26,971	24,605
Aerospace Total	365,238	417,988	692,609
Test Systems	79,670	84,599	80,093
Total	\$ 444,908	\$ 502,587	\$ 772,702

NOTE 3 — ACCOUNTS RECEIVABLE

Accounts receivable at December 31 consists of:

(In thousands)

	2021	2020
Trade Accounts Receivable	\$ 84,681	\$ 78,577
Unbilled Recoverable Costs and Accrued Profits	25,941	17,697
Total Receivables, Gross	110,622	96,274
Less Allowance for Estimated Credit Losses	(3,183)	(3,218)
Total Receivables, Net	<u>\$ 107,439</u>	<u>\$ 93,056</u>

The following table provides a roll-forward of the allowance for estimated credit losses that is deducted from accounts receivable to present the net amount expected to be collected at December 31:

(In thousands)

Balance at December 31, 2019	\$ 3,559
Bad Debt Expense, Net of Recoveries	1,913
Write-off Charges Against the Allowance and Other Adjustments	(2,254)
Balance at December 31, 2020	\$ 3,218
Bad Debt Expense, Net of Recoveries	90
Write-off Charges Against the Allowance and Other Adjustments	(125)
Balance at December 31, 2021	<u>\$ 3,183</u>

NOTE 4 — INVENTORIES

Inventories at December 31 are as follows:

(In thousands)

	2021	2020
Finished Goods	\$ 28,579	\$ 26,964
Work in Progress	22,954	21,987
Raw Material	106,043	108,108
Total Inventories	<u>\$ 157,576</u>	<u>\$ 157,059</u>

At December 31, 2021, the Company's reserve for inventory valuation was \$33.8 million, or 17.7% of gross inventory. At December 31, 2020, the Company's reserve for inventory valuation was \$33.4 million, or 17.5% of gross inventory.

NOTE 5 — PROPERTY, PLANT AND EQUIPMENT

Property, Plant and Equipment at December 31 are as follows:

(In thousands)

	2021	2020
Land	\$ 8,632	\$ 9,891
Building and Improvements	70,566	75,493
Machinery and Equipment	121,960	119,444
Construction in Progress	5,680	5,843
Total Property, Plant and Equipment, Gross	\$ 206,838	\$ 210,671
Less Accumulated Depreciation	111,602	103,993
Total Property, Plant and Equipment, Net	<u>\$ 95,236</u>	<u>\$ 106,678</u>

There was a \$2.3 million impairment of property, plant and equipment in the year ended December 31, 2019, classified within Impairment Loss in the Consolidated Statement of Operations, as more fully discussed in Note 23.

NOTE 6 — INTANGIBLE ASSETS

The following table summarizes acquired intangible assets at December 31 as follows:

(In thousands)	Weighted Average Life	2021		2020	
		Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	11 years	\$ 2,146	\$ 1,979	\$ 2,146	\$ 1,891
Non-compete Agreement	4 years	11,082	10,592	11,082	10,085
Trade Names	10 years	11,447	8,518	11,512	7,537
Completed and Unpatented Technology	9 years	47,932	30,441	48,043	25,766
Customer Relationships	15 years	142,276	69,033	142,478	60,096
Total Intangible Assets	12 years	\$ 214,883	\$ 120,563	\$ 215,261	\$ 105,375

Amortization is computed on the straight line method for financial reporting purposes. Amortization expense for intangibles was \$5.4 million, \$17.1 million and \$17.6 million for 2021, 2020 and 2019, respectively. During 2019 there was a \$6.2 million impairment of intangible assets in conjunction with the AeroSat restructuring. The amount is classified within Impairment Loss in the Consolidated Statements of Operations.

Based upon acquired intangible assets at December 31, 2021, amortization expense for each of the next five years is estimated to be:

(In thousands)	
2022	\$ 14,911
2023	\$ 13,878
2024	\$ 12,856
2025	\$ 10,935
2026	\$ 9,533

NOTE 7 — GOODWILL

The following table summarizes the changes in the carrying amount of goodwill at December 31 as follows:

(In thousands)	Aerospace	Test Systems	Total
Balance at December 31, 2019	\$ 123,038	\$ 21,932	\$ 144,970
Acquisitions and Divestitures	—	(298)	(298)
Impairment Charge	(86,312)	—	(86,312)
Foreign Currency Translations and Other	(78)	—	(78)
Balance at December 31, 2020	\$ 36,648	\$ 21,634	\$ 58,282
Foreign Currency Translations and Other	—	—	—
Balance at December 31, 2021	\$ 36,648	\$ 21,634	\$ 58,282
Goodwill, Gross	\$ 157,349	\$ 21,634	\$ 178,983
Accumulated Impairment Losses	(120,701)	—	(120,701)
Goodwill, Net	\$ 36,648	\$ 21,634	\$ 58,282

The Company's four reporting units with goodwill as of the first day of our fourth quarter of 2021 were subject to the annual goodwill impairment test. Based on our quantitative assessments of our reporting units performed during our annual goodwill impairment test, the Company concluded that no impairment to the carrying value of goodwill in any of the Company's reporting units was indicated and no impairment charge was recognized.

Beginning in the first quarter of 2020, the COVID-19 pandemic negatively impacted the global economy and aerospace industry. Management considered these qualitative factors and the impact to each reporting unit's revenue and earnings, and determined that it was more likely than not that the fair value of several reporting units was less than its carrying value. Therefore, we performed a quantitative test for all eight reporting units with goodwill as of March 28, 2020.

We determined that the estimated fair value of four of the eight reporting units with goodwill significantly exceeded their respective carrying values and did not result in a goodwill impairment for these four reporting units as of March 28, 2020.

For the remaining four reporting units with goodwill, we determined that the estimated fair value was less than their respective carrying values. We recognized full impairments of the goodwill of our Astronics Connectivity Systems and Certification (“ACSC”), PGA and Custom Control Concepts (“CCC”) reporting units, and a partial impairment of the goodwill of our PECO reporting unit as of March 28, 2020.

During the second quarter of 2020, further commercial aircraft order reductions, delays and cancellations at a major customer of our PECO reporting unit resulted in revisions to PECO’s forecast. We therefore performed a quantitative test for the PECO reporting unit as of June 27, 2020. As a result of this quantitative test, we determined that the estimated fair value was less than the respective carrying value as of June 27, 2020.

As a result of our interim goodwill impairment tests, we recorded non-cash goodwill impairment charges in the Aerospace segment of approximately \$6.3 million within the Impairment Loss line of the December 31, 2020 Consolidated Statements of Operations.

In the year ending December 31, 2019, we performed quantitative assessments for the reporting units which had goodwill as of the first day of the fourth quarter, prior to the initiation of the antenna business restructuring activities. Based on our quantitative assessment, the Company recorded a full impairment charge of approximately \$1.6 million associated with the AeroSat reporting unit. The impairment loss was incurred in the Aerospace segment and is reported within the Impairment Loss line of the December 31, 2019 Consolidated Statements of Operations.

NOTE 8 — LONG-TERM DEBT

The Company’s long-term debt at December 31, 2021 and 2020 consists of borrowings under its Fifth Amended and Restated Credit Agreement (the “Agreement”), which provides for a \$500 million revolving credit line with the option to increase the line by up to \$150 million. The maximum leverage ratio of funded debt, net of cash to Adjusted EBITDA (as defined in the Agreement) was 3.75 to 1, increasing to 4.50 to 1 for up to four fiscal quarters following the closing of an acquisition permitted under the Agreement, subject to limitations. The Company paid interest on the unpaid principal amount of the facility at a rate equal to one-, three- or six-month LIBOR plus between 1.00% and 1.50% based upon the Company’s leverage ratio. The Company also paid a commitment fee to the Lenders in an amount equal to between 0.10% and 0.20% on the undrawn portion of the credit facility, based upon the Company’s leverage ratio.

In May 2020, the Company executed an amendment to the Agreement (the “Amended Facility”), which reduced the revolving credit line from \$500 million to \$375 million. The Amended Facility suspended the application of the leverage ratio up through and including the second quarter of 2021 (the “suspension period”). The maximum net leverage ratio is set at 6.00 to 1 for the third quarter of 2021, 5.50 to 1 for the fourth quarter of 2021, 4.50 to 1 for the first quarter of 2022, and return to 3.75 to 1 for each quarter thereafter. At December 31, 2020, there was \$173.0 million outstanding under the revolving credit facility, none of which is due prior to the expiration date.

At December 31, 2021, there was \$163.0 million outstanding on the revolving credit facility and there remained \$210.9 million available subject to the minimum liquidity covenant discussed below, net of outstanding letters of credit. The credit facility allocates up to \$20 million of the \$375 million revolving credit line for the issuance of letters of credit, including certain existing letters of credit. At December 31, 2021, outstanding letters of credit totaled \$1.1 million.

Through the third quarter of 2021, the Amended Facility required the Company to maintain minimum liquidity, defined as unrestricted cash plus the unused revolving credit commitments, of \$180.0 million at all times. Through the second quarter of 2021, the Company was required to maintain a minimum interest coverage ratio of 1.75x on a quarterly basis, except for the first quarter of 2021, which was set at 1.50x. The Company was in compliance with its financial covenants at December 31, 2021. During the suspension period, the Company paid interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus 2.25%. The Company paid a commitment fee to the lenders in an amount equal to 0.35% on the undrawn portion of the Amended Facility. After the suspension period, the Company pays interest on the unpaid principal amount of the Amended Facility at a rate equal to one-, three- or six-month LIBOR (which shall be at least 1.00%) plus between 1.00% to 2.25% based upon the Company’s leverage ratio. The Company’s interest rate under the Amended Facility is 3.25% at December 31, 2021. The Company also pays a commitment fee to the lenders in an amount equal to 0.10% to 0.35% on the undrawn portion of the Amended Facility, based upon the Company’s leverage ratio. The Amended Facility provided for the payment of a consent fee of 15 basis points of the commitment for each consenting lender. The Amended Facility required mandatory prepayments during the suspension period when the Company’s cash balance exceeded \$100 million. During the year ended December 31, 2020, subsequent to the execution of the Amended Facility, the Company made prepayments approximating \$165.0 million.

On March 1, 2022, the Company executed an amendment to the Amended Facility, which reduced the revolving credit line from \$375 million to \$225 million and extended the maturity date of the loans under the facility from February 16, 2023 to May 30, 2023. Interest will be payable on the unpaid principal amount of the facility at a rate equal to the Secured Overnight Financing Rate (“SOFR”, which shall be at least 1.00%), plus between 1.50% to 3.25% based upon the Company’s leverage ratio. The Company will also pay a commitment fee to the lenders in an amount equal to 0.10% to 0.40% on the undrawn portion of the Amended Facility, based upon the Company’s leverage ratio. The amendment provided for the payment of a consent fee of 10 basis points of the commitment for each consenting lender.

The amendment will require the Company to maintain minimum liquidity, defined as unrestricted cash plus the unused revolving credit commitments, of \$35 million. The maximum net leverage ratio is set at 4.75 to 1 for the first and second quarters of 2022 and 3.75 to 1 thereafter, and the definition of Adjusted EBITDA has been modified to exclude income from earnout payments and asset sales.

The Amended Facility also temporarily restricts certain activities, including dividend payments, acquisitions and share repurchases, through the third quarter of 2022. The Company’s obligations under the Amended Facility are jointly and severally guaranteed by each domestic subsidiary of the Company other than non-material subsidiaries. The obligations are secured by a first priority lien on substantially all of the Company’s and the guarantors’ assets.

In the event of voluntary or involuntary bankruptcy of the Company or any subsidiary, all unpaid principal and other amounts owing under the Amended Facility automatically become due and payable. Other events of default, such as failure to make payments as they become due and breach of financial and other covenants, change of control, judgments over a certain amount, and cross default under other agreements give the agent the option to declare all such amounts immediately due and payable.

While we expect to be able to refinance, replace or extend the maturity date of our credit facility before it matures, we cannot be sure that we will be able to obtain such debt refinancing on commercially reasonable terms or at all. The extent to which we will be able to effect such refinancing, replacement or maturity extension on terms that are favorable to us or at all is dependent on a number of highly uncertain factors, including then-prevailing credit and other market conditions, economic conditions, particularly in the aerospace and defense markets, disruptions or volatility caused by factors such as COVID-19, regional conflicts, inflation, and supply chain disruptions. In addition, rising interest rates could limit our ability to refinance our existing credit facility when it matures or cause us to pay higher interest rates upon refinancing. As the Company’s long-term debt approaches maturity, if the Company is unable to refinance, replace or extend the maturity on its credit facility, the Company’s liquidity, results of operations, and financial condition could be materially adversely impacted.

NOTE 9 — WARRANTY

In the ordinary course of business, the Company warrants its products against defects in design, materials and workmanship typically over periods ranging from twelve to sixty months. The Company determines warranty reserves needed by product line based on experience and current facts and circumstances. Activity in the warranty accrual, which is included in other accrued expenses on the Consolidated Balance Sheets, is summarized as follows:

(In thousands)	2021	2020	2019
Balance at Beginning of the Year	\$ 7,018	\$ 7,660	\$ 5,027
Warranty Liabilities Divested or Acquired	—	—	(80)
Warranties Issued	6,083	1,725	3,781
Reassessed Warranty Exposure	(1,474)	(1,029)	1,451
Warranties Settled	(3,444)	(1,338)	(2,519)
Balance at End of the Year	<u>\$ 8,183</u>	<u>\$ 7,018</u>	<u>\$ 7,660</u>

NOTE 10 — LEASES

The Company has operating and finance leases for leased office and manufacturing facilities and equipment leases. We have concluded that when an agreement grants us the right to substantially all of the economic benefits associated with an identified asset, and we are able to direct the use of that asset throughout the term of the agreement, we have a lease. We lease certain office equipment under finance leases, and we lease certain production facilities, office equipment and vehicles under operating leases. Some of our leases include options to extend or terminate the leases and these options have been included in the relevant lease term to the extent that they are reasonably certain to be exercised.

If the lease arrangement also contains non-lease components, the Company elected the practical expedient not to separate any combined lease and non-lease components for all lease contracts. For our real estate leases, the remaining fixed minimum rental

payments used in the calculation of the new lease liability, include fixed payments and variable payments (if the variable payments are based on an index), over the remaining lease term. Variable lease payments based on indices have been included in the related right-of-use assets and lease liabilities on our Consolidated Balance Sheets, while variable lease payments based on usage of the underlying asset have been excluded, as they do not represent present rights or obligations. Variable lease components for leases relate primarily to common area maintenance charges and other separately billed lessor services, sales and real estate taxes. Variable lease costs are expensed in the period they are incurred. We have also elected to adopt the practical expedient under ASC 842 to not separate lease and non-lease components in contracts where the base lease payment contains both. In this situation, these lease agreements are accounted for as a single lease component for all classes of underlying assets. While we do have real estate leases with options to purchase the facility at a market value at the date of exercise, these are not included in the calculation of the lease liability, as these options are not expected to be exercised.

Any new additional operating and financing lease liabilities and corresponding right-of-use (“ROU”) assets are based on the present value of the remaining minimum rental payments. In determining the incremental borrowing rate, we have considered borrowing data for secured debt obtained from our lending institution.

The following is a summary of the Company's ROU assets and liabilities at December 31:

(In thousands)	2021	2020
Operating Leases:		
Operating Right-of-Use Assets, Gross	\$ 30,318	\$ 28,678
Less Accumulated Right-of-Use Asset Impairment	1,710	1,710
Less Accumulated Amortization	12,439	8,015
Operating Right-of-Use Assets, Net	<u>\$ 16,169</u>	<u>\$ 18,953</u>
Short-term Operating Lease Liabilities	\$ 6,778	\$ 4,998
Long-term Operating Lease Liabilities	12,018	16,637
Operating Lease Liabilities	<u>\$ 18,796</u>	<u>\$ 21,635</u>
Finance Leases:		
Finance Right-of-Use Assets, Gross	\$ 177	\$ 3,484
Less Accumulated Amortization	106	2,039
Finance Right-of-Use Assets, Net — Included in Other Assets	<u>\$ 71</u>	<u>\$ 1,445</u>
Short-term Finance Lease Liabilities — Included in Other Accrued Expenses	\$ 72	\$ 2,081
Long-term Finance Lease Liabilities — Included in Other Liabilities	—	734
Finance Lease Liabilities	<u>\$ 72</u>	<u>\$ 2,815</u>

The following is a summary of the Company's total lease costs as of December 31:

(In thousands)	2021	2020
Finance Lease Cost:		
Amortization of ROU Assets	\$ 573	\$ 1,020
Interest on Lease Liabilities	78	214
Total Finance Lease Cost	<u>651</u>	<u>1,234</u>
Operating Lease Cost	5,881	5,292
Impairment Charge of Operating Lease ROU Asset	—	691
Variable Lease Cost	1,546	1,358
Short-term Lease Cost (excluding month-to-month)	271	175
Less Sublease and Rental Income	(1,265)	(1,437)
Total Operating Lease Cost	<u>6,433</u>	<u>6,079</u>
Total Net Lease Cost	<u>\$ 7,084</u>	<u>\$ 7,313</u>

The following is a summary of cash paid for amounts included in the measurement of lease liabilities as of December 31:

(In thousands)	2021	2020
Operating Cash Flow for Finance Leases	\$ 78	\$ 214
Operating Cash Flow for Operating Leases	\$ 6,711	\$ 5,334
Financing Cash Flow for Finance Leases	\$ 901	\$ 1,922

As permitted by ASC 842, leases with expected durations of less than 12 months from inception (i.e. short-term leases) were excluded from the Company's calculation of its lease liability and ROU asset. Furthermore, as permitted by ASC 842, the Company elected to apply the package of practical expedients, which allows companies not to reassess: (a) whether its expired or existing contracts are or contain leases, (b) the lease classification for any expired or existing leases, and (c) initial direct costs for any existing leases.

The weighted-average remaining term for the Company's operating and financing leases are approximately 5 years and less than 1 year, respectively. The weighted-average discount rates for the Company's operating and financing leases are approximately 3.3% and 1.3%, respectively.

The following is a summary of the Company's maturity of lease liabilities:

(In thousands)	Operating Leases	Financing Leases
2022	\$ 7,296	\$ 72
2023	3,879	—
2024	2,886	—
2025	2,808	—
2026	1,210	—
Thereafter	2,151	—
Total Lease Payments	\$ 20,230	\$ 72
Less: Interest	1,434	—
Total Lease Liability	\$ 18,796	\$ 72

These amounts exclude annual operating lease payments of \$1.5 million per year through 2031, which represents legal binding lease payments for leases signed, but not yet commenced.

NOTE 11 — INCOME TAXES

The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting and tax basis of assets and liabilities. Deferred tax assets are reduced, if deemed necessary, by a valuation allowance for the amount of tax benefits which are not more likely than not to be realized. Investment tax credits are recognized on the flow through method.

The provision for (benefit from) income taxes at December 31 consists of the following:

(In thousands)	2021	2020	2019
Current			
U.S. Federal	\$ (1,713)	\$ (8,679)	\$ 23,798
State	(667)	(4,539)	4,471
Foreign	1,439	1,036	2,402
Current	(941)	(12,182)	30,671
Deferred			
U.S. Federal	(237)	17,044	(16,250)
State	(87)	(92)	727
Foreign	(117)	(1,399)	1,138
Deferred	(441)	15,553	(14,385)
Total	\$ (1,382)	\$ 3,371	\$ 16,286

The effective tax rates differ from the statutory federal income tax rate as follows:

	2021	2020	2019
Statutory Federal Income Tax Rate	21.0 %	21.0 %	21.0 %
Permanent Items			
Stock Compensation Expense	(2.1)%	(0.3)%	(0.5)%
Non Deductible Goodwill Impairment	— %	(10.2)%	— %
Contingent Consideration Liability Fair Value Adjustment	1.7 %	— %	— %
Other	(0.7)%	— %	0.5 %
Foreign Tax Rate Differential	(2.7)%	(1.0)%	1.4 %
State Income Tax, Net of Federal Income Tax Effect	2.2 %	3.3 %	6.0 %
Research and Development Tax Credits	12.8 %	2.2 %	(4.6)%
Change in Valuation Allowance	(29.8)%	(19.2)%	1.1 %
Net GILTI and FDII Tax Benefit	— %	— %	(1.2)%
Foreign Tax Credit for Dividend Withholding	1.7 %	— %	— %
Tax Rate Change on 2020 Federal Net Operating Loss Carryback	0.9 %	1.3 %	— %
Other	0.1 %	(0.1)%	0.1 %
Effective Tax Rate	5.1 %	(3.0)%	23.8 %

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes as well as tax attributes.

Significant components of the Company's deferred tax assets and liabilities at December 31, are as follows:

(In thousands)	2021	2020
Deferred Tax Assets:		
Asset Reserves	\$ 17,462	\$ 18,189
Deferred Compensation	7,424	7,564
Section 163(j) - Interest Expense Limitation	891	—
State Investment and Research and Development Tax Credit Carryforwards, Net of Federal Tax	4,674	866
Customer Advanced Payments and Deferred Revenue	1,301	2,216
Net Operating Loss Carryforwards and Other	15,617	11,244
Goodwill and Intangible Assets	1,082	2,069
ASC 606 Revenue Recognition	1,817	2,311
Lease Liabilities	4,178	5,545
Other	5,540	2,300
Total Gross Deferred Tax Assets	59,986	52,304
Valuation Allowance for Federal and State Deferred Tax Assets and Tax Credit Carryforwards, Net of Federal Tax	(43,519)	(37,168)
Deferred Tax Assets	16,467	15,136
Deferred Tax Liabilities:		
Depreciation	9,393	10,166
ASC 606 Revenue Recognition - Section 481(a) Adjustment	1,030	928
Lease Assets	3,539	4,506
Earnout Income Accrual	2,603	—
Other	1,050	1,186
Deferred Tax Liabilities	17,615	16,786
Net Deferred Tax Liabilities	\$ (1,148)	\$ (1,650)

The net deferred tax assets and liabilities presented in the Consolidated Balance Sheets are as follows at December 31:

(In thousands)	2021	2020
Other Assets — Long-term	\$ 273	\$ 1,259
Deferred Tax Liabilities — Long-term	(1,421)	(2,909)
Net Deferred Tax Liabilities	\$ (1,148)	\$ (1,650)

At December 31, 2021, gross federal net operating losses, amounted to approximately \$2.1 million. In the current year, the Company generated approximately \$15.8 million of net operating losses, which can be carried forward indefinitely, limited annually to 80% of taxable income. The remaining prior year carry forward net operating losses of approximately \$6.3 million can be carried forward and are subject to annual limitations under Internal Revenue Code Section 382. Of these net operating losses, \$9 million expire in 2037 and 2038 and the remaining \$0.4 million will carryforward indefinitely. Given that the Company does not have a source of future taxable income to realize these net operating losses, a valuation allowance has been recorded on them.

At December 31, 2021, gross state net operating loss carryforwards amounted to approximately \$37.2 million. These state net operating loss carryforwards begin to expire at various dates from 2021 through 2041. Due to the uncertainty as to the Company's ability to generate sufficient taxable income in certain states in the future and to utilize certain of the Company's state operating loss carryforwards before they expire, the Company has recorded a valuation allowance on \$134.6 million of them. The remaining \$2.6 million of net operating loss carryforwards are more likely than not to be realized.

At December 31, 2021, state income tax credit carryforwards amounted to approximately \$1.8 million and begin to expire at various dates from 2021 to 2036. Due to the uncertainty as to the Company's ability to generate sufficient taxable income in certain states in the future, the Company has recorded a valuation allowance on these credits.

At December 31, 2021, the estimated federal R&D tax credit for the current year amounted to approximately \$0.6 million which the Company can carry forward through 2041. In addition, the Company has approximately \$0.7 million of foreign tax

credits that it can carry forward through 2031. Given that the Company does not have a source of future taxable income to realize these tax attributes, a valuation allowance has been recorded on these credits.

During the year ended December 31, 2020, the Company determined that a revised state filing position could be taken which would reduce the taxable income apportioned for state income tax purposes and recorded a state income tax receivable of approximately \$3.0 million as a component of Prepaid Expenses and Other Current Assets. The Company has filed amended state income tax returns for tax years 2015 and 2016 and intends to file amended state income tax returns for tax years 2017 through 2019 in order to claim these refunds.

During the year ended December 31, 2018, the Company determined that a revised state filing position could be taken which would reduce the taxable income apportioned for state income tax purposes and amended state income tax returns were filed for the open tax years of 2014 through 2017 to reflect this revised tax position. The Company is also claiming the benefit of the revised filing position for 2018 and subsequent tax years. The statute of limitations expired on various dates in 2020 and 2021 for the amended returns for tax years 2014 through 2016, and approximately \$0.8 million and approximately \$0.5 million of the unrecognized tax benefit was recognized during 2020 and 2021, respectively. Absent a state tax audit notice related to the refund claim, the statute of limitations will expire in December 2022 for the amended return for tax year 2017, at which time approximately \$0.5 million of the unrecognized tax benefit is expected to be recognized. The statute of limitations will expire in years 2022 through 2025 for tax years 2018 through 2021, respectively.

The Company has analyzed its filing positions in all of the federal and state jurisdictions where it is required to file income tax returns, as well as all open tax years in these jurisdictions. Should the Company need to accrue a liability for uncertain tax benefits, any interest associated with that liability would be recorded as interest expense. Penalties, if any, would be recorded as operating expenses. During the year ended December 31, 2020, reserves for uncertain tax positions were recorded in association with a revised state income tax filing positions pursuant to ASC Topic 740-10. A reconciliation of the total amounts of unrecognized tax benefits, excluding interest and penalties that, if recognized, would impact the effective tax rate, is as follows:

(in thousands)	2021	2020	2019
Balance at Beginning of the Year	\$ 1,890	\$ 2,565	\$ 2,197
Decreases as a Result of Tax Positions Taken in Prior Years	(478)	(775)	—
Increases as a Result of Tax Positions Taken in the Current Year	—	100	368
Balance at End of the Year	<u>\$ 1,412</u>	<u>\$ 1,890</u>	<u>\$ 2,565</u>

There are no material penalties or interest liabilities accrued as of December 31, 2021, 2020, or 2019, nor are any material penalties or interest costs included in expense for each of the years ended December 31, 2021, 2020 and 2019. The years under which we conducted our evaluation coincided with the tax years currently still subject to examination by major federal and state tax jurisdictions, those being 2017 through 2021 for federal purposes and 2017 through 2021 for state purposes.

Pretax (loss) income from the Company's foreign subsidiaries amounted to \$(3.3) million, \$(7.0) million and \$12.2 million for 2021, 2020 and 2019, respectively. The balance of pretax earnings or loss for each of those years were domestic.

On December 29, 2021, Luminescent Systems Canada, Inc. ("LSI Canada") declared a one-time dividend in the amount of \$6.5 million to its U.S. parent. LSI Canada remitted non-resident Canadian withholding tax on this dividend in the amount of approximately \$0.8 million. No additional provision for U.S. federal or foreign taxes has been made as the remaining foreign subsidiaries' undistributed earnings (approximately \$3.0 million at December 31, 2021) are considered to be permanently reinvested. It is not practicable to determine the amount of outside basis differences related to the investment in foreign subsidiaries and other taxes that would be payable if these amounts were repatriated to the U.S.

While the Tax Cuts and Jobs Act provides for a territorial tax system, beginning in 2018, it includes the foreign-derived intangible income ("FDII") and global intangible low taxed income ("GILTI") provisions. The Company elected to account for GILTI tax in the period in which it is incurred, and includes in its U.S. income tax return foreign subsidiary earnings from its Controlled Foreign Corporations ("CFCs") in excess of an allowable return on the foreign subsidiary's tangible assets. The Company does not expect to incur any GILTI tax expense during the year ended December 31, 2021 as the Company is in a net tested loss position. The FDII provisions allow for a deduction equal to a percentage of the foreign-derived intangible income of a domestic corporation. As a result of these provisions, net, the Company recorded no tax benefit during the year ended December 31, 2021, a tax benefit of less than \$0.1 million during the year ended December 31, 2020, and a tax benefit of approximately \$0.8 million during the year ended December 31, 2019.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was enacted in response to the economic uncertainty resulting from the COVID-19 pandemic. The CARES Act includes many measures to assist companies,

including temporary changes to income and non-income based laws, some of which were enacted as part of the Tax Cuts and Jobs Act of 2017 (“TCJA”). Some of the key changes include eliminating the 80% of taxable income limitation by allowing corporate entities to fully utilize NOLs to offset taxable income in 2018, 2019 and 2020, allowing NOLs originating in 2018, 2019 and 2020 to be carried back five years, enhanced interest deductibility, and retroactively clarifying the immediate recovery of qualified improvement property costs rather than over a 39-year recovery period. During the years ended December 31, 2021 and 2020, the Company recorded a tax benefit relating to the NOL carryback provisions and the technical correction for qualified improvement property provided for in the CARES Act of approximately \$0.3 million and \$1.5 million respectively.

As a result of the on-going COVID-19 pandemic, the Company generated a significant tax loss for the year ended December 31, 2020, which was carried back under the CARES Act to recover previously paid income taxes. The Company records a valuation allowance against the deferred tax assets if and to the extent it is more likely than not that the Company will not recover the deferred tax assets. In evaluating the need for a valuation allowance, the Company weights all relevant positive and negative evidence, and considers among other factors, historical financial performance, projected future taxable income, scheduled reversals of deferred tax liabilities, the overall business environment, and tax planning strategies. Losses in recent periods and cumulative pre-tax losses in the three years period ending with the current year, combined with the significant uncertainty brought about by the COVID-19 pandemic, is collectively considered significant negative evidence under ASC 740 when assessing whether an entity can use projected income as a basis for concluding that deferred tax assets are realizable on a more-likely than not basis. For purposes of assessing the recoverability of deferred tax assets, the Company determined that it could not include future projected earnings in the analysis due to recent history of losses and therefore had insufficient objective positive evidence that the Company will generate sufficient future taxable income to overcome the negative evidence of cumulative losses. Accordingly, during the years ended December 31, 2021 and 2020, the Company determined that a portion of its deferred tax assets are not expected to be realizable in the future. As a result, the Company recorded a provision for valuation allowances against its U.S. federal deferred tax assets of approximately \$6.0 million and \$23.3 million during the years ended December 31, 2021 and 2020 respectively. In addition, during the year ended December 31, 2021, the Company recorded a valuation allowance against certain foreign deferred tax assets of approximately \$1.3 million.

NOTE 12 — PROFIT SHARING/401K PLAN

The Company offers eligible domestic full-time employees participation in certain profit sharing/401K plans. The plans provide for a discretionary annual company contribution. In addition, employees may contribute a portion of their salary to the plans which, under certain of the profit sharing/401K plans, is partially matched by the Company. In response to the impact of the COVID-19 pandemic, both the discretionary Company contribution and the match were temporarily suspended beginning in the second quarter of 2020. The discretionary Company contribution and, where applicable, the matching contribution, were reinstated in the fourth quarter of 2021. The plans may be amended or terminated at any time.

Total charges to income before income taxes for these plans were approximately \$4.3 million, \$3.3 million and \$10.0 million in 2021, 2020 and 2019, respectively. The Company expects to fund substantially all of the 2021 401K contributions with treasury stock in lieu of cash in the first quarter of 2022.

NOTE 13 — RETIREMENT PLANS AND RELATED POST RETIREMENT BENEFITS

The Company has two non-qualified supplemental retirement defined benefit plans (“SERP” and “SERP II”) for certain current and retired executive officers. The accumulated benefit obligation of the plans as of December 31, 2021 and 2020 amounts to \$28.5 million and \$29.4 million, respectively.

The Plans provide for benefits based upon average annual compensation and years of service and in the case of SERP, there are offsets for social security and profit sharing benefits. It is the Company’s intent to fund the plans as plan benefits become payable, since no assets exist at December 31, 2021 or 2020 for either of the plans.

The Company accounts for the funded status (i.e., the difference between the fair value of plan assets and the projected benefit obligations) of its pension plans in accordance with the recognition and disclosure provisions of ASC Topic 715, *Compensation, Retirement Benefits*, which requires the Company to recognize the funded status in its balance sheet, with a corresponding adjustment to Accumulated Other Comprehensive Income (“AOCI”), net of tax. These amounts will be subsequently recognized as net periodic pension cost pursuant to the Company’s historical policy for amortizing such amounts. Further, actuarial gains and losses that arise in subsequent periods and are not recognized as net periodic pension cost in the same periods will be recognized as a component of AOCI. Those amounts will be subsequently recognized as a component of net periodic pension cost on the same basis as the amounts recognized in AOCI.

Unrecognized prior service costs of \$1.4 million (\$2.0 million net of \$0.6 million in taxes) and unrecognized actuarial losses of \$6.7 million (\$8.3 million net of \$1.6 million in taxes) are included in AOCI at December 31, 2021 and have not yet been recognized in net periodic pension cost.

The reconciliation of the beginning and ending balances of the projected benefit obligation of the plans for the years ended December 31 is as follows:

(In thousands)	2021	2020
Funded Status		
Projected Benefit Obligation		
Beginning of the Year — January 1	\$ 31,730	\$ 26,547
Service Cost	195	223
Interest Cost	764	836
Actuarial (Gain) Loss	(1,838)	4,472
Benefits Paid	(348)	(348)
End of the Year — December 31	<u>\$ 30,503</u>	<u>\$ 31,730</u>

In 2021, the net actuarial gain of \$1.8 million is due principally to the increase of 33 basis points in the discount rate used to measure the benefit obligation as of December 31, 2021 compared to the prior year. The assumptions used to calculate the projected benefit obligation as of December 31 are as follows:

	2021	2020
Discount Rate	2.75%	2.42%
Future Average Compensation Increases	2.00% - 3.00%	0.00% - 2.00%

The plans are unfunded at December 31, 2021 and are recognized in the accompanying Consolidated Balance Sheets as a current accrued pension liability of \$0.3 million and a long-term accrued pension liability of \$30.2 million. This also is the expected future contribution to the plan, since the plan is unfunded.

The service cost component of net periodic benefit cost is included in SG&A expenses, and all other net periodic benefit costs components (such as interest cost, prior service cost amortization and actuarial gain/loss amortization) are reported outside of operating income, within Other Expense, Net of Other Income in the accompanying Consolidated Statements of Operations.

The following table summarizes the components of the net periodic cost for the years ended December 31:

(In thousands)	2021	2020	2019
Net Periodic Cost			
Service Cost — Benefits Earned During Period	\$ 195	\$ 223	\$ 181
Interest Cost	764	836	916
Amortization of Prior Service Cost	386	386	386
Amortization of Losses	1,292	648	300
Net Periodic Cost	<u>\$ 2,637</u>	<u>\$ 2,093</u>	<u>\$ 1,783</u>

The assumptions used to determine the net periodic cost are as follows:

	2021	2020	2019
Discount Rate	2.42%	3.17%	4.20%
Future Average Compensation Increases	2.00% - 3.00%	2.00%	2.00%

The Company expects the benefits to be paid in each of the next two years to be \$0.3 million, \$0.6 million in each of the following three years, and \$7.9 million in the aggregate for the next five years after that. This also is the expected Company contribution to the plans.

Participants in SERP are entitled to paid medical, dental and long-term care insurance benefits upon retirement under the plan. The measurement date for determining the plan obligation and cost is December 31. The accumulated postretirement benefit obligation is \$1.1 million for the years ended December 31, 2021 and 2020. The plan is recognized in the accompanying Consolidated Balance Sheets as a current accrued pension liability of \$0.1 million and a long-term accrued pension liability of \$1.0 million. The net periodic cost for the years ended December 31, 2021, 2020 and 2019 is immaterial.

The Company also has a defined benefit plan related to its subsidiary in France. The measurement date for determining the plan obligation and cost is December 31. The unfunded liability is \$0.3 million for the years ended December 31, 2021 and 2020.

The plan is recognized in the accompanying Consolidated Balance Sheets as a long-term liability. The net periodic cost for the years ended December 31, 2021, 2020 and 2019 is immaterial.

The Company is a participating employer in a trustee-managed multiemployer defined benefit pension plan for employees who participate in collective bargaining agreements. The plan generally provides retirement benefits to employees based on years of service to the Company. Contributions are based on the hours worked and are expensed on a current basis. The Plan is 93.7% funded as of January 1, 2021. The Company's contributions to the plan were \$0.4 million in 2021, \$0.5 million in 2020 and \$1.1 million in 2019. These contributions represent less than 1% of total contributions to the plan.

NOTE 14 — SHAREHOLDERS' EQUITY

Share Buyback Program

The Company's Board of Directors from time to time authorizes the repurchase of common stock, which allows the Company to purchase shares of its common stock in accordance with applicable securities laws on the open market or through privately negotiated transactions. In the years ended 2019 and 2020, the Company repurchased 1,851,000 and 282,000 shares, at an aggregate cost of \$50.8 million and \$7.7 million, respectively. The Company has the capacity under the currently authorized program to repurchase an additional \$41.5 million. The 10b5-1 plan associated with the program was terminated on February 3, 2020. Under its current credit agreement, and as described further in Note 8, the Company is currently restricted from further stock repurchases.

Reserved Common Stock

At December 31, 2021, approximately 11.1 million shares of common stock were reserved for issuance upon conversion of the Class B stock, exercise of stock options, issuance of restricted stock and purchases under the Employee Stock Purchase Plan. Class B Stock is identical to Common Stock, except Class B Stock has ten votes per share, is automatically converted to Common Stock on a one-for-one basis when sold or transferred other than via gift, devise or bequest and cannot receive dividends unless an equal or greater amount of dividends is declared on Common Stock.

Comprehensive (Loss) Income and Accumulated Other Comprehensive Loss

Comprehensive income or loss consists of net income or loss and the after-tax impact of retirement liability adjustments. No income tax effect is recorded for currency translation adjustments.

The components of accumulated other comprehensive loss are as follows:

(In thousands)	2021	2020
Foreign Currency Translation Adjustments	\$ (5,407)	\$ (4,468)
Retirement Liability Adjustment – Before Tax	(11,370)	(14,264)
Tax Benefit	2,282	2,282
Retirement Liability Adjustment – After Tax	(9,088)	(11,982)
Accumulated Other Comprehensive Loss	\$ (14,495)	\$ (16,450)

The components of other comprehensive income (loss) are as follows:

(In thousands)	2021	2020	2019
Foreign Currency Translation Adjustments	\$ (939)	\$ 2,574	\$ 114
Retirement Liability Adjustment	2,894	(3,396)	(3,054)
Tax Benefit	—	—	641
Retirement Liability Adjustment	2,894	(3,396)	(2,413)
Other Comprehensive Income (Loss)	\$ 1,955	\$ (822)	\$ (2,299)

In 2021 and 2020, no tax benefit was recognized as the Company had recorded a full valuation allowance.

NOTE 15 — EARNINGS (LOSS) PER SHARE

Earnings (loss) per share computations are based upon the following table:

(In thousands, except per share data)

	2021	2020	2019
Net (Loss) Income	\$ (25,578)	\$ (115,781)	\$ 52,017
Basic Earnings Weighted Average Shares	31,061	30,795	32,028
Net Effect of Dilutive Stock Options	—	—	431
Diluted Earnings Weighted Average Shares	31,061	30,795	32,459
Basic (Loss) Earnings Per Share	\$ (0.82)	\$ (3.76)	\$ 1.62
Diluted (Loss) Earnings Per Share	\$ (0.82)	\$ (3.76)	\$ 1.60

Stock options with exercise prices greater than the average market price of the underlying common shares are excluded from the computation of diluted earnings per share because they are out-of-the-money and the effect of their inclusion would be anti-dilutive. The number of common shares excluded from the computation was approximately 1.2 million for the year ended December 31, 2021, 0.8 million for the year ended December 31, 2020, and 0.5 million for the year ended December 31, 2019.

The Company expects to fund substantially all of the 2021 401K contributions with treasury stock in lieu of cash in the first quarter of 2022. The earnings per share computation for the year ended December 31, 2021 is inclusive of approximately 0.4 million in shares outstanding for the equivalent shares needed to fulfill the 401K obligation using the closing share price as of December 31, 2021. Actual shares issued may differ based on the share price on the settlement date.

NOTE 16 — EQUITY COMPENSATION

The Company has equity compensation plans that authorize the issuance of restricted stock units or options for shares of Common Stock to directors, officers and key employees. Equity-based compensation is designed to reward long-term contributions to the Company and provide incentives for recipients to join and to remain with the Company. The exercise price of stock options, determined by a committee of the Board of Directors, is equal to the fair market value of the Common Stock on the grant date. Options become exercisable over periods not exceeding ten years, and must be exercised within 10 years from the grant date. The Company's practice has been to issue new shares upon the exercise of the options.

The Company established Incentive Stock Option Plans for the purpose of attracting and retaining executive officers and key employees, and to align management's interest with those of the shareholders. At December 31, 2021, the Company had options outstanding for 390,466 shares under the plans.

The Company established the Directors Stock Option Plans for the purpose of attracting and retaining the services of experienced and knowledgeable outside directors, and to align their interest with those of the shareholders. At December 31, 2021, the Company had options outstanding for 78,261 shares under the plans.

During 2017, the Company established the Long Term Incentive Plan for the purpose of attracting and retaining directors, executive officers and key employees, and to align management's interest with those of the shareholders. The Plan contemplates the use of a mix of equity award types. For stock options, the exercise price is equal to the share price on the date of grant. Upon inception, the remaining options available for future grant under the 2011 Incentive Stock Option Plan and the Directors Stock Option Plans were rolled in the Long Term Incentive Plan, and no further grants may be made out of those plans. At December 31, 2021, the Company had stock options and RSU's outstanding of 1,211,283 shares under the Long Term Incentive Plan, and there were 1,790,581 shares available for future grant under this plan.

Stock compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Vesting requirements vary for directors, officers and key employees. In general, options or RSU's granted to outside directors vest six months from the date of grant and options granted to officers and key employees straight line vest over a three- to five-year period from the date of grant. RSU's granted to officers and key employees generally cliff vest three years from the date of grant.

The following table provides compensation expense information based on the fair value of stock options and RSU's for the years ended December 31 as follows:

(In thousands)	2021	2020	2019
Equity-based Compensation Expense	\$ 6,460	\$ 5,184	\$ 3,843
Tax Benefit	(924)	(709)	(452)
Equity-based Compensation Expense, Net of Tax	\$ 5,536	\$ 4,475	\$ 3,391

Tax benefit excludes the impact of valuation allowances recorded against deferred tax assets.

Stock Options

No options were granted during the year ending December 31, 2020.

	2021	2020	2019
Weighted Average Fair Value of the Options Granted	\$ 7.05	\$ —	\$ 11.93

The weighted average fair value for these options was estimated at the date of grant using a Black-Scholes option pricing model with the following assumptions:

	2021	2020	2019
Risk-free Interest Rate	0.45% – 1.52%	—%	1.67% – 1.78%
Dividend Yield	—%	—%	—%
Volatility Factor	0.58	—	0.39
Expected Life in Years	5 – 10 years	—	5 – 7 years

To determine expected volatility, the Company uses historical volatility based on weekly closing prices of its Common Stock and considers currently available information to determine if future volatility is expected to differ over the expected terms of the options granted. The risk-free rate is based on the U.S. Treasury yield curve at the time of grant for the appropriate term of the options granted. Expected dividends are based on the Company's history and expectation of dividend payouts. The expected term of stock options is based on vesting schedules, expected exercise patterns and contractual terms.

A summary of the Company's stock option activity and related information for the years ended December 31 is as follows:

(Aggregate intrinsic value in thousands)	Options	2021 Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding at January 1	912,923	\$ 25.50	\$ —
Options Granted	468,350	\$ 12.64	\$ —
Options Exercised	(30,853)	\$ 10.87	\$ —
Options Forfeited	(86,762)	\$ 17.41	\$ —
Outstanding at December 31	1,263,658	\$ 21.64	\$ —
Exercisable at December 31	662,576	\$ 26.11	\$ —

The aggregate intrinsic value in the preceding table represents the total pretax option holder's intrinsic value, based on the Company's closing stock price of Common Stock which would have been received by the option holders had all option holders exercised their options as of that date. The Company's closing stock price of Common Stock was \$12.00, \$13.23 and \$27.95 as of December 31, 2021, 2020 and 2019, respectively.

The weighted average fair value of options vested during 2021, 2020 and 2019 was \$4.58, \$14.77 and \$15.91, respectively. The total fair value of options that vested during the year amounted to \$1.2 million, \$1.4 million and \$1.6 million for the years ended December 31, 2021, 2020 and 2019, respectively. At December 31, 2021, total compensation costs related to non-vested option awards not yet recognized amounts to \$5.7 million and will be recognized over a weighted average period of approximately 2 years.

The following is a summary of weighted average exercise prices and contractual lives for outstanding and exercisable stock options as of December 31, 2021:

Exercise Price Range	Outstanding			Exercisable		
	Shares	Weighted Average Remaining Life in Years	Weighted Average Exercise Price	Shares	Weighted Average Remaining Life in Years	Weighted Average Exercise Price
\$3.19 – \$14.45	624,885	7.4	\$ 11.96	156,534	0.9	\$ 9.92
\$22.69 – \$35.82	629,646	5.4	\$ 30.90	496,915	4.9	\$ 30.85
\$45.89 – \$45.89	9,127	3.2	\$ 45.89	9,127	3.2	\$ 45.89
	<u>1,263,658</u>	6.4	\$ 21.64	<u>662,576</u>	3.9	\$ 26.11

Restricted Stock Units

The fair value of each RSU granted is equal to the fair market value of the Company's Common Stock on the date of grant. The RSU's granted to employees generally cliff vest three years from the date of grant, while RSU's granted to directors cliff vest six months from the date of grant. There were 292,091 RSU's granted in 2021 at a weighted-average price of \$16.30, of which 82,813 awards were vested and issued during 2021. Forfeitures during the year were 30,797. Included in total equity-based compensation expense for the year ended December 31, 2021 was \$3.3 million related to RSU's. At December 31, 2021, total compensation costs related to non-vested awards not yet recognized amounts to \$3.5 million and will be recognized over a weighted average period of approximately 1.9 years.

Employee Stock Purchase Plan

In addition to the stock options and RSU's discussed above, the Company has established the Employee Stock Purchase Plan to encourage employees to invest in Astronics Corporation. The plan provides employees the opportunity to invest up to the IRS annual maximum of approximately \$25,000 in Astronics common stock at a price equal to 85% of the fair market value of the Astronics common stock, determined each October 1. Employees are allowed to enroll annually. Employees indicate the number of shares they wish to obtain through the program and their intention to pay for the shares through payroll deductions over the annual cycle of October 1 through September 30. Employees can withdraw anytime during the annual cycle, and all money withheld from the employees' pay is returned. If an employee remains enrolled in the program, enough money will have been withheld from the employees' pay during the year to pay for all the shares that the employee opted for under the program. At December 31, 2021, employees had subscribed to purchase 274,956 shares at \$12.63 per share. The weighted average fair value of the options was approximately \$5.00, \$3.43 and \$8.26 for options granted during the year ended December 31, 2021, 2020 and 2019, respectively.

The fair value for the options granted under the Employee Stock Purchase Plan was estimated at the date of grant using a Black-Scholes option pricing model with the following assumptions:

	2021	2020	2019
Risk-free Interest Rate	0.09 %	0.12 %	1.73 %
Dividend Yield	— %	— %	— %
Volatility Factor	0.71	1.00	0.53
Expected Life in Years	1.0	1.0	1.0

NOTE 17 — FAIR VALUE

ASC Topic 820, *Fair Value Measurements and Disclosures*, ("ASC Topic 820") defines fair value, establishes a framework for measuring fair value and expands the related disclosure requirements. This statement applies under other accounting pronouncements that require or permit fair value measurements. The statement indicates, among other things, that a fair value measurement assumes that the transaction to sell an asset or transfer a liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. ASC Topic 820 defines fair value based upon an exit price model. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and involves consideration of factors specific to the asset or liability.

ASC Topic 820 establishes a valuation hierarchy for disclosure of the inputs to valuation used to measure fair value. This hierarchy prioritizes the inputs into three broad levels as follows:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 inputs are unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

On a Recurring Basis:

A financial asset or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited for \$7.0 million in cash, plus an earnout estimated at a fair value of \$2.5 million at the time of acquisition. The terms of the Diagnosys acquisition allow for a potential earnout of up to an additional \$13.0 million over the three years post-acquisition based on achievement of new order levels of over \$72.0 million during that period. The fair value of this contingent consideration was estimated at \$2.2 million at December 31, 2020. The fair value assigned to the earnout was determined using the real options method, which requires Level 3 inputs such as new order forecasts, discount rate, volatility factors, and other market variables to assess the probability of Diagnosys achieving certain order levels over the period. Based on actual and forecasted new orders, the fair value was zero as of December 31, 2021, with the contingent consideration liability fair value adjustment of \$2.2 million recorded within the Selling, General and Administrative line in the Consolidated Condensed Statements of Operations in the year ended December 31, 2021.

There were no other financial assets or liabilities carried at fair value measured on a recurring basis at December 31, 2021 or 2020.

On a Non-recurring Basis:

In accordance with the provisions of ASC Topic 350, *Intangibles – Goodwill and Other*, the Company estimates the fair value of reporting units, utilizing unobservable Level 3 inputs. Level 3 inputs require significant management judgment due to the absence of quoted market prices or observable inputs for assets of a similar nature. The Company utilizes a discounted cash flow method to estimate the fair value of reporting units utilizing unobservable inputs. The fair value measurement of the reporting unit under the step-one analysis of the quantitative goodwill impairment test are classified as Level 3 inputs.

There were no impairment charges to goodwill in any of the Company's reporting units in 2021.

As further discussed in Note 7, we performed interim quantitative assessments for the reporting units which had goodwill as of March 28, 2020. Based on our quantitative assessments, the Company recorded non-cash goodwill impairment charges associated with four Aerospace reporting units, totaling approximately \$86.3 million within the Impairment Loss line in the Consolidated Statements of Operations in the year ended December 31, 2020. The impairment loss was calculated as the difference between the fair value of the reporting unit (which was calculated using level 3 inputs) and the carrying value of the reporting unit.

In 2019, we performed quantitative assessments for the reporting units which had goodwill as of the first day of the fourth quarter, prior to the initiation of the AeroSat restructuring activities. Based on our quantitative assessment, the Company recorded a full impairment charge of approximately \$1.6 million within the Impairment Loss line in the Consolidated Statements of Operations in the year ended December 31, 2019.

Long-lived assets are evaluated for recoverability whenever adverse effects or changes in circumstances indicate that the carrying value may not be recoverable. The recoverability test consists of comparing the undiscounted projected cash flows of the asset or asset group (which are Level 3 inputs) with the asset or asset group's carrying amount. Should the carrying amount exceed undiscounted projected cash flows, an impairment loss would be recognized to the extent the carrying amount exceeds fair value. As of December 31, 2021, the Company concluded that no indicators of impairment relating to long-lived assets existed.

In conjunction with the deteriorating economic conditions associated with the COVID-19 pandemic, we recorded an impairment charge to ROU assets of approximately \$0.7 million incurred in the Aerospace segment within the Impairment Loss line in the Consolidated Statements of Operations for the year ended December 31, 2020. In conjunction with the restructuring of AeroSat in 2019, the Company recorded impairment charges to long-lived assets including intangible assets, property, plant and equipment and ROU assets of approximately \$9.5 million in the Consolidated Statements of Operations for the year ended December 31, 2019.

From time to time, the Company makes long-term, strategic equity investments in companies to promote business and strategic objectives. These investments are included in Other Assets on the Consolidated Balance Sheets. One of the investments incurred a full impairment charge which accounts for \$3.5 million recorded within the Other Expense, Net of Other Income line in the accompanying Consolidated Statements of Operations for the year ended December 31, 2020. A full impairment charge of \$5.0 million for an additional investment was recorded in 2019. No such impairment was recorded in 2021. These are Level 3 measurements as there were no observable price changes during the year.

The Freedom and Diagnosys intangible assets acquired in 2019 were valued using a discounted cash flow methodology, as of their respective acquisitions dates, and are classified as Level 3 inputs.

Of the severance charges recorded, \$0.6 million, \$2.6 million and \$2.8 million in 2021, 2020 and 2019, respectively, qualify as one-time termination benefit arrangements and were initially measured at fair value using level 3 inputs.

Due to their short-term nature, the carrying value of cash and equivalents, accounts receivable and accounts payable approximate fair value. The carrying value of the Company's variable rate long-term debt instruments also approximates fair value due to the variable rate feature of these instruments.

NOTE 18 — SELECTED QUARTERLY FINANCIAL INFORMATION

The following table summarizes selected quarterly financial information for 2021 and 2020:

(Unaudited) (In thousands, except for per share data)	Quarter Ended	
	December 31,	December 31,
	2021	2020
Sales	\$ 116,052	\$ 114,803
Gross Profit (Sales Less Cost of Products Sold)	\$ 18,464	\$ 19,118
Net Gain on Sale of Facility	\$ 5,014	\$ —
Earnout on Previous Sale of Business	\$ 10,677	\$ —
Loss Before Income Taxes	\$ (151)	\$ (7,541)
Net Income (Loss)	\$ 1,604	\$ (19,985)
Basic Earnings (Loss) Per Share	\$ 0.05	\$ (0.65)
Diluted Earnings (Loss) Per Share	\$ 0.05	\$ (0.65)

In the fourth quarter of 2021, a portion of the AMJP grant received of \$7.6 million was recognized as an offset to cost of products sold. This benefit was offset by a legal accrual recorded of \$8.4 million relating to an adverse ruling of an on-going patent infringement case. In addition, the Company agreed to an earnout, shown above, with the buyer of the former semiconductor test business as more fully described in Note 22 and sold one of its Aerospace facilities, resulting in \$5.0 million gain on sale discussed in Note 23. The Company also reinstated its 401K employer contribution in the fourth quarter of 2021, and recorded expense of \$4.3 million in that period. In the fourth quarter of 2021, after completion of the tax returns for the year ended December 31, 2020, the Company recorded a current federal tax benefit of approximately \$1.7 million related to additional net operating loss and R&D tax credits that will be carried back to prior tax years in order to claim a refund.

In the fourth quarter of 2020, the Company recorded a partial valuation allowance of \$14.1 million against its U.S. federal deferred tax assets

NOTE 19 — LEGAL PROCEEDINGS

Lufthansa

On December 29, 2010, Lufthansa Technik AG (“Lufthansa”) filed a Statement of Claim in the Regional State Court of Mannheim, Germany. Lufthansa’s claim asserted that a subsidiary of the Company, AES, sold, marketed, and brought into use in Germany a power supply system that infringes upon a German patent held by Lufthansa. Lufthansa sought an order requiring AES to stop selling and marketing the allegedly infringing power supply system, a recall of allegedly infringing products sold to commercial customers in Germany since November 26, 2003, and compensation for damages related to direct sales of the allegedly infringing power supply system in Germany (referred to as “direct sales”).

In February 2015, the Regional State Court of Mannheim, Germany held that the patent was infringed. The judgment did not require AES to recall products that are already installed in aircraft or had been sold to other end users.

The Company appealed to the Higher Regional Court of Karlsruhe. On November 15, 2016, the Higher Regional Court of Karlsruhe upheld the lower court’s decision. The Company sought permission to appeal to the German Federal Supreme Court. By judgment of March 26, 2019, the German Federal Supreme Court dismissed AES’s appeal. With this decision, the above mentioned proceedings are complete.

In July 2017, Lufthansa filed an action in the Regional State Court of Mannheim for payment of damages caused by the AES’s direct sales of the product into Germany. A first instance decision in this matter was handed down on December 6, 2019. According to this ruling, Lufthansa was awarded damages in the amount of approximately \$3.2 million plus interest. Prior to 2019, the Company had accrued \$1.0 million related to this matter. As a result of the judgment on direct sales into Germany, the Company recognized an incremental reserve of \$3.5 million in its December 31, 2019 financial statements related to this matter. In 2020, AES made payment of \$4.7 million, inclusive of interest, in satisfaction of the first instance judgment. AES has appealed this decision and the appeal is currently pending before the Higher Regional Court of Karlsruhe. If the first instance judgment is later reversed on appeal, the Company could reclaim any amounts that were previously paid to Lufthansa that are in excess of the amount awarded by the appellate court, but there can be no assurances that we will be successful on such appeal.

On December 29, 2017, Lufthansa filed another infringement action against AES in the Regional State Court of Mannheim claiming that sales by AES to its international customers have infringed Lufthansa’s patent if AES’s customers later shipped the products to Germany (referred to as “indirect sales”). This action, therefore, addresses sales other than those covered by the action filed on December 29, 2010, discussed above. No amount of claimed damages has been specified by Lufthansa.

A first instance decision in this matter was issued on December 6, 2019. The Court found that indirect sales (as defined above) by AES to international customers infringe the patent under the conditions specified in the judgment and that the sale of components of the EmPower system to Germany constitutes an indirect patent infringement. The Court rejected Lufthansa’s claim that AES is also liable for damages for the sale of modified products. This means that AES is not liable for damages based on the sale of modified outlet units that removed the infringing feature. AES and Lufthansa both appealed this decision and the appeal is currently pending before the Higher Regional Court of Karlsruhe. In its appeal, Lufthansa requested an additional finding that AES shall be held liable for all damages (in an unspecified amount) caused by AES’s alleged incorrect accounting of its past sales.

On April 28, 2020, Lufthansa asked AES to provide the accounting on indirect sales (as defined above) and the sale of individual parts and an affidavit confirming the accuracy of the September 2015 accounting of direct sales. AES completed and delivered the final accounting on January 29, 2021.

If the December 6, 2019 decision of the Regional State Court of Mannheim is confirmed on appeal, AES would be responsible for payment of damages for indirect sales of patent-infringing EmPower in-seat power supply systems in the period from December 29, 2007 to May 22, 2018. AES modified the outlet units at the end of 2014 and substantially all of the modified outlet units sold from 2015 do not infringe the patent of Lufthansa. As a result, the period for which AES is liable for damages in connection with indirect sales into Germany substantially finished at the end of 2014.

After the accounting, Lufthansa is expected to enforce its claim for damages in separate court proceedings. These proceedings would most likely be tried before the Mannheim Court again, which makes it probable that the Mannheim court will determine the damages for the indirect sales on the basis of the same principles as in the direct sales proceedings (unless the latter ruling of the Mannheim court is reversed on appeal). Based on the information available and the determination of the damages in the direct sales claim discussed above, we estimated that the Company’s total exposure related to these matters that was probable and that could be reasonably estimated at December 31, 2019 was approximately \$11.6 million plus approximately \$4.5 million of accrued interest, for a total of approximately \$16.1 million. Interest will accrue at a rate of 5% above the European Central Bank rate until final payment to Lufthansa. Approximately \$0.6 million was recorded within Selling, General and

Administrative Expenses in the Company's Consolidated Statements of Operations in both 2020 and 2021 for additional interest accrued during such periods.

In connection with the indirect sales claims, we currently believe it is unlikely that the appeals process will be completed and the damages and related interest will be paid before December 31, 2022. Therefore, the liability related to this matter, totaling \$17.3 million and \$16.7 million, is classified within Other Liabilities (non-current) in the Consolidated Balance Sheets at December 31, 2021 and 2020, respectively.

In December 2017, Lufthansa filed patent infringement cases in the United Kingdom ("UK") and in France. The Lufthansa patent expired in May 2018. In those cases, Lufthansa accuses AES and certain of its customers of having manufactured, used, sold and offered for sale a power supply system, and offered and supplied parts for a power supply system that infringed upon a Lufthansa patent in those respective countries. In the normal course of its supply arrangements, AES has indemnified its customers from liability arising from such matters, and as such will bear responsibility for any monetary damages arising from such claims.

In the French matter, there was a hearing on the validity of the patent in October 2020. On December 4, 2020, the Court held the French patent invalid for all asserted claims. There can consequently be no finding of infringement on first instance. Lufthansa has appealed this judgment. The appeal hearing is scheduled for December 8, 2022. As loss exposure is not probable and estimable at this time, the Company has not recorded any liability with respect to the French matter as of December 31, 2021 or 2020.

In the UK matter, a trial took place in June 2020 to address the issues of infringement and validity of the patent. On June 22, 2020, the Court held the UK patent valid and 3 out of 4 asserted claims infringed. In contrast to the decisions in Germany, the UK Court found that the modified components infringed a valid claim of the patent, and accordingly, the period for which AES or its customers would be liable for damages in connection with direct sales into the UK extends until the expiration of the patent in May 2018. AES appealed the ruling, and the appeal hearing took place on November 2, 2021. On January 14, 2022, the Court dismissed the appeal on all grounds. Lufthansa has yet to plead its case for monetary compensation, which would be determined at a separate trial, expected to be held in the latter half of 2023. The case for damages will require extensive data gathering and analysis which has not yet been completed. This analysis will include evaluating whether any units sold into the UK were subsequently shipped into Germany, where they would be subject to the indirect sales claim discussed above. If this is the case, damages may be assessed in either the UK, or in the indirect sales matter in Germany, but not in both matters.

Under English law, Lufthansa has the option of pursuing a claim in relation to the defendants' profits from their infringing activities or pursuing a claim in relation to Lufthansa's own lost profits. That election has not yet been made by Lufthansa and there is currently no date set for it to make this election. However, as we have concluded a loss is probable and reasonably estimable based upon the information currently available to AES, we have estimated damages of approximately \$6.2 million, plus accrued interest of approximately \$1.1 million, for AES and its indemnified customers. Interest will accrue until final payment to Lufthansa. Approximately \$7.3 million is reflected for this matter as a liability in the Consolidated Balance Sheet as of December 31, 2021, and has been recorded within Selling, General & Administrative Expenses in the accompanying Consolidated Statement of Operations for the year then ended. This amount is subject to change as additional data is received and evaluated, and as additional information regarding the damages methodology is claimed by Lufthansa in advance of the damages trial. We currently believe it is unlikely that the UK damages claim will be completed and the damages and related interest will be paid before December 31, 2022. Therefore, the liability related to this matter, totaling \$7.3 million, is classified within Other Liabilities (non-current) in the Consolidated Balance Sheets at December 31, 2021.

Separate from any such damages Lufthansa may seek in connection with the UK infringement decision discussed above, as a result of the first instance judgement in their favor, Lufthansa was entitled to reimbursement from AES of a proportion of its legal expenditures in the UK case. An interim reimbursement of approximately \$1.3 million was paid to Lufthansa in August 2020. The associated expense was recorded in the Consolidated Statements of Operations in the year ended December 31, 2020 within Selling, General & Administrative Expenses. As a result of the appeal decision, Lufthansa will be entitled to reimbursement from AES of a larger proportion of its first instance legal expenditures, as well as a portion of its legal expenditures associated with the appeal. We have recorded an estimated liability of approximately \$1.0 million in our Consolidated Balance Sheet at December 31, 2021. The associated expense is recorded within Selling, General & Administrative Expenses in the Consolidated Statement of Operations for the year then ended. It is likely that such amount will be payable within the next twelve months, and as such, the liability has been classified as a current liability in the accompanying Consolidated Balance Sheets within Other Accrued Expenses at December 31, 2021.

Each of the German, France and UK claims are separate and distinct. Validity and infringement of the Lufthansa patent in each country is a matter for the courts in each of these countries, whose laws differ from each other. In addition, the principles of calculating damages in each jurisdiction differ substantially. Therefore, the Company has assessed each matter separately and

cannot apply the same calculation methodology as in the German direct and indirect matters. However, it is reasonably possible that additional damages and interest could be incurred if the appellate court in France was to rule in favor of Lufthansa, or if damages in the UK matter are calculated on a different basis than our estimate or using information not currently available.

Other

On March 23, 2020, Teradyne, Inc. filed a complaint against the Company and its subsidiary, Astronics Test Systems (“ATS”) (together, “the Defendants”) in the United States District Court for the Central District of California alleging patent and copyright infringement, and certain other related claims. The Defendants moved to dismiss certain claims from the case. On November 6, 2020, the Court dismissed the Company from the case, and also dismissed a number of claims, though the patent and copyright infringement claims remain. The case is currently in discovery. In addition, on December 21, 2020, ATS filed a petition for *inter partes* review (“IPR”) with the US Patent Trial and Appeal Board (“PTAB”), seeking to invalidate the subject patent, and on July 21, 2021, the PTAB instituted IPR. ATS requested and, on August 26, 2021, the District Court granted, a stay of litigation during the IPR proceeding. The parties are currently engaged in IPR briefing before the PTAB and oral argument before the PTAB is scheduled for April 21, 2022. A decision on the IPR is expected in July 2022. The parties are waiting to learn whether the PTAB will institute the proceeding. No amounts have been accrued for this matter in the December 31, 2021 or 2020 financial statements, as loss exposure was neither probable nor estimable at such times.

Other than these proceedings, we are not party to any significant pending legal proceedings that management believes will result in a material adverse effect on our financial condition or results of operations.

NOTE 20 — SEGMENTS

Segment information and reconciliations to consolidated amounts for the years ended December 31 are as follows:

(In thousands)	2021	2020	2019
Sales:			
Aerospace	\$ 365,261	\$ 418,079	\$ 692,614
Less Inter-segment Sales	(23)	(91)	(5)
Total Aerospace Sales	365,238	417,988	692,609
Test Systems	80,027	85,589	80,495
Less Inter-segment Sales	(357)	(990)	(402)
Test Systems	79,670	84,599	80,093
Total Consolidated Sales	\$ 444,908	\$ 502,587	\$ 772,702
Operating (Loss) Profit and Margins:			
Aerospace	\$ (8,614)	\$ (89,833)	\$ 16,657
	(2.4)%	(21.5)%	2.4 %
Test Systems	(3,765)	5,549	4,494
	(4.7)%	6.6 %	5.6 %
Total Operating (Loss) Profit	\$ (12,379)	\$ (84,284)	\$ 21,151
	(2.8)%	(16.8)%	2.7 %
Additions to (Deductions from) Operating Profit:			
Net Gain on Sale of Businesses	\$ 10,677	\$ —	\$ 78,801
Interest Expense, Net of Interest Income	(6,804)	(6,741)	(6,141)
Corporate and Other Expenses, Net	(18,454)	(21,385)	(25,508)
(Loss) Income before Income Taxes	\$ (26,960)	\$ (112,410)	\$ 68,303
Depreciation and Amortization:			
Aerospace	\$ 23,349	\$ 25,624	\$ 27,879
Test Systems	5,022	5,577	4,534
Corporate	634	653	636
Total Depreciation and Amortization	\$ 29,005	\$ 31,854	\$ 33,049
Assets:			
Aerospace	\$ 458,334	\$ 484,885	
Test Systems	105,335	105,079	
Corporate	45,469	29,781	
Total Assets	\$ 609,138	\$ 619,745	
Capital Expenditures:			
Aerospace	\$ 4,932	\$ 6,494	\$ 11,552
Test Systems	1,082	952	380
Corporate	20	13	151
Total Capital Expenditures	\$ 6,034	\$ 7,459	\$ 12,083

Operating (loss) profit is sales less cost of products sold and other operating expenses, excluding interest expense and other corporate expenses. Cost of products sold and other operating expenses are directly identifiable to the respective segment. Operating (loss) profit in the Aerospace segment in 2020 and 2019 included goodwill impairment and restructuring charges, discussed in Note 7 and Note 23, respectively.

The following table summarizes the Company's sales into the following geographic regions for the years ended December 31:

(In thousands)	2021	2020	2019
United States	\$ 350,428	\$ 377,218	\$ 583,589
North America (excluding United States)	6,990	7,656	12,585
Asia	21,089	27,579	40,764
Europe	62,138	85,306	130,227
South America	1,082	1,788	862
Other	3,181	3,040	4,675
Total	\$ 444,908	\$ 502,587	\$ 772,702

The following table summarizes the Company's property, plant and equipment by country for the years ended December 31:

(In thousands)	2021	2020
United States	\$ 85,681	\$ 95,281
France	7,688	9,109
India	936	1,223
Canada	931	1,065
Total	\$ 95,236	\$ 106,678

Sales recorded by the Company's foreign operations were \$36.6 million, \$52.3 million and \$85.9 million in 2021, 2020 and 2019, respectively. Net loss from these locations was \$3.8 million and \$6.6 million in 2021 and 2020, respectively, and net income was \$8.6 million in 2019. Net assets held outside of the U.S. total \$40.5 million and \$63.3 million at December 31, 2021 and 2020, respectively. The exchange gain included in determining net income was insignificant in 2021 and 2020, and the exchange loss was insignificant in 2019. Cumulative translation adjustments amounted to \$5.4 million and \$4.5 million at December 31, 2021 and 2020, respectively.

The Company had a significant concentration of business in 2021 with The Boeing Company ("Boeing"), and had a significant concentration with both Boeing and Panasonic Aviation Corporation ("Panasonic") in prior years. Sales to Boeing and Panasonic are primarily in the Aerospace segment. The following is information relating to the activity with those customers:

	2021	2020	2019
Percent of Consolidated Sales			
Boeing	10.0%	9.5%	13.6%
Panasonic	*	11.1%	13.0%

(In thousands)	2021	2020
Accounts Receivable at December 31,		
Boeing	\$ 14,545	\$ 6,490
Panasonic	*	\$ 4,083

* Sales to Panasonic represented less than 10% of total consolidated sales in 2021.

NOTE 21 — ACQUISITIONS

Diagnosys Inc. and its affiliates

On October 4, 2019, the Company acquired the stock of the primary operating subsidiaries as well as certain other assets from mass transit and defense market test solution provider, Diagnosys Test Systems Limited for \$7.0 million in cash, plus an earnout estimated at a fair value of \$2.5 million at acquisition. The terms of the acquisition allow for a potential earnout of up to an additional \$13.0 million over the next three years based on achievement of new order levels of over \$72.0 million during that period. No earnout is expected to be payable based on actual and expected order levels. The acquired business has operations in Westford, Massachusetts as well as Ferndown, England, and an engineering center of excellence in Bangalore, India. Diagnosys is included in our Test Systems segment. Diagnosys is a developer and manufacturer of comprehensive automated test

equipment providing test, support, and repair of high value electronics, electro-mechanical, pneumatic and printed circuit boards focused on the global mass transit and defense markets.

The purchase price allocation for this acquisition has been finalized. Purchased intangible assets and goodwill are not deductible for tax purposes. This transaction was not considered material to the Company's financial position or results of operations.

Freedom Communication Technologies, Inc.

On July 1, 2019, the Company acquired all of the issued and outstanding capital stock of Freedom Communication Technologies, Inc. Freedom, located in Kilgore, Texas, is a leader in wireless communication testing, primarily for the civil land mobile radio market. Freedom is included in our Test Systems segment. The total consideration for the transaction was \$21.8 million, net of \$0.6 million in cash acquired. The purchase price allocation for this acquisition has been finalized. Purchased intangible assets and goodwill are not deductible for tax purposes. This transaction was not considered material to the Company's financial position or results of operations.

NOTE 22 — DIVESTITURE ACTIVITIES

Semiconductor Test Business

On February 13, 2019, the Company completed the divestiture of its semiconductor business within the Test Systems segment. The business was not core to the future of the Test Systems segment. The total proceeds received for the sale amounted to \$103.8 million. The Company recorded a pre-tax gain on the sale of approximately \$80.1 million in the first quarter of 2019. The income tax expense relating to the gain was \$19.7 million.

The transaction also includes two elements of contingent earnouts. The "First Earnout" is calculated based on a multiple of all future sales of existing and certain future derivative products to existing and future customers in each annual period from 2019 through 2022. The First Earnout may not exceed \$35.0 million in total. The "Second Earnout" is calculated based on a multiple of future sales related to an existing product and program with an existing customer exceeding an annual threshold for each annual period from 2019 through 2022. The Second Earnout is not capped. For the Second Earnout, if the applicable sales in an annual period do not exceed the annual threshold, no amounts will be paid relative to such annual period; the sales in such annual period do not carry over to the next annual period. Due to the degree of uncertainty associated with estimating the future sales levels of the divested business and its underlying programs, and the lack of reliable predictive market information, the Company has elected an accounting policy to recognize such earnout proceeds, if received, as additional gain on sale when such proceeds are realized or realizable. We consider the proceeds realizable when we have received communication from the purchaser of its calculation of the earnout and the parties reach agreement on the calculation. No amounts were payable to the Company under either earnout for the calendar 2019 earnout. The Company agreed to an earnout payment of \$10.7 million for the calendar 2020 earnout, which was recorded in the fourth quarter of 2021 as Other Income and was paid to the Company in early January 2022. On February 14, 2022, the Company was notified by the purchaser that they have calculated \$11.2 million as being payable for the calendar 2021 earnout. We are in the process of reviewing the calculation, and expect to record the additional gain on the sale, and receive the payment, in the first quarter of 2022.

Airfield Lighting Product Line

On July 12, 2019, the Company sold intellectual property and certain assets associated with its Airfield Lighting product line for \$1.0 million in cash. The Airfield Lighting product line, part of the Aerospace segment, was not core to the business and represented less than 1% of revenue. The Company recorded a pre-tax loss on the sale of approximately \$1.3 million. This amount is reported in the Consolidated Statements of Operations in Net Gain on Sales of Businesses in the year ended December 31, 2019.

Other Disposal Activity

On October 6, 2021, as part of a planned consolidation effort, the Company sold one of its Aerospace facilities for \$9.2 million. Net cash proceeds were approximately \$8.8 million. A gain on sale of approximately \$5.0 million was recorded in the Consolidated Statements of Operations in Net Gain on Sale of Facility in the year ended December 31, 2021.

In 2020 the Company sold certain facilities within the Aerospace segment for \$1.5 million in cash. The net gain on the sale was insignificant.

NOTE 23 — IMPAIRMENTS, RESTRUCTURING AND OTHER CHARGES

Goodwill Impairment

The 2021 goodwill impairment test resulted in no impairment to the carrying value of goodwill in any of the Company's reporting units and no impairment charge was recognized in 2021. See Note 7 for discussion of the \$86.3 million and \$1.6 million of goodwill impairments charges in 2020 and 2019, respectively, within the Aerospace segment. Such amounts are reported within the Impairment Loss line of the Consolidated Statements of Operations in the respective year.

Restructuring Activities

In the fourth quarter of 2019, in an effort to reduce the significant operating losses at our AeroSat business, we initiated a restructuring plan to reduce costs and minimize losses of our AeroSat antenna business. The plan narrows the initiatives for the AeroSat business to focus primarily on near-term opportunities pertaining to business jet connectivity. The plan has a downsized manufacturing operation remaining in New Hampshire, with significantly reduced personnel and operating expenses.

As a result of the restructuring plan, the Company's total non-cash asset write-downs and impairment charges recorded in the fourth quarter of 2019 (including the goodwill impairment described above and a \$9.5 million impairment of long-lived assets) amounted to \$23.6 million. Restructuring charges of \$5.2 million comprised of employee termination benefits and non-cancelable inventory purchase commitments in the future for inventory which is not expected to be purchased prior to the expiration date of such agreements as a result of the restructuring plan were also recorded in 2019. The Company incurred an impairment charge to ROU assets of approximately \$0.7 million during 2020. Additional charges of \$0.2 million and \$0.4 million associated with restructuring at AeroSat were recorded during 2021 and 2020, respectively. All such charges were included in the Aerospace segment.

The COVID-19 pandemic has significantly impacted the global economy, and particularly the aerospace industry, resulting in reduced expectations of the Company's anticipated future operating results. As a result, the Company executed restructuring activities in the form of workforce reduction, primarily in the second quarter of 2020, to align capacity with expected demand. Accordingly, restructuring charges of \$4.9 million in severance expense associated primarily with the Aerospace segment were recorded in 2020. Additional restructuring charges of \$0.6 million occurred during 2021 to align the workforce to expected activities and to consolidate certain facilities. \$0.3 million of current year severance expense was related with the Aerospace segment and \$0.3 million was related with the Test Systems segment. Any future restructuring actions will depend upon market conditions, customer actions and other factors.

The above restructuring and impairment charges are presented in the Consolidated Statements of Operations for the years ended December 31 as follows:

(In thousands)	2021	2020	2019
Cost of Products Sold	\$ 221	\$ 280	\$ 15,397
Selling, General and Administrative Expenses	577	5,047	2,356
Impairment Loss	—	87,016	11,083
Total Restructuring and Impairment Charges	<u>\$ 798</u>	<u>\$ 92,343</u>	<u>\$ 28,836</u>

The following table reconciles the beginning and ending liability for restructuring charges:

(In thousands)	2021	2020	2019
Balance as of January 1	\$ 5,631	\$ 5,190	\$ —
Restructuring Charges Recognized	798	5,327	5,190
Cash Paid	(4,029)	(4,886)	—
Balance as of December 31	<u>\$ 2,400</u>	<u>\$ 5,631</u>	<u>\$ 5,190</u>

Financial Instrument Impairment

From time to time, the Company makes long-term, strategic equity investments in companies to promote business and strategic objectives. These investments are included in Other Assets on the Consolidated Balance Sheets. One of the investments became impaired in 2020 which resulted in an impairment charge of \$3.5 million recorded within the Other Expense, Net of Other Income line in the accompanying Consolidated Statements of Operations for the year ended December 31, 2020. A full impairment charge of \$5.0 million for an additional investment was recorded in 2019.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

The Company carried out an evaluation, under the supervision and with the participation of Company Management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures as defined in Exchange Act Rules 13a-15(e) and 15d-15(e). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that these disclosure controls and procedures are effective as of the end of the period covered by this report, to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is made known to them on a timely basis, and that these disclosure controls and procedures are effective to ensure such information is recorded, processed, summarized and reported within the time periods specified in the Commission's rules and forms.

Management's Report on Internal Control over Financial Reporting

See the report appearing under Item 8, Financial Statements and Supplemental Data, Management's Report on Internal Control Over Financial Reporting.

Changes in Internal Control over Financial Reporting

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

ITEM 9B. OTHER INFORMATION

None

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information regarding directors is contained under the captions “Proposal 1: Election of Directors” and “Security Ownership of Certain Beneficial Owners and Management” and is incorporated herein by reference to the 2022 Proxy to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

The executive officers of the Company, their ages, their positions and offices with the Company, and the date each assumed their office with the Company as of December 31, 2021, are as follows:

Name and Age of Executive Officer	Positions and Offices with Astronics	Year First Elected Officer
Peter J. Gundermann Age 59	President, Chief Executive Officer and Director of the Company	2001
David C. Burney Age 59	Executive Vice President, Secretary and Chief Financial Officer of the Company	2003
Mark A. Peabody Age 62	Astronics Advanced Electronic Systems President and Executive Vice President of Astronics Corporation	2010
James S. Kramer Age 58	Luminescent Systems Inc. President and Executive Vice President of Astronics Corporation	2010
James F. Mulato Age 61	President of Astronics Test Systems, Inc. and Executive Vice President of Astronics Corporation	2019
Michael C. Kuehn Age 61	Astronics Connectivity Systems & Certification Corp. and Armstrong Aerospace, Inc. President and Executive Vice President of Astronics Corporation	2019

The principal occupation and employment for Messrs. Gundermann, Burney, Kramer, Mulato and Peabody for over five years has been with the Company in their respective current roles.

Mr. Kuehn and Mr. Mulato became Executive Vice Presidents of the Company on January 1, 2019.

Mr. Kuehn has been the President of Astronics Connectivity Systems & Certification Corp. (“ACSC”) since its acquisition by the Company in 2017, and the President of Armstrong Aerospace, Inc. since 2018. Prior to acquisition, Mr. Kuehn ran the ACSC business as President of Telefonix, Incorporated for eight years.

The Company has adopted a Code of Business Conduct and Ethics that applies to the Chief Executive Officer, Chief Financial Officer as well as other directors, officers and employees of the Company. This Code of Business Conduct and Ethics is available upon request without charge by contacting Astronics Corporation at (716) 805-1599. The Code of Business Conduct and Ethics is also available on the Investors section of the Company’s website at www.astronics.com.

ITEM 11. *EXECUTIVE COMPENSATION*

The information contained under the caption “Executive Compensation” and “Summary Compensation Table” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

The information contained under the captions “Security Ownership of Certain Beneficial Owners and Management”, “Equity Compensation Plan Information” and “Executive Compensation” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE*

The information contained under the captions “Certain Relationships and Related Party Transactions and Director Independence” and “Proposal 1: Election of Directors” in the Company’s definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information contained under the caption "Audit and Non-Audit Fees" in the Company's definitive Proxy Statement to be filed within 120 days of the end of our fiscal year is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

a. The documents filed as a part of this report are as follows:

1. *The following financial statements are included:*

- i. Consolidated Statements of Operations for the years ended December 31, 2021, 2020 and 2019
- ii. Consolidated Statements of Comprehensive (Loss) Income for the years ended December 31, 2021, 2020 and 2019
- iii. Consolidated Balance Sheets as of December 31, 2021 and 2020
- iv. Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020 and 2019
- v. Consolidated Statements of Shareholders' Equity for the years ended December 31, 2021, 2020 and 2019
- vi. Notes to Consolidated Financial Statements
- vii. Reports of Independent Registered Public Accounting Firm (PCAOB ID:42)
- viii. Management's Report on Internal Control Over Financial Reporting

2. *Financial Statement Schedule*

Schedule II. Valuation and Qualifying Accounts

All other consolidated financial statement schedules are omitted because they are inapplicable, not required, or the information is included elsewhere in the consolidated financial statements or the notes thereto.

3. *Exhibits*

Exhibit No.	Description
3(a)	Restated Certificate of Incorporation, incorporated by reference to the registrant's 2013 Annual Report on Form 10-K, Exhibit 3(a), filed March 7, 2014 (File No. 000-07087).
(b)	By-Laws, as amended
(c)	Certificate of Amendment of the Certificate of Incorporation of Astronics Corporation, incorporated by reference to the registrant's Form 8-K, Exhibit 3.1, filed July 1, 2016 (File No. 000-07087).
10.1*	Restated Thrift and Profit Sharing Retirement Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.1, filed March 3, 2011 (File No. 000-07087).
10.2*	2001 Stock Option Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.4, filed March 3, 2011 (File No. 000-07087).
10.3*	Non-Qualified Supplemental Retirement Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.5, filed March 3, 2011 (File No. 000-07087).
10.4*	Employment Termination Benefits Agreement dated December 16, 2003 between Astronics Corporation and Peter J. Gundermann, President and Chief Executive Officer of Astronics Corporation, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.6, filed March 3, 2011 (File No. 000-07087).
10.5*	Employment Termination Benefits Agreement dated December 16, 2003 between Astronics Corporation and David C. Burney, Vice President and Chief Financial Officer of Astronics Corporation, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.7, filed March 3, 2011 (File No. 000-07087).
10.6*	2005 Director Stock Option Plan, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.8, filed March 3, 2011 (File No. 000-07087).
10.7*	Supplemental Retirement Plan, Amended and Restated, March 6, 2012, incorporated by reference to the registrant's 2012 Annual Report on Form 10-K, Exhibit 10.10, filed February 22, 2013 (File No. 000-07087).
10.8*	First Amendment of the Employment Termination Benefits Agreement dated December 30, 2008 between Astronics Corporation and Peter J. Gundermann, President and Chief Executive Officer of Astronics, incorporated by reference to the registrant's 2008 Annual Report on Form 10-K, Exhibit 10.11, filed March 11, 2009 (File No. 000-07087).
10.9*	First Amendment of the Employment Termination Benefits Agreement dated December 30, 2008 between Astronics Corporation and David C. Burney, Vice President and Chief Financial Officer of Astronics Corporation, incorporated by reference to the registrant's 2008 Annual Report on Form 10-K, Exhibit 10.12, filed March 11, 2009 (File No. 000-07087).
10.10*	Employment Termination Benefits Agreement Dated February 18, 2005 between Astronics Corporation and Mark A. Peabody, Executive Vice President of Astronics Advanced Electronic Systems, Inc., incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.13, filed March 3, 2011 (File No. 000-07087).
10.11*	First Amendment of the Employment Termination Benefits Agreement dated December 31, 2008 between Astronics Corporation and Mark A. Peabody, Executive Vice President of Astronics Advanced Electronic Systems, Inc., incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.14, filed March 3, 2011 (File No. 000-07087).
10.12*	Form of Indemnification Agreement as executed by each of Astronics Corporation's Directors and Executive Officers, incorporated by reference to the registrant's 2010 Annual Report on Form 10-K, Exhibit 10.15, filed March 3, 2011 (File No. 000-07087).
10.13*	2011 Employee Stock Option Plan, incorporated by reference to the registrant's Form S-8, Exhibit 4.1 filed on August 4, 2011 (File No. 000-07087).
10.14*	Supplemental Retirement Plan II, incorporated by reference to the registrant's 2012 Annual Report on Form 10-K, Exhibit 10.18, filed February 22, 2013 (File No. 000-07087).

10.15*	Astronics Corporation 2017 Long Term Incentive Plan (incorporated by reference as Exhibit A to the Registrant’s Definitive Proxy Statement on Schedule 14A, as filed with the Commission on April 17, 2017).
10.16	Asset Purchase Agreement entered as of October 26, 2017, by and among Talon Acquisition Corp., Telefonix, Incorporated, Product Development Technologies, LLC, and Paul Burke filed as Exhibit 10.1 on Form 8-K filed on October 27, 2017 (File No. 000-07087).
10.17	Fifth Amended and Restated Credit Agreement entered into by and among Astronics Corporation, HSBC Bank USA, National Association, HSBC Securities (USA) Inc. and Merrill Lynch, Pierce, Fenner & Smith Inc., and Suntrust Bank, filed as Exhibit 10.1 on Form 8-K filed on February 21, 2018 (File No. 000-07087).
10.18	Amended and Restated Asset Purchase Agreement dated as of February 13, 2019 by and Among Astronics Test Systems, Inc., Astronics Corporation and Advantest Test Solutions, Inc., filed as Exhibit 10.1 on Form 8-K filed on February 19, 2019 (File No. 000-07087).
10.19*	Amendment to the Astronics Corporation 2017 Long Term Incentive Plan, dated December 14, 2018.
10.20	Amendment No. 1 to the Fifth Amended and Restated Credit Agreement, filed as Exhibit 10.1 on Form 8-K filed on May 4, 2020 (File No. 000-07087).
10.21*	Astronics Corporation Amended and Restated 2017 Long Term Incentive Plan, (incorporated by reference as Exhibit A to the Registrant’s Definitive Proxy Statement on Schedule 14A, as filed with the Commission on April 13, 2021).
10.22	Amendment No. 2 to the Fifth Amended and Restated Credit Agreement, filed as Exhibit 10.1 on Form 8-K filed on March 2, 2022 (File No. 000-07087).
21**	Subsidiaries of the Registrant; filed herewith.
23**	Consent of Independent Registered Public Accounting Firm; filed herewith.
31.1**	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002; filed herewith.
31.2**	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002; filed herewith.
32**	Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002; filed herewith.
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema Document
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document

* Identifies a management contract or compensatory plan or arrangement as required by Item 15(a) (3) of Form 10-K.

** Submitted electronically herewith

SCHEDULE II

Valuation and Qualifying Accounts

Year	Description	Balance at the Beginning of Period	Additions Charged to Cost and Expense	Write-Offs/Other	Balance at End of Period
<i>(In thousands)</i>					
2021	Allowance for Estimated Credit Losses	\$ 3,218	\$ 90	\$ (125)	\$ 3,183
	Reserve for Excess and Obsolete Inventories	\$ 33,410	\$ 3,852	\$ (3,487)	\$ 33,775
	Deferred Tax Valuation Allowance	\$ 37,168	\$ 7,100	\$ (749)	\$ 43,519
2020	Allowance for Estimated Credit Losses	\$ 3,559	\$ 1,913	\$ (2,254)	\$ 3,218
	Reserve for Excess and Obsolete Inventories	\$ 33,606	\$ 4,166	\$ (4,362)	\$ 33,410
	Deferred Tax Valuation Allowance	\$ 13,303	\$ 23,152	\$ 713	\$ 37,168
2019	Allowance for Estimated Credit Losses	\$ 1,486	\$ 2,144	\$ (71)	\$ 3,559
	Reserve for Excess and Obsolete Inventories	\$ 20,826	\$ 14,803	\$ (2,023)	\$ 33,606
	Deferred Tax Valuation Allowance	\$ 8,098	\$ 5,205	\$ —	\$ 13,303

ITEM 16. FORM 10-K SUMMARY

None.

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, on March 4, 2022.

Astronics Corporation

By /s/ Peter J. Gundermann
Peter J. Gundermann President and Chief Executive Officer

By /s/ David C. Burney
David C. Burney, Executive Vice President, Chief Financial 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 dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Peter J. Gundermann</u> Peter J. Gundermann	President and Chief Executive Officer (Principal Executive Officer)	March 4, 2022
<u>/s/ David C. Burney</u> David C. Burney	Executive Vice President, Chief Financial Officer (Principal Financial Officer)	March 4, 2022
<u>/s/ Nancy L. Hedges</u> Nancy L. Hedges	Corporate Controller and Principal Accounting Officer	March 4, 2022
<u>/s/ Robert T. Brady</u> Robert T. Brady	Director	March 4, 2022
<u>/s/ Tonit Calaway</u> Tonit Calaway	Director	March 4, 2022
<u>/s/ Jeffrey D. Frisby</u> Jeffrey D. Frisby	Director	March 4, 2022
<u>/s/ Peter J. Gundermann</u> Peter J. Gundermann	Director	March 4, 2022
<u>/s/ Warren C. Johnson</u> Warren C. Johnson	Director	March 4, 2022
<u>/s/ Robert S. Keane</u> Robert S. Keane	Director	March 4, 2022
<u>/s/ Neil Kim</u> Neil Kim	Director	March 4, 2022
<u>/s/ Mark J. Moran</u> Mark J. Moran	Director	March 4, 2022

ASTRONICS CORPORATION
BY-LAWS, AS AMENDED
BY-LAWS
OF
ASTRONICS CORPORATION
As Amended By the Board of Directors
On August 12, 1996 and September 21, 2018

ARTICLE I
MEETING OF SHAREHOLDERS

Sec. 1. ANNUAL MEETING. The annual meeting of Shareholders shall be held not more than 180 days after the end of the fiscal year of the corporation at such date, time and place within or without the State of New York as shall be established by resolution of the Board of Directors.

Sec. 2. SPECIAL MEETING. Special meetings of shareholders may be called by the Board of Directors or the President and shall be called by the President at any time upon the written request of two-thirds (2/3) of the Directors then serving on the Board of Directors, or upon the written request of shareholders owning not less than 80 percent of the outstanding shares of each class of capital stock of the corporation entitled to vote generally in the election of Directors as of the date on which such request is actually received by the corporation. Such request shall state the purpose or purposes of the proposed meeting. Such meetings shall be held at the principal office of the corporation or at such other place within or without the State of New York as the Board of Directors shall designate.

Sec. 3. NOTICE OF MEETING. The Secretary shall serve personally or by mail upon each shareholder entitled to vote thereat a written notice of any meeting, addressed to each such shareholder at his address as it appears on the books of the corporation. Such notice shall state the place, date and hour of such meeting. If the notice is of a special meeting, it shall also state the purpose or purposes for which such meeting is called, and by or at whose direction it is being issued. Notice of any meeting shall be given not less than ten (10) nor more than fifty (50) days prior to such meeting. At any meeting at which all shareholders are present, or of which all shareholders not present have waived in writing the giving of such notice, the notice otherwise required may be dispensed with.

Sec. 4. QUORUM. Except as otherwise provided by the Certificate of Incorporation, the holders of a majority of the shares of the corporation issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall be necessary to and shall constitute a quorum for the transaction of business at all meetings of shareholders, but a lesser number may adjourn the meeting to some future time not more than twenty (20) days later, without notice other than announcement at the meeting, and at any such adjourned meeting at which a quorum is present any business may be transacted that might have been transacted at the meeting as originally noticed.

Sec. 5. VOTING. At all meetings of shareholders, all questions, the manner of deciding which is not specifically regulated by law, by the Certificate of Incorporation or by these By-Laws, shall be determined by vote of a majority of the shares present or represented at such meetings and voting on such questions. Each shareholder of record shall be entitled to one vote for every share of stock standing in his name on the books of the corporation. All voting shall be viva voce, except that any shareholder may request that the vote be by ballot, in which case, each ballot shall state the name of the shareholder voting and the number of shares standing in his name on the books of the corporation, and in addition, if such ballot be cast by proxy, the name of the proxy shall be stated. The casting of all votes of shareholders shall be governed by the provisions of these By-Laws, except as otherwise expressly provided by law.

Sec. 6. VOTING ON MERGERS AND SIMILAR TRANSACTIONS.

(A) The affirmative vote of the holders of not less than 80 percent of the outstanding shares of the corporation entitled to vote thereon shall be required

(i) to adopt any agreement for the merger or consolidation of the corporation or any “subsidiary” (as hereinafter defined) with or into any other “person” (as hereinafter defined) or the merger of any other person into the corporation or any subsidiary.

(ii) To authorize any sale, lease, exchange, mortgage, pledge or disposition to any other person of all or substantially all of the property and assets of the corporation or any subsidiary, or any part of such assets having a then fair market value greater than 50 percent of the then fair market value of the total assets of the corporation or such subsidiary, or

(iii) To authorize the issuance or transfer by the corporation or any subsidiary of any voting securities of the corporation in exchange or payment for the securities or property and assets (including cash) of any other person.

(B) The provisions of this Section 6 shall not apply to any transactions described in clauses (i), (ii) or (iii) of Section A of this Section 6 if:

(i) prior to the consummation of such transaction, the Board of Directors of the corporation shall have adopted a resolution approving the written agreement pursuant to which such transaction shall thereafter be consummated or a written memorandum of understanding with respect to the terms upon which such transaction shall thereafter be consummated, or

(ii) the corporation or a subsidiary of the corporation is, at the time such transaction is agreed to, the beneficial owner of a majority, by vote, of the voting interest in the other party or parties to the transaction.

(C) For purposes of this Section 6

(i) a “security” or “securities” shall include both equity and debt securities;

(ii) any specified person shall be deemed to be the “beneficial owner” or to “beneficially own” any securities (a) as to which such person or any affiliate or associate of such person has the right, along with others, to direct the manner of exercise of the voting rights of such securities, whether or not such person or any affiliate or associate of such person has any interest in any income or distribution with respect to such securities, or (b) which such specified person or any of its affiliates or associates has the right to acquire pursuant to any agreement, or upon exercise of conversion rights, warrants or options, or pursuant to the automatic termination of a trust, discretionary account or similar arrangement, or otherwise, or (c) which are beneficially owned, within the meaning of clause (a) and (b) hereof, by any other person with which such specified person or any of its affiliates or associates has any agreement, arrangement, or relationship or understanding for the purpose of acquiring, holding, voting, or disposing of such securities;

(iii) a “person” is any individual, corporation or other entity;

(iv) an “affiliate” of a specified person is any person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with such specified person;

(v) an “associate” of a specified person is (a) any person of which such specified person is an executive officer, principal, member or partner or is, directly or indirectly, the beneficial owner of 5 percent or more of any class of equity securities of such person, (b) any person that bears to the specified person the relationship described in sub-clause (a) of this clause (v), (c) any trust or other estate in which such specified person has a substantial beneficial interest or as to which such specified person serves as a trustee or in a similar fiduciary capacity, (d) any relative or spouse of the specified person, or any relative of such spouse, who has the same home (or is a member of the same household) as such specified person, (e) any person which controls or is controlled by such specified person, or (f) any other member or partner in a partnership, limited partnership, joint venture, syndicate or other group of which the specified person a member or partner and which is acting together with the specified person for the purpose of acquiring, holding or disposing of any interest in the corporation or a subsidiary of the corporation;

(vi) a “subsidiary” of a specified person is any person, a majority, by vote, of the voting interest of which is beneficially owned, directly or indirectly, by such specified person.

The Board of Directors of the corporation shall determine the meaning and applicability of each of the above definitions based on information then known to it, and any determination by the Board of Directors of the corporation concerning such matters shall be inclusive and binding for all purposes and with respect to all persons.

Sec. 7. ORDER OF BUSINESS. The order of business at all meetings of the shareholders shall be as follows:

1. Roll Call.
2. Proof of notice of meeting or waiver of notice.
3. Reading of minutes of preceding meeting.
4. Reports of Officers.
5. Reports of Committees.
6. Announcement of Inspectors of Election, if applicable.
7. Election of Directors, if applicable.
8. Unfinished business.
9. New business.

Sec. 8. BUSINESS TRANSACTED. At the annual meeting, Directors shall be elected and such other business may be transacted as is properly brought before the meeting. No business, other than that specified in the notice of any special meeting, shall be transacted at such meeting unless all shareholders entitled to notice thereof consent to the transaction of such business.

Sec. 9. PROXIES. Every shareholder having a right to vote at any meeting or to express consent or dissent shall be entitled to authorize another person or persons to vote for him by proxy. No proxy shall be valid unless it shall be in writing and signed by the shareholder or his attorney in fact, and specify the meeting or meetings at which such proxy may be exercised. Unless a proxy shall state that it is irrevocable as permitted by law, it shall be revocable at the pleasure of the person executing it. No proxy shall be valid after the expiration of eleven (11) months from the date thereof.

Sec. 10. CLOSING RECORD BOOKS. Unless otherwise provided by law, by the Certificate of Incorporation, or these By-Laws, the Board of Directors may fix a date not more than fifty (50) days nor less than ten (10) days before the date appointed for any meeting of shareholders or the date fixed for the payment of any dividend or other distribution allowed by law, as the record date for the determination of the shareholders entitled to notice of and to vote at such meeting, or entitled to receive such dividend or other distribution.

If no record date is fixed as provided in this section, then the close of business on the day next preceding the day on which notice of the meeting is mailed, or the close of business on the day on which the resolution is adopted, as the case may be, shall be the record date for determination of shareholders entitled to notice of such meeting, or to receive such distribution.

When any determination is made as provided in this section, such determination shall apply to any adjournment of any meeting except where a new record date is fixed by the Board of Directors for such adjourned meeting.

Sec. 11. ACTION WITHOUT MEETING. Whenever shareholders are required or permitted to take any action by vote, such action may be taken without a meeting, on written consent, setting forth the action so taken, signed by the holders of all outstanding shares entitled to vote thereon. However, this section shall not be construed to alter or modify any provision of law or of the Certificate of Incorporation under which the written consent of the holders of less than all outstanding shares is sufficient for corporate action.

ARTICLE II DIRECTORS

Sec. 1. NUMBER. The affairs and business of this corporation shall be managed by a Board of Directors composed of not less than three (3) nor more than nine (9) persons, twenty-one years of age, or more, who need not be shareholders, except that when all the shares of the corporation are owned beneficially and of record by less than three shareholders, the number of directors may be less than three, but not less than the number of shareholders. The Board shall include such number of Directors, within the maximum and minimum as set forth above, as shall be

determined from time to time by resolution adopted by a vote of a majority of the entire Board. In the event of any such increase in the number of Directors, within such limits, the vacancy or vacancies so resulting shall be filled by a vote of a majority of the Directors then in office.

Sec. 2. HOW ELECTED. The Directors of the corporation shall be elected at the annual meeting of shareholders and the number of persons, corresponding to the number of directors to be elected, who shall receive a plurality of the votes cast, shall be elected Directors of the corporation and shall constitute the Board of Directors.

Sec. 3. TERM OF OFFICE. The term of office of each Director shall be until the next annual meeting of shareholders, and thereafter until his successor has been elected and has qualified.

Sec. 4. DUTIES. The Board of Directors shall have the control and general management of the affairs and business of the corporation. Such Directors shall in all cases act as a Board, regularly convened, and they may, by majority vote, adopt such rules and regulations for the conduct of their meetings and the management of the corporation as they may deem proper, not inconsistent with any provisions of law, the Certificate of Incorporation or these By-Laws.

Sec. 5. DIRECTORS' MEETINGS. Regular meetings of the Board of Directors shall be held immediately following the annual meeting of shareholders, and at such other times as the Board may determine by resolution. Special meetings of the Board may be called by the President at any time and shall be called by the President or the Secretary upon the written request of two directors. Meetings of the Board shall be held at such time and place within or without the State of New York as may be determined by the Board.

Sec. 6. NOTICE OF MEETING. The Secretary shall serve personally or by mail upon each Director a written notice of all meetings of the Board of Directors, other than the regular annual meeting or any regular meeting held in accordance with a resolution establishing such meetings duly adopted by the Board at its regular annual meeting. Such notice shall be addressed to each Director at his address as shown on the records of the Secretary and shall specify the place, date and time of such meeting. Such notice shall be delivered personally or by mail or by telegram, at least three (3) days before the date of such meeting, including the day of mailing. At any meeting at which all Directors are present, or of which all Directors not present have waived in writing the giving of such notice, any notice otherwise required shall be dispensed with and any business may be transacted which could have been transacted if the same were specified in such notice.

Sec. 7. QUORUM. At any meeting of the Board of Directors, a majority of the entire Board shall be necessary to and constitute a quorum for the transaction of business unless otherwise provided by law or by the Certificate of Incorporation; but if a quorum is not present, a lesser number may adjourn the meeting to another time and place not more than ten (10) days later, without notice other than announcement at the meeting. At any such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the meeting as originally called.

Sec. 8. VOTING. At all meetings of the Board of Directors, each Director shall have one (1) vote irrespective of the number of shares of stock that he may hold. Unless otherwise provided by law or by the Certificate of Incorporation, the act of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board.

Sec. 9. VACANCIES. Vacancies in the Board of Directors occurring during terms of office, whether occurring upon removal with or without cause, or otherwise, shall be filled for the remainder of the term by the vote of a majority of the Directors then in office, although less than a quorum.

Sec. 10. REMOVAL OF DIRECTORS. All or any of the Directors may be removed, (a) either with or without cause, at any time by a majority vote of the shareholders entitled to vote for the election of Directors at a special meeting called for that purpose and (b) with cause, by the Board, by majority vote of all Directors then in office.

Sec. 11. COMMITTEES. The Board of Directors, by resolution adopted by a majority of the entire Board, may designate from among its members, one or more committees, each consisting of at least three (3) Directors, each of which, to the extent provided in such resolution, shall have all the authority of the Board. Any such committees shall report to the Board when and as required.

Sec. 12. COMPENSATION. The Board of Directors may determine, from time to time, the amount of compensation plus expenses of attendance, to be allowed Directors, other than officers, for their attendance at any meeting of the Board or of its committees.

Sec. 13. RESIGNATION. Any Director may resign at any time by written notice to the Board, the President or the Secretary. Unless an effective date is specified in such notice, it shall become effective upon receipt by the Board or such officer, and no action on such resignation shall be necessary to make it effective.

Sec. 14. NOMINATIONS FOR THE BOARD. Nominations for the election of Directors may be made by the Board of Directors or a committee designated by the Board of Directors or by a shareholder entitled to vote in the election of Directors. A shareholder entitled to vote in the election of Directors, however, may make such a

nomination only if written notice of the shareholder's intent to do so has been given, either by personal delivery or by United States mail, postage prepaid, to the Secretary of the corporation and received by the corporation (a) with respect to an election to be held at an annual meeting of shareholders, not later than sixty (60) nor more than ninety (90) days prior to the first anniversary of the preceding year's annual meeting (or, if the date of the annual meeting is changed by more than twenty (20) days from such anniversary date, within ten (10) days after the date the corporation mails or otherwise give notice of the date of such meeting), and (b) with respect to an election to be held at a special meeting of shareholders called for that purpose, not later than the close of business on the tenth (10th) day following the date on which notice of the special meeting was first mailed to the shareholders of the corporation.

Each shareholder's notice of intent to make a nomination shall set forth: (i) the name(s) and address(es) of the shareholder who intends to make the nomination and of the person or persons to be nominated; (ii) a representation that the shareholder (a) is a holder of record of stock of the corporation entitled to vote at such meeting, (b) will continue to hold such stock through the date on which the meeting is held, and (c) intends to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice; (iii) a description of all arrangements or understandings between the shareholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nomination is to be made by the shareholder; (iv) such other information regarding each nominee proposed by such shareholder as would be required to be included in a proxy statement filed pursuant to Regulation 14A promulgated under Section 14 of the Securities Exchange Act of 1934, as amended, as now in effect or hereafter modified, had the nominee been nominated by the Board of Directors; and (v) consent of each nominee to serve as a director of the corporation if so elected. The corporation may require any proposed nominee to furnish such other information as may reasonably be required by the corporation to determine the qualifications of such person to serve as a director.

No person shall be eligible for election as a director unless nominated (i) by a shareholder in accordance with the foregoing procedure or (ii) by the Board of Directors or a committee designated by the Board of Directors.

Sec. 15. ACTION WITHOUT A MEETING. Any action required or permitted to be taken by the Board of Directors or any committee of the Board of Directors may be taken without a meeting if all members of the Board or the committee consent in writing to the adoption of a resolution authorizing the action. The resolution and the written consents shall be filed with the minutes of the proceedings of the Board or the committee.

Sec. 16. MEETINGS BY CONFERENCE TELEPHONE. Any one or more members of the Board of Directors or any committee of the Board of Directors may participate in a meeting of the Board or of the committee by means of a conference telephone or similar communications equipment allowing all participants to hear each other at the same time. Participation by such means shall constitute presence in person at the meeting.

ARTICLE III
EXECUTIVE COMMITTEE

Sec. 1. APPOINTMENT. The Board of Directors may, by resolution of a majority of the entire Board, designate not less than three (3) nor more than five (5) Directors who shall constitute the Executive Committee. Vacancies in the Executive Committee may be filled by similar resolution at any meeting of the Board.

Sec. 2. DUTIES. The Executive Committee shall advise and aid the officers of the corporation in all matters concerning the corporation's interest and the management of the corporation's business, and when the Board of Directors is not in session the Executive Committee shall have and may exercise all the powers and authority of the Board with reference to the conduct of the business of the corporation, except as such exercise may be restricted by law, or by resolution of the Board.

The Executive Committee, unless otherwise provided by the Board, shall fix the salary or compensation of each officer whether or not such officer be a Director, but shall not determine the compensation of any member of the Executive Committee.

Sec. 3. MEETINGS. Regular meetings of the Executive Committee may be held without call or notice at such times and places as the Executive Committee from time to time may fix in advance. Other meetings of the Executive Committee may be called by any member thereof either by oral, telegraphic or written notice not later than the day prior to the date set for such meeting. Such notice shall state the date, time and place of the meeting and, if by telegram or in writing, shall be addressed to each member at his address as shown on the records of the Secretary. Upon request by any member, the Secretary shall give the required notice calling the meeting.

Sec. 4. QUORUM. At any meeting of the Executive Committee, three members shall constitute a quorum. Any action of the Executive Committee, to be effective, must be authorized by affirmative vote of a majority of the members thereof present, and in any event, shall require not less than three affirmative votes.

Sec. 5. MINUTES. The Secretary shall keep the minutes of the meetings of the Executive Committee and cause them to be recorded in a book kept at his office for that purpose. These minutes shall be presented to the Board of Directors from time to time for their information.

ARTICLE IV
OFFICERS

Sec. 1. NUMBER. The officers of the corporation shall be a president, one or more vice presidents (the number of such vice presidents to be determined by the Board of Directors), a secretary and treasurer. The Board may also elect or appoint a Chairman of the Board and shall appoint such other officers, assistant officers, agents and employees as it shall deem necessary, who shall have such authority and shall perform such duties as shall be prescribed by the Board from time to time. Any two or more offices may be held by the same person, except the offices of President and Secretary.

Sec. 2. ELECTION. All officers of the corporation shall be elected annually by the Board of Directors at its meeting held immediately following the annual meeting of shareholders, and shall hold office until the meeting of the Board immediately following the next annual meeting of shareholders. The President shall be elected from the members of the Board.

Sec. 3. DUTIES OF OFFICERS. The duties and powers of the officers of the corporation shall be as follows:

CHAIRMAN OF THE BOARD

The Chairman of the Board, if appointed by the Board of Directors, shall preside at all meetings of shareholders and of the Board, and shall have and perform such other powers and duties as may from time to time be assigned by the Board, including the specified duties of any other officer.

PRESIDENT

The President shall be the Chief Executive Officer of the corporation; in the absence of the Chairman of the Board, or if there be no Chairman, he shall preside at all meetings of shareholders and directors; he shall be ex officio a member of all standing committees, shall have general and active management and control of the Board of Directors, and shall see that all orders and resolutions of the Board are carried into effect.

VICE PRESIDENT

The Vice President, or if there be more than one, the Vice Presidents in order of their seniority or in any other order determined by the Board, shall, in the absence or disability of the President, perform the duties and exercise the powers of President, and shall generally assist the President and perform such other duties as the Board of Directors or the President shall prescribe.

SECRETARY

The Secretary shall attend all meetings of the Board and all meetings of shareholders, and record all votes and the minutes of all proceedings in a book to be kept for that purpose, and shall perform like duties for standing committees when required. He shall give or cause to be given notice of all meetings of shareholders and special meetings of the Board, and shall perform such other duties as may be prescribed by the Board of Directors or President, under whose supervision he shall act. He shall keep in safe custody the seal of the corporation and, when authorized by the Board, affix same to any instrument requiring it, and when so affixed, it shall be attested by his signature or the signature of the Treasurer, or Assistant Secretary or Assistant Treasurer. He shall keep in safe custody the certificate books and shareholder records and such other books and records as the Board may direct, and shall perform all other duties incident to the office of Secretary.

ASSISTANT SECRETARY

The Assistant Secretaries, if any, in order of their seniority or any other order determined by the Board, shall in the absence or disability of the Secretary, perform the duties and exercise the powers of the Secretary; and shall perform such other duties as the Board of Directors or the Secretary shall prescribe.

TREASURER

The Treasurer shall have care and custody of the corporate funds and other valuable effects, including securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the corporation, and shall deposit all moneys and other valuable effects in the name and the credit of the corporation in such depositories as may be designated by the Board. The Treasurer shall disburse funds of the corporation as may be ordered by the Board, taking proper vouchers for such disbursements, and shall render to the President and Directors at the regular meeting of the Board, or whenever they may request it, an account of all his transactions as Treasurer and of the financial condition of the corporation. If required by the Board, the Treasurer shall give the corporation a bond for such term in such sum and with such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of his office and for the restoration to the corporation in the case of his death, resignation, retirement or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his possession or or under his control belonging to the corporation.

ASSISTANT TREASURER

The Assistant Treasurers, if any, in order of their seniority or in any other order determined by the Board, shall in the absence or disability of the Treasurer, perform the duties and exercise the power of Treasurer, and shall perform such other duties as the Board of Directors or the Treasurer shall prescribe.

CONTROLLER

The Controller, if any, shall maintain adequate records of all assets, liabilities and transactions of the corporation and shall have adequate audits thereof currently and regularly made. In conjunction with other officers, he shall initiate and enforce measures and procedures whereby the business of the corporation shall be conducted with maximum safety, efficiency and economy. He shall attend all meetings of the Board and shall report to the President or the Board, as the Board of Directors may prescribe. His duties and powers shall extend to all subsidiary corporations and, so far as the President may deem applicable, to all affiliated corporations.

ASSISTANT CONTROLLER

The Assistant Controller, or if there be more than one, the Assistant Controllers in order of their seniority or any other order determined by the Board, shall in the absence or disability of the Controller, perform the duties and exercise the powers of Controller, and shall perform such other duties as the Board of Directors or the Controller shall prescribe.

Sec. 4. BOND. The Treasurer shall, if required by the Board of Directors, give to the corporation such security for the faithful performance of his duties as the Board may direct.

Sec. 5. VACANCIES, HOW FILLED. All vacancies in any office shall be filled by the Board of Directors without undue delay at its next regular meeting or at a meeting specially called for that purpose.

Sec. 6. COMPENSATION OF OFFICERS. The officers shall receive such salary or compensation as may be determined by the Executive Committee, if any, unless otherwise provided by the Board of Directors. If an Executive Committee is not appointed, the Board shall determine such salary or compensation. The fact that any

officer is a director shall not preclude him from receiving a salary or from voting upon any resolution establishing the same.

Sec. 7. REMOVAL OF OFFICERS. The Board of Directors may remove any officer at any time, with or without cause, by a majority vote of the entire Board.

Sec. 8. REPAYMENT OF DISALLOWED COMPENSATION. Any payments made to an officer by way of salary, commission, bonus, interest, rent, or entertainment expense incurred by such officer, which shall be disallowed in whole or in part as a deductible expense of the corporation by the Internal Revenue Service, shall be reimbursed by such officer to the full extent of such disallowance. The Board shall, be responsible for enforcing repayment of each such amount disallowed and, subject to the determination of the Board, proportionate amounts may be withheld from future compensation payments to such officer until amounts repayable have been repaid in full. The Board shall determine whether repayment of any such amounts is to be made over a period of one or more years, but any such repayment shall be made over no longer a period than five years.

ARTICLE V CORPORATE SEAL

Sec. 1. FORM. The Board of Directors shall adopt a corporate seal which shall be circular in form and shall have inscribed thereon the name of the corporation, the year of its incorporation, the words "Corporate Seal, New York" and such other matters as the Board may consider proper.

ARTICLE VI SHARE CERTIFICATES

Sec. 1. FORM; SIGNATURE. The certificates for shares of the corporation shall be in such form as the Board of Directors may determine from time to time. Such certificates shall be signed by the President or Vice President and the Secretary or Treasurer and shall be sealed with the seal of the corporation. Such seal may be a facsimile, engraved or printed. Where any such certificate is signed by a transfer agent or registered by a registrar, other than the corporation itself, title signatures of any such President, Vice President, Secretary or Treasurer upon such certificate may be facsimiles, engraved or printed. In case any such officer who has signed or whose facsimile signature has been placed upon such certificate shall have ceased to be such before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer and had not ceased to be such at the date of its issue.

Every certificate of stock issued by the corporation shall plainly state upon the face thereof: That the corporation is formed under the laws of the State of New York; the name of the registered holder; the number, kind and class of shares, and the designation of the series, if any, which it represents; and the par value of each share represented by such certificate or a statement that such shares are without par value.

Each series of certificates shall be consecutively numbered. The name of the person owning the shares represented thereby, with the number of such shares and the date of issue, shall be entered on the corporation's books as well as on the face of such certificate.

Sec. 2. TRANSFERS OF CERTIFICATES. Certificates for shares of the corporation shall be transferable on the books of the corporation, by the holder thereof in person or by his attorney, upon surrender for cancellation of such certificates, and proper evidence of succession, assignment or authority to transfer.

Sec. 3. LOST, STOLEN OR DESTROYED STOCK CERTIFICATES. No certificate for shares of stock of the corporation shall be issued in place of any certificate alleged to have been lost, stolen or destroyed, except upon production of evidence of the loss, theft or destruction, and upon indemnification of the corporation and its agents to the extent and in the manner the Board of Directors may from time to time prescribe.

Sec. 4. REGULATIONS. The Board of Directors shall have the power and authority to make such rules and regulations as it may deem expedient concerning the issue, transfer and registration of certificates for shares of the corporation.

Sec. 5. TRANSFER AGENT AND REGISTRAR. The Board of Directors may appoint one or more transfer agents or transfer clerks and/or one or more registrars of transfers, and may require all stock certificates to bear the signature of a transfer agent or transfer clerk and/or a registrar of transfers. The Board may at any time terminate the appointment of any transfer agent or transfer clerk or any registrar of transfers.

Sec. 6. OWNER OF CERTIFICATE. The holder of record of any certificate for shares of the corporation shall be deemed the holder in fact thereof, and the corporation shall not be bound to recognize any equitable or legal claim to or interest in such certificate on the part of any other persons, whether or not it shall have actual or other notice thereof, except as otherwise expressly provided by law.

ARTICLE VII
DIVIDENDS

Sec. 1. WHEN DECLARED. The Board of Directors may declare dividends in cash, in property, or in the shares of the corporation, from the surplus profits of the corporation whenever, in its opinion, the conditions of the corporation's affairs will render it expedient for such dividends to be declared.

Sec. 2. PAYMENT. The Board of Directors, in declaring any dividend, may determine the shareholders entitled to receive such dividend by fixing a record date for the determination of shareholders and making any such dividend payable only to those persons who are shareholders of record as of such date. The Board may also determine the date when payment of any such dividend is to be made.

ARTICLE VIII
CONTRACTS, BILLS, NOTES, DEPOSITORIES

Sec. 1. BILLS, NOTES, ETC. All bills payable, notes, checks, drafts, warrants or other negotiable instruments shall be made in the name of the corporation, and shall be signed and countersigned by such officer or officers of the corporation as shall be designated by resolution of the Board of Directors. No officer or agent of the corporation, either singly or jointly with others, shall have the power to make any bill payable, note, check, draft or warrant or other negotiable instrument, or endorse the same in the name of the corporation or contract or cause to be contracted any debt or liability in the name or in behalf of the corporation, except as herein expressly prescribed and provided.

Sec. 2. CONTRACTS. The Board of Directors may authorize any officer or officers, agent or agents, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general and continuing or may be confined to specific instances.

Sec. 3. DEPOSITORIES. The Board of Directors shall designate the trust company, or trust companies, bank or banks, in which shall be deposited the money or securities of the corporation.

ARTICLE IX
OFFICES

Sec. 1. PRINCIPAL OFFICE. The principal office of the corporation shall be in the City of Buffalo, County of Erie and State of New York, and the exact address of such office may be determined, and changed, from time to time by resolution of the Board of Directors.

Sec. 2. OTHER OFFICES. The corporation may have such other offices or places of business at such other places within or without the State of New York as the Board of Directors from time to time may determine, or the business of the corporation may require.

ARTICLE X
FISCAL YEAR

Sec. 1. FISCAL YEAR. Unless otherwise fixed by resolution of the Board of Directors, the fiscal year of the corporation shall begin on the 1st day of January and end on the last day of December.

ARTICLE XI
INSPECTORS OF ELECTION

Sec. 1. APPOINTMENT. The Board of Directors, prior to the annual meeting of shareholders in each year, shall appoint one or more inspectors of election to act at such annual meeting and at all other meetings of shareholders held during the ensuing year. In the event of the failure of the Board to make any such appointments, or if any inspector of election shall for any reason fail to attend and act at such meeting, an inspector of election or inspectors of election, as the case may be, may be appointed by the chairman of the meeting at which such inspectors are to act.

ARTICLE XII
AMENDMENTS

Sec. 1. BY SHAREHOLDERS. These By-Laws may be amended, repealed or adopted by the affirmative vote of the holders of a majority of the shares at the time entitled to vote for the election of directors, at any meeting for which the notice of meeting specifies such amendments, alterations, changes or action proposed to be taken with regard to these By-Laws. When so provided in the Certificate of Incorporation, or these By-Laws, the affirmative vote required to effect any such action shall be such vote, greater or lesser than a majority, as may be so provided. The provisions set forth in Article I — Sections 2 and 6 of these By-Laws may not be altered, amended or repealed in any respect unless such alteration, amendment or repeal is approved by an affirmative vote of holders of not less than 80 percent of the outstanding shares of the corporation entitled to vote thereon.

Sec. 2. BY DIRECTORS. These By-Laws may also be amended, repealed or adopted at any regular or special meeting of the Board of Directors, by the affirmative vote of a majority of the entire Board. If any By-Law regulating an impending election of directors is amended, repealed or adopted by the Board, there shall be set forth, in the notice of the next meeting of shareholders for the election of directors, the By-Law so amended, repealed or adopted, together with a concise statement of the changes made. Any By-Law amended, repealed or adopted by the Board may be amended or repealed by the shareholders at any annual meeting, or at any special meeting called for that purpose, by the affirmative vote of the holders of a majority of the shares at the time entitled to vote for the election of directors.

ARTICLE XIII INDEMNIFICATION

Sec. 1. INDEMNIFICATION. To the extent permitted by law:

(a) The corporation shall indemnify any person made a party to any action or proceeding by or in the right of the corporation to procure a judgment in its favor, by reason of the fact that he, his testator or intestate, is or was a director or officer or employee of the corporation, against the reasonable expenses, including attorneys' fees, actually and necessarily incurred by him in connection with the defense of such action or proceeding, or in connection with any appeal therein, except in relation to matters as to which such person is adjudged to have breached his duty to the corporation; and

(b) The corporation shall indemnify any person made, or threatened to be made, a party to any action or proceeding other than one by or in the right of the corporation to procure a judgment in its favor, whether civil or criminal, including an action by or in the right of any other corporation of any kind or type, domestic or foreign, which any director or officer or employee of the corporation served in any capacity at the request of the corporation, by reason of the fact that he, his testator or intestate, was a director or officer or employee of the corporation, or served such other corporation in any capacity, against judgments, fines, amounts paid in settlement and reasonable expenses, including attorneys' fees, actually and necessarily incurred as a result of such action or proceeding, or any appeal therein, if such person acted in the best interest of the corporation, and in criminal actions or proceedings, in addition had no reasonable cause to believe that his conduct was unlawful.

ARTICLE XIV EXCLUSIVE FORUM

Sec. 1. EXCLUSIVE FORUM. Unless the corporation consents in writing to the selection of an alternative forum, the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director or officer or other employee of the corporation to the corporation or the corporation's shareholders, (iii) any action asserting a claim against the corporation or any director or officer or other employee of the corporation arising pursuant to any provision of the New York Business Corporation Law or the Certificate of Incorporation or these By-Laws (as either may be amended from time to time), or (iv) any action asserting a claim against the corporation or any director or officer or other employee of the corporation governed by the internal affairs doctrine, shall be a state court located within the County of Erie in the State of New York (or, if no state court located within the County of Erie in the State of New York has jurisdiction, the U.S. District Court for the Western District of New York (Buffalo Division)).

EXHIBIT 21**ASTRONICS CORPORATION****SUBSIDIARIES OF THE REGISTRANT**

<u>Subsidiary</u>	<u>Ownership Percentage</u>	<u>State (Province), Country of Incorporation</u>
Astronics Test Systems, Inc.	100%	Delaware, USA
Astronics DME LLC	100%	Florida, USA
Astronics AeroSat Corporation	100%	New Hampshire, USA
Luminescent Systems, Inc.	100%	New York, USA
Astronics Air, LLC	100%	New York, USA
Peco, Inc.	100%	Oregon, USA
Ballard Technology, Inc.	100%	Washington, USA
Astronics Advanced Electronic Systems Corp.	100%	Washington, USA
LSI - Europe B.V.B.A.	100%	Belgium
Luminescent Systems Canada, Inc.	100%	Quebec, Canada
PGA Electronic s.a.	100%	France
Astronics France	100%	France
Astronics Air II LLC	100%	New Hampshire, USA
Armstrong Aerospace, Inc.	100%	Illinois, USA
Astronics Custom Controls Concepts Inc.	100%	Washington, USA
Astronics Connectivity Systems and Certification Corp.	100%	Illinois, USA
Freedom Communication Technologies, Inc.	100%	Delaware, USA
Diagnosys Holdings Inc.	100%	Delaware, USA
Diagnosys Inc.	100%	Delaware, USA
Diagnosys (Pinpoint) Inc.	100%	Florida, USA
Diagnosys (Customer Support) Inc.	100%	Florida, USA
Diagnosys Systems, Inc.	100%	Delaware, USA
Diagnosys Ferndown Limited	100%	England
Diagnosys GmbH	100%	Germany
Diagnosys Electronics (I) Private Limited	100%	India
Astronics Connectivity Systems & Certification Ukraine	100%	Ukraine
Huizhou Telefonix Co., Ltd.	100%	China
Alliance Technology HK Limited	100%	Hong Kong

EXHIBIT 23

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- a. Registration Statements (Form S-8 No. 333-139292, Form S-8 No. 333-87463) pertaining to the Astronics Corporation Employee Stock Purchase Plan,
- b. Registration Statement (Form S-8 No. 333-127137) pertaining to the Astronics Corporation 2005 Director Stock Option Plan,
- c. Registration Statement (Form S-8 No. 333-143564) pertaining to the Astronics Corporation 2001 Stock Option Plan,
- d. Registration Statement (Form S-8 No. 333-176044) pertaining to the Astronics Corporation 2011 Employee Stock Option Plan,
- e. Registration Statement (Form S-8 No. 333-222010) pertaining to the Astronics Corporation 2017 Long Term Incentive Plan, and
- f. Registration Statement (Form S-8 No. 333-256514) pertaining to the Astronics Corporation Amended and Restated 2017 Long Term Incentive Plan;

of our reports dated March 4, 2022, with respect to the consolidated financial statements and schedule of Astronics Corporation and the effectiveness of internal control over financial reporting of Astronics Corporation included in this Annual Report (Form 10-K) of Astronics Corporation for the year ended December 31, 2021.

/s/ Ernst & Young LLP

Buffalo, New York
March 4, 2022

Exhibit 31.1

Certification of Chief Executive Officer pursuant to Exchange Act rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2001

I, Peter J. Gundermann, President and Chief Executive Officer, certify that:

1. I have reviewed this annual report on Form 10-K of the Astronics Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 4, 2022

/s/ Peter J. Gundermann

Peter J. Gundermann
Chief Executive Officer

Exhibit 31.2

Certification of Chief Financial Officer pursuant to Exchange Act rule 13a-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2001

I, David C. Burney, Executive Vice President and Chief Financial Officer, certify that:

1. I have reviewed this annual report on Form 10-K of the Astronics Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 4, 2022

/s/ David C. Burney

David C. Burney
Chief Financial Officer

Exhibit 32

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2001

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2001, the undersigned officers of Astronics Corporation (the "Company") hereby certify that:

The Company's Annual Report on Form 10-K for the year ended December 31, 2021 fully complies with the requirements of section 13(a) or 15(d) of the Securities and Exchange Act of 1934 and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 4, 2022

/s/ Peter J. Gundermann

Peter J. Gundermann

Title: Chief Executive Officer

Dated: March 4, 2022

/s/ David C. Burney

David C. Burney

Title: Chief Financial Officer

This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section. This certification shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act, except to the extent specifically incorporated by the Company into such filing.