

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K**

(Mark One)

- Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2020 or
 Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____.

Commission File Number **001-34218**

COGNEX CORPORATION

(Exact name of registrant as specified in its charter)

Massachusetts
(State or other jurisdiction of
incorporation or organization)

04-2713778
(I.R.S. Employer
Identification No.)

**One Vision Drive
Natick, Massachusetts 01760-2059
(508) 650-3000**

(Address, including zip code, and telephone number,
including area code, of principal executive offices)

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

Title of Each Class	Trading Symbol(s)	Name of Exchange on Which Registered
Common Stock, par value \$.002 per share	CGNX	The NASDAQ Stock Market LLC

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

- | | |
|---|--|
| <input checked="" type="checkbox"/> Large accelerated filer | <input type="checkbox"/> Accelerated filer |
| <input type="checkbox"/> Non-accelerated filer | <input type="checkbox"/> Smaller reporting company |
| | <input type="checkbox"/> Emerging growth company |

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

Indicate by check mark whether the registrant 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.

Yes No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

Aggregate market value of voting stock held by non-affiliates of the registrant as of June 28, 2020: \$9,792,441,959
Common stock, par value \$.002 per share, outstanding as of January 31, 2021: 176,028,184 shares

DOCUMENTS INCORPORATED BY REFERENCE:

The registrant intends to file a Definitive Proxy Statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended December 31, 2020. Portions of such Proxy Statement are incorporated by reference in Part III of this report.

COGNEX CORPORATION
ANNUAL REPORT ON FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2020

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PART I

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the federal securities laws. Readers can identify these forward-looking statements by our use of the words “expects,” “anticipates,” “estimates,” “believes,” “projects,” “intends,” “plans,” “will,” “may,” “shall,” “could,” “should,” and similar words and other statements of a similar sense. Our future results may differ materially from current results and from those projected in the forward-looking statements as a result of known and unknown risks and uncertainties. Readers should pay particular attention to considerations described in the section captioned “Risk Factors,” appearing in Part I - Item 1A of this Annual Report on Form 10-K. We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. We disclaim any obligation to subsequently revise forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date such statements are made.

Unless the context otherwise requires, the words “Cognex®,” the “Company,” “we,” “our,” “us,” and “our company” refer to Cognex Corporation and its consolidated subsidiaries.

ITEM 1: BUSINESS

Corporate Profile

Cognex Corporation was incorporated in Massachusetts in 1981. Our corporate headquarters are located at One Vision Drive, Natick, Massachusetts 01760 and our telephone number is (508) 650-3000.

Cognex is a leading worldwide provider of machine vision products that capture and analyze visual information in order to automate manufacturing and distribution tasks where vision is required. Machine vision is the technology that gives computers and automation equipment the ability to see. Machine vision products are used to automate the manufacturing and tracking of discrete items, such as mobile phones, aspirin bottles, and automobile tires, by locating, identifying, inspecting, and measuring them during the manufacturing or distribution process. Machine vision is important for applications in which human vision is inadequate to meet requirements for size, accuracy, or speed, or in instances where substantial cost savings are obtained through the reduction of labor or improved product quality.

Although Cognex sells to customers in a variety of industries, our largest industries are the consumer electronics, logistics, and automotive industries, which combined represented approximately 70% of our total revenue in 2020. While we sell to a variety of customers in the automotive industry, we have two large customers in the consumer electronics and logistics industries that each represented a significant portion of revenue in their respective industries and each represented over 10% of our total revenue in 2020. Our total revenue and quarterly timing of revenue is impacted by the purchasing cycles of these two large customers.

Cognex operates in one segment, machine vision technology. We offer a variety of machine vision products that have similar economic characteristics, have the same production processes, and are distributed by the same sales channels to the same types of customers.

Machine Vision Market

Cognex machine vision is used to automate manufacturing and distribution processes in a variety of industries, where the technology is widely recognized as an important component of automated production and quality assurance. Virtually every manufacturer can achieve better quality and manufacturing efficiency by using machine vision, and therefore, Cognex products are used by a broad base of customers across a variety of industries, including consumer electronics, automotive, consumer products, food and beverage, and medical-related. Cognex products are also used to automate distribution processes in the logistics industry for applications in retail distribution and ecommerce to scan, track, and sort goods through distribution centers.

Although we consider Cognex to be one of the leading machine vision companies in the world, reliable estimates of the machine vision market and the number and relative size of competitors are not readily available. Our competitors include other vendors of machine vision systems, controllers, and components; manufacturers of image processing systems, sensors, and components; and system integrators. We may also compete with internal engineering departments of current or prospective customers, as well as open source tools available for free by various companies. In recent years, we have encountered increased competition from low-cost vision providers in China.

Cognex's ability to compete depends upon our ability to design, manufacture, and sell high-quality products, as well as our ability to develop new products and functionality that meet evolving customer requirements. The primary competitive factors affecting the choice of a machine vision system include vendor reputation, product functionality and performance, ease of use, price, and post-sales support. The importance of each of these factors varies depending upon the specific customer's needs.

Business Strategy

Our goal is to expand our position as a leading worldwide provider of machine vision products for industrial customers. We are selective in choosing growth opportunities that we believe will maintain our historically high gross margin percentages, which have ranged in the mid 70 percent range for the past several years and reflect the value our customers place on our innovative products. Our high gross margins have the potential to provide us with strong operating leverage in our financial model, as any incremental revenue at such margins falls through to operating income at a high ratio. Our strong and unique corporate culture reinforces our values of customer first and innovation, and enables us to attract and retain smart, highly educated, experienced talent who are motivated to solve the most challenging vision tasks.

We invest heavily in research and development in order to maintain our position as a technology leader in machine vision. We invest in technology that makes vision easier to use and more affordable, and therefore, available to a broader base of customers, such as our vision sensor products that enable customers with a lower budget to use machine vision without the help of sophisticated engineers. We also invest in technology that addresses the most challenging vision applications, such as our 3D vision products that solve applications where a height or volume measurement is required and our deep learning vision software that solves complex applications with unpredictable defects and deviations. We invest through internal development, as well as the acquisition of businesses and technologies. We believe that our acquisition of Sualab Co., Ltd. in 2019 will continue to expand our deep learning technology to visual inspection tasks that could replace human inspectors and make automated inspection tasks fast, easy, and cost-effective.

We continue to invest in our core markets, such as consumer electronics and automotive, where we are a leading provider of vision and ID products for factory automation, while making significant investments in the logistics market, where we are moving beyond barcode reading into more complex applications in retail distribution and ecommerce.

We reach a broad base of customers through our worldwide direct sales force that sells to large, strategic customers, as well as through our network of distributors and integrators that sell primarily to smaller customers who may be more geographically remote and may require supplemental technical support or integration assistance. We invest in emerging, high-growth regions where many manufacturers can benefit from incorporating machine vision into their production processes. This includes investment in China, where rising wages for assembly workers and a greater focus on product quality are driving assembly automation, particularly in the consumer electronics industry.

Acquisitions

Our business strategy includes selective expansion into new machine vision applications and markets through the acquisition of businesses and technologies.

On October 16, 2019, Cognex acquired Sualab Co., Ltd. (Sualab), a provider of deep learning-based vision software for industrial image analysis based in Korea. The total consideration of approximately \$194 million included cash payments of \$170 million and deferred payments of \$24 million that may become payable on the fourth anniversary date of the closing, contingent upon continued employment of key talent. Sualab's intellectual property, engineering expertise, and market coverage are expected to increase the Company's deep learning capabilities. Combined with intellectual property acquired from ViDi Systems S.A. in 2017, we believe that Cognex is now a leading provider of deep learning-based industrial vision software.

Management considers business acquisitions to be an important part of our growth strategy, and although we continue to actively seek out acquisition opportunities, we are selective in choosing businesses that we believe will enhance our long-term growth rate and profitability, as well as fit within our corporate culture. We plan to continue to seek opportunities to expand our product lines, customer base, distribution network, and technical talent through acquisitions in the machine vision industry.

Products

Cognex offers a full range of machine vision systems and sensors, vision software, and industrial image-based barcode readers designed to meet customer needs at different performance and price points. Our products range from low-cost vision sensors that conduct simple presence/absence inspections, to deep learning solutions that

solve complex applications with unpredictable defects and deviations. Our products also have a variety of physical forms, depending upon the user's needs. For example, customers can purchase vision software to use with their own camera and processor, or they can purchase a standalone unit that combines camera, processor, and software into a single package.

Vision Systems and Sensors

Vision systems combine smart cameras and software to perform a wide range of inspection tasks including part location, identification, measurement, assembly verification, and robotic guidance. Vision sensors deliver an easy-to-use, low-cost, reliable solution for simple pass/fail inspections, such as checking the presence and size of parts. In-Sight® vision systems and sensors, which includes 2D, 3D, alignment, and deep learning models, meet various price and performance requirements for factory automation customers. Our newest deep learning systems introduced in 2020 automate and solve complex inline inspections that typically require human judgment for defect detection, optical character recognition (OCR), assembly verification, or classification.

Vision Software

Vision software offers customers the flexibility of the Cognex vision tools library to use with the cameras, frame grabbers, and peripheral equipment of their choice. Cognex VisionPro® software offers an extensive suite of patented vision tools for advanced programming, while Cognex Designer™ allows customers to build complete vision applications with the simplicity of a graphical, flowchart-based programming environment. Cognex Deep Learning software solves difficult applications that are too complicated and time-consuming to program and maintain with traditional machine vision rule-based algorithms.

Industrial Image-Based Barcode Readers

Cognex image-based barcode readers quickly and reliably read 1D, 2D, and direct part mark (DPM) codes found in nearly every industry including automotive, consumer products, medical-related, and logistics. The DataMan® product line, which includes fixed-mount, handheld, and mobile models, as well as barcode verifiers, help organizations optimize performance, increase throughput, and control traceability.

Research, Development, and Engineering

Cognex engages in research, development, and engineering (RD&E) to enhance our existing products and to develop new products and functionality to address market opportunities. In addition to internal research and development efforts, we intend to continue our strategy of gaining access to new technology through strategic relationships and acquisitions where appropriate.

RD&E expenses as a percentage of revenue were 16% in 2020, 16% in 2019, and 14% in 2018. We believe that a continued commitment to RD&E activities is essential in order to maintain or achieve product leadership with our existing products and to provide innovative new product offerings, as well as to provide engineering support for large customers. In addition, we consider our ability to accelerate time to market for new products to be critical to our revenue growth. Therefore, we expect to continue to make significant RD&E investments in the future, and intend to continue our product development plans during periods of lower revenue levels. At any point in time, we have numerous research and development projects underway.

We rely on the technical expertise, creativity, and knowledge of our personnel, and therefore, we utilize patent, trademark, copyright, and trade secret protection to maintain our competitive position and protect our proprietary rights in our products and technology. While our intellectual property rights are important to our success, we believe that our business as a whole is not materially dependent on any particular patent, trademark, copyright, or other intellectual property right.

Manufacturing and Order Fulfillment

Cognex's products are manufactured utilizing a turnkey operation whereby the majority of component procurement, system assembly, and initial testing are performed by third-party contract manufacturers. Cognex's primary contract manufacturer is located in Indonesia. The contract manufacturers use specified components sourced from a vendor list approved by Cognex and assembly/test documentation created and controlled by Cognex. Certain components are presently sourced from a single vendor that is selected based on price and performance considerations. In the event of a supply disruption from a single-source vendor, these components may be purchased from alternative vendors.

After the completion of initial testing, a fully-assembled product from the contract manufacturers is routed to our distribution centers in Cork, Ireland or Natick, Massachusetts, USA, where trained Cognex personnel load Cognex software onto the product and perform quality control procedures. Fully-configured finished products for customers in the Americas, with the exception of certain products stocked locally in Mexico, are then shipped from our Natick,

Massachusetts distribution center, while finished products for customers outside of the Americas are shipped from our Cork, Ireland distribution center. In 2020, the Company began stocking certain fully-configured finished products in its Mexico facility in order to provide faster delivery to local customers.

Sales Channels and Support Services

Cognex sells its products through a worldwide direct sales force that focuses on the development of strategic accounts that generate or are expected to generate significant sales volume, as well as through a global network of distribution and integration partners. Our distribution partners provide sales and local support to help Cognex reach the many prospects for our products in factories around the world, and our integration partners are experts in vision and complementary technologies that can provide turnkey solutions for complex automation projects using vision. Sales engineers call directly on targeted accounts, with the assistance of application engineers, and manage the activities of our distribution and integration partners within their territories in order to provide an advantageous sales model for our products.

Sales to customers based outside of the United States represented approximately 65% of our total revenue in 2020, with approximately 26% from customers based in Europe, 21% from customers based in Greater China, and 18% from customers based in other regions outside the United States. Sales to customers based in Europe are denominated in Euros and U.S. Dollars, sales to customers based in Greater China are denominated in Yuan for sales within Mainland China and U.S. Dollars in other territories, and sales to customers based in other regions are denominated in U.S. Dollars, Japanese Yen, Korean Won, and Mexican Pesos.

Cognex's service offerings represent less than 10% of our total revenue and include maintenance and support, consulting, and training services. Maintenance and support programs include hardware support programs that entitle customers to have failed products repaired, as well as software support programs that provide customers with application support and software updates to the latest software releases. Application support is provided by technical support personnel located at Cognex regional offices, as well as by field service engineers that provide support at the customer's production site. We provide consulting services that range from a specific area of functionality to a completely integrated installed application. Training services include a variety of product courses that are available at our offices worldwide, at customer facilities, and online.

Human Capital

At Cognex, we refer to our employees as "Cognoids." As of December 31, 2020, Cognex employed 2,055 Cognoids, including 1,149 in sales, marketing, and service activities; 537 in research, development, and engineering; 164 in manufacturing and quality assurance; and 205 in information technology, finance, and administration. Of our 2,055 Cognoids, 1,247 are based outside of the United States. We have not experienced any work stoppages due to labor disputes. We believe that our employee relations are good.

We have a strong and unique corporate culture to guide the actions and behaviors of our Cognoids. Our culture is defined by our ten values - *Customer First, Excellence, Perseverance, Enthusiasm, Creativity, Pride, Integrity, Recognition, Sharing, and Fun* - and is represented by our motto - *Work Hard, Play Hard, Move Fast*. We believe our culture enables us to attract and retain smart, energetic, and creative talent, and is critical to our ability to execute on our operating plans and strategic initiatives. To preserve and enhance our culture, we have a global team of Cognoids who serve as *Ministers of Culture* and are led by our Chief Culture Officer, Robert J. Shillman, our Founder and Chairman of the Board of Directors.

We have a robust talent development process that focuses on identifying and developing high-potential employees, as well as succession planning for key positions. Our compensation programs are based on pay-for-performance, with a greater percentage of total compensation tied to variable incentive programs, such as performance-based bonuses and stock-based awards, as Cognoids advance to more senior positions.

Regulatory Compliance

Cognex's capital expenditures, earnings, and competitive position are not materially affected by compliance with federal, state, and local environmental provisions which have been enacted or adopted to regulate the distribution of materials into the environment.

Available Information

Cognex maintains a website at www.cognex.com. We make available, free of charge, on our website in the "Company" section under the caption "Investor Information" followed by "Financial Reports" and then "SEC Filings," our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including exhibits, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after such reports are electronically filed

with, or furnished to, the SEC. Cognex's reports filed with, or furnished to, the SEC are also available at the SEC's website at www.sec.gov. Information contained on our website is not a part of, or incorporated by reference into, this Annual Report on Form 10-K.

ITEM 1A: RISK FACTORS

The risks and uncertainties described below are not the only ones that we face. Additional risks and uncertainties that we are unaware of, or that we currently deem immaterial, also may become important factors that affect our company in the future. If any of these risks were to occur, our business, financial condition, or results of operations could be materially and adversely affected. This section includes or refers to certain forward-looking statements. We refer you to the explanation of the qualifications and limitations on such forward-looking statements, appearing under the heading "Forward-Looking Statements" in Part II - Item 7 of this Annual Report on Form 10-K.

Risks Related to the COVID-19 Pandemic

Our business has been, and is expected to continue to be, adversely affected by the COVID-19 pandemic.

The COVID-19 (also referred to as "coronavirus") outbreak developed into a global pandemic in March 2020. The COVID-19 outbreak had a modest adverse impact on our business in the first quarter of 2020, primarily near the end of the quarter. This impact expanded and accelerated into the second quarter of 2020, as we noted lower demand for our products in certain industries, additional disruptions to our supply chain, longer customer delivery times, higher delivery costs, and further shutdowns of customer facilities. These conditions triggered a review of long-lived assets that resulted in intangible asset impairment charges of \$19,571,000 and excess inventory exposures that resulted in charges of \$7,718,000 in the second quarter of 2020. Although the impact of these conditions on our business to date appears to have been most severe in the second quarter of 2020, certain industries we serve continue to be adversely impacted by the global pandemic, most notably the automotive industry, which was our largest market in 2019. Furthermore, the impact of the pandemic could worsen in any of our major industries or geographies in the future, resulting in deteriorating economic and business conditions and adverse effects on our business, results of operations, and financial condition. We face several risks and uncertainties related to the impact of COVID-19 on our business. It is difficult for us to quantify the duration and severity of this impact due to many factors beyond our control and knowledge, including changing governmental regulations and the scope and duration of social distancing and commercial restrictions. These risks and uncertainties include, among others:

- our customers may further delay or cancel orders for our products,
- customer facilities may be shut down for extended periods of time, resulting in our inability to deliver products, perform on-site services, or make on-site sales visits,
- our customers may not have sufficient cash flow or access to financing to purchase our products,
- our customers may not pay us within agreed upon terms or may default on their payments altogether,
- our vendors may be unable to fulfill their delivery obligations to us within acceptable lead times for extended periods of time, which may force us to seek alternative sources of supply at higher costs,
- our contract manufacturers may experience interruptions that result in delivery delays and higher costs for our products,
- we may experience manufacturing delays and higher costs in the event of a supply disruption from a single-source vendor,
- we may experience extended customer delivery times and higher delivery costs,
- our distribution centers in Natick, Massachusetts and Cork, Ireland may have difficulty staffing employees and contractors, be forced to operate with a significantly reduced workforce, or be forced to shut down altogether due to government regulations or health concerns,
- our online sales and marketing efforts may be less effective than face-to-face activities, resulting in fewer new customers and lower sales from new products,
- challenges involved in working from home may delay certain of our new product introductions,
- lower demand for our products may result in charges for excess and obsolete inventory if we are unable to sell inventory that is either already on hand or committed to purchase,
- lower cash flows may result in impairment charges for acquired intangible assets,

- our investment portfolio of debt securities may be exposed to material credit losses, and
- a decline in our stock price may make stock-based awards a less attractive form of compensation and a less attractive form of retention for our employees.

These risks and uncertainties could have a material adverse effect on the continuity of our business, results of operations, and financial condition. This situation is continuously changing and additional impacts on our business may arise of which we are not currently aware.

Our restructuring activities may result in disruption to our business.

In May 2020, our Board of Directors approved a restructuring plan intended to reduce our operating costs, optimize our business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a workforce reduction of approximately 8% and office closures. These restructuring actions, together with other actions to reduce the Company's overall costs, were designed to generate an aggregate annualized cost savings of approximately \$25 million versus our original planned cost structure. As of December 31, 2020, the majority of these actions have been completed to achieve the annualized cost savings from this restructuring plan. Furthermore, as of the date of this report, business levels have improved from our financial projections in May 2020, when we believe the impact of the pandemic on our business was most severe. While we do not anticipate further restructuring actions, we continue to tightly manage our operating costs and optimize our business model. Although we expect to continue to make investments in strategic areas, the restructuring actions we completed in 2020 may nevertheless negatively impact programs we believe are important to the long-term success of our company, such as the ability to accelerate time to market for new products. In addition, our ability to provide a high level of service to our customers may be negatively impacted by these actions, particularly in regions where we have downsized our operations.

Risks Related to Revenue Concentrations

The loss of, or significant curtailment of purchases by, two large customers could have an adverse effect on our business.

In 2020, the Company had two large customers in the consumer electronics and logistics industries that each represented a significant portion of revenue in their respective industries and each represented over 10% of our total revenue in 2020. Our total revenue and quarterly timing of revenue is impacted by the purchasing cycles of these two large customers.

Large customers may divert management's attention from other operational matters and pull resources from other areas of the business, resulting in potential loss of revenue from other customers. In addition, large customers may receive preferred pricing and a higher level of support, which may lower our gross margin percentage. Furthermore, in certain instances due to long supplier lead times, we may purchase inventory in advance of receipt of a customer purchase order, which exposes us to an increased risk of excess or obsolete inventory and resulting charges. The loss of, or further curtailment of purchases by, any one or more of our larger customers could have a material adverse effect on our operating results.

A continued downturn in the automotive industry may further adversely affect our business.

Revenue from customers in the automotive industry, which was our largest market in 2019, declined by approximately 20% in 2020. It has been reported that the automotive industry has been significantly and adversely impacted by the COVID-19 pandemic, as consumer demand for new automobiles has been curtailed and investment in new electric vehicle technology has been delayed. Furthermore, the surge in demand for electronics during the pandemic has resulted in chip shortages that may constrain vehicle production and delay a recovery of our business in this industry. Despite the decline in revenue from customers in the automotive industry in 2020, automotive revenue continues to represent a significant portion of our total revenue, and we are dependent upon revenue from customers in this industry to achieve our longer-term, high-margin growth plans. As a result, our operating results could continue to be materially and adversely affected by further declining sales in this industry.

Risks Related to our Supply Chain

The failure of a key supplier to deliver quality product in a timely manner or our inability to obtain components for our products could adversely affect our operating results.

A significant portion of our products is manufactured by a third-party contractor located in Indonesia. This contract manufacturer has agreed to provide Cognex with termination notification periods and last-time-buy rights, if and when that may be applicable. We rely upon our contract manufacturers to provide quality product. We engage in extensive product quality programs and processes, including actively monitoring the performance of our third-party manufacturers; however, we may not detect all product quality issues through these programs and processes. We also rely upon our contract manufacturers to meet delivery schedules.

We have in the past experienced, and may continue in the future to experience, delays in the delivery of our finished products from our contract manufacturers due to the impact of the COVID-19 pandemic or other factors. Although our primary contract manufacturer has the ability to shift production to plants in other regions when operations in its Indonesia plant are disrupted, production and test equipment located at the Indonesia plant that is unique to the manufacture of Cognex products creates practical challenges to doing so in a timely manner. Furthermore, this contract manufacturer sources components for our finished products from China and other regions that experienced interruptions in production and delivery during the pandemic as factories were closed. These challenges in obtaining components and maintaining production have resulted in delays, and may continue to result in delays, in meeting our delivery schedules that, in turn, result in delayed deliveries to our customers past their requested delivery date and negatively impact customer satisfaction.

Certain components are presently sourced from a single vendor that is selected based on price and performance considerations. In the event of a supply disruption from a single-source vendor, these components may be purchased from alternative vendors, which may result in manufacturing delays based on the lead time of the new vendor and higher costs. Certain key electronic and mechanical components that are purchased from strategic suppliers, such as processors or imagers, are fundamental to the design of Cognex products. A disruption in the supply of these key components, such as a last-time-buy announcement, natural disaster, financial bankruptcy, or other event, may require us to purchase a significant amount of inventory at unfavorable prices resulting in lower gross margins and higher risk of carrying excess inventory. If we are unable to secure adequate supply from alternative vendors, we may have to redesign our products, which may lead to a delay in manufacturing and a possible loss of sales. Furthermore, the surge in demand for electronics during the COVID-19 pandemic has resulted in chip shortages that may impact the supply for our products. Although we are taking certain actions to mitigate supply risk, an interruption in, termination of, or material change in the purchase terms of any key components could have a material adverse effect on our operating results.

Our failure to effectively manage product transitions or accurately forecast customer demand could result in excess or obsolete inventory and resulting charges.

Because the market for our products is characterized by rapid technological changes, we frequently introduce new products with improved ease-of-use, improved hardware performance, additional software features and functionality, or lower cost that may replace existing products. Among the risks associated with the introduction of new products are difficulty predicting customer demand and effectively managing inventory levels to ensure adequate supply of the new product and avoid excess supply of the legacy product.

We may strategically enter into non-cancelable commitments with vendors to purchase materials for our products in advance of demand to take advantage of favorable pricing, address concerns about the availability of future supplies, or build safety stock to help ensure customer shipments are not delayed should we experience higher than anticipated demand for materials with long lead times. These measures to purchase inventory may expose us to an increased risk of excess or obsolete inventory and resulting charges if actual demand is lower than anticipated.

Deteriorating global economic conditions from the COVID-19 pandemic resulted in lower projected sales of excess inventories, for which the company recorded provisions totaling \$7,718,000 in the second quarter of 2020. Our failure to effectively manage product transitions or accurately forecast customer demand, in terms of both volume and configuration, has led to, and may again in the future lead to, an increased risk of excess or obsolete inventory and resulting charges.

Our products may contain design or manufacturing defects, which could result in reduced demand, significant delays, or substantial costs.

If flaws in either the design or manufacture of our products were to occur, we could experience a rate of failure in our products that could result in significant delays in shipment and material repair or replacement costs. Our release-to-market process may not be robust enough to detect significant design flaws or software bugs. While we engage in product quality programs and processes, including actively monitoring and evaluating the quality of our component suppliers and contract manufacturers, these actions may not be sufficient to avoid a product failure rate that results in:

- substantial delays in shipment,
- significant repair or replacement costs,
- product liability claims or lawsuits, particularly in connection with life sciences customers or other high-risk end-user industries, or
- potential damage to our reputation.

Any of these results could have a material adverse effect on our operating results.

Risks Related to Execution of our Business Strategy

If we fail to attract and retain key talent and maintain our unique corporate culture, our business and operating results could suffer.

To support our growth and execute on our operating plans and strategic initiatives, we must effectively attract, train, develop, motivate, and retain skilled employees, while maintaining our unique corporate culture. During the COVID-19 pandemic, many of our employees have worked remotely from their homes to comply with governmental regulations, with the primary exception of our distribution center employees who have remained on-site in shifts throughout the pandemic to deliver products to essential businesses. While we have been able to effectively conduct most business activities in this manner, these conditions have made it more challenging to maintain our collaborative corporate culture. When regulatory and health conditions allow, we anticipate returning to a more collaborative, largely on-site work environment. If work-from-home conditions continue longer than anticipated or we are unable to successfully bring people back into the office once safe to do so, the company's business and ability to execute its plans could be adversely affected in a material way.

We are highly dependent upon the management and leadership of our senior management team. Although we have many experienced and qualified senior managers, the loss of key personnel could have a material adverse effect on our company.

We use stock options and restricted stock units (RSUs) as a key component of our employee compensation program in order to align employee interests with the interests of our shareholders, provide competitive compensation packages, and encourage employee retention. Our stock price volatility may cause periods of time during which option exercise prices might be less than the sale price of our common stock or the value of RSUs might be less competitive, which may lessen the retentive attributes of these awards. We are limited as to the number of stock options and RSUs that we may grant under our stock plans, and we are unsure how effective different stock-based awards with different vesting schedules will be to retain key talent. Accordingly, we may find it difficult to attract, retain, and motivate employees, and any such difficulties could materially adversely affect our business.

If we fail to effectively manage our growth, our business and operating results could suffer.

We have in the past experienced, and may again in the future experience, periods of rapid revenue growth due to such factors as the level of investment from key customers or the impact of general economic recoveries on automation spending. The growth and expansion of our business and product offerings place significant demand on our employees and, in particular, our management team. This growth may require significant additional resources, which may not scale in a cost-effective manner or may negatively impact our customers' experience. We may not be able to hire and train new employees and contractors quickly enough to meet our business needs. If we fail to quickly adapt our hiring and training plans to our business levels or effectively execute on our hiring plans, our efficiency and ability to meet our operating goals could suffer. Furthermore, employee productivity, morale, and retention could suffer, which may have a material adverse effect on our business and operating results.

Our inability to achieve growth in revenue and profits from our logistics business may negatively impact our operating results.

We are pursuing applications to automate distribution processes in the logistics industry including applications for retail distribution and ecommerce to scan, track, and sort goods through distribution centers. Our future growth plans are dependent upon growth in this industry. Our gross margin percentage in this industry is currently lower than our average gross margin percentage, as certain sales in this industry are for application-specific customer solutions that include deployment services. Our strategy is to shift our focus as the logistics market matures from Cognex providing deployment services to utilizing partner integrators to provide these services for end users, which we believe will result in improved gross margins that will be more in line with our overall average over time. In addition, we are making significant investments in engineering and sales to further develop our logistics business. Failure to generate revenue in this industry in the amounts and at the gross margins anticipated may have a material adverse impact on our revenue growth and operating results.

Our failure to introduce new products in a successful and timely manner could result in the loss of our market share and a decrease in our revenues and profits.

The market for our products is characterized by rapidly changing technology. Accordingly, we believe that our future success will depend upon our ability to accelerate time-to-market for new products with improved functionality, ease-of-use, performance, and price. There can be no assurance that we will be able to introduce new products in accordance with scheduled release dates or that new products will achieve market acceptance. Our inability to keep pace with the rapid rate of technological change in the high-technology marketplace could have a material adverse effect on our operating results.

Product development is often a complex, time-consuming, and costly process involving significant investment in research and development with no assurance of return on investment. Our strong balance sheet allows us to continue to make significant investments in research, development, and marketing for new products and technologies. Research is by its nature speculative and the ultimate commercial success of a product depends upon various factors, many of which are not under our control. We may not achieve significant revenue from new product investments for a number of years, if at all. Moreover, new products, if introduced, may not generate the gross margins that we have experienced historically.

Our failure to properly manage the distribution of our products and services could result in the loss of revenues and profits.

We utilize a direct sales force, as well as a network of distribution and integration partners, to sell our products and services. Successfully managing the interaction of our direct and indirect sales channels to reach various potential customers for our products and services is a complex process. In addition, our reliance upon indirect selling methods may reduce visibility to demand and pricing issues.

Finished products for customers in the Americas, with the exception of certain products stocked locally in Mexico, are shipped from our Natick, Massachusetts distribution center, while finished products for customers outside of the Americas are shipped from our Cork, Ireland distribution center. In 2020, we began stocking certain fully-configured finished products in our Mexico facility in order to provide faster delivery to local customers. To support the expansion of our business internationally, we may decide to make changes to our operating structure in other countries in the future when we believe these changes will make us more competitive by offering faster delivery, importation services, and/or local currency sales. These new operating models may require changes in legal structures, business systems, and business processes that may result in significant business disruption and negatively impact our customers' experience, resulting in loss of sales. Furthermore, as we assume more responsibility for the importation of our products into other countries, we face higher compliance risk to adhering to local regulatory and trade requirements. Finally, the local stocking of finished products in countries outside of our primary distribution centers may result in higher costs and increased risk of excess or obsolete inventory associated with maintaining the appropriate level and mix of stock in multiple inventory locations, resulting in lower gross margins.

Our go-to-market strategy has distinct risks and costs, and therefore, our failure to implement the most advantageous balance in the sales and operating model for our products and services could adversely affect our revenue and profitability.

Increased competition may result in decreased demand or prices for our products and services.

The machine vision market is highly fragmented and competitive. Our competitors include other vendors of machine vision systems, controllers, and components; manufacturers of image processing systems, sensors, and components; and system integrators. We may also compete with internal engineering departments of current or prospective customers, as well as open source tools available for free by various companies. In recent years, we have encountered increased competition from low-cost vision providers in China. Any of these competitors may have greater financial and other resources than we do. We may not be able to compete successfully in the future and our investments in research and development, sales and marketing, and support activities may be insufficient to enable us to maintain our competitive advantage. In addition, competitive pressures could lead to price erosion that could have a material adverse effect on our gross margins and operating results.

Implementation of our acquisition strategy may not be successful, which could affect our ability to increase our revenue or profitability and result in the impairment of acquired intangible assets.

In 2019, we completed our largest acquisition to date when we acquired Sualab Co., Ltd., a provider of deep learning-based vision software based in Korea. Our business may be negatively impacted by risks related to this acquisition, as well as other smaller acquisitions we have completed in the past few years, and future acquisitions that we may make. These risks include, among others:

- the diversion of management's attention from other operational matters,
- difficulties or delays integrating personnel, operations, technologies, products, and systems of the acquired business, particularly in locations far from the company's headquarters,
- the inability to realize expected synergies or other benefits resulting from the acquisition,
- the failure to retain key talent,
- the impairment of acquired intangible assets resulting from lower-than-expected cash flows from the acquired assets,
- the inability to protect and secure acquired intellectual property or confidential information,
- difficulties or delays completing the development of acquired in-process technology,
- the failure to retain key customers, and
- the failure to achieve projected sales of acquired products.

Acquisitions are inherently risky and the inability to effectively manage these risks could have a material adverse effect on our operating results.

Business system disruptions may adversely affect our business.

In 2021, the Company is making significant investments in business systems related to our sales processes, including systems to help our sales team more efficiently manage customer relationships and sales opportunities. We expect these new sales systems to be placed into service in the first quarter of 2022. Implementing new business systems requires a significant investment of time and money, and may divert management's attention from other operational matters. The implementation of a new system and changes to associated business processes, particularly those that are customer-facing, may result in significant business disruption and negatively impact our customers' experience, resulting in loss of sales. The Company intends to continue to make IT-related investments to improve its management information systems and support the expansion of our business internationally. Any disruption occurring with our business systems may have a material adverse effect on our operating results.

Risks Related to Information Technology and Intellectual Property

Information security breaches may adversely affect our business.

We rely on our information technology infrastructure and management information systems to effectively run our business. We may be subject to information security breaches caused by hacking, malicious software, or acts of vandalism or terrorism. Our security measures or those of our third-party service providers may not detect or prevent such breaches. Any such compromise to our information security could result in theft of our intellectual property, including software source code, a misappropriation of our cash or other assets, an interruption in our operations, the unauthorized publication of our confidential business or proprietary information, the unauthorized release of customer, vendor, or employee data, the violation of privacy or other laws, and the exposure to litigation or regulatory penalties, any of which could harm our business and operating results. We have experienced cybersecurity incidents in the past that have included malware, viruses, phishing attacks, and intrusion attempts to Cognex's internet-facing systems. To date, these incidents have not had a material impact on our operations or financial results; however, future cybersecurity incidents could have a material adverse effect on our business, financial condition, or operating results.

If we fail to successfully protect our intellectual property, our competitive position and operating results could suffer.

We rely on our proprietary software technology and hardware designs, as well as the technical expertise, creativity, and knowledge of our personnel to maintain our position as a leading provider of machine vision products. Software piracy and reverse engineering, specifically from companies in Russia and China, may result in counterfeit products that are misrepresented in the market as Cognex products or pirated products that contain stolen technology such as software source code. Although we use a variety of methods to protect our intellectual property, we rely most heavily on patent, trademark, copyright, and trade secret protection, as well as non-disclosure agreements with customers, suppliers, employees, and consultants. We also attempt to protect our intellectual property by restricting access to our proprietary information by a combination of technical and internal security measures. These measures, however, may not be adequate to:

- protect our proprietary technology,
- protect our patents from challenge, invalidation, or circumvention, or
- ensure that our intellectual property will provide us with competitive advantages.

Our pending and future patent applications may not issue as patents or, if issued, may not issue in a form that will provide us with any meaningful protection or any competitive advantage. Even if issued, existing or future patents may be challenged, narrowed, invalidated, or circumvented, which could limit our ability to stop competitors from developing and marketing similar products or limit the length of patent protection we may have for our products. Furthermore, other companies may design around technologies we have patented, licensed, or developed. Moreover, changes in patent laws or their interpretation in the United States and other countries could also diminish the value of our intellectual property or narrow the scope of our patent protection. In addition, the legal systems of certain countries do not favor the aggressive enforcement of patents, and the laws of foreign countries may not protect our rights to the same extent as the laws of the United States. As a result, our patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar to ours. Any of these adverse circumstances could have a material adverse effect on our operating results.

Risks Related to Financial Matters

We are at risk for impairment charges with respect to our investments or acquired intangible assets, which could have a material adverse effect on our results of operations.

As of December 31, 2020, we had approximately \$498 million of debt securities in our investment portfolio. These debt securities are reported at fair value, with unrealized gains and losses, net of tax, included in shareholders' equity as other comprehensive income (loss) since these securities are designated as available-for-sale securities. As of December 31, 2020, our portfolio of debt securities had an unrealized gain of \$5,690,000, and no unrealized losses. However, at any point in time, we may hold securities in an unrealized loss position. Management monitors its debt securities that are in an unrealized loss position to determine whether a loss exists related to the credit quality of the issuer that would be reported in current operations. It is our policy to invest in investment-grade debt securities that minimize our exposure to credit losses.

As of December 31, 2020, we had approximately \$16 million in acquired intangible assets, consisting primarily of acquired technologies and customer relationships. These assets are susceptible to changes in fair value due to a decrease in the historical or projected cash flows from the use of these assets, which may be negatively impacted by economic trends. Deteriorating global economic conditions from the COVID-19 pandemic triggered a review of long-lived assets for potential impairment, which resulted in intangible asset impairment charges totaling \$19,571,000 in the second quarter of 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab. A further decline in the cash flows generated by these or other intangible assets may result in future impairment charges.

If we determine that any of these investments or intangible assets are impaired, we would be required to take a related charge to earnings that could have a material adverse effect on our results of operations.

We may have additional tax liabilities, which could adversely affect our operating results and financial condition.

We are subject to taxes in the United States, as well as in numerous foreign jurisdictions, including income taxes, indirect taxes such as value-added taxes (VAT), and payroll-related taxes and withholding obligations. Significant judgment is required in determining our worldwide provision for income and other taxes. In the ordinary course of business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are regularly under audit by tax authorities and may be assessed additional taxes, penalties, fees or interest, which could have an adverse effect on our financial position, liquidity, or results of operations.

Although we believe our tax positions are reasonable, the final determination of tax audits and any related litigation could be materially different than that which is reflected in our financial statements and could have a material adverse effect on our income tax provision, net income, or cash flows in the period in which the determination is made.

Fluctuations in foreign currency exchange rates and the use of derivative instruments to hedge these exposures could adversely affect our reported results, liquidity, and competitive position.

We face exposure to foreign currency exchange rate fluctuations, as a significant portion of our revenues, expenses, assets, and liabilities are denominated in currencies other than the functional currencies of our subsidiaries or the reporting currency of our company, which is the U.S. Dollar. In certain instances, we utilize forward contracts to hedge against foreign currency fluctuations. These contracts are used to minimize foreign currency gains or losses, as the gains or losses on the derivative are intended to offset the losses or gains on the underlying exposure. We do not engage in foreign currency speculation. If the counterparty to any of our hedging arrangements experiences financial difficulties, or is otherwise unable to honor the terms of the contract, we may experience material losses.

The success of our foreign currency risk management program depends upon forecasts of transaction activity denominated in various currencies. To the extent that these forecasts are overstated or understated during periods of currency volatility, we could experience unanticipated foreign currency gains or losses that could have a material impact on our results of operations. In addition, our failure to identify new exposures and hedge them in an effective manner may result in material foreign currency gains or losses. Furthermore, our ability to hedge the Chinese Yuan is limited, which has resulted in unhedged exposures. To date, foreign currency gains and losses related to the Chinese Yuan have been immaterial to our total results; however, further fluctuations in this currency may result in material foreign currency gains or losses in the future.

In addition to the U.S. Dollar, a significant portion of our revenues and expenses are denominated in the Euro and Chinese Yuan, and to a lesser extent the Japanese Yen, Korean Won, and Mexican Peso. We estimate that approximately 45% of our sales in 2020 were invoiced in currencies other than the U.S. Dollar, and we expect sales denominated in foreign currencies to continue to represent a significant portion of our total revenue. While we also have expenses denominated in these same foreign currencies, the impact on revenues has historically been, and is expected to continue to be, greater than the offsetting impact on expenses. Therefore, in times when the U.S. Dollar strengthens in relation to these foreign currencies, we would expect to report a net decrease in operating income. Conversely, in times when the U.S. Dollar weakens in relation to these foreign currencies, we would expect to report a net increase in operating income. Thus, changes in the relative strength of the U.S. Dollar may have a material impact on our operating results.

General Risk Factors

Unfavorable global economic conditions may negatively impact our operating results.

Our revenue levels are impacted by global economic conditions, as we have a significant business presence in many countries throughout the world. Economic downturns may cause industrial companies to delay or reduce spending for automation projects, including those with machine vision, amid weaker general manufacturing confidence and heightened uncertainty around global trade. When global economic conditions are unfavorable, our revenue and our ability to generate operating profits could be materially adversely affected.

As a result of global economic conditions, our business is subject to the following risks, among others:

- our customers may not have sufficient cash flow or access to financing to purchase our products,
- our customers may not pay us within agreed upon terms or may default on their payments altogether,
- our vendors may be unable to fulfill their delivery obligations to us in a timely manner,
- lower demand for our products may result in charges for excess and obsolete inventory if we are unable to sell inventory that is either already on hand or committed to purchase,
- lower cash flows may result in impairment charges for acquired intangible assets or goodwill,
- a decline in our stock price may make stock-based awards a less attractive form of compensation and a less effective form of retention for our employees, and
- the trading price of our common stock may be volatile.

As of December 31, 2020, the Company had approximately \$767 million in cash and investments. In addition, Cognex has no long-term debt and we do not anticipate needing debt financing in the near future. We believe that our strong cash position puts us in a relatively good position to weather economic downturns. Nevertheless, our operating results have been materially adversely affected in the past, and could be materially adversely affected in the future, as a result of unfavorable economic conditions and reduced capital spending by manufacturers worldwide.

Economic, political, and other risks associated with international sales and operations could adversely affect our business and operating results.

In 2020, approximately 65% of our revenue was derived from customers located outside of the United States. We anticipate that international sales will continue to account for a significant portion of our revenue. In addition, we source components from suppliers located outside of the United States, including China, and utilize third-party contract manufacturers, primarily located in Indonesia, to assemble certain of our products. We intend to continue to expand our sales and operations outside of the United States and expand our presence in international emerging markets. As a result, our business is subject to the risks inherent in international sales and operations, including, among other things:

- various regulatory and statutory requirements,

- difficulties in injecting and repatriating cash,
- export and import restrictions,
- trade tariffs,
- transportation delays,
- product certification requirements,
- employment regulations and local labor conditions,
- difficulties in staffing and managing foreign sales operations,
- instability in economic or political conditions,
- public health epidemics or pandemics, such as the COVID-19 pandemic,
- difficulties protecting intellectual property,
- business systems connectivity issues, and
- potentially adverse tax consequences.

Any of these factors could have a material adverse effect on our operating results. In recent years, trade tariffs imposed by the United States on certain components imported from Chinese suppliers resulted in higher costs for our products. To date, these cost increases have been immaterial to our total cost of goods sold and primarily relate to components sourced in China for new products that we build in the United States in their infancy before they are moved to our contract manufacturer in Indonesia; however, cost increases as a result of trade tariffs could become material in the future.

Trade tariffs have also had an indirect impact on the economic climate in China, which in turn, has had a negative impact on the Company's revenue from customers based in China. Further escalations of trade conflicts between the United States and China, or other countries where Cognex has operations, may have a further adverse effect on our revenue. In addition to trade tariffs, United States export controls that place restrictions on the exportation of our products or a subset of our products, including, without limitation, any applicable regulations promulgated by the U.S. Commerce Department's Bureau of Industry and Security, have had a negative impact on our revenue from customers based in China. To date, the impact of these restrictions has been immaterial to our total revenue; however, further or continued restrictions could have a material adverse effect on our operating results in the future.

Additionally, we are subject to applicable anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, and similar anti-corruption and anti-kickback laws in the jurisdictions in which we operate. These laws generally prohibit offering, promising, giving, or authorizing others to provide anything of value, either directly or indirectly, to a government official or private party in order to influence official action or otherwise gain an unfair business advantage, such as to obtain or retain business. Particularly as a result of our global operations, including in developing countries, and our growing international sales force, our relationships with our customers and resellers could expose us to liability under these laws. Violations of anti-corruption laws may result in severe civil and criminal penalties for noncompliance. Even an unsuccessful challenge or investigation into our practices is costly to defend, and could cause adverse publicity, and thus could have a material adverse effect on our business, financial condition, or operating results.

Finally, Brexit, or the withdrawal of the United Kingdom (U.K.) from the European Union, resulted in a new trade agreement between these two parties that became effective on January 1, 2021. Revenue from customers in the U.K. represented approximately 1% of our total revenue in 2020. Under the new trade process, our U.K. customers have experienced, and may continue to experience, delivery delays as additional customs documents are required to complete delivery.

Our Company may be subject to time-consuming and costly litigation.

From time to time, we may be subject to various claims and lawsuits by competitors, shareholders, customers, distributors, patent trolls, former employees, or other parties arising in the ordinary course of business, including lawsuits charging patent infringement, or claims and lawsuits instituted by us to protect our intellectual property and confidential information or for other reasons. These matters can be time consuming, divert management's attention and resources, and cause us to incur significant expenses. Furthermore, the results of any of these actions may have a material adverse effect on our operating results.

ITEM 1B: UNRESOLVED STAFF COMMENTS

None

ITEM 2: PROPERTIES

In 1994, Cognex purchased and renovated a 100,000 square-foot building located in Natick, Massachusetts that serves as our corporate headquarters and is occupied by employees primarily in research, development, and engineering, manufacturing and quality assurance, and administration functions. In 1997, Cognex completed construction of a 50,000 square-foot addition to this building.

In 1995, Cognex purchased an 83,000 square-foot office building adjacent to our corporate headquarters that is occupied by employees primarily in sales, marketing, service, logistics, finance, and information technology functions.

In 1997, Cognex purchased a three and one-half acre parcel of land adjacent to our corporate headquarters. This land is being held for future expansion and is currently used as an Ultimate Frisbee Field for our Cognoids.

In 2007, Cognex purchased a 19,000 square-foot building adjacent to our corporate headquarters. This facility serves as the distribution center for customers in the Americas.

In 2014, Cognex purchased a 50,000 square foot building in Cork, Ireland where we had previously leased space for several years. This facility serves as the distribution center for customers outside of the Americas.

Cognex conducts certain of its operations in leased facilities. These lease agreements expire at various dates through 2030. Certain of these leases contain renewal options, retirement obligations, escalation clauses, rent holidays, and leasehold improvement incentives.

ITEM 3: LEGAL PROCEEDINGS

Various claims and legal proceedings generally incidental to the normal course of business are pending or threatened on behalf of or against the Company. While we cannot predict the outcome of these matters, we believe that any liability arising from them will not have a material adverse effect on our financial position, liquidity, or results of operations.

ITEM 4: MINE SAFETY DISCLOSURES

Not applicable.

ITEM 4A: INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table sets forth the names, ages, and titles of Cognex's executive officers as of December 31, 2020:

Name	Age	Title
Robert J. Shillman	74	Chairman of the Board of Directors and Chief Culture Officer
Robert J. Willett	53	President and Chief Executive Officer
Sheila M. DiPalma	54	Executive Vice President of Employee Services
Carl Gerst	53	Executive Vice President of Products and Platforms
Paul Todgham	44	Senior Vice President of Finance and Chief Financial Officer

Executive officers are elected annually by the Board of Directors. There are no family relationships among the directors and executive officers of the Company.

Dr. Shillman and Mr. Willett, who are both members of the Company's Board of Directors, have been employed by Cognex in their current positions for no less than the past five years.

Ms. DiPalma joined Cognex in 1992. She has served for more than 25 years in a series of increasingly responsible roles in the finance function, including six years as Cognex Treasurer, before transitioning to Employee Services in 2016. Prior to joining Cognex, Ms. DiPalma was a member of the audit firm PricewaterhouseCoopers. She holds a Bachelor of Science degree in Accounting from Boston College, a Master of Science degree in Taxation from Bentley College, and is a Certified Public Accountant.

Mr. Gerst joined Cognex in 1999. He worked in a number of product-focused roles before being promoted to Senior Vice President of the ID Products Business Unit in 2014. In 2020, Mr. Gerst was promoted to Executive Vice President of Vision and ID Products and his leadership role was expanded to include Vision Products and Global Marketing Communications. Prior to joining Cognex, Mr. Gerst held roles in engineering, sales, and product marketing for Hand Held Products (now Honeywell Imaging and Mobility), a leading supplier of Automatic Identification and Data Collection equipment. Mr. Gerst holds a Bachelor of Science degree in Electrical Engineering from Clarkson University and a Master in Business Administration from the Simon School of Business at the University of Rochester.

Mr. Todgham joined Cognex in March 2020. Prior to joining Cognex, Mr. Todgham spent six years at Levi Strauss & Company, where he held a range of senior leadership positions, including leading finance for the company's Global Supply Chain, Distribution, Merchandising, Planning, Design, and Marketing teams. He previously served as Vice President of Finance for Ross Stores, Inc., where he oversaw financial planning & analysis and treasury functions. Earlier in his career, Mr. Todgham worked at The Boston Consulting Group, advising clients in the technology and consumer sectors on issues of strategy, operations, and organization. Mr. Todgham holds a Master in Business Administration from Stanford University, a Master in Economics from the University of Cambridge, and a Bachelor of Arts degree in Applied Mathematics from Harvard University.

PART II

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

The Company's common stock is traded on The NASDAQ Stock Market LLC, under the symbol CGNX. As of January 31, 2021, there were approximately 650 shareholders of record of the Company's common stock. The Company believes the number of beneficial owners of the Company's common stock on that date was substantially greater.

In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. As of December 31, 2020, the Company repurchased 2,816,000 shares at a cost of \$121,348,000 under this program, including 1,215,000 shares at a cost of \$51,036,000 during 2020, leaving a remaining balance of \$78,652,000. On March 12, 2020, the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. Purchases under this March 2020 program will commence upon completion of the October 2018 program. The Company may repurchase shares under this program in future periods depending on a variety of factors, including, among other things, the impact of dilution from employee stock awards, stock price, share availability, and cash requirements. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

The following table sets forth information with respect to purchases by the Company of shares of its common stock during each fiscal month of the fourth quarter of 2020:

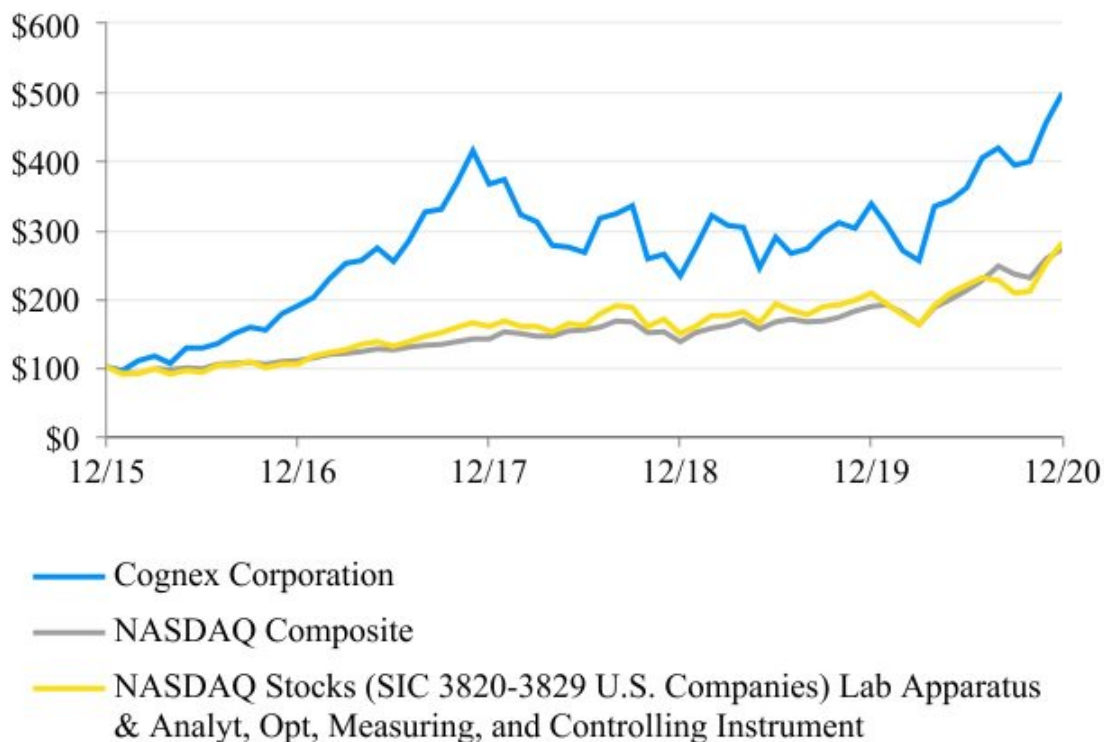
	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs
September 28 - October 25, 2020	—	\$ —	—	\$ 278,652,000
October 26 - November 22, 2020	—	—	—	278,652,000
November 23 - December 31, 2020	—	—	—	278,652,000
Total	—	\$ —	—	\$ 278,652,000

The information required by Item 5 of Form 10-K regarding equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report.

The Company's Board of Directors declared and paid cash dividends of \$0.050 per share in the first, second, and third quarters of 2019, and \$0.055 in the fourth quarter of 2019, as well as in the first, second, and third quarters of 2020. The dividend was increased to \$0.060 per share in the fourth quarter of 2020. Also, in the fourth quarter of 2020, an additional special cash dividend of \$2.00 per share was declared and paid. Total dividends amounted to \$390,508,000 in 2020, which included \$351,428,000 paid for the special cash dividend, \$35,124,000 in 2019, and \$31,865,000 in 2018. Future dividends will be declared at the discretion of the Company's Board of Directors and will depend upon such factors as the Board deems relevant, including, among other things, the Company's ability to generate positive cash flow from operations.

Set forth below is a line graph comparing the annual percentage change in the cumulative total shareholder return on the Company's common stock, based on the market price of the Company's common stock, with the total return on companies within the Nasdaq Composite Index and the Research Data Group, Inc. Nasdaq Lab Apparatus & Analytical, Optical, Measuring & Controlling Instrument (SIC 3820-3829 US Companies) Index (the "Nasdaq Lab Apparatus Index"). The performance graph assumes an investment of \$100 in each of the Company and the two indices, and the reinvestment of any dividends. The historical information set forth below is not necessarily indicative of future performance. Data for the Nasdaq Composite Index and the Nasdaq Lab Apparatus Index was provided to the Company by Research Data Group, Inc.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*



*\$100 invested on 12/31/2015 in stock or index, including reinvestment of dividends. Fiscal year ended December 31.

	12/15	12/16	12/17	12/18	12/19	12/20
Cognex Corporation	100.00	189.58	365.72	232.13	337.84	498.56
NASDAQ Composite	100.00	108.87	141.13	137.12	187.44	271.64
NASDAQ Stocks <i>(SIC 3820-3829 U.S. Companies) Lab Apparatus & Analyt, Opt, Measuring, and Controlling Instrument</i>	100.00	103.62	158.96	149.08	207.48	280.67

ITEM 6: SELECTED FINANCIAL DATA

	Year Ended December 31,				
	2020	2019	2018	2017	2016
	(In thousands, except per share amounts)				
Statement of Operations Data:					
Revenue	\$ 811,020	\$ 725,625	\$ 806,338	\$ 766,083	\$ 529,515
Cost of revenue (1)	206,421	189,754	206,052	187,289	131,070
Gross margin	604,599	535,871	600,286	578,794	398,445
Research, development, and engineering expenses (1)	130,982	119,427	116,445	99,205	78,269
Selling, general, and administrative expenses (1)	267,593	273,842	262,699	220,728	166,110
Restructuring charges	15,924	—	—	—	—
Intangible asset impairment charges	19,571	—	—	—	—
Operating income	170,529	142,602	221,142	258,861	154,066
Non-operating income	16,382	20,392	13,432	7,603	8,011
Income from continuing operations before income tax expense (benefit)	186,911	162,994	234,574	266,464	162,077
Income tax expense (benefit) on continuing operations	10,725	(40,871)	15,307	89,752	18,128
Net income from continuing operations	176,186	203,865	219,267	176,712	143,949
Net loss from discontinued operations (1)	—	—	—	—	(255)
Net income	\$ 176,186	\$ 203,865	\$ 219,267	\$ 176,712	\$ 143,694
Basic earnings per weighted-average common and common-equivalent share (2):					
Net income from continuing operations	\$ 1.02	\$ 1.19	\$ 1.27	\$ 1.02	\$ 0.84
Net loss from discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ —
Net income	\$ 1.02	\$ 1.19	\$ 1.27	\$ 1.02	\$ 0.84
Diluted earnings per weighted-average common and common-equivalent share (2):					
Net income from continuing operations	\$ 1.00	\$ 1.16	\$ 1.24	\$ 0.98	\$ 0.83
Net loss from discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ —
Net income	\$ 1.00	\$ 1.16	\$ 1.24	\$ 0.98	\$ 0.83
Weighted-average common and common-equivalent shares outstanding (2):					
Basic	173,489	171,194	172,333	173,287	170,676
Diluted	176,592	175,269	177,406	179,551	174,144
Cash dividends per common share (2)	\$ 2.2250	\$ 0.2050	\$ 0.1850	\$ 0.1675	\$ 0.1475
(1) Amounts include stock-based compensation expense, as follows:					
Cost of revenue	\$ 1,365	\$ 1,504	\$ 2,447	\$ 1,881	\$ 1,052
Research, development, and engineering	13,387	15,748	14,578	11,022	6,271
Selling, general, and administrative	27,909	28,337	24,065	19,039	13,235
Discontinued operations	—	—	—	—	—
Total stock-based compensation expense	\$ 42,661	\$ 45,589	\$ 41,090	\$ 31,942	\$ 20,558
(2) Prior period results have been adjusted to reflect the two-for-one stock split effected in the form of a stock dividend which occurred in 2017.					
	December 31,				
	2020	2019	2018	2017	2016
	(In thousands)				
Balance Sheet Data:					
Working capital	\$ 469,394	\$ 486,754	\$ 688,969	\$ 517,356	\$ 461,357
Total assets	1,800,702	1,885,935	1,289,667	1,287,753	1,038,361
Shareholders' equity	1,262,202	1,355,710	1,135,263	1,095,673	963,385

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

FORWARD-LOOKING STATEMENTS

Certain statements made in this report, as well as oral statements made by the Company from time to time, constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Readers can identify these forward-looking statements by our use of the words "expects," "anticipates," "estimates," "believes," "projects," "intends," "plans," "will," "may," "shall," "could," "should," and similar words and other statements of a similar sense. These statements are based on our current estimates and expectations as to prospective events and circumstances, which may or may not be in our control and as to which there can be no firm assurances given. These forward-looking statements, which include statements regarding business and market trends, future financial performance, the expected impact of the COVID-19 pandemic on our assets, business and results of operations, customer order rates and timing of related revenue, future product mix, restructuring and other cost-savings initiatives, research and development activities, capital projects, investments, acquisitions, liquidity, dividends and stock repurchases, strategic plans, and estimated tax benefits and expenses and other tax matters, involve known and unknown risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include: (1) the impact, duration, and severity of the COVID-19 pandemic; (2) potential disruptions to our business due to restructuring activities; (3) the loss of, or curtailment of purchases by, large customers in the consumer electronics and logistics industries; (4) the reliance on revenue from the automotive industry; (5) the reliance on key suppliers to manufacture and deliver critical components for our products; (6) the failure to effectively manage product transitions or accurately forecast customer demand; (7) the inability to design and manufacture high-quality products; (8) the inability to attract and retain skilled employees and maintain our unique corporate culture; (9) the failure to effectively manage our growth; (10) the inability to achieve growth in revenue and profits from the logistics industry; (11) the technological obsolescence of current products and the inability to develop new products; (12) the failure to properly manage the distribution of products and services; (13) the impact of competitive pressures; (14) the challenges in integrating and achieving expected results from acquired businesses; (15) potential disruptions in our business systems; (16) information security breaches; (17) the inability to protect our proprietary technology and intellectual property; (18) potential impairment charges with respect to our investments or acquired intangible assets; (19) exposure to additional tax liabilities; (20) fluctuations in foreign currency exchange rates and the use of derivative instruments; (21) our involvement in time-consuming and costly litigation; (22) unfavorable global economic conditions; and (23) economic, political, and other risks associated with international sales and operations. The foregoing list should not be construed as exhaustive and we encourage readers to refer to the detailed discussion of risk factors included in Part I - Item 1A of this Annual Report on Form 10-K. The Company cautions readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date made. The Company disclaims any obligation to subsequently revise forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date such statements are made.

EXECUTIVE OVERVIEW

Cognex Corporation is a leading worldwide provider of machine vision products that capture and analyze visual information in order to automate manufacturing and distribution tasks where vision is required. In addition to product revenue derived from the sale of machine vision products, the Company also generates revenue by providing maintenance and support, consulting, and training services to its customers; however, service revenue accounted for less than 10% of total revenue for all periods presented.

Cognex machine vision is used to automate manufacturing and distribution processes in a variety of industries, where the technology is widely recognized as an important component of automated production and quality assurance. Virtually every manufacturer can achieve better quality and manufacturing efficiency by using machine vision, and therefore, Cognex products are used by a broad base of customers across a variety of industries, including consumer electronics, automotive, consumer products, food and beverage, and medical-related. Cognex products are also used to automate distribution processes in the logistics industry, including for applications in retail distribution and ecommerce to scan, track, and sort goods through distribution centers.

Revenue for the year ended December 31, 2020 totaled \$811,020,000, representing an increase of 12% from 2019. This increase was driven largely by higher revenue from certain customers in the consumer electronics industry and ecommerce customers in the logistics industry. We believe that both of these industries benefited in 2020 from higher consumer demand during the COVID-19 pandemic. These increases were partially offset by lower revenue from customers in the automotive industry, which was our largest market in 2019 and continues to be negatively impacted by global economic conditions resulting from the COVID-19 pandemic.

Gross margin improved to 75% of revenue in 2020 from 74% of revenue in 2019. Gross margin expansion was due to the favorable impact of the higher revenue on fixed manufacturing costs, as well as favorable product mix. Operating expenses increased by 10% from the prior year due primarily to one-time restructuring charges and intangible asset impairment charges. Excluding these charges, operating expenses were relatively flat with the prior year, as higher incentive compensation costs were offset by lower travel expenses resulting from COVID-19 restrictions and savings from restructuring actions.

Operating income expanded to 21% of revenue in 2020 compared to 20% of revenue in 2019. A higher level of discrete tax benefits in 2019 related to tax structure changes resulted in net income of 22% of revenue in 2020 compared to 28% of revenue in 2019, and net income per diluted share of \$1.00 in 2020 compared to \$1.16 in 2019.

The following table sets forth certain consolidated financial data as a percentage of revenue:

	Year Ended December 31,		
	2020	2019	2018
Revenue	100 %	100 %	100 %
Cost of revenue	25	26	26
Gross margin	75	74	74
Research, development, and engineering expenses	16	16	14
Selling, general, and administrative expenses	33	38	33
Restructuring charges	2	—	—
Intangible asset impairment charges	3	—	—
Operating income	21	20	27
Non-operating income	2	3	2
Income before income tax expense (benefit)	23	23	29
Income tax expense (benefit)	1	(5)	2
Net income	22 %	28 %	27 %

RESULTS OF OPERATIONS

As foreign currency exchange rates are a factor in understanding period-to-period comparisons, we believe the presentation of results on a constant-currency basis in addition to reported results helps improve investors' ability to understand our operating results and evaluate our performance in comparison to prior periods. We also use results on a constant-currency basis as one measure to evaluate our performance. Constant-currency information compares results between periods as if exchange rates had remained constant period-over-period. We generally refer to such amounts calculated on a constant-currency basis as excluding the impact of foreign currency exchange rate changes. Results on a constant-currency basis are not in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) and should be considered in addition to, and not as a substitute for, results prepared in accordance with U.S. GAAP.

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Revenue

Revenue for the year ended December 31, 2020 was \$811,020,000 compared to \$725,625,000 for the prior year, representing an increase of 12%. The increase was due largely to higher revenue from customers in the consumer electronics and logistics industries, which were our two largest markets in 2020. It appears that manufacturers of electronics products and ecommerce providers in the logistics industry both benefited from the "stay-at-home" conditions that arose from the COVID-19 pandemic in 2020. Revenue from customers in the consumer electronics and logistics industries increased by approximately 30% and 40%, respectively, from the prior year, and a significant portion of this growth came from large customers in these industries. Our total revenue and quarterly timing of revenue is impacted by the purchasing cycles of these large customers.

In contrast, our results indicate that other industries we serve have experienced significantly lower demand during the COVID-19 pandemic, most notably the automotive industry, which was our largest market in 2019. Although revenue from customers in the automotive industry for the full year 2020 decreased by approximately 20% from the prior year, automotive revenue for the fourth quarter of 2020 was slightly higher than the fourth quarter of 2019 and increased sequentially each of the last two quarters. In addition, revenue from customers in certain industries in which we have a smaller presence, including medical-related industries, increased for the full year 2020 from the

prior year, due in part to COVID-19 applications for Cognex products. Although we continue to experience certain disruptions to our business from COVID-19 and the situation is continuously changing, the impact of these conditions on our business to date appears to have been most severe in the second quarter of 2020.

From a geographic perspective, revenue from customers based in the Americas increased by 12% from the prior year driven by higher revenue in the logistics industry, partially offset by lower revenue in the automotive industry. A significant portion of our logistics business currently comes from customers based in the Americas. Although this region had the largest dollar growth of logistics revenue in 2020, we are making investments to grow our logistics business outside of the Americas and our logistics revenue increased in all of our major regions in 2020. Revenue from customers based in Europe decreased by 8% from the prior year due to lower revenue in the automotive and consumer electronics industries, partially offset by higher revenue in the logistics industry. Revenue from customers based in Greater China increased by 46% from the prior year due largely to higher revenue in the consumer electronics industry, partially offset by lower revenue in the automotive industry. In recent years, there has been a shift in procurement for certain electronics orders for Cognex products used on assembly lines in China. This procurement shift has resulted in an increase in consumer electronics revenue reported in Greater China that was previously reported in Europe. Revenue from other countries in Asia increased by 17% from the prior year due primarily to higher revenue in the consumer electronics and logistics industries.

As of the date of this report, we expect revenue for the first quarter of 2021 to be higher than revenue reported for fourth quarter of 2020 of \$223,615,000. We anticipate the majority of this increase to come from higher revenue in the logistics industry.

Gross Margin

Gross margin as a percentage of revenue improved to 75% in 2020 compared to 74% in 2019. The increase in the gross margin percentage was primarily due to the favorable impact of the higher revenue on fixed manufacturing costs, as well as favorable product mix. In 2020, revenue from customers in the consumer electronics and logistics industries each represented a greater percentage of our total revenue than the prior year. Although our logistics margins are lower relative to our total gross margin, these margins improved from 2019 and the impact of logistics on our gross margin was more than offset by a greater contribution of relatively higher-margin consumer electronics revenue.

The favorable impact of sales volume and product mix was partially offset by higher provisions for excess and obsolete inventories, which totaled \$9,908,000 in 2020 compared to \$5,296,000 in 2019. The higher level of provisions in 2020 was due to lower projected sales of excess inventories as a result of the deteriorating global economic conditions from the COVID-19 pandemic.

As of the date of this report, we expect gross margin as a percentage of revenue for the first quarter of 2021 to be in the mid 70 percent range, but likely lower than the 75% reported for the fourth quarter of 2020. The decrease is anticipated to be due to a greater percentage of total revenue coming from the logistics industry, which has relatively lower gross margins.

Operating Expenses

Research, Development, and Engineering Expenses

Research, development, and engineering (RD&E) expenses in 2020 increased by \$11,555,000, or 10%, from the prior year as detailed in the table below (in thousands).

RD&E expenses in 2019	\$	119,427
Acquisition-related compensation costs		7,963
Incentive compensation		7,912
Stock-based compensation expense		(2,405)
Travel expenses		(2,083)
Other		168
RD&E expenses in 2020	<u>\$</u>	<u>130,982</u>

RD&E expenses increased due to higher compensation costs related to the Company's acquisition of Sualab Co., Ltd. in the fourth quarter of 2019. These incremental compensation costs included a new team of deep learning engineers, as well as deferred payments from the acquisition that are being recorded as compensation expense over four years from the closing date that accounted for \$4,189,000 of this increase. Excluding the addition of the Sualab deep learning team, RD&E personnel-related costs decreased slightly from 2019 to 2020, as the impact of

incremental resources added largely in 2019 were offset by savings from a workforce reduction in the second quarter of 2020.

RD&E expenses also increased due to higher expenses for annual incentive compensation plans. Relevant performance goals for these plans are set at the beginning of each year, with the ability to earn upside if the goals are exceeded. The Company did not achieve its performance goal to earn a company bonus in 2019, while the goal set for 2020 was exceeded based on the Company's operating income margin. Expenses for the fourth quarter of 2020 included a true-up of the annual liability to reflect the upside achievement based on our strong operating results for this quarter that exceeded our prior estimates. These annual incentive compensation plans will be reset with relevant performance goals for 2021 and incentive compensation expenses will reflect our estimates of achievement throughout the year, which we expect will result in lower expense for the first quarter of 2021 as compared to the fourth quarter of 2020.

These increases were partially offset by lower stock-based compensation expense as a result of a lower total value of awards granted in 2020 as compared to 2019, as well as the impact on the timing of expense recognition due to changes in restricted stock unit vesting schedules. In addition, credits were recorded to stock-based compensation expense in the second quarter of 2020 for awards canceled as a result of a workforce reduction. The Company also incurred lower travel expenses resulting from COVID-19 restrictions. We expect these restrictions to continue into 2021.

RD&E expenses as a percentage of revenue were 16% for both 2020 and 2019. We believe that a continued commitment to RD&E activities is essential in order to maintain or achieve product leadership with our existing products and to provide innovative new product offerings, as well as to provide engineering support for large customers. In addition, we consider our ability to accelerate time to market for new products to be critical to our revenue growth. We currently expect to continue to make significant RD&E investments to support our product development plans during the COVID-19 pandemic and other business disruptions generally.

Selling, General, and Administrative Expenses

Selling, general, and administrative (SG&A) expenses decreased in 2020 by \$6,249,000, or 2%, from the prior year as detailed in the table below (in thousands).

SG&A expenses in 2019	\$	273,842
Travel expenses		(13,980)
Contract labor		(2,444)
Marketing programs		(1,813)
Recruiting fees		(1,077)
Incentive compensation		19,079
Other		(6,014)
SG&A expenses in 2020	\$	267,593

SG&A expenses decreased due to lower travel expenses resulting from COVID-19 restrictions. The majority of these savings came from sales activities, which were redirected to online efforts due to shutdowns of customer facilities for portions of 2020. We expect these restrictions to continue into 2021. In addition, the Company reduced spending on contract labor, marketing programs, and recruiting activities as part of actions taken to reduce operating costs during the global pandemic.

These decreases were partially offset by higher expenses for annual incentive compensation plans. Relevant performance goals for these plans are set at the beginning of each year, with the ability to earn upside if the goals are exceeded. The Company did not achieve its performance goal to earn a company bonus in 2019, while the goal set for 2020 was exceeded based on the Company's operating income margin. Expenses for the fourth quarter of 2020 included a true-up of the annual liability to reflect the upside achievement based on our strong operating results for this quarter that exceeded our prior estimates. Likewise, sales commissions were higher than the prior year due to a greater portion of our sales team exceeding the performance goals set in their commission plans in 2020 versus 2019. These annual incentive compensation plans will be reset with relevant performance goals for 2021 and incentive compensation expenses will reflect our estimates of achievement throughout the year, which we expect will result in lower expense for the first quarter of 2021 as compared to the fourth quarter of 2020.

SG&A personnel-related costs were relatively flat from the prior year, as the impact of incremental resources added largely in 2019 were offset by savings from a workforce reduction in the second quarter of 2020.

Restructuring Charges

In May 2020, the Company's Board of Directors approved a restructuring plan intended to reduce the Company's operating costs, optimize its business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a global workforce reduction of approximately 8% and office closures. The Company recorded restructuring charges from these actions totaling \$15,924,000 in 2020. As of December 31, 2020, the majority of these actions were completed and no additional charges are expected to be incurred in future periods in relation to this restructuring plan.

These restructuring actions, together with other actions to reduce the Company's overall costs, were designed to generate an aggregate annualized cost savings of approximately \$25 million versus the Company's original planned cost structure. As of the date of this report, we are on track to achieve this target for 2021, with actual savings from these restructuring and other cost-saving actions in 2020 estimated to be approximately \$16 million.

Intangible Asset Impairment Charges

Deteriorating global economic conditions from the COVID-19 pandemic triggered a review of long-lived assets for potential impairment in the second quarter of 2020. This review resulted in intangible asset impairment charges totaling \$19,571,000 recorded in the second quarter of 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab.

Non-operating Income (Expense)

The Company recorded foreign currency gains of \$3,697,000 in 2020 and foreign currency losses of \$509,000 in 2019. Foreign currency gains and losses result primarily from the revaluation of cash, accounts receivable, accounts payable, and intercompany balances that are reported in one currency and denominated in another. In 2020, the Company recognized foreign currency gains related to the revaluation of intercompany payables reported on the Company's China entity that are denominated in U.S. Dollars. The Company currently does not hedge its Chinese Yuan exposures due to limitations in hedging instruments available for this currency.

Investment income decreased by \$6,695,000, or 34%, from the prior year. The decrease was due to lower yields on the Company's portfolio of debt securities, and to a lesser extent, lower average investment balances.

The Company recorded other expense of \$309,000 in 2020 and other income of \$1,212,000 in 2019. Other income (expense) includes fair value adjustments of contingent consideration liabilities arising from business acquisitions. In 2019, the Company recorded favorable fair value adjustments related to its acquisition of GVI Ventures, Inc., resulting from a lower level of revenue in the Americas' automotive industry.

Income Tax Expense (Benefit)

The Company's effective tax rate was an expense of 6% of pre-tax income in 2020 compared to a benefit of 25% of pre-tax income in 2019. The effective tax rate in both years reflected several discrete tax items described below.

The effective tax rate included a decrease in tax expense of \$12,788,000 in 2020 and \$6,472,000 in 2019 related to stock options, primarily from the excess tax benefit arising from the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes from stock option exercises. The Company cannot predict the level of stock option exercises by employees in future periods.

In 2020, the Company recorded discrete tax items related to the final true-up of the prior year tax accrual upon filing the related tax return. This included a decrease in tax expense of \$13,984,000 primarily to recognize a foreign tax benefit on certain gains taxed outside of the United States based on clarifications to rules related to the use of foreign tax credits. This benefit was partially offset by tax expense for a transfer price adjustment in China of \$3,267,000 and smaller tax expense adjustments related to foreign tax filings of \$843,000.

In 2020, interpretations of a German law relating to withholding taxes on intellectual property rights emerged. The Company conducted a careful review of the interpretation and believes it has adequate reserves for this German tax exposure. Management will continue to monitor this law and court rulings in Germany.

In 2019, the Company made changes to its international tax structure as a result of European Union tax reform legislation, and as a result, recorded a net discrete tax benefit of \$87,500,000. Also, in 2019, the Company migrated acquired intellectual property to certain subsidiaries, and as a result, recorded a discrete tax expense of \$28,528,000.

Other discrete tax items, none of which were individually material, resulted in a net decrease in tax expense of \$307,000 in 2020 and \$1,932,000 in 2019. Excluding the impact of all discrete tax items, the Company's effective tax rate was an expense of 17% of pre-tax income in 2020 and 16% of pre-tax income in 2019. The increase in the effective tax rate excluding discrete tax items was due to more of the Company's profits being earned and taxed in higher tax jurisdictions, as well as the impact of changes in 2019 to the Company's international tax structure.

Year Ended December 31, 2019 Compared to Year Ended December 31, 2018

Revenue

Revenue for the year ended December 31, 2019 was \$725,625,000 compared to \$806,338,000 for the prior year, representing a decrease of \$80,713,000, or 10%. Changes in foreign currency exchange rates accounted for approximately 2% of the revenue decrease from 2018 to 2019, primarily related to the translation of Euro-denominated and Chinese Yuan-denominated revenue to U.S. Dollars.

In 2019, industrial companies delayed and reduced spending for automation projects, including those with machine vision, amid weaker general manufacturing confidence and heightened uncertainty around global trade. This decrease in capital spending, along with the decision by certain of our larger customers to retrofit existing equipment rather than invest in new production lines or facilities, contributed to the decrease in revenue from the prior year.

The impact to our business was most significant in our two largest markets, consumer electronics and automotive, which together represent approximately half of our total revenue. Consumer electronics revenue was approximately 30% lower than the prior year, with the majority of this decrease related to smartphone manufacturing, while automotive revenue was approximately 10% lower than the prior year.

These decreases were only partially offset by higher revenue in the logistics industry, which increased by approximately 15% from the prior year. This growth rate was slower than 2018 due to a major customer delaying deliveries for new facilities until mid-2020 after building adequate capacity for 2019 by upgrading existing facilities. Excluding revenue from this major customer, logistics revenue increased by approximately 50% from the prior year.

From a geographic perspective, revenue from customers based in the Americas increased by 5% driven by higher sales in the logistics industry, partially offset by lower sales in the automotive industry. Revenue from customers based in Europe decreased by 27% driven by lower sales in the consumer electronics industry, and to a lesser extent, the automotive industry. Revenue from customers based in Greater China decreased by 7% across a variety of industries. The decline would have been larger in Greater China, and less extreme in Europe, if not for procurement changes made by certain consumer electronics customers, shifting their purchases to China from Europe. Revenue from customers based in other regions in Asia were relatively flat.

Gross Margin

Gross margin as a percentage of revenue was 74% for both 2019 and 2018. The unfavorable absorption of manufacturing overhead costs over the lower level of revenue was offset by favorable product mix.

Operating Expenses

Research, Development, and Engineering Expenses

Research, development, and engineering (RD&E) expenses in 2019 increased by \$2,982,000, or 3%, from the prior year as detailed in the table below (in thousands).

RD&E expenses in 2018	\$	116,445
Personnel-related costs		5,782
Incentive compensation		(3,852)
Other		1,052
RD&E expenses in 2019	\$	119,427

RD&E expenses increased due to higher personnel-related costs resulting primarily from headcount additions to support new product initiatives, of which \$1,013,000 related to a new team of deep learning engineers from the Company's acquisition of Sualab Co., Ltd. on October 16, 2019. The consideration from this acquisition included deferred payments that are being recorded as compensation expense over four years from the closing date, which accounted for an additional \$1,092,000 of the increase in personnel-related costs. These increases were partially offset by lower expenses related to incentive compensation plans resulting from lower levels of achievement on performance plans that were set at the beginning of the year.

Selling, General, and Administrative Expenses

Selling, general, and administrative (SG&A) expenses in 2019 increased by \$11,143,000, or 4%, from the prior year as detailed in the table below (in thousands).

SG&A expenses in 2018	\$	262,699
Personnel-related costs		23,811
Incentive compensation		(8,742)
Foreign currency exchange rate changes		(5,085)
ERP project costs		(4,967)
Other		6,126
SG&A expenses in 2019	<u>\$</u>	<u>273,842</u>

SG&A expenses increased due to higher personnel-related costs resulting primarily from headcount additions, principally sales personnel. In addition to salaries and fringe benefits, these personnel-related costs included sales commissions and travel expenses related to the additional headcount. These increases were partially offset by lower expenses related to incentive compensation plans resulting from lower levels of achievement on performance plans that were set at the beginning of the year. Changes in foreign currency exchange rates also resulted in a lower level of expenses, as costs denominated in foreign currencies were translated to U.S. Dollars at a lower rate. Expenses were also lower due to project costs incurred in 2018 related to the Company's new Enterprise Resource Planning (ERP) system. This system was placed into service during the third quarter of 2018, and therefore, similar costs were not incurred in 2019.

Non-operating Income (Expense)

The Company recorded foreign currency losses of \$509,000 in 2019 and \$1,064,000 in 2018. Foreign currency gains and losses result primarily from the revaluation of cash, accounts receivable, accounts payable, and intercompany balances that are reported in one currency and denominated in another.

Investment income increased by \$4,974,000 or 34%, from the prior year. The increase was due to higher yields on the Company's portfolio of debt securities, and to a lesser extent, higher average investment balances.

The Company recorded other income of \$1,212,000 in 2019 and other expense of \$219,000 in 2018. Other income (expense) includes fair value adjustments of contingent consideration liabilities arising from business acquisitions. A higher level of fair value adjustments to income was recorded in 2019 related to the Company's acquisition of GVi Ventures, Inc., resulting from a lower level of revenue in the Americas' automotive industry.

Income Tax Expense (Benefit)

The Company's effective tax rate was a benefit of 25% of pre-tax income in 2019 compared to an expense of 7% in 2018.

The European Union has enacted a series of tax reform legislation over the past few years regarding low tax structures. The Company made changes to its international tax structure in the fourth quarter of 2019 as a result of this legislation, and as a result, recorded a net discrete tax benefit of \$87,500,000.

On October 16, 2019, the Company acquired Sualab Co., Ltd., a provider of deep learning-based vision software based in Korea. The Company migrated acquired intellectual property to certain subsidiaries in the fourth quarter of 2019, and as a result, recorded a discrete tax expense of \$28,528,000.

In addition, the effective tax rate included a decrease in tax expense of \$6,472,000 in 2019 and \$8,488,000 in 2018 related to stock options, primarily from the excess tax benefit arising from the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes from stock option exercises.

Other discrete tax events included a net decrease in tax expense of \$1,932,000 in 2019 and \$1,847,000 in 2018, consisting primarily of the expiration of the statutes of limitations for certain reserves for income tax uncertainties and the final true-up of the prior year's tax accrual upon filing the related tax returns.

Excluding the impact of these discrete events, the Company's effective tax rate was an expense of 16% of pre-tax income in 2019. This represents an increase in the effective tax rate excluding discrete events from 14% in 2018 due to more of the Company's profits being earned and taxed in higher tax jurisdictions.

LIQUIDITY AND CAPITAL RESOURCES

The Company has historically been able to generate positive cash flow from operations, which has funded its operating activities and other cash requirements and has resulted in an accumulated cash and investment balance of \$767,438,000 as of December 31, 2020. The Company has established guidelines relative to credit ratings, diversification, and maturities of its investments that maintain liquidity.

The Company's cash requirements in 2020 were primarily met with positive cash flows from operations, maturities and sales of investments, and the proceeds from stock option exercises. Cash requirements consisted of operating activities, the payment of dividends, the repurchase of common stock, and capital expenditures. Working capital requirements included an increase in accounts receivable resulting from the higher business level and the timing of invoicing for a material customer, as well as an increase in gross inventories to support the higher business level and build safety stock to mitigate the Company's exposure to demand changes or supply disruptions. Cash outlays in the first quarter of 2021 are planned to include incentive compensation payments that were earned and accrued in 2020.

Capital expenditures in 2020 totaled \$13,303,000 and consisted primarily of computer hardware and software, manufacturing test equipment related to new product introductions, and improvements made to the Company's headquarters building in Natick, Massachusetts and various leased facilities. In 2021, the Company is making significant investments in business systems related to its sales process, including systems to help our sales team more efficiently manage customer relationships and sales opportunities. As of the date of this report, the Company estimates cash outlays for this initiative to be up to \$10 million, a large portion of which we expect will be capitalized and placed into service in the first quarter of 2022.

The Company implemented a variety of cost-cutting measures in the second quarter of 2020 to address the impact of the COVID-19 pandemic, including a workforce reduction and office closures. The Company estimates the total restructuring charges from these actions to be approximately \$15,924,000, of which \$3,938,000 represents non-cash charges and adjustments, \$9,597,000 was paid in 2020, and the remainder of \$2,389,000 expected to be paid in 2021.

The following table summarizes the Company's material contractual obligations, both fixed and contingent (in thousands):

Year Ended December 31,	Inventory Purchase Commitments	Leases	Total
2021	\$ 32,315	\$ 9,101	\$ 41,416
2022	—	6,863	6,863
2023	—	5,072	5,072
2024	—	2,074	2,074
2025	—	1,317	1,317
Thereafter	—	4,960	4,960
	<u>\$ 32,315</u>	<u>\$ 29,387</u>	<u>\$ 61,702</u>

In addition to the obligations described above, the following items may also result in future material uses of cash:

Stock Repurchases

In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. As of December 31, 2020, the Company repurchased 2,816,000 shares at a cost of \$121,348,000 under this program, including 1,215,000 shares at a cost of \$51,036,000 during 2020, leaving a remaining balance of \$78,652,000. On March 12, 2020, the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. Purchases under this March 2020 program will commence upon completion of the October 2018 program. The Company may repurchase shares under this program in future periods depending on a variety of factors, including, among other things, the impact of dilution from employee stock awards, stock price, share availability, and cash requirements. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

Dividends

The Company's Board of Directors declared and paid cash dividends of \$0.050 per share in the first, second, and third quarters of 2019, and \$0.055 in the fourth quarter of 2019, as well as in the first, second, and third quarters of 2020. The dividend was increased to \$0.060 per share in the fourth quarter of 2020. Also, in the fourth quarter of 2020, an additional special cash dividend of \$2.00 per share was declared and paid. Total dividends amounted to \$390,508,000 in 2020, which included \$351,428,000 paid for the special cash dividend, \$35,124,000 in 2019, and \$31,865,000 in 2018. Future dividends will be declared at the discretion of the Company's Board of Directors and will depend upon such factors as the Board deems relevant, including, among other things, the Company's ability to generate positive cash flow from operations.

Business Acquisitions

The total consideration for the 2019 acquisition of Sualab Co., Ltd. included deferred payments of \$24,040,000 that may become payable on the fourth anniversary date of the closing, contingent upon the continued employment of key talent.

Income Taxes

In conjunction with the acquisition of Sualab, the Company migrated acquired intellectual property to certain subsidiaries in 2019, which resulted in a foreign tax payment of approximately \$27,000,000 in 2020.

The Tax Cuts and Jobs Act of 2017 subjected unrepatriated foreign earnings to a one-time transition tax, which is expected to result in tax payments of \$51,113,000 starting in 2021 through 2025.

The Company believes that its existing cash and investment balances, together with cash flow from operations, will be sufficient to meet its operating, investing, and financing activities for the next twelve months. As of December 31, 2020, the Company had \$767,438,000 in cash and investments. In addition, the Company has no long-term debt and does not anticipate needing debt financing in the near future. We believe that our strong cash position has put us in a relatively good position with respect to anticipated longer-term liquidity needs.

OFF-BALANCE SHEET ARRANGEMENTS

As of December 31, 2020, the Company has no off-balance sheet arrangements as defined in Item 303(a)(4)(ii) of Regulation S-K.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

Our discussion and analysis of the Company's financial condition and results of operations are based on the consolidated financial statements included in this Annual Report on Form 10-K, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, and expenses, and related disclosure of contingent assets and liabilities. We base our estimates on historical experience and various other assumptions believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Changes in accounting estimates are reasonably likely to occur from period to period. Accordingly, actual results could differ from these estimates under different assumptions or circumstances resulting in charges that could be material in future reporting periods. We believe the following critical accounting policies require the use of significant estimates and judgments in the preparation of our consolidated financial statements.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification (ASC) 606, "Revenue from Contracts with Customers." The core principle of ASC 606 is to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The framework in support of this core principle includes: (1) identifying the contract with the customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to the performance obligations; and (5) recognizing revenue when (or as) the performance obligations are satisfied.

Identifying the Contract with the Customer

The Company identifies contracts with customers as agreements that create enforceable rights and obligations, which typically take the form of customer contracts or purchase orders. The Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectibility of consideration is probable.

Identifying the Performance Obligations in the Contract

The Company identifies performance obligations as promises in contracts to transfer distinct goods or services. Standard products and services that the Company regularly sells separately are accounted for as distinct performance obligations. Application-specific customer solutions that are comprised of a combination of products and services are accounted for as one performance obligation to deliver a total solution to the customer. On-site support services that are provided to the customer after the solution is deployed are accounted for as a separate performance obligation. These solutions are provided to customers in a variety of industries, including the consumer electronics and logistics industries.

Shipping and handling activities for which the Company is responsible under the terms and conditions of the sale are not accounted for as performance obligations but as fulfillment costs. These activities are required to fulfill the Company's promise to transfer the goods and are expensed when revenue is recognized.

The Company does not assess whether promised goods or services are performance obligations if they are immaterial in the context of the contract. If revenue is recognized before immaterial promises have been completed, then the costs related to such immaterial promises are accrued at the time of sale.

Determining the Transaction Price

The Company determines the transaction price as the amount of consideration it expects to receive in exchange for transferring promised goods or services to the customer. Amounts collected from customers for sales taxes are excluded from the transaction price.

If a contract includes a variable amount, such as a rebate, then the Company estimates the transaction price using either the expected value or the most likely amount of consideration to be received, depending upon the specific facts and circumstances. The Company includes estimated variable consideration in the transaction price only to the extent it is probable that a significant reversal of revenue will not occur when the uncertainty is resolved. The Company updates its estimate of variable consideration at the end of each reporting period to reflect changes in facts and circumstances.

The Company does not grant customers the explicit right to return product. However, from time to time, the Company may allow a customer to return a product. As a practical expedient, the Company estimates the transaction price using the expected value based on its history of return experience using a portfolio approach in which the Company's total revenue is reduced by an estimate of total customer returns. Management reasonably expects that the effect of applying a portfolio approach to a group of contracts would not differ materially from considering each contract separately.

Allocating the Transaction Price to the Performance Obligations

The Company allocates the transaction price to each performance obligation at contract inception based on a relative stand-alone selling price basis, or the price at which the Company would sell the good or service separately to similar customers in similar circumstances.

Recognizing Revenue When (or As) the Performance Obligations are Satisfied

The Company recognizes revenue when it transfers the promised goods or services to the customer. Revenue for standard products is recognized at the point in time when the customer obtains control of the goods, which is typically upon delivery when the customer has legal title, physical possession, the risks and rewards of ownership, and an enforceable obligation to pay for the products. Revenue for services, which are not material, is typically recognized over the time the service is provided.

Revenue for application-specific customer solutions is recognized at the point in time when the solution is validated, which is the point in time when the Company can objectively determine that the agreed-upon specifications in the contract have been met and the customer will accept the performance obligations in the arrangement. Although the customer may have taken legal title and physical possession of the goods when they arrived at the customer's designated site, the significant risks and rewards of ownership transfer to the customer only upon validation. Revenue for on-site support services related to these solutions is recognized over the time the service is provided.

In certain instances, an arrangement may include customer-specified acceptance provisions or performance guarantees that allow the customer to accept or reject delivered products that do not meet the customer's specifications. If the Company can objectively determine that control of a good or service has been transferred to the customer in accordance with the agreed-upon specifications in the contract, then customer acceptance is a formality. If acceptance provisions are presumed to be substantive, then revenue is deferred until customer acceptance.

For the Company's standard products and services, revenue recognition and billing typically occur at the same time. For application-specific customer solutions, however, the agreement with the customer may provide for billing terms which differ from revenue recognition criteria, resulting in either deferred revenue or unbilled revenue. Credit assessments are performed to determine payment terms, which vary by region, industry, and customer. Prepayment terms result in contract liabilities for customer deposits. When credit is granted to customers, payment is typically due 30 to 90 days from billing. The Company's contracts have an original expected duration of less than one year, and therefore as a practical expedient, the Company has elected to ignore the impact of the time value of money on a contract and to expense sales commissions. The Company recognizes an asset for costs to fulfill a contract if the costs relate directly to the contract and to future performance, and the costs are expected to be recovered.

Management exercises judgment when determining the amount of revenue to be recognized each period. Such judgments include, but are not limited to, assessing the customer's ability and intention to pay substantially all of the contract consideration when due, determining when two or more contracts should be combined and accounted for as a single contract, determining whether a contract modification has occurred, assessing whether promises are immaterial in the context of the contract, determining whether material promises in a contract represent distinct performance obligations, estimating the transaction price for a contract that contains variable consideration, determining the stand-alone selling price of each performance obligation, determining whether control is transferred over time or at a point in time for performance obligations, and assessing whether formal customer acceptance provisions are substantive.

Investments

As of December 31, 2020, the Company's investment portfolio of debt securities totaled \$498,365,000. These debt securities are reported at fair value, with unrealized gains and losses, net of tax, included in shareholders' equity as other comprehensive income (loss) since these securities are designated as available-for-sale securities. As of December 31, 2020, the Company's portfolio of debt securities had an unrealized gain of \$5,690,000, and no unrealized losses.

The fair value of the Company's debt securities is based on model-driven valuations in which all significant inputs are observable or can be derived from or corroborated by observable market data for substantially the full term of the asset. Management is responsible for estimating the fair value of these financial assets, and in doing so, considers valuations provided by a large, third-party pricing service. This service maintains regular contact with market makers, brokers, dealers, and analysts to gather information on market movement, direction, trends, and other specific data. They use this information to structure yield curves for various types of debt securities and arrive at the daily valuations.

Management monitors its debt securities that are in an unrealized loss position to determine whether a loss exists related to the credit quality of the issuer. When developing an estimate of expected credit losses, management considers all relevant information including historical experience, current conditions, and reasonable forecasts that project the expected future cash flows. Credit losses on debt securities were not material in 2020, 2019, or 2018.

Inventories

Inventories are stated at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less readily predictable costs of completion, disposal, and transportation. Management estimates excess and obsolescence exposures based on assumptions about future demand, product transitions, and market conditions, and records reserves to reduce the carrying value of inventories to their net realizable value. Volatility in the global economy makes these assumptions about future demand more judgmental. Among the risks associated with the introduction of new products are difficulty predicting customer demand and effectively managing inventory levels to ensure adequate supply of the new product and avoid excess supply of the legacy product. In addition, we may strategically enter into non-cancelable commitments with vendors to purchase materials for products in advance of demand to take advantage of favorable pricing or address concerns about the availability of future supplies and long lead times. Estimates in 2020 took into account the global economic conditions resulting from the COVID-19 pandemic. As of December 31, 2020, the Company's reserve for excess and obsolete inventory totaled \$14,578,000, or 19% of the gross inventory balance. A 10% difference in inventory reserves as of December 31, 2020 would have affected net income by approximately \$1,210,000.

Intangible Assets

The Company's intangible assets are susceptible to shortened estimated useful lives and changes in fair value due to changes in their use, market or economic changes, or other events or circumstances. The Company evaluates the potential impairment of intangible assets whenever events or circumstances indicate the carrying value may not be recoverable. Factors that could trigger an impairment review include historical or projected results that are less than the assumptions used in the original valuation of an acquired asset, a change in the Company's business strategy or its use of an acquired asset, or negative economic or industry trends.

If an event or circumstance indicates the carrying value of intangible assets may not be recoverable, the Company assesses the recoverability of the assets by comparing the carrying value of the assets to the sum of the undiscounted future cash flows that the assets are expected to generate over their remaining economic lives. If the carrying value exceeds the sum of the undiscounted future cash flows, the Company compares the fair value of the intangible assets to the carrying value and records an impairment loss for the difference. The Company generally estimates the fair value of its intangible assets using the income approach based on a discounted cash flow model. The income approach requires the use of many assumptions and estimates including future revenues and expenses, discount factors, income tax rates, the identification of groups of assets with highly independent cash flows, and assets' economic lives. Volatility in the global economy makes these assumptions and estimates more judgmental. Actual future operating results and the remaining economic lives of our intangible assets could differ from those used in assessing the recoverability of these assets and could result in an impairment of intangible assets in future periods.

Deteriorating global economic conditions from the COVID-19 pandemic triggered a review of intangible assets for potential impairment in the second quarter of 2020. This review resulted in intangible asset impairment charges totaling \$19,571,000 recorded in the second quarter of 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab. No impairment charges related to intangible assets were recorded in 2019 or 2018.

Stock-Based Compensation

Compensation expense is recognized for all grants of stock options and restricted stock units. Determining the appropriate valuation model and estimating the fair values of these grants requires the input of subjective assumptions, including expected stock price volatility, dividend yields, expected term, and forfeiture rates. The expected volatility assumption is based partially upon the historical volatility of the Company's common stock, which may or may not be a true indicator of future volatility. The assumptions used in calculating the fair values of stock option grants represent management's best estimates, but these estimates involve inherent uncertainties and the application of judgment. As a result, if factors change and different assumptions are used, stock-based compensation expense could be significantly different from what the Company recorded in the current period.

Income Taxes

Significant judgment is required in determining worldwide income tax expense based on tax laws in the various jurisdictions in which the Company operates. The Company has established reserves for income taxes by applying the "more likely than not" criteria, under which the recognition threshold is met when an entity concludes that a tax position, based solely on its technical merits, is more likely than not to be sustained upon examination by the relevant tax authority. All tax positions are analyzed periodically and adjustments are made as events occur that warrant modification, such as the completion of audits or the expiration of statutes of limitations, which may result in future charges or credits to income tax expense.

As part of the process of preparing consolidated financial statements, management is required to estimate income taxes in each of the jurisdictions in which the Company operates. This process involves estimating the current tax liability, as well as assessing temporary differences arising from the different treatment of items for financial statement and tax purposes. These differences result in deferred tax assets and liabilities, which are recorded on the Consolidated Balance Sheets.

The Tax Cuts and Jobs Act of 2017 imposed a minimum tax on foreign earnings related to intangible assets, known as the Global Intangible Low-Taxed Income (GILTI) tax. In 2019, the Company elected to account for the impact of the GILTI minimum tax in deferred taxes, a change from the Company's initial election made in 2018 whereby the GILTI minimum tax was included in income tax expense as incurred on an annual basis. Management has determined that this change is considered preferable, based on the conclusion that it appropriately matches the Company's current and deferred income tax implications related to the change in tax structure noted below.

In 2019, the Company made changes to its international tax structure as a result of tax reform legislation enacted by the European Union that resulted in an intercompany sale of intellectual property based on the fair value of this

intellectual property. Also in 2019, in connection with the acquisition of Sualab Co. Ltd., the Company migrated acquired intellectual property to certain subsidiaries to align with its corporate tax structure. Significant judgment was required to estimate the fair value of the migrated intellectual property, including management estimates related to forecasted future cash flows and discount rates.

Business Acquisitions

Business combinations are accounted for under the acquisition method of accounting. Determining what constitutes a business to qualify as a business combination requires some judgment. Allocating the purchase price requires the Company to identify and estimate the fair values of various assets acquired and liabilities assumed. Management is responsible for determining the appropriate valuation model and estimated fair values, and in doing so, considers a number of factors, including information provided by an outside valuation advisor. Management primarily establishes fair value using the income approach based on a discounted cash flow model. The income approach requires the use of many assumptions and estimates including future revenues and expenses, as well as discount factors. Contingent consideration liabilities are reported at their estimated fair values based on probability-adjusted present values of the consideration expected to be paid, using significant inputs and estimates. Key assumptions used in these estimates include probability assessments with respect to the likelihood of achieving certain milestones and discount rates consistent with the level of risk of achievement. The fair value of these contingent consideration liabilities are remeasured each reporting period, with changes in the fair value included in current operations. The remeasured liability amount could be significantly different from the amount at the acquisition date, resulting in material charges or credits in future reporting periods.

Restructuring Charges

In May 2020, the Company's Board of Directors approved a restructuring plan intended to reduce the Company's operating costs, optimize its business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a global workforce reduction of approximately 8% and office closures. The majority of these actions were completed as of December 31, 2020 and resulted in total restructuring charges of \$15,924,000 in 2020.

The Company made significant estimates and judgments in the determination of the restructuring charges, including the assessment that the workforce reduction met the criteria to be accounted for as one-time termination benefits and the date the criteria were met to record this liability, severance estimates for employees who had not yet signed termination agreements, the date that closed offices were abandoned, and estimates of remaining lease obligations for abandoned offices. As of December 31, 2020, the Company had trued up the majority of these estimates based on actual negotiated payments with employees or landlords, with adjustments recorded in the second half of 2020 based on the Company's revised estimates of these liabilities.

NEW PRONOUNCEMENTS

Refer to Part II, Item 8 - Note 2 within this Form 10-K, for a full description of recently issued accounting pronouncements including the expected dates of adoption and expected impact on the financial position and results of operations of the Company.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is exposed to certain risks relating to its ongoing business operations, including foreign currency exchange rate risk and interest rate risk. The Company currently mitigates certain foreign currency exchange rate risks with derivative instruments. The Company does not currently manage its interest rate risk with derivative instruments.

Foreign Currency Risk

The Company faces exposure to foreign currency exchange rate fluctuations, as a significant portion of its revenues, expenses, assets, and liabilities are denominated in currencies other than the functional currencies of the Company's subsidiaries or the reporting currency of the Company, which is the U.S. Dollar. In certain instances, we utilize forward contracts to hedge against foreign currency fluctuations. These contracts are used to minimize foreign currency gains or losses, as the gains or losses on the derivative are intended to offset the losses or gains on the underlying exposure. We do not engage in foreign currency speculation.

The Company enters into economic hedges utilizing foreign currency forward contracts with maturities of up to 45 days to manage the exposure to fluctuations in foreign currency exchange rates arising primarily from foreign-denominated receivables and payables.

The Company had the following outstanding forward contracts (in thousands):

Currency	December 31, 2020				December 31, 2019			
	Notional Value	USD Equivalent	High Rate	Low Rate	Notional Value	USD Equivalent	High Rate	Low Rate
<i>Derivatives Not Designated as Hedging Instruments:</i>								
Euro	50,000	\$ 61,342	0.8151	0.8151	18,000	\$ 20,249	0.8917	0.8917
Mexican Peso	155,000	7,776	19.93	19.93	80,000	4,223	18.94	18.94
Korean Won	6,925,000	6,377	1,086	1,086	161,951,500	139,688	1,155	1,155
Japanese Yen	600,000	5,808	103.30	103.30	575,000	5,291	108.70	108.70
Hungarian Forint	1,330,000	4,494	295.9	295.9	870,000	2,962	295.3	295.3
British Pound	1,675	2,287	0.7324	0.7324	2,700	3,569	0.7541	0.7541
Taiwanese Dollar	38,035	1,362	27.93	27.93	37,450	1,256	29.91	29.91
Singapore Dollar	1,465	1,110	1.3198	1.3198	845	628	1.3461	1.3461
Canadian Dollar	1,285	1,010	1.2719	1.2719	1,300	1,000	1.2989	1.2989

A change in foreign currency exchange rates could materially impact the fair value of these contracts; however, if this occurred, the fair value of the underlying exposures hedged by the contracts would change by a similar amount. Accordingly, management does not believe that a material change in foreign currency exchange rates used in the fair value of our derivative instruments would materially impact operations or cash flows.

The success of our foreign currency risk management program depends upon forecasts of transaction activity denominated in various currencies. To the extent that these forecasts are overstated or understated during periods of currency volatility, we could experience unanticipated foreign currency gains or losses that could have a material impact on our results of operations. Furthermore, our failure to identify new exposures and hedge them in an effective manner may result in material foreign currency gains or losses.

The Company's functional currency/reporting currency exchange rate exposures result from revenues and expenses that are denominated in currencies other than the U.S. Dollar. In addition to the U.S. Dollar, a significant portion of our revenues and expenses are denominated in the Euro and Chinese Yuan, and to a lesser extent the Japanese Yen, Korean Won, and Mexican Peso. We estimate that approximately 45% of our sales in 2020 were invoiced in currencies other than the U.S. Dollar, and we expect sales denominated in foreign currencies to continue to represent a significant portion of our total revenue. While we also have expenses denominated in these same foreign currencies, the impact on revenues has historically been, and is expected to continue to be, greater than the offsetting impact on expenses. Therefore, in times when the U.S. Dollar strengthens in relation to these foreign currencies, we would expect to report a net decrease in operating income. Conversely, in times when the U.S. Dollar weakens in relation to these foreign currencies, we would expect to report a net increase in operating income. Thus, changes in the relative strength of the U.S. Dollar may have a material impact on our operating results.

Interest Rate Risk

The Company's investment portfolio of debt securities includes corporate bonds, treasury bills, asset-backed securities, agency bonds, sovereign bonds, and municipal bonds. Debt securities with original maturities greater than three months are designated as available-for-sale and are reported at fair value. As of December 31, 2020, the fair value of the Company's portfolio of debt securities amounted to \$498,365,000 with amortized cost amounts totaling \$492,675,000, maturities that do not exceed five years, and a yield to maturity of 1.18%. Differences between the fair value and principal amounts of the Company's portfolio of debt securities are primarily attributable to discounts and premiums arising at the acquisition date, as well as unrealized gains and losses as of the balance sheet date.

The Company's investment policy allows investment in debt securities with effective maturities up to ten years, however as of December 31, 2020, 97% of the investment portfolio has effective maturity dates of less than three years. Given the relatively short maturities and investment-grade quality of the Company's portfolio of debt securities as of December 31, 2020, a sharp rise in interest rates should not have a material adverse effect on the fair value of these instruments. As a result, the Company does not currently hedge these interest rate exposures.

The following table presents the hypothetical change in the fair value of the Company's portfolio of debt securities arising from selected potential changes in interest rates (in thousands). This modeling technique measures the change in fair value that would result from a parallel shift in the yield curve plus or minus 50 and 100 basis points (BP) over a twelve-month time horizon.

Type of security	Valuation of securities given an interest rate decrease		No change in interest rates	Valuation of securities given an interest rate increase	
	(100 BP)	(50 BP)		50 BP	100 BP
Corporate bonds	\$ 239,731	\$ 237,937	\$ 236,142	\$ 234,347	\$ 232,553
Treasury bills	133,866	132,863	131,861	130,859	129,857
Asset-backed securities	93,619	92,918	92,218	91,517	90,816
Agency bonds	19,295	19,150	19,006	18,862	18,717
Sovereign bonds	12,285	12,193	12,100	12,009	11,917
Municipal bonds	7,144	7,090	7,038	6,983	6,930
	\$ 505,940	\$ 502,151	\$ 498,365	\$ 494,577	\$ 490,790

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders
Cognex Corporation

Opinion on the financial statements

We have audited the accompanying consolidated balance sheets of Cognex Corporation (a Massachusetts corporation) and subsidiaries (the “Company”) as of December 31, 2020 and 2019, the related consolidated statements of operations, comprehensive income, shareholders’ equity, and cash flows for each of the three years in the period ended December 31, 2020, and the related notes and financial statement schedule included under Item 15(2) (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

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, 2020, based on criteria established in the 2013 Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”), and our report dated February 11, 2021 expressed an unqualified opinion.

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 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.

Revenue Recognition – Application-Specific Customer Solutions

As described further in Notes 1 and 14 to the consolidated financial statements, the Company recognizes revenue from application-specific customer solutions. For these transactions, revenue is recognized at the point in time when the solution is validated, which is when the Company can objectively determine that the agreed-upon specifications in the contract have been met and the customer will accept the performance obligation in the contract. We identified revenue recognition related to application-specific customer solutions as a critical audit matter.

The principal considerations for our determination that application-specific customer solutions revenue is a critical audit matter are that determining the timing of validation and that the agreed-upon specifications in the contract have been met relies on the use of management estimates and requires a higher degree of auditor subjectivity and judgment in designing and executing audit procedures. Accounting for application-specific customer solutions requires the Company to monitor and evaluate customer contracts on an ongoing basis to determine the point in time at which the agreed-upon specifications in the contract have been met.

Our audit procedures related to the revenue recognition of application-specific customer solutions included the following, among others.

- We tested the design and operating effectiveness of internal controls related to the monitoring of application-specific customer solutions and the determination of the timing of revenue recognition.
- We evaluated management's significant accounting policies related to these customer contracts for appropriate revenue recognition based on key terms and provisions.
- For a sample of transactions, we inspected source documents, including the customer contract or purchase order, third-party shipping information, invoice, and evidence of acceptance.

Impairment Loss – Long Lived Assets of Sualab Co., Ltd.

As described further in Notes 1 and 9 to the consolidated financial statements, during the second quarter of the fiscal year ended December 31, 2020, the Company recorded an impairment charge of \$19.6M related to certain definite and indefinite lived intangible assets. The Company evaluates the recoverability of the carrying value of its intangible assets whenever events or circumstances indicate the carrying value may not be recoverable. The identified assets did not pass the recoverability test, and accordingly, the Company recognized an impairment charge for the amount the carrying values of the assets exceeded their fair values. The fair values were determined based on the present values of future cash flows using significant inputs and assumptions not observable in the market. We identified the Company's determination of the fair value of the identified indefinite and definite-lived intangible assets as a critical audit matter.

The principal considerations for our determination that the fair value of the identified indefinite and definite-lived intangible assets evaluated for impairment is a critical audit matter are that the determination of the fair value of the intangible assets relies on the use of management estimates related to forecasted future cash flows and discount rates. This requires management to evaluate historical results and expectations of future operating performance based on relevant information available to them regarding expectations of industry performance, as well as, expectations for company-specific performance. Determining the discount rate requires management to evaluate the appropriate risk premium based on their judgment of industry and company-specific risks. Significant management judgments and estimates utilized to determine the fair value are subject to estimation uncertainty and require significant auditor subjectivity in evaluating the reasonableness of those judgments and estimates.

Our audit procedures related to the determination of the fair value of the identified indefinite and definite-lived intangible assets evaluated for impairment included the following, among others.

- We tested the design and operating effectiveness of internal controls relating to management's determination of the fair value of the identified indefinite and definite-lived intangible assets evaluated for impairment, including controls over the determination of key inputs and assumptions related to forecasting of future cash flows and determination of the discount rate.
- We evaluated management's historical ability to achieve forecasted revenue and operating results.
- We compared management's forecasts of future revenue and operating margin to third-party industry projections and historical operating results.
- We utilized a valuation specialist to assist in testing the Company's discounted cash flow model and in evaluating the reasonableness of significant assumptions to the model, including the discount rate.

/s/ GRANT THORNTON LLP

We have served as the Company's auditor since 2007.

Boston, Massachusetts
February 11, 2021

COGNEX CORPORATION – CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2020	2019	2018
	(In thousands, except per share amounts)		
Revenue	\$ 811,020	\$ 725,625	\$ 806,338
Cost of revenue	206,421	189,754	206,052
Gross margin	604,599	535,871	600,286
Research, development, and engineering expenses	130,982	119,427	116,445
Selling, general, and administrative expenses	267,593	273,842	262,699
Restructuring charges (Note 22)	15,924	—	—
Intangible asset impairment charges (Note 9)	19,571	—	—
Operating income	170,529	142,602	221,142
Foreign currency gain (loss)	3,697	(509)	(1,064)
Investment income	12,994	19,689	14,715
Other income (expense)	(309)	1,212	(219)
Income before income tax expense (benefit)	186,911	162,994	234,574
Income tax expense (benefit)	10,725	(40,871)	15,307
Net income	<u>\$ 176,186</u>	<u>\$ 203,865</u>	<u>\$ 219,267</u>
Net Income per weighted-average common and common-equivalent share:			
Basic	<u>\$ 1.02</u>	<u>\$ 1.19</u>	<u>\$ 1.27</u>
Diluted	<u>\$ 1.00</u>	<u>\$ 1.16</u>	<u>\$ 1.24</u>
Weighted-average common and common-equivalent shares outstanding:			
Basic	<u>173,489</u>	<u>171,194</u>	<u>172,333</u>
Diluted	<u>176,592</u>	<u>175,269</u>	<u>177,406</u>
Cash dividends per common share	<u>\$ 2.225</u>	<u>\$ 0.205</u>	<u>\$ 0.185</u>

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION – CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Net income	\$ 176,186	\$ 203,865	\$ 219,267
Other comprehensive income (loss), net of tax:			
Available-for-sale investments:			
Net unrealized gain (loss), net of tax of \$981, \$515, and (\$188) in 2020 2019, and 2018, respectively	6,478	5,219	(1,185)
Reclassification of net realized (gain) loss into current operations	(4,119)	(1,452)	(501)
Net change related to available-for-sale investments	2,359	3,767	(1,686)
Foreign currency translation adjustments:			
Foreign currency translation adjustments	1,115	(541)	(4,216)
Net change related to foreign currency translation adjustments	1,115	(541)	(4,216)
Other comprehensive income (loss), net of tax	3,474	3,226	(5,902)
Total comprehensive income	<u>\$ 179,660</u>	<u>\$ 207,091</u>	<u>\$ 213,365</u>

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION – CONSOLIDATED BALANCE SHEETS

	December 31,	
	2020	2019
	(In thousands)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 269,073	\$ 171,431
Current investments, amortized cost of \$102,258 and \$235,610 in 2020 and 2019, respectively, allowance for credit losses of \$0 in 2020 and 2019	103,240	240,470
Accounts receivable, allowance for credit losses of \$831 and \$530 in 2020 and 2019, respectively	125,696	103,447
Unbilled revenue	5,632	4,782
Inventories	60,830	60,261
Prepaid expenses and other current assets	37,220	26,840
Total current assets	601,691	607,231
Non-current investments, amortized cost of \$390,417 and \$431,633 in 2020 and 2019, respectively, allowance for credit losses of \$0 in 2020 and 2019	395,125	433,452
Property, plant, and equipment, net	79,173	89,443
Operating lease assets	22,582	17,522
Goodwill	244,078	243,445
Intangible assets, net	15,555	39,490
Deferred income taxes	434,704	449,519
Other assets	7,794	5,833
Total assets	\$ 1,800,702	\$ 1,885,935
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 16,270	\$ 17,866
Accrued expenses	77,264	52,199
Accrued income taxes	9,379	30,333
Deferred revenue and customer deposits	21,274	14,432
Operating lease liabilities	8,110	5,647
Total current liabilities	132,297	120,477
Non-current operating lease liabilities	18,120	12,326
Deferred income taxes	314,952	332,344
Reserve for income taxes	14,257	11,563
Non-current accrued income taxes	48,915	51,113
Other liabilities	9,959	2,402
Total liabilities	538,500	530,225
Commitments and contingencies (Note 11)		
Shareholders' equity:		
Preferred stock, \$.01 par value - Authorized: 400 shares in 2020 and 2019, respectively, no shares issued and outstanding	—	—
Common stock, \$.002 par value – Authorized: 300,000 shares in 2020 and 2019, respectively, issued and outstanding: 175,790 and 172,440 shares in 2020 and 2019, respectively	352	345
Additional paid-in capital	807,739	639,372
Retained earnings	487,912	753,268
Accumulated other comprehensive loss, net of tax	(33,801)	(37,275)
Total shareholders' equity	1,262,202	1,355,710
Total liabilities and shareholders' equity	\$ 1,800,702	\$ 1,885,935

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION – CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2020	2019	2018
	(In thousands)		
Cash flows from operating activities:			
Net income	\$ 176,186	\$ 203,865	\$ 219,267
Adjustments to reconcile net income to net cash provided by operating activities:			
Stock-based compensation expense	42,661	45,589	41,090
Depreciation of property, plant, and equipment	22,139	21,527	18,473
Loss (gain) on disposal of property, plant, and equipment	1,817	324	—
Amortization of intangible assets	4,364	3,373	3,076
Intangible asset impairment charges	19,571	—	—
Excess and obsolete inventory charges	9,908	5,296	2,985
Operating lease asset impairment charges	3,427	—	—
Amortization of discounts or premiums on investments	1,274	(618)	108
Realized gain on sale of investments	(4,119)	(1,452)	(501)
Revaluation of contingent consideration	(114)	(1,401)	(3)
Change in deferred income taxes	(3,353)	(94,866)	(413)
Changes in operating assets and liabilities:			
Accounts receivable	(21,285)	16,807	(1,867)
Unbilled revenue	(848)	3,530	(906)
Inventories	(10,319)	17,841	(19,931)
Prepaid expenses and other current assets	(9,909)	7,405	(9,750)
Accounts payable	(1,688)	1,633	(7,247)
Accrued expenses	24,542	(8,938)	380
Accrued income taxes	(22,973)	25,266	(21,903)
Deferred revenue and customer deposits	6,571	3,875	1,434
Other	4,548	4,255	(838)
Net cash provided by operating activities	<u>242,400</u>	<u>253,311</u>	<u>223,454</u>
Cash flows from investing activities:			
Purchases of investments	(922,867)	(1,031,642)	(782,032)
Maturities and sales of investments	1,104,605	1,062,962	812,565
Purchases of property, plant, and equipment	(13,303)	(21,745)	(37,095)
Business acquisitions	1,004	(166,911)	(4,265)
Net cash provided by (used in) investing activities	<u>169,439</u>	<u>(157,336)</u>	<u>(10,827)</u>
Cash flows from financing activities:			
Issuance of common stock under stock plans	125,715	64,581	26,783
Repurchase of common stock	(51,036)	(61,690)	(203,822)
Payment of dividends	(390,508)	(35,124)	(31,865)
Payment of contingent consideration	(1,039)	—	(1,000)
Net cash used in financing activities	<u>(316,868)</u>	<u>(32,233)</u>	<u>(209,904)</u>
Effect of foreign exchange rate changes on cash and cash equivalents	2,671	(523)	(1,093)
Net change in cash and cash equivalents	<u>97,642</u>	<u>63,219</u>	<u>1,630</u>
Cash and cash equivalents at beginning of year	<u>171,431</u>	<u>108,212</u>	<u>106,582</u>
Cash and cash equivalents at end of year	<u>\$ 269,073</u>	<u>\$ 171,431</u>	<u>\$ 108,212</u>

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION – CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In thousands)	Common Stock		Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Shareholders' Equity
	Shares	Par Value				
Balance as of December 31, 2017	173,507	\$ 347	\$ 461,338	\$ 668,587	\$ (34,599)	\$ 1,095,673
Issuance of common stock under stock plans	1,493	3	26,780	—	—	26,783
Repurchase of common stock	(4,180)	(8)	—	(203,814)	—	(203,822)
Stock-based compensation expense	—	—	41,090	—	—	41,090
Payment of dividends	—	—	—	(31,865)	—	(31,865)
Adjustment as a result of the adoption of ASU 2016-06 "Income Taxes - Intra-Entity Transfers Other than Inventory"	—	—	—	(5,961)	—	(5,961)
Net income	—	—	—	219,267	—	219,267
Net unrealized gain (loss) on available-for-sale investments, net of tax of (\$188)	—	—	—	—	(1,185)	(1,185)
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(501)	(501)
Foreign currency translation adjustment, net of tax of \$0	—	—	—	—	(4,216)	(4,216)
Balance as of December 31, 2018	170,820	\$ 342	\$ 529,208	\$ 646,214	\$ (40,501)	\$ 1,135,263
Issuance of common stock under stock plans	3,018	6	64,575	—	—	64,581
Repurchase of common stock	(1,398)	(3)	—	(61,687)	—	(61,690)
Stock-based compensation expense	—	—	45,589	—	—	45,589
Payment of dividends	—	—	—	(35,124)	—	(35,124)
Net income	—	—	—	203,865	—	203,865
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$515	—	—	—	—	5,219	5,219
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(1,452)	(1,452)
Foreign currency translation adjustment, net of tax of \$0	—	—	—	—	(541)	(541)
Balance as of December 31, 2019	172,440	\$ 345	\$ 639,372	\$ 753,268	\$ (37,275)	\$ 1,355,710
Issuance of common stock under stock plans	4,565	9	125,706	—	—	125,715
Repurchase of common stock	(1,215)	(2)	—	(51,034)	—	(51,036)
Stock-based compensation expense	—	—	42,661	—	—	42,661
Payment of dividends	—	—	—	(390,508)	—	(390,508)
Net income	—	—	—	176,186	—	176,186
Net unrealized gain (loss) on available-for-sale investments, net of tax of \$981	—	—	—	—	6,478	6,478
Reclassification of net realized (gain) loss on the sale of available-for-sale investments	—	—	—	—	(4,119)	(4,119)
Foreign currency translation adjustment, net of tax of \$0	—	—	—	—	1,115	1,115
Balance as of December 31, 2020	175,790	\$ 352	\$ 807,739	\$ 487,912	\$ (33,801)	\$ 1,262,202

The accompanying notes are an integral part of these consolidated financial statements.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: Summary of Significant Accounting Policies

The accompanying consolidated financial statements reflect the application of the significant accounting policies described below.

Nature of Operations

Cognex Corporation is a leading provider of machine vision products that capture and analyze visual information in order to automate manufacturing and distribution tasks where vision is required.

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities as of the balance sheet date, and the reported amounts of revenues and expenses during the year. Actual results could differ from those estimates. Significant estimates and judgments include those related to revenue recognition, investments, inventories, intangible assets, stock-based compensation, income taxes, business combinations, and restructuring charges.

Basis of Consolidation

The consolidated financial statements include the accounts of Cognex Corporation and its subsidiaries, all of which are wholly-owned. All intercompany accounts and transactions have been eliminated.

Foreign Currency Translation

The financial statements of the Company's foreign subsidiaries, where the local currency is the functional currency, are translated using exchange rates in effect at the end of the year for assets and liabilities and average exchange rates during the year for results of operations. The resulting foreign currency translation adjustment, net of tax, is included in shareholders' equity as other comprehensive income (loss).

Fair Value Measurements

The Company applies a three-level valuation hierarchy for fair value measurements. The categorization of assets and liabilities within the valuation hierarchy is based on the lowest level of input that is significant to the measurement of fair value. Level 1 inputs to the valuation methodology utilize unadjusted quoted market prices in active markets for identical assets and liabilities. Level 2 inputs to the valuation methodology are other observable inputs, including quoted market prices for similar assets and liabilities, quoted prices for identical and similar assets and liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data. Level 3 inputs to the valuation methodology are unobservable inputs based on management's best estimate of the inputs that market participants would use in pricing the asset or liability at the measurement date, including assumptions about risk. A change to the level of an asset or liability within the fair value hierarchy is determined at the end of a reporting period.

Cash, Cash Equivalents, and Investments

Money market instruments, as well as certificates of deposit and debt securities with original maturities of three months or less, are classified as cash equivalents and are stated at amortized cost. Certificates of deposit and debt securities with original maturities greater than three months and remaining maturities of one year or less are classified as current investments. Debt securities with remaining maturities greater than one year are classified as non-current investments. It is the Company's policy to invest in investment-grade debt securities with effective maturities that do not exceed ten years.

Debt securities with original maturities greater than three months are designated as available-for-sale and are reported at fair value, with unrealized gains and losses, net of tax, included in shareholders' equity as other comprehensive income (loss). Realized gains and losses are calculated using the specific identification method. Realized gains and losses, interest income, and the amortization of the discount or premium on debt securities arising at acquisition, are included in "Investment income" on the Consolidated Statements of Operations.

Management monitors its debt securities to determine whether a loss exists related to the credit quality of the issuer. If the present value of the cash flows expected to be collected from the security is less than the amortized cost basis of the security, then a credit loss exists and an allowance against the security for credit losses is recorded. The allowance is limited to the amount by which fair value is below amortized cost, recognizing that the investment could be sold at fair value. Credit losses continue to be remeasured in subsequent reporting periods. Credit losses and

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

recoveries related to debt securities are included in "Other income (expense)" on the Consolidated Statements of Operations. When developing an estimate of expected credit losses, management considers all relevant information including historical experience, current conditions, and reasonable forecasts that project the expected future cash flows.

Accounts Receivable

The Company extends credit with various payment terms to customers based on an evaluation of their financial condition. Accounts that are outstanding longer than the payment terms are considered to be past due. The Company establishes an allowance against accounts receivable for credit losses when it determines receivables are at risk for collection based on the length of time the receivable has been outstanding, the customer's current ability to pay its obligations to the Company, general economic and industry conditions, and reasonable forecasts about the future, as well as various other factors. Receivables are written off against this allowance in the period they are determined to be uncollectible and payments subsequently received on previously written-off receivables are recorded as a recovery of the credit loss. Credit losses and recoveries related to accounts receivable are included in "Selling, general, and administrative expenses" on the Consolidated Statements of Operations.

Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using standard costs, which approximates actual costs under the first-in, first-out (FIFO) method. Net realizable value is the estimated selling prices in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation.

The Company's inventory is subject to technological change or obsolescence. The Company reviews inventory quantities on hand and estimates excess and obsolescence exposures based on assumptions about future demand, product transitions, and market conditions, and records reserves to reduce the carrying value of inventories to their net realizable value. If actual future demand is less than estimated, additional inventory write-downs would be required.

The Company generally disposes of obsolete inventory upon determination of obsolescence. The Company does not dispose of excess inventory immediately, due to the possibility that some of this inventory could be sold to customers as a result of differences between actual and forecasted demand. When inventory has been written down below cost, such reduced amount is considered the new cost basis for subsequent accounting purposes. As a result, the Company would recognize a higher than normal gross margin if the reserved inventory were subsequently sold.

Property, Plant, and Equipment

Property, plant, and equipment are stated at cost and depreciated using the straight-line method over the assets' estimated useful lives. Buildings' useful lives are 39 years, building improvements' useful lives are ten years, and the useful lives of computer hardware and software, manufacturing test equipment, and furniture and fixtures range from two to ten years. Leasehold improvements are depreciated over the shorter of the estimated useful lives or the remaining terms of the leases. Maintenance and repairs are expensed when incurred; additions and improvements are capitalized. Upon retirement or disposition, the cost and related accumulated depreciation of the disposed assets are removed from the accounts, with any resulting gain or loss included in current operations.

Internal-use Software

Internal-use software is software acquired, internally developed, or modified solely to meet the entity's internal needs, and during the software's development, no substantive plan exists to sell the software. The accounting treatment for computer software developed for internal use depends upon the nature of activities performed at each stage of development. The preliminary project stage includes conceptual formulation of design alternatives, determination of system requirements, vendor demonstrations, and final selection of vendors, and during this stage costs are expensed as incurred. The application development stage includes software configuration, coding, hardware installation, and testing. During this stage, certain costs are capitalized, including external direct costs of materials and services, as well as payroll and payroll-related costs for employees who are directly associated with the project, while certain costs are expensed as incurred, including training and data conversion costs. The post-implementation stage includes support and maintenance, and during this stage costs are expensed as incurred.

Capitalization begins when both the preliminary project stage is completed and management commits to funding the project. Capitalization ceases at the point the project is substantially complete and ready for its intended use, that is,

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

after all substantial testing is completed. Costs of specified upgrades and enhancements to internal-use software are capitalized if it is probable that those expenditures result in additional functionality. Capitalized costs are amortized on a straight-line basis over the estimated useful life.

Leases

At inception of a contract, the Company determines whether that contract is or contains a lease. The Company determines whether a contract contains a lease by assessing whether there is an identified asset and whether the contract conveys the right to control the use of the identified asset for a period of time in exchange for consideration. The Company has control of the asset if it has the right to direct the use of the asset and obtains substantially all of the economic benefits from the use of the asset throughout the period of use.

As a practical expedient, the Company does not recognize a lease asset or lease liability for leases with a lease term of 12 months or less. In the determination of the lease term, the Company considers the existence of extension or termination options and the probability of those options being exercised.

Lease contracts may include lease components and non-lease components, such as common area maintenance and utilities for property leases. As a practical expedient, the Company accounts for the non-lease components together with the lease components as a single lease component for all of its leases.

The Company classifies a lease as a finance lease when it meets any of the following criteria at the lease commencement date: (1) the lease transfers ownership of the underlying asset to the Company by the end of the lease term; (2) the lease grants the Company an option to purchase the underlying asset that the Company is reasonably certain to exercise; (3) the lease term is for the major part of the remaining economic life of the underlying asset (the Company considers a major part to be 75% or more of the remaining economic life of the underlying asset); (4) the present value of the sum of the lease payments and any residual value guaranteed by the Company equals or exceeds substantially all of the fair value of the underlying asset (the Company considers substantially all the fair value to be 90% or more of the fair value of the underlying asset amount); or (5) the underlying asset is of such a specialized nature that it is expected to have no alternative use to the lessor at the end of the lease term. When none of the criteria above are met, the Company classifies the lease as an operating lease.

On the lease commencement date, the Company records a lease asset and lease liability on the balance sheet. The lease asset consists of: (1) the amount of the initial lease liability; (2) any lease payments made to the lessor at or before the lease commencement date, minus any lease incentives received; and (3) any initial direct cost incurred by the Company. Initial direct costs are incremental costs of a lease that would not have been incurred if the lease had not been obtained and are capitalized as part of the lease asset. The lease liability equals the present value of the future cash payments discounted using the Company's incremental borrowing rate. The Company's incremental borrowing rate is the rate of interest that the Company would have to pay to borrow an amount equal to the lease payments over a similar term, which is the three-month London Interbank Offered Rate (LIBOR) plus a 2% credit risk spread.

Operating lease expense equals the total cash payments recognized on a straight-line basis over the lease term. The amortization of the lease asset is calculated as the straight-line lease expense less the accretion of the interest on the lease liability each period. The lease liability is reduced by the cash payment less the interest each period.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Goodwill

Goodwill is stated at cost. The Company evaluates the potential impairment of goodwill annually each fourth quarter and whenever events or circumstances indicate the carrying value of the goodwill may not be recoverable. The Company performs a qualitative assessment of goodwill to determine whether further impairment testing is necessary. Factors that management considers in this assessment include macroeconomic conditions, industry and market considerations, overall financial performance (both current and projected), changes in management or strategy, changes in the composition or carrying amount of net assets, and market capitalization. If this qualitative assessment indicates that it is more likely than not that the fair value of a reporting unit is less than its carrying value, the Company would proceed to perform a quantitative impairment test. Under this quantitative analysis, the fair value of the reporting unit is compared with its carrying value, including goodwill. If the carrying value exceeds the fair value of the reporting unit, the Company recognizes an impairment charge. The Company estimates the fair value of its reporting unit using the income approach based on a discounted cash flow model. In addition, the Company uses the market approach, which compares the reporting unit to publicly-traded companies and transactions involving similar businesses, to support the conclusions based on the income approach.

Intangible Assets

Intangible assets are stated at cost and amortized over the assets' estimated useful lives. Intangible assets are either amortized in relation to the relative cash flows anticipated from the intangible asset or using the straight-line method, depending upon facts and circumstances. The useful lives of distribution networks range from eleven to twelve years, of completed technologies from five to eight years, of customer relationships from five to eight years, of non-compete agreements from three to seven years, and trademarks two years. In-process technology is an indefinite-lived intangible asset until the technology is completed, at which point it is amortized over its estimated useful life.

The Company evaluates the potential impairment of intangible assets whenever events or circumstances indicate the carrying value of the assets may not be recoverable. For finite-lived intangible assets that are subject to amortization, the Company follows a two-step process for impairment testing. In step one, known as the recoverability test, the carrying value of the asset is compared to the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If the sum of the undiscounted future cash flows is less than the carrying value, the asset is not recoverable and step two is performed. In step two, the impairment charge is measured as the amount by which the carrying value of the asset exceeds its fair value. For indefinite-lived intangible assets that are not subject to amortization, the fair value of the asset is measured and an impairment charge is recorded as the amount by which the carrying value of the asset exceeds its fair value.

Warranty Obligations

The Company warrants its products to be free from defects in material and workmanship for periods primarily ranging from one to three years from the time of sale based on the product being purchased and the terms of the customer arrangement. Warranty obligations are evaluated and recorded at the time of sale since it is probable that customers will make claims under warranties related to products that have been sold and the amount of these claims can be reasonably estimated based on historical costs to fulfill claims. Obligations may also be recorded subsequent to the time of sale whenever specific events or circumstances impacting product quality become known that would not have been taken into account using historical data.

Contingencies

Loss contingencies are accrued if the loss is probable and the amount of the loss can be reasonably estimated. Legal costs associated with potential loss contingencies are expensed as incurred.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Derivative Instruments

Derivative instruments are recorded on the Consolidated Balance Sheets at fair value. Changes in the fair value of the Company's economic hedges utilizing foreign currency forward contracts are included in "Foreign currency gain (loss)" on the Consolidated Statements of Operations. The Company recognizes all derivative instruments as either current assets or current liabilities at fair value on the Consolidated Balance Sheets. When the Company is engaged in more than one outstanding derivative contract with the same counterparty and also has a legally enforceable master netting agreement with that counterparty, the "net" mark-to-market exposure represents the netting of the positive and negative exposures with that counterparty. The cash flows from derivative instruments are presented in the same category on the Consolidated Statements of Cash Flows as the category for the cash flows from the hedged item. Generally, this accounting policy election results in cash flows related to derivative instruments being classified as an operating activity on the Consolidated Statements of Cash Flows.

Revenue Recognition

The Company recognizes revenue in accordance with Accounting Standards Codification (ASC) 606, "Revenue from Contracts with Customers." The core principle of ASC 606 is to recognize revenue in a manner that depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. The framework in support of this core principle includes: (1) identifying the contract with the customer; (2) identifying the performance obligations in the contract; (3) determining the transaction price; (4) allocating the transaction price to the performance obligations; and (5) recognizing revenue when (or as) the performance obligations are satisfied.

Identifying the Contract with the Customer

The Company identifies contracts with customers as agreements that create enforceable rights and obligations, which typically take the form of customer contracts or purchase orders. The Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance, and collectibility of consideration is probable.

Identifying the Performance Obligations in the Contract

The Company identifies performance obligations as promises in contracts to transfer distinct goods or services. Standard products and services that the Company regularly sells separately are accounted for as distinct performance obligations. Application-specific customer solutions that are comprised of a combination of products and services are accounted for as one performance obligation to deliver a total solution to the customer. On-site support services that are provided to the customer after the solution is deployed are accounted for as a separate performance obligation. These solutions are provided to customers in a variety of industries, including the consumer electronics and logistics industries.

Shipping and handling activities for which the Company is responsible under the terms and conditions of the sale are not accounted for as performance obligations but as fulfillment costs. These activities are required to fulfill the Company's promise to transfer the goods and are expensed when revenue is recognized.

The Company does not assess whether promised goods or services are performance obligations if they are immaterial in the context of the contract. If revenue is recognized before immaterial promises have been completed, then the costs related to such immaterial promises are accrued at the time of sale.

Determining the Transaction Price

The Company determines the transaction price as the amount of consideration it expects to receive in exchange for transferring promised goods or services to the customer. Amounts collected from customers for sales taxes are excluded from the transaction price.

If a contract includes a variable amount, such as a rebate, then the Company estimates the transaction price using either the expected value or the most likely amount of consideration to be received, depending upon the specific facts and circumstances. The Company includes estimated variable consideration in the transaction price only to the extent it is probable that a significant reversal of revenue will not occur when the uncertainty is resolved. The Company updates its estimate of variable consideration at the end of each reporting period to reflect changes in facts and circumstances.

The Company does not grant customers the explicit right to return product. However, from time to time, the Company may allow a customer to return a product. As a practical expedient, the Company estimates the transaction price using the expected value based on its history of return experience using a portfolio approach in

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which the Company's total revenue is reduced by an estimate of total customer returns. Management reasonably expects that the effect of applying a portfolio approach to a group of contracts would not differ materially from considering each contract separately.

Allocating the Transaction Price to the Performance Obligations

The Company allocates the transaction price to each performance obligation at contract inception based on a relative stand-alone selling price basis, or the price at which the Company would sell the good or service separately to similar customers in similar circumstances.

Recognizing Revenue When (or As) the Performance Obligations are Satisfied

The Company recognizes revenue when it transfers the promised goods or services to the customer. Revenue for standard products is recognized at the point in time when the customer obtains control of the goods, which is typically upon delivery when the customer has legal title, physical possession, the risks and rewards of ownership, and an enforceable obligation to pay for the products. Revenue for services, which are not material, is typically recognized over the time the service is provided.

Revenue for application-specific customer solutions is recognized at the point in time when the solution is validated, which is the point in time when the Company can objectively determine that the agreed-upon specifications in the contract have been met and the customer will accept the performance obligations in the arrangement. Although the customer may have taken legal title and physical possession of the goods when they arrived at the customer's designated site, the significant risks and rewards of ownership transfer to the customer only upon validation. Revenue for on-site support services related to these solutions is recognized over the time the service is provided.

In certain instances, an arrangement may include customer-specified acceptance provisions or performance guarantees that allow the customer to accept or reject delivered products that do not meet the customer's specifications. If the Company can objectively determine that control of a good or service has been transferred to the customer in accordance with the agreed-upon specifications in the contract, then customer acceptance is a formality. If acceptance provisions are presumed to be substantive, then revenue is deferred until customer acceptance.

For the Company's standard products and services, revenue recognition and billing typically occur at the same time. For application-specific customer solutions, however, the agreement with the customer may provide for billing terms which differ from revenue recognition criteria, resulting in either deferred revenue or unbilled revenue. Credit assessments are performed to determine payment terms, which vary by region, industry, and customer. Prepayment terms result in contract liabilities for customer deposits. When credit is granted to customers, payment is typically due 30 to 90 days from billing. The Company's contracts have an original expected duration of less than one year, and therefore as a practical expedient, the Company has elected to ignore the impact of the time value of money on a contract and to expense sales commissions. The Company recognizes an asset for costs to fulfill a contract if the costs relate directly to the contract and to future performance, and the costs are expected to be recovered.

Management exercises judgment when determining the amount of revenue to be recognized each period. Such judgments include, but are not limited to, assessing the customer's ability and intention to pay substantially all of the contract consideration when due, determining when two or more contracts should be combined and accounted for as a single contract, determining whether a contract modification has occurred, assessing whether promises are immaterial in the context of the contract, determining whether material promises in a contract represent distinct performance obligations, estimating the transaction price for a contract that contains variable consideration, determining the stand-alone selling price of each performance obligation, determining whether control is transferred over time or at a point in time for performance obligations, and assessing whether formal customer acceptance provisions are substantive.

Research and Development

Research and development costs primarily include personnel-related costs, outside services, and prototyping materials. Research and development costs are expensed when incurred until technological feasibility has been established for the product. Thereafter, all software costs may be capitalized until the product is available for general release to customers. The Company determines technological feasibility at the time the product reaches beta in its stage of development. Historically, the time incurred between beta and general release to customers has been short, and therefore, the costs have been insignificant.

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Advertising Costs

Advertising costs are expensed as incurred and totaled \$1,443,000 in 2020, \$1,385,000 in 2019, and \$1,662,000 in 2018.

Stock-Based Compensation

The Company's stock-based awards that result in compensation expense consist of stock options and restricted stock units (RSUs). The Company has reserved a specific number of shares of its authorized but unissued shares for issuance upon the exercise of stock options or the settlement of RSUs. When a stock option is exercised or an RSU is settled, the Company issues new shares from this pool. The fair values of stock options are estimated on the grant date using a binomial lattice model. Management is responsible for determining the appropriate valuation model and estimating these fair values, and in doing so, considers a number of factors, including information provided by an outside valuation advisor. The fair value of RSUs is determined based on the market value of the Company's common stock on the grant date.

The Company recognizes compensation expense related to stock options and RSUs using the graded attribution method, in which expense is recognized on a straight-line basis over the service period for each separately vesting portion of the stock option or RSU as if the award was, in substance, multiple awards. The amount of compensation expense recognized at the end of the vesting period is based on the number of awards for which the requisite service has been completed. No compensation expense is recognized for awards that are forfeited for which the employee does not render the requisite service. The term "forfeitures" is distinct from "expirations" and represents only the unvested portion of the surrendered award. The Company applies estimated forfeiture rates to its unvested awards to arrive at the amount of compensation expense that is expected to be recognized over the requisite service period. At the end of each separately vesting portion of an award, the expense that was recognized by applying the estimated forfeiture rate is compared to the expense that should be recognized based on the employee's service, and an increase or decrease to compensation expense is recorded to true up the final expense.

Taxes

The Company recognizes a tax position in its financial statements when that tax position, based solely upon its technical merits, is more likely than not to be sustained upon examination by the relevant taxing authority. Those tax positions failing to qualify for initial recognition are recognized in the first interim period in which they meet the more likely than not standard, or are resolved through negotiation or litigation with the taxing authority, or upon expiration of the statutes of limitations. Derecognition of a tax position that was previously recognized occurs when an entity subsequently determines that a tax position no longer meets the more likely than not threshold of being sustained.

Only the portion of the liability that is expected to be paid within one year is classified as a current liability. As a result, liabilities expected to be resolved without the payment of cash (e.g., resolution due to the expiration of the statutes of limitations) or are not expected to be paid within one year are not classified as current. It is the Company's policy to record estimated interest and penalties as income tax expense and tax credits as a reduction in income tax expense.

Deferred tax assets and liabilities are determined based on the differences between the financial statement and tax bases of assets and liabilities as measured by the enacted tax rates that will be in effect when these differences reverse. Valuation allowances are provided if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Tax Cuts and Jobs Act of 2017 imposed a minimum tax on foreign earnings related to intangible assets, known as the Global Intangible Low-Taxed Income (GILTI) tax. In 2019, the Company elected to account for the impact of the GILTI minimum tax in deferred taxes, a change from the Company's initial election made in 2018 whereby the GILTI minimum tax was included in income tax expense as incurred on an annual basis. The change is considered preferable, as it appropriately matches the Company's current and deferred income tax implications.

Sales tax in the United States and similar taxes in other jurisdictions that are collected from customers and remitted to government authorities are presented on a gross basis (i.e., a receivable from the customer with a corresponding payable to the government). Amounts collected from customers and retained by the Company during tax holidays are recognized as non-operating income when earned.

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Net Income Per Share

Basic net income per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted net income per share is computed by dividing net income available to common shareholders by the weighted-average number of common shares outstanding for the period plus potential dilutive common shares. Dilutive common equivalent shares consist of stock options and restricted stock units and are calculated using the treasury stock method. Common equivalent shares do not qualify as participating securities. In periods where the Company records a net loss, potential common stock equivalents are not included in the calculation of diluted net loss per share as their effect would be anti-dilutive.

Comprehensive Income

Comprehensive income is defined as the change in equity of a company during a period from transactions and other events and circumstances, excluding transactions resulting from investments by owners and distributions to owners. Accumulated other comprehensive loss, net of tax, consists of foreign currency translation adjustment losses of \$36,912,000 and \$38,027,000, as of December 31, 2020 and December 31, 2019, respectively; net unrealized gains on available-for-sale investments of \$4,382,000 and \$2,023,000 as of December 31, 2020 and December 31, 2019, respectively; and losses on currency swaps, net of gains on long-term intercompany loans of \$1,271,000 at each year end.

Amounts reclassified from accumulated other comprehensive income (loss) to investment income on the Consolidated Statements of Operations were net realized gains of \$4,119,000, \$1,452,000, and \$501,000 for 2020, 2019, and 2018, respectively.

Concentrations of Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist primarily of cash, cash equivalents, investments, and accounts receivable. The Company has certain domestic and foreign cash balances that exceed the insured limits set by the Federal Deposit Insurance Corporation (FDIC) in the United States and equivalent regulatory agencies in foreign countries. The Company primarily invests in investment-grade debt securities and has established guidelines relative to credit ratings, diversification, and maturities of its debt securities that maintain safety and liquidity. The Company has historically not experienced any significant realized losses on its debt securities.

The Company has two large customers that each represented a significant portion of revenue in 2020 and accounts receivable as of December 31, 2020. The Company performs ongoing credit evaluations of its customers and maintains allowances for potential credit losses. The Company has historically not experienced any significant losses related to the collection of its accounts receivable.

A significant portion of the Company's product is manufactured by a third-party contractor located in Indonesia. This contractor has agreed to provide Cognex with termination notification periods and last-time-buy rights, if and when that may be applicable. We rely upon this contractor to provide quality product and meet delivery schedules. We engage in extensive product quality programs and processes, including actively monitoring the performance of our third-party manufacturers; however, we may not detect all product quality issues through these programs and processes.

Certain components are presently sourced from a single vendor that is selected based on price and performance considerations. In the event of a supply disruption from a single-source vendor, these components may be purchased from alternative vendors, which may result in manufacturing delays based on the lead time of the new vendor and higher costs. Certain key electronic and mechanical components that are purchased from strategic suppliers, such as processors or imagers, are fundamental to the design of Cognex products. A disruption in the supply of these key components, such as a last-time-buy announcement, natural disaster, financial bankruptcy, or other event, may require us to purchase a significant amount of inventory at unfavorable prices resulting in lower gross margins and higher risk of carrying excess inventory. If we are unable to secure adequate supply from alternative sources, we may have to redesign our products, which may lead to a delay in manufacturing and a possible loss of sales.

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Business Acquisitions

The Company determines whether a transaction qualifies as a business combination by applying the definition of a business, which requires the assets acquired and liabilities assumed to be inputs and processes that have the ability to contribute to the creation of outputs. The Company accounts for business combinations under the acquisition method of accounting, which requires the following steps: (1) identifying the acquirer, (2) determining the acquisition date, (3) recognizing and measuring the identifiable assets acquired and the liabilities assumed, and (4) recognizing and measuring goodwill. The Company measures the identifiable assets acquired and liabilities assumed at their estimated fair values as of the acquisition date. Management is responsible for determining the appropriate valuation model and estimated fair values, and in doing so, considers a number of factors, including information provided by an outside valuation advisor. Management primarily establishes fair value using the income approach based on a discounted cash flow model. The income approach requires the use of many assumptions and estimates including future revenues and expenses, as well as discount factors. Contingent consideration liabilities are reported at their estimated fair values based on probability-adjusted present values of the consideration expected to be paid, using significant inputs and estimates. Key assumptions used in these estimates include probability assessments with respect to the likelihood of achieving certain milestones and discount rates consistent with the level of risk of achievement. The fair values of these contingent consideration liabilities are remeasured each reporting period with changes in fair value included in "Other income (expense)" on the Consolidated Statements of Operations. Goodwill is recognized as of the acquisition date as the excess of the consideration transferred over the net amount of assets acquired and liabilities assumed. Transaction costs are expensed as incurred.

Restructuring Charges

One-time employee termination benefits as part of a restructuring activity exist at the date the plan of termination has been communicated to employees (the "communication date") and meets all of the following criteria: (1) management, having the authority to approve the action, has committed to the plan of termination, (2) the plan identifies the number of employees to be terminated, their job classifications or functions and their locations, and the expected completion date, (3) the plan establishes the terms of the benefit arrangement in sufficient detail, and (4) actions required to complete the plan indicate it is unlikely that significant changes to the plan will be made. If employees are not required to render service until they are terminated in order to receive the termination benefits or will not be retained to render service beyond a minimum retention period, a liability for the termination benefits is recognized and measured at fair value at the communication date. Otherwise, a liability is measured initially at the communication date based on the fair value of the liability as of the termination date and recognized ratably over the future service period. Changes to the fair value of the liability are recorded as restructuring adjustments.

Closures of leased offices as part of a restructuring activity prior to the end of the contractual lease term are treated as abandoned right-to-use assets when the Company ceases to use the property for economic benefit and lacks either the intent or ability to sublease. The lease asset is written down to zero as of the abandonment date. Estimates of contract termination costs assume the Company will be obligated to pay the remaining rent over the contract period, and the lease liability continues to be recorded on the balance sheet. Subsequent negotiations that result in early contract terminations are recorded as favorable restructuring adjustments.

Other associated costs typically associated with restructuring activities include costs to consolidate facilities, costs to relocate employees, and legal fees incurred to research local statutory requirements and prepare termination agreements. These costs are recognized in the period in which the liability is incurred, which generally corresponds to the period in which the services are rendered.

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NOTE 2: New Pronouncements

Accounting Standards Update (ASU) 2019-12, "Simplifying the Accounting for Income Taxes"

ASU 2019-12 applies to all entities within the scope of Topic 740, Income Taxes. The amendments in this ASU simplify the accounting for income taxes by removing the following exceptions: (1) exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items; (2) exception to the requirement to recognize a deferred tax liability for equity method investments when a foreign subsidiary becomes an equity method investment; (3) exception to the ability not to recognize a deferred tax liability for a foreign subsidiary when a foreign equity method investment becomes a subsidiary; and (4) exception to the general methodology for calculating income taxes in an interim period when a year-to-date loss exceeds the anticipated loss for the year. The amendments in this ASU also simplify the accounting for income taxes by doing the following: (1) requiring that an entity recognize a franchise tax that is partially based on income as an income-based tax and account for any incremental amount incurred as a non-income-based tax; (2) requiring that an entity evaluate when a step up in the tax basis of goodwill should be considered part of the business combination in which the book goodwill was originally recognized and when it should be considered a separate transaction; (3) specifying that an entity is not required to allocate the consolidated amount of current and deferred tax expense to a legal entity that is not subject to tax in its separate financial statements; and (4) requiring that an entity reflect the effect of an enacted change in tax laws or rates in the annual effective tax rate computation in the interim period that included the enacted date. The amendments in this ASU are effective for public companies for annual periods, and interim periods within those annual periods, beginning after December 15, 2020. Early adoption is permitted; however, an entity that elects to early adopt the amendments must adopt all the amendments in the same period. The amendments in this ASU related to separate financial statements of legal entities that are not subject to tax should be applied on a retrospective basis for all periods presented. The amendments related to changes in ownership of foreign equity method investments or foreign subsidiaries should be applied on a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. The amendments related to franchise taxes that are partially based on income should be applied on either a retrospective basis for all periods presented or a modified retrospective basis through a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. All other amendments should be applied on a prospective basis. Management does not expect ASU 2019-12 to have a material impact on the Company's consolidated financial statements and disclosures.

Accounting Standards Update (ASU) 2020-04, "Reference Rate Reform (Topic 848)"

The amendments in this ASU apply to all entities that have contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. The amendments in this ASU provide optional expedients and exceptions for applying generally accepted accounting principles (GAAP) to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by the amendments do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022, except for hedging relationships existing as of December 31, 2022, that an entity has elected certain optional expedients for and that are retained through the end of the hedging relationship. The amendments in this ASU are effective for all entities as of March 12, 2020 through December 31, 2022. Management does not expect ASU 2020-04 to have a material impact on the Company's consolidated financial statements and disclosures.

Accounting Standards Update (ASU) 2020-08, "Codification Improvements to Subtopic 310-20, Receivables - Nonrefundable Fees and Other Costs"

The amendments in this ASU clarify that for each reporting period, for callable debt with multiple call dates and call prices that may change at each call date, to the extent that the amortized cost basis of an individual callable debt security exceeds the amount repayable by the issuer at the next call date, the excess is amortized to the next call date. The amendments in this ASU are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early application is not permitted. The amendments in this ASU should be applied on a prospective basis as of the beginning of the period of adoption for existing or newly purchased callable debt securities. Management does not expect ASU 2020-08 to have a material impact on the Company's consolidated financial statements and disclosures.

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NOTE 3: Fair Value Measurements

Financial Assets and Liabilities that are Measured at Fair Value on a Recurring Basis

The following table summarizes the financial assets and liabilities measured at fair value on a recurring basis as of December 31, 2020 (in thousands):

	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)
Assets:			
Money market instruments	\$ 2,464	\$ —	\$ —
Corporate bonds	—	236,142	—
Treasury bills	—	131,861	—
Asset-backed securities	—	92,218	—
Agency bonds	—	19,006	—
Sovereign bonds	—	12,100	—
Municipal bonds	—	7,038	—
Economic hedge forward contracts	—	265	—
Liabilities:			
Economic hedge forward contracts	—	38	—

The Company's money market instruments are reported at fair value based on the daily market price for identical assets in active markets, and are therefore classified as Level 1.

The Company's debt securities and forward contracts are reported at fair value based on model-driven valuations in which all significant inputs are observable or can be derived from or corroborated by observable market data for substantially the full term of the asset or liability, and are therefore classified as Level 2. Management is responsible for estimating the fair value of these financial assets and liabilities, and in doing so, considers valuations provided by a large, third-party pricing service. For debt securities, this service maintains regular contact with market makers, brokers, dealers, and analysts to gather information on market movement, direction, trends, and other specific data. They use this information to structure yield curves for various types of debt securities and arrive at the daily valuations. The Company's forward contracts are typically traded or executed in over-the-counter markets with a high degree of pricing transparency. The market participants are generally large commercial banks.

The Company's contingent consideration liabilities are reported at fair value based on probability-adjusted present values of the consideration expected to be paid, using significant inputs that are not observable in the market, and are therefore classified as Level 3. Key assumptions used in these estimates include probability assessments with respect to the likelihood of achieving certain revenue milestones. The fair values of these contingent consideration liabilities were calculated using discount rates consistent with the level of risk of achievement, and are remeasured each reporting period.

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The following table summarizes the activity for the Company's liabilities measured at fair value using Level 3 inputs (in thousands):

Balance as of December 31, 2018	\$ 2,554
Fair value adjustment to GVi contingent consideration	(1,646)
Fair value adjustment to Chiaro contingent consideration	245
Balance as of December 31, 2019	1,153
Fair value adjustment to Chiaro contingent consideration	(114)
Payment of Chiaro contingent consideration	(1,039)
Balance as of December 31, 2020	<u>\$ —</u>

The fair value of the contingent consideration liability related to the Company's acquisition of GVi Ventures, Inc. in 2017 was written down to zero as of December 31, 2019, resulting from a lower level of revenue in the Americas' automotive industry, and the balance remains at zero as of December 31, 2020. The undiscounted potential outcomes related to future contingent consideration range from \$0 to \$2,500,000 based on certain revenue levels over the next two years.

Non-financial Assets that are Measured at Fair Value on a Non-recurring Basis

Non-financial assets, such as property, plant and equipment, operating lease assets, goodwill, and intangible assets, are required to be measured at fair value only when an impairment loss is recognized. The Company evaluates these long-lived assets for impairment whenever events or changes in circumstances, referred to as "triggering events," indicate the carrying value may not be recoverable. Our business has been adversely and materially impacted by deteriorating global economic conditions resulting from the COVID-19 pandemic. These conditions triggered a review of long-lived assets for potential impairment as of May 26, 2020, which resulted in operating lease asset impairment charges of \$3,427,000 (refer to Notes 7 and 22) that are included in "Restructuring charges" on the Consolidated Statements of Operations, and intangible asset impairment charges of \$19,571,000 (refer to Note 9). These fair value measurements are based on the present values of future cash flows using significant inputs that are not observable in the market, and are therefore classified as Level 3. The Company did not record impairment charges related to non-financial assets in 2019 and 2018.

NOTE 4: Cash, Cash Equivalents, and Investments

Cash, cash equivalents, and investments consisted of the following (in thousands):

	December 31,	
	2020	2019
Cash	\$ 266,609	\$ 155,498
Money market instruments	2,464	15,933
Cash and cash equivalents	<u>269,073</u>	<u>171,431</u>
Treasury bills	35,403	92,914
Corporate bonds	32,714	65,624
Asset-backed securities	25,160	66,680
Sovereign bonds	8,660	6,294
Municipal bonds	1,303	4,630
Certificate of deposit	—	4,328
Current investments	<u>103,240</u>	<u>240,470</u>
Corporate bonds	203,428	146,474
Treasury bills	96,458	216,334
Asset-backed securities	67,058	46,403
Agency bonds	19,006	5,914
Municipal bonds	5,735	2,322
Sovereign bonds	3,440	16,005
Non-current investments	<u>395,125</u>	<u>433,452</u>
	<u>\$ 767,438</u>	<u>\$ 845,353</u>

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The Company's cash balance included foreign bank balances totaling \$225,853,000 and \$123,499,000 as of December 31, 2020 and 2019, respectively.

Treasury bills consist of debt securities issued by the U.S. government; corporate bonds consist of debt securities issued by both domestic and foreign companies; asset-backed securities consist of debt securities collateralized by pools of receivables or loans with credit enhancement; sovereign bonds consist of direct debt issued by foreign governments; municipal bonds consist of debt securities issued by state and local government entities; certificates of deposit are time deposits held by financial institutions with a fixed interest rate; and agency bonds consist of domestic or foreign obligations of government agencies and government-sponsored enterprises that have government backing. All securities are denominated in U.S. Dollars, with the exception of the certificate of deposit held as of December 31, 2019 that was denominated in Korean Won.

Accrued interest receivable is included in "Prepaid expenses and other current assets" on the Consolidated Balance Sheet and amounted to \$1,560,000 and \$2,874,000 as of December 31, 2020 and 2019, respectively.

The following table summarizes the Company's available-for-sale investments as of December 31, 2020 (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
Current:				
Treasury bills	\$ 34,978	\$ 425	\$ —	\$ 35,403
Corporate bonds	32,394	320	—	32,714
Asset-backed securities	24,999	161	—	25,160
Sovereign bonds	8,590	70	—	8,660
Municipal bonds	1,297	6	—	1,303
Non-current:				
Corporate bonds	200,549	2,879	—	203,428
Treasury bills	95,522	936	—	96,458
Asset-backed securities	66,329	729	—	67,058
Agency bonds	18,913	93	—	19,006
Municipal bonds	5,725	10	—	5,735
Sovereign bonds	3,379	61	—	3,440
	\$ 492,675	\$ 5,690	\$ —	\$ 498,365

On January 1, 2020, the Company adopted Accounting Standards Update (ASU) 2016-13, "Measurement of Credit Losses on Financial Instruments," using the modified-retrospective approach, which requires the Company to apply the standard on a prospective basis with a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the guidance is effective. The Company did not record an adjustment to retained earnings, as there were no debt securities with credit losses as of the adoption date.

The following table summarizes changes in the allowance for credit losses (in thousands):

Balance as of December 31, 2018	\$ —
Balance as of December 31, 2019	—
Increases to the allowance for credit losses	160
Decreases to the allowance for credit losses	(160)
Write-offs	—
Balance as of December 31, 2020	\$ —

The Company recorded gross realized gains on the sale of debt securities totaling \$4,283,000 in 2020, \$1,581,000 in 2019, and \$669,000 in 2018, and gross realized losses on the sale of debt securities totaling \$164,000 in 2020, \$129,000 in 2019, and \$168,000 in 2018.

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The following table summarizes the effective maturity dates of the Company's available-for-sale investments as of December 31, 2020 (in thousands):

	<u><1 Year</u>	<u>1-2 Years</u>	<u>2-3 Years</u>	<u>3-4 Years</u>	<u>4-5 Years</u>	<u>Total</u>
Corporate bonds	\$ 32,714	\$ 69,534	\$ 119,328	\$ 13,488	\$ 1,078	\$ 236,142
Treasury bills	35,403	68,217	28,241	—	—	131,861
Asset-backed securities	25,160	46,842	18,755	1,461	—	92,218
Agency bonds	—	2,805	16,201	—	—	19,006
Sovereign bonds	8,660	—	3,440	—	—	12,100
Municipal bonds	1,303	5,096	639	—	—	7,038
	<u>\$ 103,240</u>	<u>\$ 192,494</u>	<u>\$ 186,604</u>	<u>\$ 14,949</u>	<u>\$ 1,078</u>	<u>\$ 498,365</u>

NOTE 5: Inventories

Inventories consisted of the following (in thousands):

	<u>December 31,</u>	
	<u>2020</u>	<u>2019</u>
Raw materials	\$ 26,800	\$ 27,285
Work-in-process	4,780	5,503
Finished goods	29,250	27,473
	<u>\$ 60,830</u>	<u>\$ 60,261</u>

The Company recorded provisions for excess and obsolete inventories of \$9,908,000 and \$5,296,000 in 2020 and 2019, respectively, which reduced the carrying value of the inventories to their net realizable value. Estimates in 2020 took into account the global economic conditions resulting from the COVID-19 pandemic.

NOTE 6: Property, Plant, and Equipment

Property, plant, and equipment consisted of the following (in thousands):

	<u>December 31,</u>	
	<u>2020</u>	<u>2019</u>
Land	\$ 3,951	\$ 3,951
Buildings	24,533	24,533
Building improvements	45,978	49,289
Leasehold improvements	12,682	10,790
Computer hardware and software	58,162	67,474
Manufacturing test equipment	29,816	31,278
Furniture and fixtures	6,372	6,800
	<u>181,494</u>	<u>194,115</u>
Less: accumulated depreciation	<u>(102,321)</u>	<u>(104,672)</u>
	<u>\$ 79,173</u>	<u>\$ 89,443</u>

The Company disposed of property, plant, and equipment with a cost basis of \$26,829,000 and accumulated depreciation of \$24,977,000 in 2020, resulting in a loss of \$1,852,000. Disposals in 2020 included leasehold improvements and other assets associated with office closures. The Company disposed of property, plant, and equipment with a cost basis of \$8,883,000 and accumulated depreciation of \$8,559,000 in 2019, resulting in a loss of \$324,000.

Buildings included rental property with a cost basis of \$800,000 and accumulated depreciation of \$255,000 as of December 31, 2019. This rental property lease was terminated during the second quarter of 2020.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 7: Leases

The Company's leases are primarily leased properties across different worldwide locations where the Company conducts its operations. All of these leases are classified as operating leases. Certain leases may contain options to extend or terminate the lease at the Company's sole discretion. As of December 31, 2020, there was one option to terminate that was accounted for in the determination of the lease term for one of the Company's leases outstanding, and no options to extend that were included in the determination of the lease term for leases outstanding. As of December 31, 2019 there were no options to extend or terminate that were included in the determination of the lease term for leases outstanding. Certain leases contain leasehold improvement incentives, retirement obligations, escalating clauses, rent holidays, and variable payments tied to a consumer price index. There were no restrictions or covenants for the leases outstanding as of December 31, 2020 or December 31, 2019.

The total operating lease expense and operating lease cash payments in 2020 were \$8,180,000 and \$8,009,000, respectively. The total operating lease expense and operating lease cash payments in 2019 were \$6,893,000 and \$6,530,000, respectively. The total lease expense for leases with a term of twelve months or less for which the Company elected not to recognize a lease asset or lease liability was \$123,000 and \$275,000 in 2020 and 2019, respectively. Annual rental expense was \$8,186,000 in 2018.

Future operating lease cash payments are as follows (in thousands):

<u>Year Ended December 31,</u>	<u>Amount</u>
2021	\$ 9,101
2022	6,863
2023	5,072
2024	2,074
2025	1,317
Thereafter	4,960
	<u>\$ 29,387</u>

The discounted present value of the future lease cash payments resulted in a lease liability of \$26,230,000 and \$17,973,000 as of December 31, 2020 and December 31, 2019, respectively. The Company did not have any leases that had not yet commenced but that created significant rights and obligations as of December 31, 2020 or December 31, 2019.

The weighted-average discount rate was 4.0% and 4.6% for the leases outstanding as of December 31, 2020 and December 31, 2019, respectively. The weighted-average remaining lease term was 5.1 and 3.7 years for the leases outstanding as of December 31, 2020 and December 31, 2019, respectively.

As part of the Company's restructuring plan (refer to Note 22), management closed eleven leased offices in 2020, prior to the end of their lease terms. The carrying value of the lease assets associated with these offices was reduced to zero, resulting in operating lease asset impairment charges of \$3,427,000 in 2020 that are included in "Restructuring charges" on the Consolidated Statements of Operations. Management is currently negotiating early contract terminations for the remaining lease liability obligations associated with these abandoned offices, which totaled \$2,877,000 as of December 31, 2020 and are included in "Operating lease liabilities" on the Consolidated Balance Sheets. The Company did not record impairment charges related to operating lease assets in 2019 or 2018.

The Company owns a building adjacent to its corporate headquarters that was partially occupied by a tenant during a portion of 2020, and for the entirety of 2019 and 2018. This lease terminated prior to the end of its lease term during the second quarter of 2020, and the Company is now fully occupying this building for its operations. Annual rental income totaled \$77,000 in 2020, \$311,000 in 2019, and \$1,116,000 in 2018.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 8: Goodwill

The changes in the carrying value of goodwill were as follows (in thousands):

	Amount
Balance as of December 31, 2018	\$ 113,208
Acquisition of Sualab Co., Ltd.	130,142
Foreign exchange rate changes	95
Balance as of December 31, 2019	243,445
Sualab Co., Ltd. purchase price adjustment	(1,004)
Foreign exchange rate changes	1,637
Balance as of December 31, 2020	\$ 244,078

Refer to Note 21 to the Consolidated Financial Statements for further information regarding acquisitions.

The adverse impact of the COVID-19 pandemic on our business triggered a review of long-lived assets, including goodwill, for potential impairment during the second quarter of 2020. Based on this assessment, management concluded that events and circumstances did not indicate the fair value of the reporting unit was less than its carrying value. For its 2020 annual analysis of goodwill, management elected to perform a qualitative assessment. Based on this assessment, management believes it is more likely than not that the fair value of the reporting unit exceeds its carrying value. Factors that management considered in these qualitative assessments include macroeconomic conditions, industry and market considerations, overall financial performance (both current and projected), changes in management or strategy, changes in the composition or carrying amount of net assets, and market capitalization. The Company did not record impairment charges related to goodwill in 2019 or 2018.

In the fourth quarter of 2020, the Company recorded a credit to goodwill in the amount of \$1,004,000, representing a purchase price adjustment related to the Company's 2019 acquisition of Sualab Co., Ltd.

NOTE 9: Intangible Assets

Intangible assets consisted of the following (in thousands):

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Distribution networks	\$ 38,060	\$ 38,060	\$ —
Completed technologies	24,217	12,397	11,820
Customer relationships	10,578	7,160	3,418
Non-compete agreements	710	436	274
Trademarks	110	67	43
Balance as of December 31, 2020	\$ 73,675	\$ 58,120	\$ 15,555

	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Distribution networks	\$ 38,060	\$ 38,060	\$ —
Completed technologies	31,987	9,160	22,827
Customer relationships	14,407	6,402	8,005
In-process technologies	8,200	—	8,200
Non-compete agreements	710	350	360
Trademarks	110	12	98
Balance as of December 31, 2019	\$ 93,474	\$ 53,984	\$ 39,490

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The adverse impact of the COVID-19 pandemic on our business triggered a review of long-lived assets, including intangible assets, for potential impairment during the second quarter of 2020. Based on this assessment, management concluded that certain of the Company's finite-lived intangible assets failed the recoverability test, and recorded impairment charges for these assets equal to the amount by which their carrying value exceeded their fair value. The Company also measured the fair value and recorded an impairment charge for its indefinite-lived intangible asset related to in-process technologies. The fair values were established, with the assistance of an outside valuation advisor, using the income approach based on a discounted cash flow model that estimated future revenue streams and expenses attributable to those revenue streams provided by management.

This review resulted in intangible asset impairment charges totaling \$19,571,000 in the second quarter of 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab Co. Ltd. ("Sualab") as a result of the deteriorating global economic conditions from the COVID-19 pandemic. Completed technologies, in-process technologies, and customer relationships acquired from Sualab were impaired in the amounts of \$10,070,000, \$5,900,000, and \$3,382,000, respectively. In addition, customer relationships acquired from EnShape GmbH that had a gross carrying value of \$447,000 and accumulated amortization of \$228,000 on the measurement date were reduced to zero, resulting in an impairment charge of \$219,000. Sualab in-process technologies were completed in the fourth quarter of 2020 and were accordingly reported as completed technologies subject to amortization as of December 31, 2020. The Company did not record impairment charges related to intangible assets in 2019 or 2018.

Estimated amortization expense for each of the five succeeding fiscal years and thereafter is as follows (in thousands):

<u>Year Ended December 31,</u>	<u>Amount</u>
2021	\$ 3,656
2022	3,286
2023	2,594
2024	2,080
2025	1,757
Thereafter	2,182
	<u>\$ 15,555</u>

NOTE 10: Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31,	
	2020	2019
Company bonuses	\$ 19,343	\$ —
Salaries, commissions, and payroll taxes	14,025	11,500
Foreign retirement obligations	6,886	6,146
Warranty obligations	5,406	4,713
Vacation	3,641	4,708
Other	27,963	25,132
	<u>\$ 77,264</u>	<u>\$ 52,199</u>

The changes in the warranty obligation were as follows (in thousands):

Balance as of December 31, 2018	\$ 4,743
Provisions for warranties issued during the period	3,841
Fulfillment of warranty obligations	(3,871)
Balance as of December 31, 2019	4,713
Provisions for warranties issued during the period	3,463
Fulfillment of warranty obligations	(2,770)
Balance as of December 31, 2020	<u>\$ 5,406</u>

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 11: Commitments and Contingencies

As of December 31, 2020, the Company had outstanding purchase orders totaling \$32,315,000 to purchase inventory from various vendors. Certain of these purchase orders may be canceled by the Company, subject to cancellation penalties. These purchase commitments relate to expected sales in 2021.

Various claims and legal proceedings generally incidental to the normal course of business are pending or threatened on behalf of or against the Company. While we cannot predict the outcome of these matters, we believe that any liability arising from them will not have a material adverse effect on our financial position, liquidity, or results of operations.

NOTE 12: Indemnification Provisions

Except as limited by Massachusetts law, the by-laws of the Company require it to indemnify certain current or former directors, officers, and employees of the Company against expenses incurred by them in connection with each proceeding in which he or she is involved as a result of serving or having served in certain capacities. Indemnification is not available with respect to a proceeding as to which it has been adjudicated that the person did not act in good faith in the reasonable belief that the action was in the best interests of the Company. The maximum potential amount of future payments the Company could be required to make under these provisions is unlimited. The Company has never incurred significant costs related to these indemnification provisions. As a result, the Company believes the estimated fair value of these provisions is not material.

In the ordinary course of business, the Company may accept standard limited indemnification provisions in connection with the sale of its products, whereby it indemnifies its customers for certain direct damages incurred in connection with third-party patent or other intellectual property infringement claims with respect to the use of the Company's products. The maximum potential amount of future payments the Company could be required to make under these provisions is generally subject to fixed monetary limits. The Company has never incurred significant costs to defend lawsuits or settle claims related to these indemnification provisions. As a result, the Company believes the estimated fair value of these provisions is not material.

In the ordinary course of business, the Company also accepts limited indemnification provisions from time to time, whereby it indemnifies customers for certain direct damages incurred in connection with bodily injury and property damage arising from the use of the Company's products. The maximum potential amount of future payments the Company could be required to make under these provisions is generally limited and is likely recoverable under the Company's insurance policies. As a result of this coverage, and the fact that the Company has never incurred significant costs to defend lawsuits or settle claims related to these indemnification provisions, the Company believes the estimated fair value of these provisions is not material.

NOTE 13: Derivative Instruments

The Company's foreign currency risk management strategy is principally designed to mitigate the potential financial impact of changes in the value of transactions and balances denominated in foreign currencies resulting from changes in foreign currency exchange rates. The Company enters into economic hedges utilizing foreign currency forward contracts with maturities of up to 45 days to manage the exposure to fluctuations in foreign currency exchange rates arising primarily from foreign-denominated receivables and payables. The gains and losses on these derivatives are intended to be offset by the changes in the fair value of the assets and liabilities being hedged. These economic hedges are not designated as hedging instruments for hedge accounting treatment.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company had the following outstanding forward contracts (in thousands):

Currency	December 31, 2020		December 31, 2019	
	Notional Value	USD Equivalent	Notional Value	USD Equivalent
<i>Derivatives Not Designated as Hedging Instruments:</i>				
Euro	50,000	\$ 61,342	18,000	\$ 20,249
Mexican Peso	155,000	7,776	80,000	4,223
Korean Won	6,925,000	6,377	161,951,500	139,688
Japanese Yen	600,000	5,808	575,000	5,291
Hungarian Forint	1,330,000	4,494	870,000	2,962
British Pound	1,675	2,287	2,700	3,569
Taiwanese Dollar	38,035	1,362	37,450	1,256
Singapore Dollar	1,465	1,110	845	628
Canadian Dollar	1,285	1,010	1,300	1,000

Information regarding the fair value of the outstanding forward contracts was as follows (in thousands):

	Asset Derivatives			Liability Derivatives		
	Balance Sheet Location	Fair Value		Balance Sheet Location	Fair Value	
		December 31, 2020	December 31, 2019		December 31, 2020	December 31, 2019
<i>Derivatives Not Designated as Hedging Instruments:</i>						
Economic hedge forward contracts	Prepaid expenses and other current assets	\$ 265	\$ 857	Accrued expenses	\$ 38	\$ 23

The following table summarizes the gross activity for all derivative assets and liabilities which were presented on a net basis on the Consolidated Balance Sheets due to the right of offset with each counterparty (in thousands):

	Asset Derivatives		Liability Derivatives	
	December 31, 2020	December 31, 2019	December 31, 2020	December 31, 2019
Gross amounts of recognized assets	\$ 265	\$ 857	Gross amounts of recognized liabilities	\$ 38
Gross amounts offset	—	—	Gross amounts offset	—
Net amount of assets presented	\$ 265	\$ 857	Net amount of liabilities presented	\$ 38

Information regarding the effect of derivative instruments, net of the underlying exposure, on the consolidated financial statements was as follows (in thousands):

Location in Financial Statements	Year Ended December 31,			
	2020	2019	2018	
<i>Derivatives Not Designated as Hedging Instruments:</i>				
Gains (losses) recognized in current operations	Foreign currency gain (loss)	\$ (12,308)	\$ 1,305	\$ (285)

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 14: Revenue Recognition

The following table summarizes disaggregated revenue information by geographic area based on the customer's country of domicile (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Americas	\$ 310,027	\$ 277,155	265,175
Europe	208,787	227,738	311,914
Greater China	168,287	115,061	123,708
Other Asia	123,919	105,671	105,541
	<u>\$ 811,020</u>	<u>\$ 725,625</u>	<u>\$ 806,338</u>

The following table summarizes disaggregated revenue information by revenue type (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Standard products and services	\$ 674,830	\$ 629,220	\$ 654,509
Application-specific customer solutions	136,190	96,405	151,829
	<u>\$ 811,020</u>	<u>\$ 725,625</u>	<u>\$ 806,338</u>

Costs to fulfill a contract are included in "Prepaid expenses and other current assets" on the Consolidated Balance Sheet and amounted to \$6,846,000 and \$3,963,000 as of December 31, 2020 and 2019, respectively.

Accounts receivable represent amounts billed and currently due from customers which are reported at their net estimated realizable value. The Company maintains an allowance against its accounts receivable for credit losses. Contract assets consist of unbilled revenue which arises when revenue is recognized in advance of billing for certain application-specific customer solutions contracts. Contract liabilities consist of deferred revenue and customer deposits which arise when amounts are billed to or collected from customers in advance of revenue recognition.

On January 1, 2020, the Company adopted Accounting Standards Update (ASU) 2016-13, "Measurement of Credit Losses on Financial Instruments," using the modified-retrospective approach, which requires the Company to apply the standard on a prospective basis with a cumulative-effect adjustment to retained earnings as of the beginning of the period in which the guidance is effective. The Company did not record an adjustment to retained earnings as this ASU did not have a material impact on the Company's consolidated allowance for credit losses.

The following table summarizes changes in the allowance for credit losses (in thousands):

	Amount
Balance as of December 31, 2018	\$ 596
Increases to the allowance for credit losses	215
Write-offs	(286)
Foreign exchange rate changes	5
Balance as of December 31, 2019	530
Increases to the allowance for credit losses	600
Write-offs	(300)
Foreign exchange rate changes	1
Balance as of December 31, 2020	<u>\$ 831</u>

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company's estimate of expected credit losses in 2020 took into account the global economic conditions resulting from the COVID-19 pandemic.

The following table summarizes the deferred revenue and customer deposits activity (in thousands):

	Amount
Balance as of December 31, 2018	\$ 9,845
Increases to deferred revenue and customer deposits	53,422
Recognition of revenue	(48,730)
Foreign exchange rate changes	(105)
Balance as of December 31, 2019	14,432
Increases to deferred revenue and customer deposits	120,008
Recognition of revenue	(114,014)
Foreign exchange rate changes	848
Balance as of December 31, 2020	\$ 21,274

As a practical expedient, the Company has elected not to disclose the aggregate amount of the transaction price allocated to unsatisfied performance obligations, as our contracts have an original expected duration of less than one year.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 15: Shareholders' Equity

Preferred Stock

The Company has 400,000 shares of authorized but unissued \$.01 par value preferred stock.

Common Stock

On April 25, 2018, the Company's shareholders approved an amendment to the Company's Articles of Organization to increase the authorized number of shares of \$.002 par value common stock from 200,000,000 to 300,000,000. In addition, on April 25, 2018, the Company's shareholders approved an amendment and restatement of the Company's 2001 General Stock Option Plan which provides for an increase in the number of available shares by 10,000,000.

Each outstanding share of common stock entitles the record holder to one vote on all matters submitted to a vote of the Company's shareholders. Common shareholders are also entitled to dividends when and if declared by the Company's Board of Directors.

Shareholder Rights Agreement

On December 5, 2018, the Company's Board of Directors allowed the Company's Shareholder Rights Agreement and associated rights to expire in accordance with their terms without renewal. In connection with the adoption of the Shareholder Rights Agreement, the Company had filed Articles of Amendment to its Restated Articles of Organization establishing Series E Junior Participating Cumulative Preferred Stock with the Secretary of State of The Commonwealth of Massachusetts, setting forth the rights, powers, and preferences of the Series E Junior Participating Cumulative Preferred Stock issuable upon exercise of the rights (the "Preferred Shares"). Effective on April 26, 2019, the Company filed Articles of Amendment to the Company's Restated Articles of Organization with the Secretary of State of The Commonwealth of Massachusetts eliminating the Preferred Shares and returning them to authorized but undesignated shares of the Company's preferred stock.

Stock Repurchases

In April 2017, the Company's Board of Directors authorized the repurchase of \$100,000,000 of the Company's common stock. The Company repurchased 1,744,000 shares at a cost of \$100,000,000 under this April 2017 program, including 803,000 shares at a cost of \$45,200,000 in 2018. In February 2018, the Company's Board of Directors authorized the repurchase of \$150,000,000 of the Company's common stock. The Company repurchased 3,174,000 shares at a cost of \$150,000,000 in 2018 under this February 2018 program. In October 2018, the Company's Board of Directors authorized the repurchase of \$200,000,000 of the Company's common stock. The Company repurchased 203,000 shares at a cost of \$8,622,000 in 2018 under this October 2018 program. Total stock repurchases amounted to \$203,822,000 in 2018. The Company repurchased 1,398,000 shares at a cost of \$61,690,000 in 2019 and 1,215,000 shares at a cost of \$51,036,000 in 2020 under this October 2018 program, leaving a remaining balance of \$78,652,000. On March 12, 2020, the Company's Board of Directors authorized the repurchase of an additional \$200,000,000 of the Company's common stock. Purchases under this March 2020 program will commence upon completion of the October 2018 program. The Company may repurchase shares under this program in future periods depending on a variety of factors, including, among other things, the impact of dilution from employee stock awards, stock price, share availability, and cash requirements. The Company is authorized to make repurchases of its common stock through open market purchases, pursuant to Rule 10b5-1 trading plans, or in privately negotiated transactions.

Dividends

The Company's Board of Directors declared and paid cash dividends of \$0.050 per share in the first, second, and third quarters of 2019, and \$0.055 in the fourth quarter of 2019, as well as in the first, second, and third quarters of 2020. The dividend was increased to \$0.060 per share in the fourth quarter of 2020. Also, in the fourth quarter of 2020, an additional special cash dividend of \$2.00 per share was declared and paid. Total dividends amounted to \$390,508,000 in 2020, which included \$351,428,000 paid for the special cash dividend, \$35,124,000 in 2019, and \$31,865,000 in 2018. Future dividends will be declared at the discretion of the Company's Board of Directors and will depend upon such factors as the Board deems relevant, including, among other things, the Company's ability to generate positive cash flow from operations.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16: Stock-Based Compensation

Stock Plans

The Company's stock-based awards that result in compensation expense consist of stock options and restricted stock units (RSUs). As of December 31, 2020, the Company had 16,260,393 shares available for grant under its stock plans. Stock options are granted with an exercise price equal to the market value of the Company's common stock at the grant date and generally vest over four or five years based on continuous employment and expire ten years from the grant date. RSUs generally vest upon three years of continuous employment or incrementally over such three-year period. Participants are not entitled to dividends on RSUs.

Stock Options

The following table summarizes the Company's stock option activity:

	Shares (in thousands)	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2019	12,899	\$ 37.95		
Granted	1,245	54.68		
Exercised	(4,565)	27.54		
Forfeited or expired	(609)	50.28		
Outstanding as of December 31, 2020	8,970	\$ 44.73	7.11	\$ 318,873
Exercisable as of December 31, 2020	3,135	\$ 33.79	5.60	\$ 145,735
Options vested or expected to vest as of December 31, 2020 (1)	8,235	\$ 44.08	7.01	\$ 298,118

(1) In addition to the vested options, the Company expects a portion of the unvested options to vest at some point in the future. Options expected to vest are calculated by applying an estimated forfeiture rate to the unvested options.

The fair values of stock options granted in each period presented were estimated using the following weighted-average assumptions:

	Year Ended December 31,		
	2020	2019	2018
Risk-free rate	1.4 %	2.7 %	2.9 %
Expected dividend yield	0.41 %	0.39 %	0.35 %
Expected volatility	37 %	37 %	39 %
Expected term (in years)	6.0	5.3	5.4

Risk-free rate

The risk-free rate was based on a treasury instrument whose term was consistent with the contractual term of the option.

Expected dividend yield

Generally, the current dividend yield is calculated by annualizing the cash dividend declared by the Company's Board of Directors and dividing that result by the closing stock price on the grant date.

Expected volatility

The expected volatility was based on a combination of historical volatility of the Company's common stock over the contractual term of the option and implied volatility for traded options of the Company's stock.

Expected term

The expected term was derived from the binomial lattice model from the impact of events that trigger exercises over time.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The weighted-average grant-date fair value of stock options granted was \$19.62 in 2020, \$18.62 in 2019, and \$20.84 in 2018.

The total intrinsic value of stock options exercised was \$166,796,000 in 2020, \$90,762,000 in 2019, and \$52,629,000 in 2018. The total fair value of stock options vested was \$45,998,000 in 2020, \$38,974,000 in 2019, and \$31,106,000 in 2018.

Restricted Stock Units (RSUs)

The following tables summarizes the Company's RSU activity:

	Shares (in thousands)	Weighted-Average Grant Date Fair Value
Nonvested as of December 31, 2019	150	\$ 48.63
Granted	446	52.09
Vested	—	—
Forfeited or expired	(42)	50.61
Nonvested as of December 31, 2020	554	\$ 51.27

The weighted-average grant-date fair value of RSUs granted in 2019 was \$48.61. There were no RSUs granted in 2018. There were no RSUs that vested in 2020, 2019, and 2018.

Stock-Based Compensation Expense

The Company stratifies its employee population into two groups: one consisting of senior management and another consisting of all other employees. The Company currently applies an estimated forfeiture rate of 7% to all unvested options for senior management and a rate of 12% for all other employees. Each year during the first quarter, the Company revises its forfeiture rate. This resulted in an increase to compensation expense of \$1,787,000 in 2020, a decrease to compensation expense of \$499,000 in 2019, and an increase to compensation expense of \$1,283,000 in 2018.

As of December 31, 2020, total unrecognized compensation expense related to non-vested stock-based awards, including stock options and RSUs, was \$51,825,000, which is expected to be recognized over a weighted-average period of 1.7 years.

The total stock-based compensation expense and the related income tax benefit recognized was \$42,661,000, which includes credits of \$1,401,000 relating to grants cancelled as a result of the Company's workforce reduction, and \$6,569,000, respectively, in 2020, \$45,589,000 and \$7,756,000, respectively, in 2019, and \$41,090,000 and \$7,317,000, respectively, in 2018. No compensation expense was capitalized in 2020, 2019, or 2018.

The following table presents the stock-based compensation expense by caption for each period presented on the Consolidated Statements of Operations (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Cost of revenue	\$ 1,365	\$ 1,504	\$ 2,447
Research, development, and engineering	13,387	15,748	14,578
Selling, general, and administrative	27,909	28,337	24,065
	\$ 42,661	\$ 45,589	\$ 41,090

NOTE 17: Employee Savings Plan

Under the Company's Employee Savings Plan, a defined contribution plan, all U.S. employees who have attained age 21 may contribute up to 100% of their pay on a pre-tax basis under the Company's Employee Savings Plan, subject to the annual dollar limitations established by the Internal Revenue Service ("IRS"). The Company matches 50% of the first 6% of pay an employee contributes. Company contributions vest 25%, 50%, 75%, and 100% after one, two, three, and four years of continuous employment with the Company, respectively. Company contributions totaled \$2,636,000 in 2020, \$2,729,000 in 2019, and \$2,540,000 in 2018. Cognex stock is not an investment alternative and Company contributions are not made in the form of Cognex stock.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 18: Income Taxes

Domestic income before taxes was \$39,425,000 in 2020, \$31,396,000 in 2019, and \$39,042,000 in 2018. Foreign income before taxes was \$147,486,000 in 2020, \$131,598,000 in 2019, and \$195,532,000 in 2018.

Income tax expense (benefit) consisted of the following (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Current:			
Federal	\$ 160	\$ 15,854	\$ 10,624
State	921	2,108	(879)
Foreign	13,197	30,670	6,307
	<u>14,278</u>	<u>48,632</u>	<u>16,052</u>
Deferred:			
Federal	(18,266)	352,808	(1,271)
State	(556)	183	554
Foreign	15,269	(442,494)	(28)
	<u>(3,553)</u>	<u>(89,503)</u>	<u>(745)</u>
	<u>\$ 10,725</u>	<u>\$ (40,871)</u>	<u>\$ 15,307</u>

A reconciliation of the U.S. federal statutory corporate tax rate to the Company's income tax expense (benefit), or effective tax rate, was as follows:

	Year Ended December 31,		
	2020	2019	2018
Income tax expense at U.S. federal statutory corporate tax rate	21 %	21 %	21 %
State income taxes, net of federal benefit	1	2	1
Foreign tax rate differential	(6)	(9)	(9)
Tax credit	(1)	(1)	—
Discrete tax benefit related to employee stock options	(7)	(4)	(4)
Discrete tax expense (benefit) related to tax return filings	(5)	—	—
Discrete tax expense related to German withholding	1	—	—
Discrete tax expense related to migration of acquired IP	—	18	—
Discrete tax (benefit) related to change in tax structure	—	(268)	—
Discrete tax expense related to GILTI impact of change in tax structure	—	214	—
Discrete tax expense (benefit) related to Tax Act	—	—	(3)
Other discrete tax events	—	(1)	—
Other	2	3	1
Income tax expense (benefit)	<u>6 %</u>	<u>(25) %</u>	<u>7 %</u>

Change in Accounting Policy

In 2019, the Company elected to change its method of accounting for the United States Global Intangible Low-Taxed Income (GILTI) tax from recording the tax impact in the period it is incurred to recognizing deferred taxes for temporary tax basis differences expected to reverse as GILTI tax in future years. The change is considered preferable, as it appropriately matches the Company's current and deferred income tax implications related to the change in international tax structure noted above.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The change in this accounting policy impacted the Company's 2019 reported results as follows (in thousands):

Statement of Operations

	Year Ended December 31, 2019		
	As reported under the new accounting policy	As computed under the previous accounting policy	Effect of change
Income before income tax expense	\$ 162,994	\$ 162,994	\$ —
Income tax expense (benefit)	(40,871)	(393,317)	352,446
Net income	\$ 203,865	\$ 556,311	\$ (352,446)
Net income per weighted-average common and common-equivalent share:			
Basic	\$ 1.19	\$ 3.25	\$ (2.06)
Diluted	\$ 1.16	\$ 3.17	\$ (2.01)

Balance Sheet

	December 31, 2019		
	As reported under the new accounting policy	As computed under the previous accounting policy	Effect of change
Deferred tax assets	\$ 449,519	\$ 469,621	\$ (20,102)
Deferred tax liabilities	\$ 332,344	\$ —	\$ 332,344

Statement of Shareholders' Equity

	Year Ended December 31, 2019		
	As reported under the new accounting policy	As computed under the previous accounting policy	Effect of change
Retained earnings	\$ 753,268	\$ 1,105,714	\$ (352,446)

There were no material differences to the Company's reported results in prior years.

Discrete Tax Items

The effective tax rate included a decrease in tax expense of \$12,788,000 in 2020, \$6,472,000 in 2019, and \$8,488,000 in 2018 related to stock options, primarily from the excess tax benefit arising from the difference between the deduction for tax purposes and the compensation cost recognized for financial reporting purposes from stock option exercises. The Company cannot predict the level of stock option exercises by employees in future periods.

In 2020, the Company recorded discrete tax items related to the final true-up of the prior year's tax accrual upon filing the related tax return. This included a tax benefit of \$13,984,000 primarily to recognize a foreign tax benefit on certain gains taxed outside of the United States based on clarifications to rules relating to the use of foreign tax credits. This benefit was partially offset by tax expense for a transfer price adjustment in China of \$3,267,000 and smaller tax expense adjustments related to foreign tax filings of \$843,000.

In 2020, interpretations of a German law relating to withholding taxes on intellectual property rights emerged. The Company conducted a careful review of the interpretation and believes it has adequate reserves for this German tax exposure. Management will continue to monitor this law and court rulings in Germany.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

In 2019, the Company made changes to its international tax structure as a result of legislation by the European Union regarding low tax structures that resulted in an intercompany sale of intellectual property. The Company recorded an associated deferred tax asset and income tax benefit of \$437,500,000 in Ireland based on the fair value of the intellectual property, that will be realized over 15 years as future tax deductions. From a United States perspective, the sale is disregarded, and any future deductions claimed in Ireland were added back to taxable income as part of GILTI minimum tax. The Company recorded an associated deferred tax liability and income tax expense of \$350,000,000, representing the GILTI minimum tax related to the fair value of the intellectual property. The result of these transactions was a net discrete tax benefit of \$87,500,000. Management expects its current effective tax rate excluding discrete items to increase slightly in future years as a result of this change.

In 2019, in connection with the acquisition of Sualab, Co. Ltd., the Company migrated acquired intellectual property to certain subsidiaries to align with its corporate tax structure. As a result of this transaction, the Company recorded a discrete tax expense of \$28,528,000, which included a reserve of \$3,700,000 for certain related tax uncertainties.

In December 2017, the Tax Cuts and Jobs Act of 2017 (Tax Act) was signed into law. In 2018, the Company recorded an increase in tax expense of \$3,240,000 from the write-down of its deferred tax assets primarily relating to guidance under the Tax Act regarding stock-based compensation. In 2018, the Company recorded a decrease in tax expense of \$11,028,000 to revise its estimate of a one-time transition tax on unrepatriated foreign earnings resulting from the Tax Act, which resulted in a revised estimate for the one-time transition tax of \$90,351,000.

Other discrete tax items, none of which were individually material, resulted in a net decrease in tax expense of \$307,000 in 2020, \$1,932,000 in 2019, and \$1,847,000 in 2018.

Tax Reserves

The changes in the reserve for income taxes, excluding gross interest and penalties, were as follows (in thousands):

Balance of reserve for income taxes as of December 31, 2018	\$	7,294
Gross amounts of increases in unrecognized tax benefits as a result of tax positions taken in prior periods		199
Gross amounts of increases in unrecognized tax benefits as a result of tax positions taken in the current period		5,259
Gross amounts of decreases in unrecognized tax benefits as a result of the expiration of the applicable statutes of limitations		(1,161)
Balance of reserve for income taxes as of December 31, 2019		11,591
Gross amounts of increases in unrecognized tax benefits as a result of tax positions taken in prior periods		162
Gross amounts of increases in unrecognized tax benefits as a result of tax positions taken in the current period		3,383
Gross amounts of decreases in unrecognized tax benefits as a result of the expiration of the applicable statutes of limitations		(1,184)
Balance of reserve for income taxes as of December 31, 2020	\$	13,952

The Company's reserve for income taxes, including gross interest and penalties, was \$15,285,000 as of December 31, 2020, which included \$14,257,000 classified as a non-current liability and \$1,028,000 recorded as a reduction to non-current deferred tax assets. The Company's reserve for income taxes, including gross interest and penalties, was \$12,591,000 as of December 31, 2019, which included \$11,563,000 classified as a non-current liability and \$1,028,000 recorded as a reduction to non-current deferred tax assets. The amount of gross interest and penalties included in these balances was \$1,332,000 and \$1,000,000 as of December 31, 2020 and December 31, 2019, respectively. If the Company's tax positions were sustained or the statutes of limitations related to certain positions expired, these reserves would be released and income tax expense would be reduced in a future period. As a result of the expiration of certain statutes of limitations, there is a potential that a portion of these reserves could be released, which would decrease income tax expense by approximately \$1,900,000 to \$2,000,000 over the next twelve months.

The Company has defined its major tax jurisdictions as the United States, Ireland, and China, and within the United States, Massachusetts. The statutory tax rate is 12.5% in Ireland and 25% in China, compared to the U.S. federal statutory corporate tax rate of 21%. These differences resulted in a favorable impact to the effective tax rate of 6 percentage points for 2020 and 9 percentage points for both 2019 and 2018. Management has determined that earnings from its legal entity in China will be indefinitely reinvested to provide local funding for growth, and that earnings from all other jurisdictions will not be indefinitely reinvested.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Within the United States, the tax years 2017 through 2019 remain open to examination by the Internal Revenue Service ("IRS") and various state taxing authorities. The tax years 2016 through 2019 remain open to examination by various taxing authorities in other jurisdictions in which the Company operates. The Company has recently been notified that it is under audit by the IRS for the tax year 2017. Management believes the Company is adequately reserved for this audit. Any reserves associated with this audit period will not be released until the issue is settled or the audit is concluded.

Interest and penalties included in income tax expense were \$340,000, \$116,000, and \$91,000 in 2020, 2019, and 2018, respectively.

Cash paid for income taxes totaled \$33,695,000 in 2020, \$13,443,000 in 2019, and \$41,430,000 in 2018.

Deferred Tax Assets and Liabilities

Deferred tax assets and liabilities, presented on a gross basis by jurisdiction, consisted of the following (in thousands):

	December 31,	
	2020	2019
Non-current gross deferred tax assets:		
Intangible asset in connection with change in tax structure	\$ 424,156	\$ 437,500
Stock-based compensation expense	13,294	15,042
Federal and state tax credit carryforwards	10,171	8,491
Inventory and revenue related	5,976	2,934
Bonuses, commissions, and other compensation	4,932	1,609
Depreciation	4,211	3,522
Foreign net operating losses	602	4,286
Other	4,342	3,550
Gross non-current deferred tax assets	<u>467,684</u>	<u>476,934</u>
Valuation allowance	<u>(8,568)</u>	<u>(7,312)</u>
	<u>\$ 459,116</u>	<u>\$ 469,622</u>
Non-current gross deferred tax liabilities:		
GILTI tax basis differences in connection with change in tax structure	\$ (339,325)	\$ (350,000)
Other GILTI tax basis differences	(39)	(2,446)
	<u>\$ (339,364)</u>	<u>\$ (352,446)</u>

As of December 31, 2020, the Company had a valuation allowance for state research and development tax credits of \$8,568,000 that was not considered to be realizable. Should these credits be utilized in a future period, the reserve associated with these credits would be reversed in the period when it is determined that the credits can be utilized to offset future state income tax liabilities. As of December 31, 2020, the Company had state research and development tax credit carryforwards of \$11,361,000, net of federal tax, which will begin to expire for the 2020 tax return.

While the deferred tax assets, net of valuation allowance, are not assured of realization, management has evaluated the realizability of these deferred tax assets and has determined that it is more likely than not that these assets will be realized. In reaching this conclusion, we have evaluated certain relevant criteria including the Company's historical profitability, current projections of future profitability, and the lives of tax credits, net operating losses, and other carryforwards. Should the Company fail to generate sufficient pre-tax profits in future periods, we may be required to establish valuation allowances against these deferred tax assets, resulting in a charge to current operations in the period of determination.

COGNEX CORPORATION - NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 19: Weighted Average Shares

Weighted-average shares were calculated as follows (in thousands):

	Year Ended December 31,		
	2020	2019	2018
Basic weighted-average common shares outstanding	173,489	171,194	172,333
Effect of dilutive stock awards	3,103	4,075	5,073
Diluted weighted-average common and common-equivalent shares outstanding	176,592	175,269	177,406

Stock options to purchase 4,371,194, 5,735,608, and 2,650,164 shares of common stock, on a weighted-average basis, were outstanding in 2020, 2019, and 2018, respectively, but were not included in the calculation of dilutive net income per share because they were anti-dilutive. Restricted stock units totaling 3,826 and 13,092 shares of common stock, on a weighted-average basis, were outstanding in 2020 and 2019, respectively, but were not included in the calculation of dilutive net income per share because they were anti-dilutive. There were no anti-dilutive restricted stock units outstanding, on a weighted-average basis, in 2018.

NOTE 20: Segment and Geographic Information

The Company operates in one segment, machine vision technology. The Company's chief operating decision maker is the chief executive officer, who makes decisions to allocate resources and assesses performance at the corporate level. The Company offers a variety of machine vision products that have similar economic characteristics, have the same production processes, and are distributed by the same sales channels to the same types of customers.

The following table summarizes information about geographic areas (in thousands):

	United States	Europe	Greater China	Other	Total
Year Ended December 31, 2020					
Revenue	\$ 280,205	\$ 208,787	\$ 168,287	\$ 153,741	\$ 811,020
Long-lived assets	60,911	20,014	1,278	4,764	86,967
Year Ended December 31, 2019					
Revenue	\$ 247,689	\$ 227,738	\$ 115,061	\$ 135,137	\$ 725,625
Long-lived assets	68,496	21,691	1,487	3,602	95,276
Year Ended December 31, 2018					
Revenue	\$ 231,760	\$ 311,914	\$ 123,708	\$ 138,956	\$ 806,338
Long-lived assets	67,156	23,948	1,482	2,735	95,321

Revenue is presented geographically based on the customer's country of domicile. Revenue from a single customer accounted for 13% and 15% of total revenue in 2020 and 2018, respectively. Revenue from this customer was not greater than 10% of total revenue in 2019. Accounts receivable from this same customer accounted for 20%, 24%, and 30% of total accounts receivable as of December 31, 2020, 2019, and 2018, respectively. In 2020, a second customer accounted for 14% of total revenue. Accounts receivable from this second customer accounted for 19% of total accounts receivable as of December 31, 2020.

NOTE 21: Business Acquisitions

Sualab Co., Ltd.

On October 16, 2019, the Company acquired all the outstanding shares of Sualab Co., Ltd. (Sualab), a provider of deep learning-based vision software for industrial image analysis based in Korea. The total consideration of \$193,638,000 included cash payments of \$170,602,000 upon closing. In the fourth quarter of 2020, the Company recorded a credit to goodwill in the amount of \$1,004,000 representing a purchase price adjustment. The remaining consideration consists of deferred payments of \$24,040,000 that may become payable on the fourth anniversary date of the closing, contingent upon continued employment of key talent, and will be recorded as compensation expense over this four-year period.

Sualab's intellectual property, engineering expertise, and market coverage are expected to increase the Company's existing deep learning capabilities. Combined with intellectual property acquired from ViDi Systems S.A. in 2017, the Company is now a leading provider of deep learning-based industrial vision software.

The purchase price that was not related to employment was allocated as follows (in thousands):

Cash and cash equivalents	\$	3,691
Current investments		9,487
Accounts receivable		1,200
Inventories		115
Prepaid expenses and other current assets		252
Property, plant, and equipment		726
Operating lease assets		2,792
Deferred income tax asset		3,087
Other assets		513
Accounts payable		(28)
Accrued expenses		(2,633)
Deferred revenue and customer deposits		(764)
Operating lease liabilities		(448)
Non-current operating lease liabilities		(2,344)
Deferred income tax liabilities		(7,926)
Other liabilities		(10)
Completed technologies		18,300
In-process technologies		8,200
Customer relationships		5,800
Non-compete agreements		340
Trademarks		110
Goodwill		129,138
Purchase price	\$	169,598

The completed technologies, in-process technologies, customer relationships, trademarks, and non-compete agreements are included in "Intangible assets" on the Consolidated Balance Sheet. The completed technologies are being amortized to cost of revenue over eight years, the customer relationships are being amortized to SG&A expenses over seven years, the trademarks are being amortized to SG&A expenses over two years, and the non-compete agreements are being amortized to RD&E expenses over six to seven years. The in-process technologies were completed in the fourth quarter of 2020 and are being amortized to cost of revenue over six years. The portion of the acquired goodwill deductible for tax purposes is \$104,609,000.

Deteriorating global economic conditions from the COVID-19 pandemic triggered a review of long-lived assets for potential impairment in the second quarter of 2020. This review resulted in intangible asset impairment charges totaling \$19,571,000 in the second quarter of 2020, primarily related to lower projected cash flows from the technologies and customer relationships acquired from Sualab. Completed technologies, in-process technologies,

and customer relationships acquired from Sualab were impaired in the amounts of \$10,070,000, \$5,900,000, and \$3,382,000, respectively.

This transaction was accounted for as a business combination. Pro-forma information is not presented because it is not significant. Revenue and earnings since the date of the acquisition included in the Company's Consolidated Statements of Operations are also not presented because they are not material. Transaction costs were immaterial and were expensed as incurred.

NOTE 22: Restructuring Charges

On May 26, 2020, the Company's Board of Directors approved a restructuring plan intended to reduce the Company's operating costs, optimize its business model, and address the impact of the COVID-19 pandemic. The restructuring plan included a global workforce reduction of approximately 8% and office closures. The Company recorded restructuring charges from these actions totaling \$15,924,000 in 2020 which are included in "Restructuring charges" on the Consolidated Statements of Operations. As of December 31, 2020, the majority of these actions were completed and no additional charges are expected to be incurred in future periods in relation to this restructuring plan.

The following table summarizes the restructuring charges for the year ended December 31, 2020 (in thousands):

	Amount
One-time termination benefits	\$ 10,159
Contract termination costs	5,207
Other associated costs	558
	\$ 15,924

One-time termination benefits included severance, health insurance, and outplacement services for 181 employees who were either terminated during the second quarter of 2020, or were notified during the second quarter of 2020 that they would be terminated at a future date. For employees not required to render service beyond a minimum retention period, the one-time termination benefits were recognized in the second quarter of 2020. Otherwise, these benefits, including retention bonuses for selected employees, were recognized over the remaining service period which was completed by December 31, 2020.

Contract termination costs included operating lease asset impairment charges for eleven offices closed prior to the end of the contractual lease term. These costs also included the write-off of leasehold improvements and other equipment related to these abandoned offices that had no alternative use, as well as other associated operating costs, such as utilities, that the Company is obligated to pay for the remainder of the lease term. These contract termination costs were primarily recognized in the second quarter of 2020 when the Company ceased using the property for economic benefit.

Other associated costs primarily included legal fees related to the employee termination actions, which were recognized when the services were performed.

The following table summarizes the activity in the Company's restructuring reserve, which is included in "Accrued expenses" on the Consolidated Balance Sheets (in thousands):

	One-time Termination Benefits	Contract Termination Costs	Other Associated Costs	Total
Balance as of December 31, 2019	\$ —	\$ —	\$ —	\$ —
Restructuring charges	11,329	5,220	636	17,185
Cash payments	(8,717)	(317)	(563)	(9,597)
Non-cash restructuring charges	—	(4,163)	—	(4,163)
Restructuring adjustments	(1,170)	(13)	(78)	(1,261)
Foreign exchange rate changes	182	23	20	225
Balance as of December 31, 2020	\$ 1,624	\$ 750	\$ 15	\$ 2,389

Restructuring adjustments related to one-time termination benefits consisted primarily of the favorable true-up of severance estimates based on final agreements and health insurance estimates based on employee elections.

NOTE 23: Subsequent Events

On February 11, 2021, the Company's Board of Directors declared a cash dividend of \$0.060 per share. The dividend is payable March 12, 2021 to all shareholders of record as of the close of business on February 26, 2021.

COGNEX CORPORATION - SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED)

	Quarter Ended			
	March 29, 2020	June 28, 2020	September 27, 2020	December 31, 2020
	(In thousands, except per share amounts)			
Revenue	\$ 167,235	\$ 169,097	\$ 251,073	\$ 223,615
Gross margin	126,035	118,777	191,332	168,455
Restructuring charges	—	14,798	251	875
Intangible asset impairment charges	—	19,571	—	—
Operating income (loss)	20,951	(6,142)	96,635	59,085
Net income (loss)	<u>\$ 20,477</u>	<u>\$ (1,142)</u>	<u>\$ 87,506</u>	<u>\$ 69,345</u>
Basic net income (loss) per share	<u>\$ 0.12</u>	<u>\$ (0.01)</u>	<u>\$ 0.50</u>	<u>\$ 0.40</u>
Diluted net income (loss) per share	<u>\$ 0.12</u>	<u>\$ (0.01)</u>	<u>\$ 0.49</u>	<u>\$ 0.39</u>

	Quarter Ended			
	March 31, 2019	June 30, 2019	September 29, 2019	December 31, 2019
	(In thousands, except per share amounts)			
Revenue	\$ 173,484	\$ 199,047	\$ 183,325	\$ 169,769
Gross margin	127,200	148,080	135,693	124,898
Operating income	30,147	51,756	43,092	17,607
Net income	<u>\$ 33,104</u>	<u>\$ 48,749</u>	<u>\$ 41,685</u>	<u>\$ 80,327</u>
Basic net income per share	<u>\$ 0.19</u>	<u>\$ 0.28</u>	<u>\$ 0.24</u>	<u>\$ 0.47</u>
Diluted net income per share	<u>\$ 0.19</u>	<u>\$ 0.28</u>	<u>\$ 0.24</u>	<u>\$ 0.46</u>

COGNEX CORPORATION – SCHEDULE II – VALUATION AND QUALIFYING ACCOUNTS

Description	Balance at Beginning of Period	Additions		Deductions	Other	Balance at End of Period
		Charged to Costs and Expenses	Charged to Other Accounts			
(In thousands)						
Allowance for Credit Losses on Accounts Receivable:						
2020	\$ 530	\$ 600	\$ —	\$ (300)	(1) \$ 1	(2) \$ 831
2019	\$ 596	\$ 215	\$ —	\$ (286)	(1) \$ 5	(2) \$ 530
2018	\$ 387	\$ 282	\$ —	\$ (61)	(1) \$ (12)	(2) \$ 596
Reserve for Sales Returns:						
2020	\$ 1,291	\$ —	\$ —	\$ —	(1) \$ —	(2) \$ 1,291
2019	\$ 1,050	\$ 225	\$ —	\$ —	(1) \$ 16	(2) \$ 1,291
2018	\$ 1,181	\$ 182	\$ —	\$ (282)	(1) \$ (31)	(2) \$ 1,050
Deferred Tax Valuation Allowance:						
2020	\$ 7,312	\$ 1,256	\$ —	\$ —	\$ —	\$ 8,568
2019	\$ 6,112	\$ 1,200	\$ —	\$ —	\$ —	\$ 7,312
2018	\$ 5,309	\$ 803	\$ —	\$ —	\$ —	\$ 6,112

- (1) Specific write-offs
- (2) Foreign currency exchange rate changes

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

There were no disagreements with accountants on accounting or financial disclosure during 2020 or 2019.

ITEM 9A: CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

As required by Rules 13a-15 and 15d-15 of the Securities Exchange Act of 1934, the Company has evaluated, with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, the effectiveness of its disclosure controls and procedures (as defined in such rules) as of the end of the period covered by this report. Based on such evaluation, the Chief Executive Officer and Chief Financial Officer concluded that such disclosure controls and procedures were effective as of that date.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Management has evaluated the effectiveness of the Company's internal control over financial reporting based on the framework in Internal Control – Integrated Framework issued in 2013 by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Based on our evaluation, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2020.

Attestation Report of the Registered Public Accounting Firm on Internal Control over Financial Reporting

The Company's internal control over financial reporting as of December 31, 2020 has been audited by Grant Thornton LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the fourth quarter of the year ended December 31, 2020 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. We have considered the impact of the COVID-19 pandemic on our internal controls over financial reporting. Personnel constraints related to working from home have made our ability to execute certain controls more challenging; however, we have enhanced existing monitoring controls in an effort to ensure we continue to have effective internal controls during this time. The Company continues to review its disclosure controls and procedures, including its internal control over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that the Company's systems evolve with its business.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Shareholders Cognex Corporation

Opinion on internal control over financial reporting

We have audited the internal control over financial reporting of Cognex Corporation (a Massachusetts corporation) and subsidiaries (the “Company”) as of December 31, 2020, based on criteria established in the 2013 Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in the 2013 Internal Control—Integrated Framework issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the consolidated financial statements of the Company as of and for the year ended December 31, 2020, and our report dated February 11, 2021 expressed an unqualified opinion on those financial statements.

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/ GRANT THORNTON LLP

Boston, Massachusetts

February 11, 2021

ITEM 9B: OTHER INFORMATION

None

PART III

ITEM 10: DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

Information with respect to Directors and Executive Officers of the Company and the other matters required by Item 10 shall be included in the Company's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 5, 2021 and is incorporated herein by reference. In addition, certain information with respect to Executive Officers of the Company may be found in the section captioned "Executive Officers of the Registrant," appearing in Part I – Item 4A of this Annual Report on Form 10-K.

The Company has adopted a Code of Business Conduct and Ethics covering all employees, which is available, free of charge, on the Company's website, www.cognex.com under "Company-Investor Information-Governance". The Company intends to disclose on its website any amendments to or waivers of the Code of Business Conduct and Ethics on behalf of the Company's directors and executive officers that would otherwise be required to be disclosed under the rules of the SEC or The NASDAQ Stock Market LLC.

ITEM 11: EXECUTIVE COMPENSATION

Information with respect to executive compensation and the other matters required by Item 11 shall be included in the Company's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 5, 2021 and is incorporated herein by reference.

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

Information with respect to security ownership and the other matters required by Item 12 shall be included in the Company's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 5, 2021 and is incorporated herein by reference.

The following table provides information as of December 31, 2020 regarding shares of common stock that may be issued under the Company's existing equity compensation plans:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights, and vesting of restricted stock units	Weighted-average exercise price of outstanding options, restricted stock units, warrants, and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)		
Equity compensation plans approved by shareholders (4)	9,457,572 (1) \$	42.3695	16,260,393 (2)
Equity compensation plans not approved by shareholders (4)	66,034 (3)	8.1684	-
	9,523,606 \$	42.1323	16,260,393

- (1) Includes shares to be issued upon exercise of outstanding options under the Company's 1998 Stock Incentive Plan, 2007 Stock Option and Incentive Plan, and subsequent to shareholder approval, the 2001 General Stock Option Plan, as amended and restated.
- (2) Includes shares remaining available for future issuance under the Company's 2007 Stock Option and Incentive Plan and 2001 General Stock Option Plan, as amended and restated.
- (3) Includes shares to be issued upon the exercise of outstanding options granted prior to shareholder approval under the 2001 General Stock Option Plan, as amended and restated.
- (4) All references made to share or per share amounts have been adjusted to reflect the two-for-one stock split which occurred in the fourth quarter of 2017.

The 2001 General Stock Option Plan was originally adopted by the Board of Directors in December 2001 without shareholder approval. In December 2011, this plan received shareholder approval for an amendment and restatement of the plan. This plan provides for the granting of nonqualified stock options and incentive stock options to any employee who is actively employed by the Company and is not an officer or director of the Company. The maximum number of shares of common stock available for grant under this plan is 38,440,000 shares. All option grants must have an exercise price per share that is no less than the fair market value per share of the Company's common stock on the grant date and must have a term that is no longer than ten years from the grant date. 30,468,140 stock options have been granted under the 2001 General Stock Option Plan.

ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information with respect to certain relationships and related transactions and the other matters required by Item 13 shall be included in the Company's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 5, 2021 and is incorporated herein by reference.

ITEM 14: PRINCIPAL ACCOUNTING FEES AND SERVICES

Information with respect to principal accounting fees and services and the other matters required by Item 14 shall be included in the Company's definitive Proxy Statement for the Annual Meeting of Shareholders to be held on May 5, 2021 and is incorporated herein by reference.

PART IV

ITEM 15: EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(1) Financial Statements

The financial statements are included in Part II – Item 8 of this Annual Report on Form 10-K.

(2) Financial Statement Schedule

Financial Statement Schedule II is included in Part II – Item 8 of this Annual Report on Form 10-K.

Other schedules are omitted because of the absence of conditions under which they are required or because the required information is provided in the consolidated financial statements or notes thereto.

(3) Exhibits

The Exhibits filed as part of this Annual Report on Form 10-K are listed in the Exhibit Index, immediately preceding the signature page hereto.

ITEM 16: FORM 10-K SUMMARY

Not applicable

EXHIBIT INDEX

EXHIBIT NUMBER	
3A	<u>Restated Articles of Organization of Cognex Corporation effective June 27, 1989, as amended through May 5, 2016 (incorporated by reference to Exhibit 3.1 of Cognex's Quarterly Report on Form 10-Q for the quarter ended July 3, 2016 [File No. 1-34218])</u>
3B	<u>Articles of Amendment to the Articles of Organization of Cognex Corporation establishing Series E Junior Participating Preferred Stock (incorporated by reference to Exhibit 3.2 to Cognex's Quarterly Report on Form 10-Q for the quarter ended July 3, 2016 [File No. 1-34218])</u>
3C	<u>Articles of Amendment to Restated Articles of Organization of Cognex Corporation, effective May 2, 2018 (incorporated by reference to Exhibit 4.2 of Cognex's Registration Statement on Form S-8 [Registration No. 333-224716])</u>
3D	<u>Articles of Amendment to Restated Articles of Organization of Cognex Corporation, effective April 26, 2019 (incorporated by reference to Exhibit 3.4 of Cognex's Quarterly Report on Form 10-Q for the quarter ended March 31, 2019 [File No. 1-34218])</u>
3E	<u>By-laws of Cognex Corporation, as amended and restated through December 5, 2013 (incorporated by reference to Exhibit 3.3 of Cognex's Quarterly Report on Form 10-Q for the quarter ended July 3, 2016 [File No. 1-34218])</u>
3F	<u>Amendment to Amended and Restated By-laws of Cognex Corporation, effective May 5, 2016 (incorporated by reference to Exhibit 3.4 of Cognex's Quarterly Report on Form 10-Q for the quarter ended July 3, 2016 [File No. 1-34218])</u>
4A	<u>Specimen Certificate for Shares of Common Stock (incorporated by reference to Exhibit 4 to Cognex's Registration Statement on Form S-1 [Registration No. 33-29020])</u>
4B	<u>Description of Capital Stock (incorporated by reference to Exhibit 4B of Cognex's Annual Report on Form 10-K for the year ended December 31, 2019 [File No. 1-34218])</u>
10A *	<u>Cognex Corporation 1998 Non-Employee Director Stock Option Plan (incorporated by reference to Exhibit 4.1 to Cognex's Registration Statement on Form S-8 [Registration No. 333-60807])</u>
10B *	<u>Amendment to Cognex Corporation 1998 Non-Employee Director Stock Option Plan, effective as of July 26, 2007 (incorporated by reference to Exhibit 10C of Cognex's Annual Report on Form 10-K for the year ended December 31, 2012 [File No. 1-34218])</u>
10C *	<u>Cognex Corporation 1998 Stock Incentive Plan (incorporated by reference to Exhibit 4.2 to the Registration Statement on Form S-8 [Registration No. 333-60807])</u>
10D *	<u>First Amendment to the Cognex Corporation 1998 Stock Incentive Plan (incorporated by reference to Exhibit 4.3 to Cognex's Registration Statement on Form S-8 [Registration No. 333-60807])</u>
10E *	<u>Second Amendment to the Cognex Corporation 1998 Stock Incentive Plan (incorporated by reference to Exhibit 10F of Cognex's Annual Report on Form 10-K for the year ended December 31, 2011 [File No. 1-34218])</u>
10F *	<u>Amendment to Cognex Corporation 1998 Stock Incentive Plan, effective as of July 26, 2007 (incorporated by reference to Exhibit 10G of Cognex's Annual Report on Form 10-K for the year ended December 31, 2012 [File No. 1-34218])</u>
10G *	<u>Cognex Corporation 2001 General Stock Option Plan, as amended and restated (incorporated by reference to Exhibit 99.1 to Cognex's Registration Statement on Form S-8 [Registration No. 333-224716])</u>
10H *	<u>Cognex Corporation 2007 Stock Option and Incentive Plan, as amended and restated (incorporated by reference to Exhibit 10H of Cognex's Annual Report on Form 10-K for the year ended December 31, 2017 [File No. 1-34218])</u>
10I *	<u>Form of Letter Agreement between Cognex Corporation and each of Robert J. Shillman, Patrick A. Alias and Anthony Sun (incorporated by reference to Exhibit 10K of Cognex's Annual Report on Form 10-K for the year ended December 31, 2012 [File No. 1-34218])</u>
10J *	<u>Form of Stock Option Agreement (Non-Qualified) under 1998 Stock Incentive Plan (incorporated by reference to Exhibit 10L of Cognex's Annual Report on Form 10-K for the year ended December 31, 2012 [File No. 1-34218])</u>
10K *	<u>Form of Indemnification Agreement with each of the Directors of Cognex Corporation (incorporated by reference to Exhibit 10R of Cognex's Annual Report on Form 10-K for the year ended December 31, 2013 [File No. 1-34218])</u>
10L *	<u>Employment Agreement, dated June 17, 2008, by and between Cognex Corporation and Robert Willett (incorporated by reference to Exhibit 10S of Cognex's Annual Report on Form 10-K for the year ended December 31, 2013 [File No. 1-34218])</u>

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10M *	<u>Amendment to Employment Agreement with Robert Willett, dated November 14, 2008 (incorporated by reference to Exhibit 10T of Cognex's Annual Report on Form 10-K for the year ended December 31, 2013 [File No. 1-34218])</u>
10N *	<u>Form of Stock Option Agreement (Non-Qualified) under 2007 Stock Option and Incentive Plan (incorporated by reference to Exhibit 10U of Cognex's Annual Report on Form 10-K for the year ended December 31, 2013 [File No. 1-34218])</u>
10O *	<u>Form of Stock Option Agreement under 2001 General Stock Option Plan (incorporated by reference to Exhibit 10O of Cognex's Annual Report on Form 10-K for the year ended December 31, 2017 [File No. 1-34218])</u>
10P *	<u>Stock Option Agreements with Robert Willett dated November 3, 2014 (incorporated by reference to Exhibit 10S of Cognex's Annual Report on Form 10-K for the year ended December 31, 2014 [File No. 1-34218])</u>
10Q *	<u>Summary of Cognex Annual Bonus Program (incorporated by reference to Exhibit 10Q of Cognex's Annual Report on Form 10-K for the year ended December 31, 2017 [File No. 1-34218])</u>
10R*	<u>Stock Option Agreement dated May 1, 2019 between Cognex Corporation and Laura MacDonald (incorporated by reference to Exhibit 10.2 of Cognex's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019 [File No. 1-34218])</u>
10S*	<u>Form of Restricted Stock Unit Agreement under the 2007 Stock Option and Incentive Plan (incorporated by reference to Exhibit 10U of Cognex's Annual Report on Form 10-K for the year ended December 31, 2019 [File No. 1-34218])</u>
21	Subsidiaries of the registrant (filed herewith)
23.1	Consent of Grant Thornton LLP (filed herewith)
31.1	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (CEO) (filed herewith)
31.2	Certification pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (CFO) (filed herewith)
32.1	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (CEO) (furnished herewith)
32.2	Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (CFO) (furnished herewith)
101.SCH	Inline XBRL Taxonomy Extension Schema Document (filed herewith)
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document (filed herewith)
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document (filed herewith)
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document (filed herewith)
101.DEF	Inline XBRL Taxonomy Extension Schema Document (filed herewith)
104	Cover Page Interactive Data File (formatted as Inline XBRL with applicable taxonomy extension information contained in Exhibits 101*.) (filed herewith)
	* Indicated management contract or compensatory plan or arrangement

SIGNATURES

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

COGNEX CORPORATION

By: /s/ Robert J. Willett
Robert J. Willett
President and Chief Executive Officer

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Robert J. Shillman</u> Robert J. Shillman	Chairman of the Board of Directors and Chief Culture Officer	February 11, 2021
<u>/s/ Robert J. Willett</u> Robert J. Willett	President, Chief Executive Officer, and Director (principal executive officer)	February 11, 2021
<u>/s/ Paul D. Todgham</u> Paul D. Todgham	Senior Vice President of Finance and Chief Financial Officer (principal financial and accounting officer)	February 11, 2021
<u>/s/ Patrick Alias</u> Patrick Alias	Director	February 11, 2021
<u>/s/ Eugene Banucci</u> Eugene Banucci	Director	February 11, 2021
<u>/s/ Theodor Krantz</u> Theodor Krantz	Director	February 11, 2021
<u>/s/ Dianne Parrotte</u> Dianne Parrotte	Director	February 11, 2021
<u>/s/ Jerry Schneider</u> Jerry Schneider	Director	February 11, 2021
<u>/s/ Anthony Sun</u> Anthony Sun	Director	February 11, 2021
<u>/s/ Sachin Lawande</u> Sachin Lawande	Director	February 11, 2021

COGNEX CORPORATION
SUBSIDIARIES OF THE REGISTRANT

As of December 31, 2020, the registrant had the following direct and indirect subsidiaries, the financial statements of which are all included in the consolidated financial statements of the registrant:

NAME OF SUBSIDIARY	STATE/COUNTRY OF INCORPORATION	PERCENT OWNERSHIP
Cognex Asia, Inc.	Delaware	100%
Cognex Canada, Inc.	Delaware	100%
Cognex Canada Technology, Inc.	California	100%
Cognex EnShape GmbH	Germany	100%
Cognex Europe, B.V.	Netherlands	100%
Cognex Europe, Inc.	Delaware	100%
Cognex Foreign Sales Corporation	Barbados	100%
Cognex Germany, Inc.	Massachusetts	100%
Cognex Germany Aachen GmbH	Germany	100%
Cognex Goruntu Sistemleri Satis ve Ticaret Limited Sirketi	Turkey	100%
Cognex Hungary Kft.	Hungary	100%
Cognex International, Inc.	Delaware	100%
Cognex Ireland Ltd.	Ireland	100%
Cognex K.K.	Japan	100%
Cognex Korea Co. Ltd.	Korea	100%
Cognex Korea, Inc.	Delaware	100%
Cognex, Ltd.	Ireland	100%
Cognex Malaysia Sdn. Bhd.	Malaysia	100%
Cognex Mexico S.R.L.C.V.	Mexico	100%
Cognex Poland z.o.o	Poland	100%
Cognex Representacao Comercial E Participacoes Ltda.	Brazil	100%
Cognex Sensors India Private Limited	India	100%
Cognex Service, Inc	Delaware	100%
Cognex Service Ltd.	Ireland	100%
Cognex Singapore, Inc.	Delaware	100%
Cognex Switzerland GmbH	Switzerland	100%
Cognex Taiwan, Inc.	Delaware	100%
Cognex Technology and Investment LLC	California	100%
Cognex UK Ltd.	United Kingdom	100%
Cognex Vietnam Company Ltd.	Vietnam	100%
Cognex Vision Inspection System (Shanghai) Co., Ltd.	China	100%
Cognex Vision Spain, S.L.U.	Spain	100%
Cognex Vision Thailand Limited	Thailand	100%
SuaLab (Suzhou) Co., Ltd.	China	100%
Vision Drive, Inc.	Delaware	100%
One Vision Drive LLC	Massachusetts	100%

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our reports dated February 11, 2021, with respect to the consolidated financial statements, schedule, and internal control over financial reporting included in the Annual Report of Cognex Corporation on Form 10-K for the year ended December 31, 2020. We hereby consent to the incorporation by reference of said reports in the Registration Statements of Cognex Corporation on Forms S-8 (File Nos. 333-60807; 333-96961; 333-100709; 333-126787; 333-150315; 333-206081 and 333-224716).

/s/ GRANT THORNTON LLP

Boston, Massachusetts
February 11, 2021

CERTIFICATION

I, Robert J. Willett, certify that:

- 1 I have reviewed this Annual Report on Form 10-K of Cognex 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(s) 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(s) 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 the registrant's board of directors (or persons performing the 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: February 11, 2021

By: /s/ Robert J. Willett

Robert J. Willett
 President and Chief Executive Officer
 (Principal Executive Officer)

CERTIFICATION

I, Paul D. Todgham, certify that:

- 1 I have reviewed this Annual Report on Form 10-K of Cognex 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(s) 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(s) 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 the registrant's board of directors (or persons performing the 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: February 11, 2021

By: /s/ Paul D. Todgham

Paul D. Todgham
Senior Vice President of Finance and Chief Financial
Officer
(Principal Financial Officer)

CERTIFICATION PURSUANT TO
18 U.S.C. 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned officer of Cognex Corporation (the "Company") hereby certifies to his knowledge that the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 11, 2021

By: /s/ Robert J. Willett
Robert J. Willett
President and Chief Executive Officer (Principal
Executive Officer)

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

CERTIFICATION PURSUANT TO
18 U.S.C. 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned officer of Cognex Corporation (the "Company") hereby certifies to his knowledge that the Company's Annual Report on Form 10-K for the year ended December 31, 2020 (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 11, 2021

By: /s/ Paul D. Todgham
Paul D. Todgham
Senior Vice President of Finance and Chief Financial
Officer (Principal Financial Officer)

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.