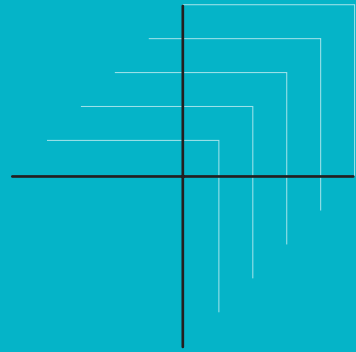




**SGHI**<sup>TM</sup>

2021  
Annual Report



# POWERING GROWTH. EXPANDING POSSIBILITIES.

At SGH, our purpose is simple: to power growth for our people, businesses, customers and shareholders. As a technology holding company, we're a diverse collective of doers united by a drive to raise the bar – every day.

Our operating philosophy inspires our teams to think creatively, execute with discipline and focus on what's next.

With a team-first mindset, we lift each other up and always seek different perspectives. We listen and adapt – with humility and openness about what's working and what's not – to deliver purposeful solutions that are built to last. And we take a long-term approach to building our family of businesses, because sustainable growth requires continuous investment in people, innovation and new opportunities.

At SGH, we never stop seeking a better way. Because when better never ends, we build a world that's always advancing.



## OUR VALUES

Our company values guide our decision-making, nurture a positive environment, power growth and expand possibilities.



### Put people first

Respect, include and support one another

Seek diverse perspectives

Listen to understand



### Act with purpose

Solve for the customer

Flex to every challenge

Aim for impact



### Drive progress

Be curious about what's possible

Think outside the box

Care for the world we live in



### Deliver results

Take action and ownership

Reflect, learn and grow

Raise the bar every day

## DEAR SGH SHAREHOLDERS,

When I joined the company in August 2020, I outlined my personal philosophy that performance is driven by People, Purpose, Planning, and Process. During my tenure, we have focused on these pillars to transform SGH into a diversified, growth-oriented company. As a result, fiscal 2021 was a milestone year for SGH.

We closed the acquisition of Cree LED in March 2021 and subsequently reorganized the company into three lines of business: Intelligent Platform Solutions, Memory Solutions, and LED Solutions. Our three businesses are focused on serving our customers by delivering advanced semiconductor solutions to specialty end markets.

We strengthened our leadership team with the addition of six diverse and experienced executives in support of our strategy to drive growth and diversification across all of our businesses. We also made tremendous progress towards creating a high-performance culture with the launch of our new brand, shared purpose, and core values.

In a year of unprecedented global challenges – from the COVID pandemic to microelectronic supply chain constraints – SGH delivered outstanding results. Through the dedication of our employees, collaboration with our customers and suppliers, and the strength of our SGH operating system, we delivered:

- A record revenue year of \$1.5 billion in fiscal 2021, up 34% from fiscal 2020

- Intelligent Platform Solutions revenue was up 30% from fiscal 2020 to a record \$345 million in fiscal 2021
- Memory Solutions revenue was up 9% from fiscal 2020 to \$932 million in fiscal 2021

- LED Solutions, which is a new business for SGH, added \$225 million of revenue in fiscal 2021

- Gross margin was up 120 basis points to 20.5% in fiscal 2021, with Non-GAAP gross margin up 240 basis points to 22.2% in fiscal 2021

- Cash flow from operations of \$153 million in fiscal 2021, up 76% compared with fiscal 2020

- Cash and equivalents of \$223 million in fiscal 2021, up 48% compared with fiscal 2020

In October of this year, we published our inaugural Environmental, Social and Governance (“ESG”) report for 2020, highlighting what we’ve accomplished to date and



establishing the following key initiatives for our future focus:

### Climate Change

Achieve 75% renewable energy at our global operations by 2025, compared to our current level of greater than 60%;

### Diversity and Inclusion

Implement and fund activities and programs to drive the recruitment, career support, and community building for underrepresented groups; and

### Governance

Commit to transparently report our ESG program, engage with stakeholders to integrate their feedback, and seek to continuously improve our ESG performance.

Reinforcing our commitment to corporate governance, the SGH board of directors (the “Board”) increased representation of women on the Board by appointing a female independent director, embraced independence by appointing a lead independent director, enhanced risk oversight by establishing a cybersecurity committee for the Board, and promoted shareholder alignment via revised stock ownership guidelines. In addition, we are transitioning to a fully independent board of directors with the exception of my board seat as CEO.

I could not be more proud of our dedicated employees, who delivered these outstanding results. It is a testament to what we can

accomplish together, and I am truly excited about our future at SGH.

I would like to thank you, our shareholders, for your continued support of SGH.

Sincerely,

A handwritten signature in blue ink that reads "Mark W. Adams". The signature is fluid and cursive.

**Mark Adams**

President and Chief Executive Officer





BUILDING  
A WORLD  
THAT'S ALWAYS  
ADVANCING

SGH™

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

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

For the fiscal year ended August 27, 2021

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 001-38102



**SMART GLOBAL HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

Cayman Islands (State or other jurisdiction of incorporation or organization)	98-1013909 (I.R.S. Employer Identification No.)
c/o Maples Corporate Services Limited P.O. Box 309 Grand Cayman, Cayman Islands (Address of principal executive offices)	KY1-1104 (Zip Code)

Registrant's telephone number, including area code: (510) 623-1231

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

<b>Title of each class</b>	<b>Trading Symbol(s)</b>	<b>Name of each exchange on which registered</b>
Ordinary shares, \$0.03 par value per share	SGH	Nasdaq Global Select Market

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

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

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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 an 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.

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

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.

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on the Nasdaq Global Select Market on February 26, 2021 (the last business day of the registrant's most recently completed second fiscal quarter) was \$737.9 million. Shares of common stock held by each executive officer, director, and their affiliated holders have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of October 8, 2021, the registrant had 24,377,423 ordinary shares outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's Proxy Statement for the 2021 General Meeting are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended August 27, 2021.

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## Cautionary Note Regarding Forward-Looking Statements

This Annual Report on Form 10-K ("Annual Report") and the documents incorporated herein by reference contain statements that are not historical in nature, that are predictive, or that depend upon or refer to future events or conditions or contain other forward-looking statements. Statements including, but not limited to, statements regarding our future financial or operating performance, the extent and timing of future revenues and expenses and customer demand, statements regarding the deployment of our products and services, statements regarding our reliance on third parties, and statements using words such as "anticipate," "believe," "could," "estimate," "expect," "forecast," "intend," "plan," "potential," "should" and similar words and the negatives thereof constitute forward-looking statements. Forward-looking statements are based on current expectations and preliminary assumptions that are subject to factors, risks and uncertainties that could cause actual results to differ materially from those described in these forward-looking statements. Such factors, risks and uncertainties include, but are not limited to, those identified in "Intellectual Property," "Competition," "Risk Factors," "Critical Accounting Estimates," "Results of Operations," "Quantitative and Qualitative Disclosures About Market Risk" and "Liquidity and Capital Resources" contained in this Annual Report and the risks discussed in our other Securities and Exchange Commission ("SEC") filings.

We urge you to consider these factors, risks and uncertainties carefully in evaluating the forward-looking statements contained in this Annual Report. All subsequent written or oral forward-looking statements attributable to our company or persons acting on our behalf are expressly qualified in their entirety by these cautionary statements. The forward-looking statements included in this Annual Report are made only as of the date of this Annual Report. We do not intend, and undertake no obligation, to update these forward-looking statements.

## About This Annual Report

As used herein, "SGH," "Company," "Registrant," "we," "our," "us" or similar terms refer to SMART Global Holdings, Inc. and our consolidated subsidiaries, unless the context indicates otherwise. Our fiscal year is the 52 or 53-week period ending on the last Friday in August. Fiscal 2021, 2020 and 2019 each contained 52 weeks. All period references are to our fiscal periods unless otherwise indicated.

SGH, SMART Global Holdings, SMART Modular Technologies, SMART, the SMART logo, Intelligent Platform Solutions, Penguin Computing, the Penguin Computing logo, CreeLED and our other trademarks or service marks appearing in this Annual Report are our trademarks or registered trademarks. Trade names, trademarks and service marks of other companies appearing in this Annual Report are the property of their respective holders.

# PART I

## Item 1. Business

### Overview

Since our inception over 30 years ago, SGH has grown into a diversified group of businesses focused on the design and manufacture of specialty solutions for the computing, memory and LED markets. Our success is based on a customer-focused approach characterized by a commitment to quality, advanced technical expertise, quick time-to-market, build-to-order flexibility and excellence in customer service.

At SGH, we strive to achieve long-term growth by investing in our people, innovation, processes and new opportunities. Since the beginning of fiscal 2018, we have accelerated our growth through the completion of five acquisitions. With our most recent acquisition of Cree LED in 2021, we have organized the company into three lines of business: Memory Solutions, Intelligent Platform Solutions (“IPS”) and LED Solutions.

In addition to driving growth organically and through acquisitions, we use the SGH operating system to support and drive operational efficiency and performance.



Our employees have always played a key role in our success. Today, SGH employs a diverse workforce of approximately 3,900 employees around the world who are focused on innovation and customer satisfaction.

### Acquisition of LED Business

In March 2021, we completed the acquisition of the LED business (“LED Business”) of Cree, Inc., a corporation now known as Wolfspeed, Inc. (“Cree”). The acquisition of the LED Business, a leader in LED lighting technology, further enhances our growth and diversification strategy and fits well with our other specialty businesses in computing and memory. The purchase price for the LED Business consisted of cash payments of \$72.4 million, the issuance of an unsecured promissory note issued in the amount of \$125 million and the potential for Cree to receive an earn-out payment of up to \$125 million based on the revenue and gross profit performance of the LED Business in the twelve-month period ended in March 2022.

### COVID-19

The outbreak of coronavirus disease 2019 (“COVID-19”) has resulted in substantial loss of life, economic disruption and government intervention worldwide. While we have not yet experienced significant disruptions of our operations as a result of the COVID-19 pandemic, the pandemic resulted in reduced sales volumes of certain product lines since early calendar 2020. COVID-19 also disrupted our product development, marketing and corporate development activities, and has more recently affected our supply chain. Our recently acquired LED Business experienced similar impacts from the pandemic from early in calendar 2020. If these

conditions continue, or if we have an outbreak in any of our facilities, sales volumes may be negatively impacted and we may, among other issues, experience, in any or all product lines, delays in product development, a decreased ability to support our customers, disruptions in sales and manufacturing activities and overall reduced productivity each of which could have a negative impact on our ability to meet customer commitments and on our revenue and profitability. The reduction of investment in new capacity due to the pandemic, coupled with strong demand to expand delivery and logistics, internet and cloud services as well as a rebound in economic conditions and general demand at a pace faster than expected, has resulted in significant supply shortages that may impact our ability to manufacture products for our customers and may result in rising prices of the materials we need to manufacture our products. We may not be able to pass on these rising costs to our customers which could result in a negative impact to our gross margins. Furthermore, if there is a significant outbreak or if travel restrictions or stay-at-home or work remote or from home conditions or other governmental or voluntary restrictions relating to the COVID-19 pandemic significantly impact our suppliers' ability to manufacture or deliver raw materials or provide key components or services, we could experience more delays or reductions in our ability to manufacture and ship products to our customers. While certain segments of our customer base are experiencing strong demand, the pandemic may negatively impact the demand for other segments for our customer base or those customers' ability to manufacture their products, which could reduce their demand for our products or services.

## **Our Products and Services**

In connection with our acquisition of the LED Business in 2021, we reorganized SGH into three business units: Memory Solutions, IPS and LED Solutions.

### **Memory Solutions**

Our Memory Solutions group provides high performance and reliable memory solutions through the design, development and advanced packaging of leading-edge to extended lifecycle products. These specialty products are tailored to meet customer-specific requirements across networking and communications, enterprise storage, computing, including desktop, notebook and server applications, smartphones and other vertical markets. These products are marketed to OEMs and to commercial and government customers. The Memory Solutions group also offers SMART Supply Chain Services, which provides customized, integrated supply chain services to enable our customers to better manage supply chain planning and execution, reduce costs and increase productivity. Our Memory Solutions group had net sales of \$931.8 million, \$857.2 million and \$995.4 million in 2021, 2020 and 2019, respectively.

#### **SMART Modular Technologies**

SMART Modular Technologies focuses on the design and manufacture of application-specific memory products, technical support and value-added testing services that differ from the core focus of standard memory module providers. We collaborate closely with our global OEM customers throughout their design process and across multiple projects to create solutions for demanding applications with differentiated requirements, such as specific form factors, higher density, lower power, specific firmware or greater durability and reliability compared to standard solutions. We target opportunities where we believe we can be a primary supplier of longer-lifecycle solutions to OEM customers for diverse and growing end markets within the industrial, government, networking and communications and enterprise storage and computing markets as well as other vertical markets. In this business, we offer an extensive portfolio of over 2,000 products available in standard and rugged formats.

We offer an extensive lineup of dynamic random access memory ("DRAM") modules utilizing a wide range of DRAM technologies from legacy synchronous DRAM to double data rate ("DDR"), DDR2, DDR3 and leading-edge, high-performance DDR4 DRAM devices. These technologies are incorporated into standard memory, enterprise memory and hybrid memory solutions in standard and rugged formats. These modules encompass a broad range of form factors and functions, including dual in-line memory modules ("DIMMs"), nonvolatile DIMMs, load reduced DIMMs, registered DIMMs, unbuffered DIMMs, small outline dual in-line memory modules and mini-DIMMs and XR-DIMMs for industrial and government, networking and communications, enterprise storage and computing and other vertical markets. These memory modules come in configurations of up to 288 pins and densities of up to 128 gigabytes. We support leading-edge and emerging interconnect standards such as Gen-Z and OpenCAPI with our Gen-Z Memory module (ZMM) and Differential DIMM (DDIMM). We utilize advanced printed circuit board and device packaging and stacking technologies to achieve cost-effective, high-density solutions. Our products are designed to meet the quality requirements of enterprise class systems pursuant to stringent specifications required by various high-speed applications.

We work closely with our customers to develop solutions that incorporate application-specific requirements. Our products are designed into our customers' applications for industrial, networking and communications, enterprise storage and computing, government and other vertical markets.

We also design and manufacture embedded and removable Flash memory products in a variety of form factors and capacities incorporated into storage and hybrid memory solutions in standard and rugged formats. Our wide range of Flash memory products includes solid-state drives ("SSDs"), Serial Advanced Technology Attachment ("SATA") and PCIe NVMe products in 2.5" enclosures, M.2 and other module form factors. We also offer Flash component products such as embedded MultiMediaCard ("eMMC") and embedded and removable products in USB, CompactFlash and SD and microSD Card configurations. Our Flash capabilities include application-specific and customized firmware development.

In Brazil, we have established a leading market position, as measured by market share, where we are the largest in-country manufacturer of memory modules and our products are designed and qualified by OEM customers for desktops, notebooks, servers and smartphones. In this market, we process imported wafers and die and we cut, package and test them to create embedded Multi Chip Packages ("eMCP"), DRAM modules and other DRAM and Flash-based products. We have a strategic, long-term relationship with a global memory wafer supplier that has provided us with a stable source of competitively priced wafers for the Brazil market. The relationship also provides our supplier with access to that market through our in-country infrastructure and capabilities.

### **SMART Supply Chain Services**

We offer supply chain services, including procurement, logistics, inventory management, temporary warehousing, programming, kitting and packaging services. We tailor our supply chain service offerings to meet the specific needs of our customers to enable our customers to manage supply chain planning and execution, which reduces costs and increases productivity. Our supply chain services are based on our proprietary software platform that we develop, which is then integrated with our customers' respective procurement management systems as well as our suppliers' distribution management systems. Our global footprint allows us to provide these services to customers and their manufacturing partners in many regions of the world and our global inventory management capabilities allow us to manage a vast array of customer and supplier part numbers across worldwide manufacturing and logistics hubs, helping our customers minimize inventory levels while maintaining reliable delivery and availability of supply.

### **Intelligent Platform Solutions**

Our Intelligent Platform Solutions group ("IPS") consists of Penguin Computing and Penguin Edge. Penguin Computing offers specialized platform solutions for high-performance computing ("HPC"), artificial intelligence ("AI"), machine learning ("ML") and advanced modeling for technology research. We provide these leading-edge solutions to customers in the government, hyper-scale, energy, financial services and education markets. Penguin Edge offers solutions for embedded and wireless applications, specializing in high-reliability products for a wide range of customers in government, telecommunications, health care, smart city, network edge and industrial applications. IPS had net sales of \$344.8 million, \$265.1 million and \$216.6 million in 2021, 2020 and 2019, respectively.

### **Penguin Computing**

Through Penguin Computing, we provide a robust portfolio of hardware (including solutions based on the Open Compute Project ("OCP") and software products and services offerings. Our solutions are comprised of: servers, software, integrated turn-key clusters, enterprise-grade storage and networking, all available in hardware or cloud-based solutions via Penguin-On-Demand (POD). Our product offering includes our Open Compute Tundra Extreme Scale products to solve technical and density challenges. We also provide turn-key storage solutions that provide power and flexibility with hardware optimized for software-defined storage. Our rackmount servers and graphics processing unit ("GPU") accelerated computing platforms give customers powerful tools to implement their AI and ML advanced modeling and HPC applications. Complementing our compute, storage and networking hardware solutions is our Scyld Software line of cloud and cluster management software. These products provide advanced capabilities for management of HPC clusters from department-level systems to supercomputers. In addition, our products and services enable customers to provide their own HPC cloud with remote access via our proprietary browser-based VDI solution. Our services offering include solution design, deployment services, software automation and managed services.

## **Penguin Edge**

Penguin Edge encompasses the operations of two businesses, SMART Embedded Computing ("SMART EC") and SMART Wireless Computing ("SMART Wireless"). SMART EC provides advanced embedded computing solutions including high-end application-ready platforms, single-board computers ("SBCs"), enclosures, blades, edge servers, network accelerator cards and enabling software. SMART EC's advanced computing board and system solutions include ATCA, VME, PCIe and rackmount server products. Target markets for SMART EC solutions and products include network edge computing, government, telecommunications infrastructure, industrial and transportation applications.

Our SMART Wireless business provides computing products such as system-on-a-module ("SOMs"), SBCs and integrated systems for wireless computing endpoint applications. Available in standard and custom configurations, our boards, systems and services meet the needs of connected devices used in Internet of Things ("IoT") endpoint applications such as smart city, digital health and smart office.

## **LED Solutions**

Our LED Solutions group offers a broad portfolio of application-optimized LEDs focused on improving on lumen density, intensity, efficacy, optical control and reliability. Backed by expert design assistance and superior sales support, our LED products enable our customers to develop and market LED-based products for lighting, video screens and specialty lighting applications. Our LED Solutions group had net sales of \$224.6 million in the second half of 2021. Our LED Solutions group was formed after the closing of our acquisition of the LED Business from Cree in March 2021, and our products are offered to customers under the brand CreeLED.

### **CreeLED**

For over 30 years, CreeLED has been a leader in LED lighting technology, offering new and differentiated LED solutions to a broad base of customers across multiple market segments. CreeLED solutions include CreeLED chips and components.

Our CreeLED chip products include blue and green LED chips based on gallium nitride ("GaN") and related materials. LED chips or die are used in a number of applications and are currently available in a variety of brightness levels, wavelengths (colors) and sizes. Products using our blue and green LED chips are featured in a variety of applications including video screens, gaming displays and function indicator lights. Customers also combine our blue LED chips with phosphors to create white LEDs, which are used in various applications for indoor and outdoor illumination and backlighting, full-color display screens, liquid crystal display ("LCD") backlighting, white keypads, automotive backlights, headlamps and directional indicators.

Our CreeLED components include packaged LED products, from our XLamp and J Series LED components and LED modules for lighting applications to our high-brightness LED components. Our XLamp LED components and LED modules are designed to meet a broad range of market needs for lighting applications, including general illumination (both indoor and outdoor applications), portable, architectural, signal and transportation lighting. Our high-brightness LED components consist of surface mount device ("SMD") and through-hole packaged LED products. Our SMD LED component products are available in a full range of colors designed to meet a broad range of market needs, including video, signage, general illumination, transportation, gaming and specialty lighting. Our through-hole packaged LED component products are available in a full range of colors primarily designed for the signage market and provide users with color and brightness consistency across a wide viewing area.

## **Manufacturing and Test**

We have manufacturing facilities in Atibaia, Brazil; Newark and Fremont, California; and Penang, Malaysia, which are all certified in one or more of the following: ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. We also have a manufacturing facility in Huizhou, China, which is ISO/TS16949 certified and where products for our LED Solutions group are packaged. In addition, in early fiscal 2022, we began manufacturing operations in our Manaus, Brazil facility. We also have a test and integration facility in Tempe, Arizona for SMART EC and other products. Additionally, we are a member of the Responsible Business Alliance ("RBA") and our manufacturing facilities are compliant with the RBA Code of Conduct which is increasingly a business requirement of our customers.

We believe that our manufacturing operations for Memory Solutions have benefited from our many years of design experience and our existing library of proven designs which stress high manufacturability and quality. Over 30 years of manufacturing experience enables us to quickly move from manufacturing initiation to full production volumes of new products, which is paramount in helping

our customers achieve rapid time-to-market for their new product introductions. As a result of our design efficiencies, high level of automation and expertise in utilizing advanced manufacturing processes, we achieve high manufacturing yields and reduced direct labor costs and offer our customers quick turnaround of both small and large production orders, which is a key factor in enabling our build-to-order model.

While we do not own or operate wafer fabrication facilities, we have capabilities for subsequent stages of the product manufacturing cycle. Our manufacturing capabilities in Atibaia, Brazil and Huizhou, China receive unmounted integrated circuits and LED chips in wafer or discrete chip form from third-party wafer fabrication facilities, preparing and packaging the die into semiconductor and LED components, testing the components and, in some cases, assembling components on substrates or printed circuit boards to make modules, multi-chip packages and LED products. Through our investments and experience, we have developed expertise in semiconductor and LED technology and advanced manufacturing and test that allows us to manufacture semiconductor products with shrinking geometries, increasing complexity and broader levels of performance and, for LED products, brighter, more efficient and lower cost LED chips and components for a broad range of lighting applications. We have made significant capital investments to further expand our manufacturing and test capabilities and operate at an even higher level of efficiency.

In our IPS group, we have utilized two primary methods of fulfilling demand for products: building products to order and configuring products to order, in each case using components and subassemblies we acquire from a wide range of vendors. At Penguin Computing, we have developed capabilities for design and development of large scale systems and dense HPC and AI clusters that have significant power and cooling requirements with manufacturing and test for our HPC products being done in Fremont, California. At SMART EC and SMART Wireless, we have developed capabilities for design and development of a wide range of embedded and wireless computing products which we manufacture, assemble and/or test in our manufacturing facilities in Newark, California; Penang, Malaysia; and Tempe, Arizona.

Product testing is an important aspect of our manufacturing operations and we believe that we have established substantial technical expertise in the testing of products for high-end applications. Our extensive testing capabilities not only help to ensure a low defect rate, but they also enable us, in certain situations, to sell specialized testing as an additional service. We design customer specific testing processes that differ from the core focus of standard providers. We have achieved stringent quality targets across a broad spectrum of system applications and customer-specific designs. Our staff includes experienced test engineers who have developed proprietary testing routines and parameters which, combined with our advanced test equipment, enable us to diagnose problems in components as well as in system design and enable us to characterize the performance of new products and to provide high quality products in volume.

For certain of our customers, we employ extensive software-based electrical and thermal simulations and test our designs on high-end functional testers utilizing a broad set of test suites. These tests are designed to meet the quality requirements of enterprise class systems pursuant to stringent specifications required by various high speed and high compute applications. We also conduct design verification testing of hardware and firmware as well as system integration and reliability testing. We work to continually improve our test routines and associated software and, for our specialty memory products, we have developed a high-volume, fully automated reliability testing and screening capability substantially beyond standard industry practices. These practices enable us to reduce the occurrence of early life failures and weak module fallout which can save our customers from the often significant expenses associated with replacing products that fail after their field deployment.

## Customers

We believe our customers rely on us as a strategic supplier due to our application-specific products, quality and technical support, our global footprint and our ability to provide locally manufactured products. We also provide customized, integrated supply chain services to certain customers to assist them in the management and execution of their procurement and distribution processes. We believe our close collaboration with customers, customer-specific designs, long-lifecycle solutions and proprietary supply chain services create significant customer attachment. Our products are generally manufactured on a build-to-order basis. Our sales are made primarily pursuant to customer purchase orders and are not based on long-term supply agreements.

We sell our products and solutions directly to a diversified base of local and global OEM, enterprise and government customers. In our Memory Solutions group, we sell to OEM customers in industrial, government, networking and communications, enterprise storage, computing and mobile, as well as other vertical markets. In IPS, we sell Penguin Computing products to enterprise and government customers in financial services, energy, government, hyper-scale and education end markets. As part of Penguin Edge, we sell SMART EC and SMART Wireless products to OEM customers in government, telecommunications infrastructure, industrial, network edge computing and transportation markets as well as in IoT endpoint applications such as smart city, digital health and



smart office markets. Our LED Solutions group sells LED chips and components to manufacturers, distributors and other customers. Our LED products and solutions are sold on a channel and direct basis to a diversified base of local and global OEM and contract manufacturers supporting a broad range of customers.

We also utilize third-party sales representatives who generally do not maintain a product inventory. A substantial portion of our LED Solutions products are sold to distributors, who stock inventory and sell our products to their customer base, which includes value added resellers, manufacturers who incorporate our products into their own manufactured goods and ultimate end users of our products. Similar to other global semiconductor component suppliers, our LED Solutions business has historically experienced, and in the future may experience, seasonally lower sales during the earlier part of the calendar year.

In 2021, 2020 and 2019, sales to our ten largest end customers (including sales to contract manufacturers or ODMs at the direction of such end customers) accounted for 65%, 66% and 73% of total net sales, respectively. See "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Concentrations."

## Suppliers

To address the needs of our customers, we have developed and maintained relationships with leading suppliers located in Asia, Europe and the Americas. Our semiconductor suppliers include many of the world's largest memory manufacturers including Samsung Semiconductor, Inc., Micron Technology, Inc., SK hynix, Inc. and Kioxia Holdings Corporation (formerly Toshiba Memory Corporation). They also include some of the world's largest providers of computing, communications and graphics processors, including Intel Corporation, Advanced Micro Devices, Inc., NVIDIA Corporation and Qualcomm Incorporated; as well as providers of subsystems including Intel and Giga-Byte Technology Co., Ltd.; networking products including Artista Networks, Inc. and suppliers of software products. We frequently work jointly with our suppliers in bidding for customers' design-in opportunities. We also work closely with our suppliers to better ensure that materials are available and delivered on time. Our established global network of materials sourcing helps to ensure that our pricing remains competitive and that we are able to provide a stable source of supply for our customers.

We believe that our longstanding relationships with leading suppliers put us in a favorable position to procure sufficient quantities of materials, including during periods of industry shortages. Our flexible and responsive global manufacturing capabilities, inventory management systems and global IT system allow us to cost-effectively move materials from one site to another and often deploy what might otherwise be excess inventory among other products and customers. In our Memory Solutions and IPS businesses, we purchase a significant portion of our materials from suppliers on a purchase order basis and generally do not have long-term commitments from our suppliers. Our LED Solutions business has a number of supply agreements with third-party providers for LED chips in wafer or discrete form.

The COVID-19 pandemic, as well as a rebound in general economic conditions, has resulted in significant supply shortages in the overall supply chain. These shortages may impact our ability to manufacture products for our customers and may result in rising prices of the materials we need to manufacture our products. Many of these issues relate to reduced investment in capacity by our suppliers, as well as local government policies that have affected the ability of employees of our suppliers to work. Additionally, the impact over the past year on airline freight capacity affected the timeliness of some deliveries and increased our freight cost.

## Sales, Support and Marketing

We primarily sell our products directly to global OEMs and to enterprise, government and other end customers located across North America, Latin America, Asia and Europe. Our sales and marketing efforts are conducted through an integrated process incorporating our direct sales force, e-commerce, customer service representatives and our on-site field application engineers ("FAE") with a network of independent sales representatives, distributors, integrators and resellers. Our sales and marketing efforts also include a high level of involvement from our senior executives. Larger customers are also often supported by dedicated sales and support teams.

Our on-site FAEs work closely with our sales team to provide product design support to our customers. Our FAEs collaborate closely with our customers, providing us with insight into their business models and product roadmaps and allowing us to identify opportunities at an early stage to help grow our business. The combination of our integrated sales network with our FAEs enables us to be more responsive and successful in navigating through each customer's unique and oftentimes complex design qualification or bid proposal processes.

Our marketing activities include advertising in technical journals, publishing articles in leading industry periodicals, hyper-scale, periodic webinars, publishing white papers, electronic newsletters, blogs and utilizing direct email solicitation. In addition, we participate in many industry trade shows worldwide and have active memberships in various industry organizations, including the Joint Electron Device Engineering Council (“JEDEC”), SD Card Association: Storage Networking Industry Association, Gen-Z Consortium, OpenCAPI Consortium, CXL Consortium, Trusted Computing Group, OCP; Sensor Open Systems Architecture and Peripheral Component Interconnect Special Interest Group.

## Research and Development

The timely development of new products and services is essential to maintaining our competitive position. Our primary research and development activities are conducted at our research and development centers in the United States (Durham, North Carolina; Fremont, California; Irvine, California; Newark, California; Tempe, Arizona and Tewksbury, Massachusetts) and in Atibaia, Brazil; Huizhou, China; India (Bangalore and Kochin); New Taipei City, Taiwan; Penang, Malaysia; and Seongnam-City, South Korea. Our research and development activities are focused on driving innovation in our products and services as well as continuous process improvement for our procurement, test and manufacturing. Our product development in Memory Solutions includes innovations for next generation DRAM products, including DDR5, mobile DRAM, hybrid memories such as hybrid volatile and non-volatile DRAM (“NVDIMM”), enterprise memory and Flash-based products, such as eMMC and eMCP, as well as associated firmware development. Our research and product development for IPS includes server selection and occasional design; designs to enable integration of racks and clusters; storage system design and evaluation; high performance network design; component testing for switches; cables and interface devices; development of software-defined storage systems; and embedded computer boards and systems. In our LED Solutions group our research and development includes innovations for next generation LED products including chips, packages for high power general illumination, packages for next generation direct view video displays and packages for specialty applications such as horticulture lighting, architectural, torch, emergency vehicle and other applications. We plan to continue to devote research and development efforts to the innovation and design of these and other new products which address the requirements of our customers, with a focus on the faster growing markets.

We continue to develop a broad offering of Flash-based products targeting the industrial, government, communications and enterprise storage and compute markets. Our engineering team is focused on firmware development, systems engineering and integration, system and platform validation and applications and product and reliability engineering for new products. In addition, in order to take advantage of local regulations and government incentive programs for the growing mobile memory market in Brazil, we have invested substantial financial and management resources to expand our Brazil research and development capabilities to enable us to develop a broad offering of Flash-based products for the local market. We are also working on expanding our offering for IoT and IIoT products and, through our acquisition of SMART Wireless, we now have over 40 design engineers combined in our two locations in India.

Our advanced engineering and design capabilities allow us to address our customers’ increasingly complex needs. We design our products to be compatible with existing industry standards and, where appropriate, develop and promote new standards or provide custom solutions to meet customers’ requirements. An important aspect of our research and development effort is understanding the challenges presented by our customers’ requirements and addressing them by utilizing our industry knowledge, proprietary technologies and technical expertise. By working closely with our customers and suppliers, we are able to deliver technically advanced products designed to meet customer-specific needs with competitive solutions to satisfy our customers’ memory, storage; and compute requirements, shorten their time-to-market; and enhance the performance of our customers’ end products and applications.

Research and development expense was \$49.3 million, \$52.1 million and \$47.9 million in 2021, 2020 and 2019, respectively. As of August 27, 2021, we had 448 research and development personnel worldwide.

## Competition

Within our diversified Memory Solutions, IPS and LED Solutions businesses, we compete with numerous global and local companies. The principal competitive factors in our markets include the ability to meet customer-specific requirements and provide high product quality, strong technical support, technologically advanced products and services, advanced testing capabilities, flexible and global delivery options, reliable supply and reasonable pricing.

In our Memory Solutions business, we primarily compete against memory module providers, and to a lesser extent, large memory semiconductor manufacturers that utilize a portion of their capacity to manufacture memory modules. In Brazil, other than the large, global semiconductor manufacturers, our competitors are generally much smaller in scale than we are in terms of revenue and capabilities for manufacturing and for research and development. To a lesser degree, we compete with companies that import DRAM and Flash components and products. Within IPS, Penguin Computing competes primarily with global manufacturers of HPC products and services. In SMART EC products, we primarily compete with makers of ruggedized computer boards and systems as well as makers of edge computing devices. In SMART Wireless products, we primarily compete with providers of SOMs and SBCs. Within LED, we compete with companies that manufacture and/or sell nitride-based LED chips and those manufacturers of LED components concentrated primarily in indoor and outdoor commercial lighting; specialty lighting, including torch lamps (flashlights); color changing architectural lighting; signs and signals; and transportation.

Our principal competitors include:

- Providers of specialty memory products;
- Memory semiconductor manufacturers that also manufacture DRAM modules and Flash products;
- Local Brazil manufacturers of DRAM modules and Flash products and manufacturers of memory integrated circuits;
- A broad set of companies in supply chain services, including distributors and third party logistics providers;
- Providers of compute and storage systems;
- Semiconductor and subsystem manufacturers;
- Providers of embedded computing platforms and systems;
- Providers of SOMs and SBCs; and
- LED product manufacturers.

Some of our global competitors are large international companies that have substantially greater financial, technical, marketing, distribution and other resources, as well as greater name recognition and longer-standing relationships with customers and suppliers than we do. These competitors are generally focused on higher-volume memory, storage or compute products that are manufactured to industry standard specifications, and they have limited customization and service capabilities. We believe that our close collaboration with customers, customer-specific designs, long-lifecycle solutions, superior products and proprietary supply chain services create significant customer attachment that may provide an advantage when competing with the large international companies.

In addition, some of our competitors are also our suppliers or customers. See "Item 1A. Risk Factors – Risks Related to Our Business – We depend on a select number of customers for a significant portion of our revenue" and "– We depend on a small number of sole or limited source suppliers."

## Intellectual Property

Intellectual property is an important aspect of our business, and we actively seek to protect and leverage our intellectual property to promote our business interests. For example, as of August 27, 2021, we own or exclusively license approximately 1900 patents that expire from 2021 to 2039. We continually review our development efforts to assess the existence and patentability of new intellectual property, which we actively seek to protect as appropriate. We believe the duration and scope of our most relevant patents are sufficient to support our business, which as a whole is not significantly dependent on any particular patent or other intellectual property rights.

To protect our intellectual property, we rely upon a combination of patent, copyright, trade secret and trademark laws, contractual restrictions such as nondisclosure agreements, licenses and intellectual property assignment agreements and policies and procedures. We pursue the registration of our domain names and trademarks in various jurisdictions, and we register trademarks in the United States and other countries as warranted. We maintain a policy requiring our employees, contractors, consultants and other third parties to enter into confidentiality and proprietary rights agreements to control access to our proprietary information. Additionally, we actively monitor data on our computer networks to assure compliance with data use policies. These laws, procedures and policies provide only limited protection, and any of our intellectual property rights may be challenged, invalidated, infringed or misappropriated. Furthermore, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the United States, and we therefore may be unable to protect our proprietary technology in certain jurisdictions.

While many of our products contain proprietary aspects and are protected by patents, some of our products are built around mature industry standards and have less patent protection. For these products, we rely on trade secrets and know-how to protect

our proprietary interests. The absence of patent protection, however, means that we cannot prevent our competitors from reverse-engineering and duplicating those products. Moreover, some of our product solutions incorporate open source software that is available under public licenses such as the GNU General Public License. We maintain policies and procedures to evaluate open source software used in our products and seek to minimize the risk of our proprietary intellectual property being inadvertently pulled under such licenses.

## Human Capital

At SGH, we put people first, nurturing a culture that supports creativity and growth. We value our employees, and we understand the importance of their development and enhancement. We believe that at the best workplaces, employees feel inspired, engaged, valued and included. As part of our “people first” mindset, we invest in key initiatives including, but not limited to, talent development, diversity and inclusion and physical and mental health.

### Employees

As of August 27, 2021, we employed 3,926 employees in locations across the globe, including, among others, the United States, China, Malaysia and Brazil. We have never experienced a work stoppage in any of our locations worldwide, and we consider our employee relations to be good.

### Employee Engagement and Development

Continuous growth requires continued investment in people, innovation and new opportunities. We are always improving upon our communications between employees and management teams to drive our company goals and enhance the employee experience. We aim to develop capable leadership that can meet the challenges of business growth while instilling a supportive and inclusive company culture. At all locations, we provide our employees with performance assessments and evaluations. Where applicable, employees also have access to coaching programs, as well as job specific training. We also provide our employees with training on workplace culture and enrichment through our learning platform, covering topics such as harassment, creating healthy work environments, inclusion and global ethics and compliance.

### Diversity, Equity and Inclusion

We are committed to diversity, equity and inclusion, and we believe that it starts at the top, where half of our executive team has been reorganized to include leaders from diverse backgrounds. We value diversity and inclusion and are proud that our employees represent various races, religious beliefs, genders, ages, national origins and points of view. We know that our diverse teams bring valuable perspectives and backgrounds to our company, helping us consistently raise the bar and drive innovation forward. This philosophy applies to all levels of our organization, including our executive leadership team and our Board of Directors.

We are committed to providing employees with an inclusive and nondiscriminatory work environment, which is outlined in our non-discrimination policy. Through this policy, we articulate people-oriented and fair treatment principles in the recruitment, promotion, performance evaluation, compensation, training and retirement of all employees.

We are committed to creating a working environment with equal opportunity employment so that workers are treated with fairness and respect. In the coming years, we look forward to expanding on our strategy to nurture a diverse and inclusive environment by focusing on initiatives such as employee resource groups and recruiting more diverse leadership.

### Wellness, Health and Safety

We strive to provide and maintain a safe work environment, as well as to promote overall wellness among employees. We prioritize employee wellbeing throughout our operations as well as through physical fitness programs. We also support mental health and wellness through our Employee Assistance Program, which offers free and confidential counseling and support for our employees and members of their households.

In 2020, as the global pandemic impacted every person, we made it a priority to ensure that our employees and their families were safe and healthy. In our U.S. offices in Newark, Fremont and Tempe, we provided free weekly COVID-19 testing to all employees, as well as diligently maintained contact tracing to track and prevent spread. In Penang, Malaysia, automated temperature and facial recognition systems were implemented to ensure that all on-site employees are healthy and protected. For our essential employees

who worked on-site at our facilities, we took additional measures to ensure their ongoing health and safety. We distributed and trained users on the correct use of personal protective equipment (PPE) and maintained social distancing, sanitization and employee awareness and communication.

## Compensation and Benefits

We offer compensation and benefits programs designed to inspire and reward our employees. Our bonus program both links employee compensation to SGH's business performance and includes a focus on individual performance. We also offer an Employee Stock Purchase Plan, equity compensation, retirement benefits and, in the U.S., a 401(k) match program.

## Brazil Local Manufacturing Requirements and Incentives

The Brazilian government has a long history of utilizing local manufacturing requirements to promote job creation, sustain economic growth and increase the competitiveness of various domestic industries. These requirements have been important in the development of numerous industries in Brazil, including automotive, oil and gas, aerospace and healthcare. Beginning in 1991, local manufacturing regulations were introduced to vitalize Brazil's IT industry as government programs began to be implemented to incentivize manufacturers to establish and expand their operations in Brazil and to incentivize OEMs to apply and utilize locally manufactured components for their products. Since 2011, we have participated in a number of government investment incentive programs.

In connection with these programs, we have recognized financial credits as a reduction of certain research and development expenses. In 2021 and 2020, we reduced our operating expenses as a result of these incentive programs by \$30.0 million and \$6.4 million, respectively. The financial credits available through the incentive program are currently set to expire in January 2022. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce the demand for, and the profit margins on, our products in Brazil. See "Item 1A. Risk Factors – Risks Related to Our International Operations – We depend on Brazil markets for a significant portion of our sales" and "– Our success in part depends on incentives in Brazilian laws for local manufacturing of electronics products. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce our profitability for products in Brazil."

## Environmental Regulations

Our operations and properties are subject to various federal, state, local, foreign and international environmental laws and regulations governing, among other things, environmental licensing and registries, protection of flora and fauna, air and noise emissions, use of water resources, wastewater discharges, management and disposal of hazardous and non-hazardous materials and wastes, reverse logistics (take-back policy) and remediation of releases of hazardous materials. The presence of lead in quantities not believed to be significant have been found in the ground under one of the multi-tenant buildings we lease in Brazil. While we did not cause the contamination, we may be held responsible if remediation is required, although we may be entitled to seek indemnification from the responsible parties under Brazilian laws and from our lessor under our lease. In addition, as part of the acquisition of Cree's LED business, we acquired facilities in China, which could present similar issues. We cannot be certain that identification of presently unidentified environmental conditions, more vigorous enforcement by regulatory agencies, enactment of more stringent laws and regulations or other unanticipated events will not arise in the future and give rise to material environmental liabilities and related costs which could have a material adverse effect on our business, financial condition and results of operations.

## Available Information

Our address in the Cayman Islands is c/o Maples Corporate Services Limited, P.O. Box 309, Umland House, Grand Cayman, Cayman Islands, KY1-1104, Cayman Islands. Our principal U.S. executive offices are located at 1390 McCarthy Boulevard, Milpitas, California 95035. Our telephone number at this address is (866) 977-4446. Our principal website is <http://www.sghcorp.com>. The information contained on, or that can be accessed through, our website is not a part of this Annual Report.

We make available, free of charge through our website, our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and amendments to those reports, filed or furnished pursuant to Sections 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the SEC.

The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F. Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site (<http://www.sec.gov>) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.



## Item 1A. Risk Factors

You should carefully consider the risks and uncertainties described below and the other information in this Annual Report on Form 10-K, including “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes. Our business, financial condition or results of operations could be materially and adversely affected if any of these risks occurs and, as a result, the market price of our ordinary shares could decline and you could lose all or part of your investment.

This Annual Report also contains forward-looking statements that involve risks and uncertainties. See “Cautionary Note Regarding Forward-Looking Statements” for additional information. Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors, including the risks facing our company described below and elsewhere in this Annual Report.

### Risk Factor Summary

The following is a summary of the principal risks described below in this Annual Report. The following summary should not be considered an exhaustive summary of the material risks facing us, and it should be read in conjunction with the “Risk Factors” section and the other information contained in this Annual Report.

#### ***Risks Related to Our Business***

- The effects of the COVID-19 outbreak could adversely affect our business, results of operations and financial condition.
- We have identified a material weakness in our internal control over financial reporting.
- Our operating results fluctuate from quarter to quarter, which make them difficult to predict.
- We have experienced losses in the past and may experience losses in the future.
- We compete in historically cyclical markets.
- Volatility in average selling prices may have an adverse effect on our business, results of operations and financial condition.
- Tariffs or other trade restrictions or taxes could have an adverse impact on our operations.
- We depend on a select number of customers for a significant portion of our revenue.
- The markets that we serve are highly competitive.
- We may be unable to optimally match purchasing and production to customer demand, which may have a material adverse effect on our business, results of operations and financial condition.
- Our future success depends on our ability to develop new products and services.
- Our customers often require that our products undergo a lengthy and expensive process of evaluation and qualification without any assurance of net sales.
- If our OEM customers decide to utilize standardized solutions instead of our specialty products, our net sales and market share may decline.
- We depend on a small number of sole or limited source suppliers.
- We may be unable to adapt to technological change.
- We may not be able to maintain or improve our manufacturing efficiency.
- Disruption of our operations at any one of our manufacturing facilities would substantially harm our business.
- We are subject to a number of procurement laws and regulations.
- Contracts with the U.S. government may be terminated, cancelled or modified.
- Products that fail to meet specifications, are defective or that are otherwise incompatible with end uses could impose significant costs on us.
- Breaches of our security systems, or those of our customers, suppliers or business partners, could expose us to losses.
- Some of our offerings utilize open source software, which may pose particular risks to our proprietary software, products and services in a manner that could harm our business.
- Open source software may make it easier for competitors, some of which may have greater resources than we have, to enter our markets and compete with us.
- We could be prevented from selling or developing our software if our licenses are not enforceable or are modified so as to become incompatible with other open source licenses.
- Our indemnification obligations to our customers and suppliers could require us to pay substantial damages.
- We may need to raise additional funds, which may not be available on acceptable terms or at all.
- We may make future acquisitions and/or alliances, which involve numerous risks.

- We may fail to realize the anticipated benefits of our recent acquisition of Cree's LED business.
- We rely on third parties to sell a portion of our products and services.
- We may be unable to protect our intellectual property.
- Legal proceedings and claims could have a material adverse effect on our business, results of operations or financial condition.
- We may be required to pay royalties or obtain licenses to sell certain products.
- Changes in tax laws or potential adjustments by tax authorities in key jurisdictions could materially increase our tax expense.
- Our ability to use our net operating loss carryforwards is limited.
- We could incur substantial costs or liabilities as a result of violations of environmental laws.
- Our worldwide operations may be disrupted by operational issues, natural disasters or other events.

#### ***Risks Relating to Our International Operations***

- Our business is subject to the risks generally associated with international business operations.
- We depend on Brazil markets for a significant portion of our sales.
- Our success in part depends on incentives in Brazilian laws for local manufacturing of electronics products. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce our profitability for products in Brazil.
- We are subject to the taxation requirements of the jurisdictions in which we operate, and if we fail to qualify for certain tax incentives or to comply with local tax regulations, we may suffer financial losses.
- Changes in foreign currency exchange rates could materially adversely affect our business, results of operations or financial condition.
- We are a holding company. If enacted, exchange controls may limit our ability to receive dividends and other distributions from our foreign subsidiaries.
- High rates of inflation in the future would adversely affect our business, results of operations and financial condition.
- Political, economic and market conditions and the perception of risk in Brazil and emerging markets may cause the market price of our ordinary shares to decline.
- We may have limited legal recourse under the laws of China if disputes arise under our agreements with third parties.

#### ***Risks Related to Our Debt***

- Our indebtedness could impair our financial condition and harm our ability to operate our business.
- Certain of our credit agreements may limit our flexibility in operating our business.
- Provisions in the 2026 Notes and Indenture (defined below) could delay or prevent an otherwise beneficial takeover of us.
- Our capped call transactions may affect the value of our publicly traded debt and ordinary shares.

#### ***Risks Relating to Investments in Cayman Islands Companies***

- We are a Cayman Islands company and, because the rights of shareholders under Cayman Islands law differ from those under U.S. law, shareholders may have difficulty protecting their shareholder rights.
- It may be difficult to enforce a judgment of U.S. courts for civil liabilities under U.S. federal securities laws against us in the Cayman Islands.

#### ***Risks Related to Our Ordinary Shares***

- The trading price of our ordinary shares has been and may continue to be volatile.
- If our estimates or judgments relating to our critical accounting estimates are based on assumptions that change or prove to be incorrect, our results of operations could fall below expectations of securities analysts and investors, resulting in a decline in the market price of our ordinary shares.
- Future sales of our ordinary shares in the public market, or the perception that these sales may occur, could cause our share price to fall.
- Anti-takeover provisions in our organizational documents may discourage our acquisition by a third party, which could limit shareholders' opportunity to sell their ordinary shares at a premium.
- We do not anticipate paying any cash dividends in the foreseeable future.

### **General Risk Factors**

- Worldwide economic and political conditions as well as other factors may adversely affect our operations and cause fluctuations in demand for our products.
- We and others are subject to a variety of laws, regulations, or industry standards that may have a material adverse effect on our business, results of operations, or financial condition.
- Our success depends on our ability to attract, retain and motivate highly skilled employees.
- Worldwide political conditions and threats of terrorist attacks may adversely affect our operations and demand for our products.

## **Risks Related to Our Business**

### **The effects of the COVID-19 outbreak could adversely affect our business, results of operations and financial condition.**

The COVID-19 pandemic has resulted in substantial loss of life, economic disruption and government intervention worldwide. As a result, we experienced reduced sales volumes of certain product lines since early calendar 2020. It also disrupted our product development, marketing and corporate development activities. Our recently acquired LED Business experienced similar impacts from the pandemic from early in calendar 2020. If these conditions continue, or if we have an outbreak in any of our facilities, such reduced sales volumes may continue or worsen and we may, among other issues, experience, in any or all product lines, delays in product development, a decreased ability to support our customers, disruptions in sales and manufacturing activities and overall reduced productivity, each of which could have a negative impact on our ability to meet customer commitments and on our revenue and profitability. There can be no assurance that negative impacts resulting from the wide-ranging effects of COVID-19 will be offset by increased sales in subsequent periods.

While initially we did not experience a major disruption in our supply chain as a result of the COVID-19 pandemic, the reduction of investment in new capacity due to the pandemic, coupled with strong demand to expand delivery and logistics, internet and cloud services as well as a rebound in economic conditions and general demand at a pace faster than expected has resulted in significant supply shortages that may impact our ability to manufacture products for our customers and may result in rising prices of the materials we need to manufacture our products. We may not be able to pass on these rising costs to our customers which could result in a negative impact to our results of operations. Furthermore, if there is a significant outbreak or if travel restrictions or stay-at-home or work remote or from home conditions or other governmental or voluntary restrictions relating to the COVID-19 pandemic significantly impact our suppliers' ability to manufacture or deliver raw materials or provide key components or services, we could experience more delays or reductions in our ability to manufacture and ship products to our customers. While certain segments of our customer base are experiencing strong demand, the pandemic may negatively impact the demand for other segments for our customer base or those customers' ability to manufacture their products, which could reduce their demand for our products or services. While we do not know and cannot quantify specific impacts, we expect we may be negatively affected if we continue to encounter manufacturing or supply chain problems, reductions in demand due to disruptions in the operations of our customers or their end customers, disruptions in local and global economies, volatility in the global financial markets, overall reductions in demand, restrictions on the export or shipment of our products or other COVID-19 ramifications.

The impact of the effects of COVID-19 on our business may worsen in the future. We source our materials from parts of the world that have been affected by the virus, and if the impacts of the pandemic worsen in any of these geographies, it could have an adverse impact on our supply chain and our ability to get the materials we need to build our products. Renewed or expanded government shutdown orders or stay-at-home directives or individual decisions to reduce work and commercial activities, or an outbreak among or quarantine of the employees in any of our facilities, could cause significant interruptions to, or temporary closures of, our operations. Since a large percentage of our production is done in a small number of facilities, a disruption to operations in any one facility could have a material impact on our business. In addition, COVID-19 has in the short-term, and, together with other disease outbreaks, may over the longer term, adversely affect the economies and financial markets within many countries and regions, including in the United States, Brazil, Asia and Europe, which are the primary geographic areas in which we conduct business, resulting in a significant economic downturn.

To the extent the COVID-19 pandemic or the related global business and economic environment adversely affect our business and financial results, it may also have the effect of heightening or exacerbating many of the other risks described in these Risk Factors. We are unable to accurately predict the impact that COVID-19 will have in future periods due to various uncertainties and future developments, including the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, the

occurrence of other epidemics, the imposition of related public health measures and travel and business restrictions or other actions that may be taken by governmental authorities in an effort to contain or treat the virus, all of which, together with the disruptions and other factors discussed above, could have a material adverse effect on our customer relationships, operating results, cash flows and financial condition and have a negative impact on our share price.

### **We have identified a material weakness in our internal control over financial reporting.**

As a public company, we are required to maintain internal control over financial reporting and to report any material weaknesses in such internal control. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

In connection with an out-of-period adjustment identified in our second quarter of 2021, our management identified a material weakness in the design of internal controls that are meant to provide reasonable assurance that the timely accounting for import taxes, including the related financial statement disclosures, was recorded in accordance with accounting principles generally accepted in the United States of America. While the identified material weakness has been remediated, we cannot provide assurance that we will not identify additional material weaknesses in future periods or that we will be successful in remediating any future significant deficiencies or material weaknesses in internal control over financial reporting.

Effective internal control over financial reporting is necessary for us to provide reliable and timely financial reports and, together with adequate disclosure controls and procedures, are designed to reasonably detect and prevent fraud. Our failure to implement and maintain effective internal control over financial reporting could adversely impact our ability to report our financial results accurately and on a timely basis, which could result in errors in our consolidated financial statements and/or result in a restatement of our consolidated financial statements. These activities could cause us to fail to meet our reporting obligations and could cause a decline in the trading price of our ordinary shares. If our financial statements are not accurate, investors may not have a complete understanding of our operations. We may also incur significant costs and diversion of management resources in an effort to enhance our controls and procedures. Any such diversion of management's attention from other business concerns could harm our results of operations. In addition, we could become subject to shareholder lawsuits or investigations by the stock exchange on which our ordinary shares are listed, the SEC or other regulatory authorities, which could require additional financial and management resources.

### **Our operating results fluctuate from quarter to quarter, which make them difficult to predict.**

Our quarterly operating results have fluctuated in the past and may fluctuate in the future. As a result, our past quarterly operating results are not necessarily indicative of future performance. Furthermore, we may not be able to maintain the margins we have achieved in recent periods. Our operating results in any given quarter can be influenced by numerous factors, many of which we are unable to predict or are outside of our control, including:

- the loss of, significant reduction in sales to, or demand from, one or more key customers;
- the acquisition of other companies or technologies, the failure to successfully integrate and operate them, or customers' or suppliers' negative reactions to them;
- a disruption in, or termination of, our supply relationship with one or more key suppliers;
- supply shortages that may impact our ability to manufacture products for our customers and may result in rising prices of the materials we need to manufacture our products;
- our failure to develop new or enhanced products and introduce them in a timely manner;
- the timing of our entry into new contracts; and
- other factors described in this "Risk Factors" section.

Due to the various factors mentioned above and other factors, the results of any prior quarterly or annual period should not be relied upon as an indication of our future operating performance. In one or more future periods, our results of operations may fall below the expectations of securities analysts and investors. In that event, the market price of our ordinary shares would likely decline. In addition, the market price of our ordinary shares may fluctuate or decline regardless of our operating performance.

## **We have experienced losses in the past and may experience losses in the future.**

Our business has in the past experienced quarterly and annual operating losses. For example, in 2020, we had a net loss of \$1.1 million and have had losses in two of the last five years. Our ability to maintain profitability depends in part on revenue growth from, among other things, increased demand for our memory solutions, products and related service offerings in our current markets including Brazil, growth in our IPS business including the performance of our acquired companies, as well as our ability to expand into new markets, such as LED solutions. We may not be successful in achieving the revenue and revenue growth necessary to maintain profitability. Moreover, as we continue to expend substantial funds for research and development projects, enhancements to sales and marketing efforts, integration of acquisitions and to otherwise operate our business, we cannot assure you that we will achieve or maintain profitability on an annual or quarterly basis even if our revenue does grow.

## **We compete in historically cyclical markets.**

Historically, the markets in which we compete have been highly cyclical and have experienced significant downturns often connected with, or in anticipation of, maturing product lifecycles of both component suppliers and electronic equipment manufacturers, and/or declines in general economic conditions. These downturns have been characterized by diminished product demand, production overcapacity, high inventory levels and accelerated erosion of selling prices and inventory values. Our business depends on the continued growth of technology utilization, the electronics industry and on end-user demand for our customers' products. Economic downturns often have had an adverse effect upon manufacturers and end-users of electronics products. The timing of new product developments, the lifecycle of existing electronics products and the level of acceptance and growth of new products can also affect demand for our products. Downturns in the markets we serve could have a significant negative impact on the demand for our products. Additionally, due to changing conditions, our customers have experienced and may in the future experience periods of excess inventory that could have a significant adverse impact on our sales. During a downturn in any of the markets that we serve, there is also a higher risk that some of our trade receivables become delinquent or even uncollectible and that our inventory would decrease in value. We cannot predict the timing or the severity of the cycles within our industries. In particular, it is difficult to predict how long and to what levels any industry upturn or downturn, or general economic strength or weakness, will last or develop. Reduced demand for our products could have a material adverse effect on our business, results of operations and financial condition.

## **Volatility in average selling prices may have an adverse effect on our business, results of operations and financial condition.**

The markets for our Memory Solutions products have historically been characterized by declines in average selling prices. Our average selling prices may decline due to several factors, including general declines in demand for our products and excess supply of DRAM and Flash memory components as a result of overcapacity. In the past, transitions to smaller design geometries and other factors causing overcapacity in memory markets have led to significant increases in the worldwide supply of memory components. If not accompanied by increases in demand, supply increases usually result in significant declines in component prices and, in turn, declines in the average selling prices and profit margins of our products. During periods of overcapacity, our net sales may decline if we fail to increase sales volume of existing products or to introduce and sell new products in quantities sufficient to offset declines in selling prices. Our efforts to increase sales or to introduce new products to offset the impact of declines in average selling prices may not be successful. Furthermore, our competitors and customers also impose significant pricing pressures on us. Declines in average selling prices have in the past had, and may again in the future have, a material adverse effect on our business, results of operations and financial condition. Declines in average selling prices also might enable OEMs to pre-install higher density memory modules into new systems at existing price points, thereby reducing the demand for future memory upgrades. In addition, our net sales and gross profit may be negatively affected by shifts in our product mix during periods of declining average selling prices.

## **Tariffs or other trade restrictions or taxes could have an adverse impact on our operations.**

We source materials from and sell and manufacture products in foreign countries, including Brazil and China, making the price and availability of our merchandise susceptible to international trade risks and other international conditions. For example, a reduction in the existing import tax rate in Brazil for products similar to those that we manufacture locally could lower prices for such products and increase competitive pressure on our business in that region. In addition, any economic and political uncertainty caused by the United States tariffs imposed on goods from China, among other potential countries, and any corresponding tariffs or currency devaluations from China or such other countries in response, has negatively impacted, and may in the future, negatively impact, demand and/or increase the cost for certain of our products, particularly within our LED business. In addition, many of our customers rely heavily on international trade. The imposition of tariffs, duties, border adjustment taxes or other trade restrictions by

the United States could also result in the adoption of new or increased tariffs or other trade restrictions by other countries. Tariffs may in the future increase our cost of materials and may cause us to increase prices to our customers which we believe may reduce demand for our products. Our price increases may not be sufficient to fully offset the impact of tariffs and may result in lowering our margin on products sold. If the U.S. government increases or implements additional tariffs, or if additional tariffs or trade restrictions are implemented by other countries, the resulting trade barriers could have a significant adverse impact on our suppliers, our customers and on our business. We are not able to predict future trade policy of the United States or of any foreign countries in which we operate or purchase goods, or the terms of any renegotiated trade agreements or their impact on our business. The adoption and expansion of trade restrictions and tariffs, quotas and embargoes, the occurrence of a trade war or other governmental action related to tariffs or trade agreements or policies, has the potential to adversely impact demand for our products, our costs, our customers, our suppliers and the world and U.S. economies, which in turn could have a material adverse effect on our business, operating results and financial condition.

### **We depend on a select number of customers for a significant portion of our revenue.**

Our principal customers include global distributors, enterprise users, government agencies and OEMs that compete in the computing, networking, communications, storage, aerospace, government, mobile, industrial automation, IoT, industrial IoT, government, military and lighting markets. In 2021, 2020 and 2019, sales to our ten largest end customers (including sales to contract manufacturers or original design manufacturers (“ODMs”) at the direction of such end customers) accounted for 65%, 66% and 73% of net sales, respectively. In 2021, 2020 and 2019, we had two, two and three customers, respectively, account individually for over 10% of our net sales. In addition, as of August 27, 2021, three customers accounted for 16%, 10% and 10% respectively, of accounts receivable. In some cases, our customers also compete with us, and/or are our major suppliers. We expect that sales to relatively few customers, including distributors in our LED business, will continue to account for a significant percentage of our net sales for the foreseeable future. However, we can provide no assurance that any of these customers or any of our other customers will continue to utilize our products or our services at current levels, or at all, since sales of our products are made primarily pursuant to purchase orders and are not based on long-term supply agreements. Although we have master agreements with some of our customers, these agreements govern the terms and conditions of the relationship and do not typically contain requirements for them to purchase minimum volumes. Our customer concentration may also subject us to perceived or actual bargaining leverage that our key customers may have, given their relative size and importance to us. Since a large percentage of our sales is to a small number of customers that are primarily large enterprises or OEMs, these customers are able to exert, have exerted and we expect will continue to exert, pressure on us to make concessions on price and on terms and conditions which can adversely affect our business, results of operations and financial condition. If our key customers seek to negotiate their agreements on terms less favorable to us and we accept such unfavorable terms, such unfavorable terms may have a material adverse effect on our business, results of operations and financial condition. Accordingly, unless and until we diversify and expand our customer base, our future success will significantly depend upon the timing and volume of business from our largest customers and the financial and operational success of these customers. Furthermore, many of our customer and supplier markets are characterized by a limited number of large companies. Industry consolidation and company failures could decrease the number of potential significant customers for our products and services. The decrease in the number of potential significant customers will increase our reliance on key customers and, due to the increased size of these companies, may negatively impact our bargaining position and thus our profit margins. If we were to lose one of our key customers or have a key customer cancel a key program or otherwise significantly reduce its volume of business with us or fail to pay us in full for the goods or services purchased from us, our sales and profitability would be materially reduced and our business and financial condition would be seriously harmed.

### **The markets that we serve are highly competitive.**

The markets that we serve are characterized by intense competition. Our competitors include many large domestic and international companies that have substantially greater financial, technical, marketing, distribution and other resources, greater name recognition, broader product lines, lower cost structures and longer-standing relationships with customers and suppliers than we do. As a result, our competitors may be able to respond better to new or emerging technologies or standards and to changes in customer requirements. Further, some of our competitors are in a better financial and marketing position from which to influence industry acceptance of a particular product standard or competing technology than we are. Our competitors may also be able to devote greater resources to the development, promotion and sale of products, and may be able to deliver competitive products at a lower price than we can. In addition to competing with certain portions of our product offerings, certain of our competitors are also our significant customers, suppliers, or both. Finally, China’s stated national policy to be a global leader in all segments of the semiconductor industry by 2030 has resulted in and may continue to cause increased competitive capability in China.

Across all of our markets, we also expect to face new companies that may enter our existing or future markets with similar or alternative products, which may be less costly or provide additional features. We also face competition from current and prospective



customers that evaluate our capabilities against the merits of manufacturing products internally. Competition may also arise due to the development of cooperative relationships among our current and potential competitors and/or suppliers or third parties to increase the ability of their products to address the needs of our prospective customers. Accordingly, it is possible that new competitors or alliances among competitors and/or suppliers may emerge and acquire significant market share.

Competitive pressure has led in the past and may continue to lead to intensified price competition resulting in lower net sales and lower profit margins which could negatively impact our financial performance. Our efforts to maintain and improve our competitive position, or our failure to do so, could have a material adverse effect on our business, results of operations and financial condition.

### **We may be unable to optimally match purchasing and production to customer demand, which may have a material adverse effect on our business, results of operations and financial condition.**

In most cases we do not obtain long-term purchase orders or commitments from our customers, but instead we work with our customers to develop non-binding estimates or forecasts of future requirements. Utilizing these non-binding estimates or forecasts, we make significant decisions based on our estimates of customer requirements including determining the levels of business that we will seek and accept, production scheduling, component purchasing and procurement commitments, inventory levels, personnel and production facility needs and other resource requirements. Customers may cancel, reduce or delay orders that were either previously made or anticipated, often with little or no notice to us, and generally without penalty, which can result in us having underutilized resources or excess materials. Conversely, customers may require rapid increases in production, which can challenge our resources and can reduce profit margins. We may not have sufficient capacity at any given time to meet our customers' demands. As many of our costs and operating expenses are relatively fixed, reduction in customer demand would have an adverse effect on our operating income, results of operations and financial condition.

Additionally, we have had in the past and expect we could again have in the future, inventory write-downs and/or write-offs due to obsolescence, excess quantities (including due to decreased demand) and declines in market value below our costs. In particular, if product obsolescence causes product demand to decrease or we fail to forecast demand accurately, we could be required to write-off inventory or record underutilization charges, which would have a negative impact on our profit margins and our profitability. Any one or more of these occurrences could have a negative impact on our results of operations and financial condition.

### **Our future success depends on our ability to develop new products and services.**

The markets that we serve are subject to rapid technological change, product obsolescence, frequent new product introductions and feature enhancements, changes in end-user requirements, evolving industry standards, and frequent innovations and disruptions in the markets in which we compete for products and services. Our ability to successfully compete and to continue to grow our business depends in significant part upon our ability to develop, introduce and sell new and enhanced products and services on a timely and cost-effective basis, and to anticipate and respond to changing customer requirements and competition. We have invested and expect to continue to invest heavily in research and development for new and innovative products. In addition, we have invested and expect to continue to invest significant time and capital into developing infrastructure, employee training and marketing efforts to expand our services offerings. However, there can be no guarantee that our efforts will be successful or that our new products or services will gain market acceptance, be price competitive or result in any significant increase in our net sales. If these investments fail to provide the expected returns, then such failure could have a material adverse effect on our business, results of operations and financial condition.

Additionally, we have experienced, and may experience in the future, delays and unanticipated expenses in the development and introduction of new products and services. A failure to develop products with required feature sets or performance standards, or delays in the development, introduction and qualification of new products or services, could significantly reduce our return on investment as well as our net sales, provide a competitor a first-to-market advantage and allow a competitor to achieve greater market share, or cause our customers to cancel their orders (generally without penalty), all of which would have a material adverse effect on our business, results of operations and financial condition.

### **Our customers often require that our products undergo a lengthy and expensive process of evaluation and qualification without any assurance of net sales.**

Our products are often incorporated into customers' systems at the design stage. We rely on OEM and other customers to select our product designs, which we refer to as design wins, and then to qualify our products for production buys. With OEM and other

customers, we often incur significant expenditures in the development of new products without any assurance that the customer will select our products for purchase. Furthermore, even if a customer designs one of our products into its system, we cannot be assured that they will qualify or use our product in production, that the customer's product will be commercially successful or that we will receive significant orders as a result of that design win or qualification. Generally, our customers are not obligated to purchase our products even if we achieve a design win. If we are unable to achieve design wins or if our customers' systems incorporating our products are not commercially successful, it could have a material adverse effect on our business, results of operations and financial condition.

In addition, because the qualification process is both product-specific and platform-specific, our existing customers sometimes require us to requalify our products, or to qualify our new products, for use in new platforms or applications, which can be time-consuming and cause reductions in our net sales during the design and qualification period. Likewise, when our suppliers discontinue production of components, it may be necessary for us to design and qualify new products for our customers. Such customers may require of us or we may decide to purchase an estimated quantity of discontinued components necessary to ensure a steady supply of existing products until products with new components can be qualified. Purchases of this nature may not be available, or they may affect our liquidity. Additionally, our estimation of quantities required during a transition may be incorrect, which could adversely impact our results of operations through lost revenue opportunities or charges related to excess and obsolete inventory.

We must devote substantial resources, including design, engineering, sales, marketing and management efforts, to qualify our products with existing and prospective customers in anticipation of sales. Significant delays in the qualification process could result in an inability to keep up with rapid technological change or new, competitive technologies. If we delay or do not succeed in qualifying a product with an existing or prospective customer, we will not be able to sell that product to that customer, which may result in us losing potential revenue and holding excess or obsolete inventory, any of which may have a material adverse effect on our business, results of operations and financial condition.

### **If our OEM customers decide to utilize standardized solutions instead of our specialty products, our net sales and market share may decline.**

Many of our specialty products are specifically designed for our OEM customers' systems or products. In an effort to reduce costs, a number of our OEM customers design standardized or commodity components, modules or subsystems into their products. Although we also manufacture standard components, modules and subsystems, an increase in such efforts by our customers could reduce the demand for our higher priced specialized or customized solutions, which in turn would have a negative impact on our business, results of operations and financial condition. In addition, when customers utilizing custom solutions choose to adopt a standard instead of custom or specialty components, modules or subsystems, new competitors producing standard components, modules or subsystems may take a portion of our customers' business previously purchased from us.

### **We depend on a small number of sole or limited source suppliers.**

We are dependent upon a small number of sole or limited source suppliers for certain materials, including certain critical components or subsystems, we use in manufacturing our products. For example, we rely on four suppliers for a significant portion of our raw materials, some of which relate to our SMART Supply Chain Services and are accounted for on an agent basis. Purchases from these suppliers in 2021, 2020 and 2019 were \$1.3 billion, \$1.0 billion and \$1.2 billion, respectively. As of August 27, 2021, accounts payable and accrued expenses included \$190.2 million for amounts owed to these suppliers. Certain of our suppliers also compete with us in one or more of our markets. We purchase almost all of our materials from our suppliers on a purchase order basis and generally do not have long-term commitments from suppliers. Our suppliers are not required to supply us with any minimum quantities, and there is no assurance that our suppliers will supply the quantities of components we may need to meet our production goals.

The markets in which we operate have in the past experienced, and are currently and may in the future experience, shortages in certain materials, including certain critical components, we use in manufacturing our products. These shortages cause some suppliers to place their customers, including us, on supply allocation. As a result, we may not be able to obtain the materials that we need to fill customer orders. If any of our suppliers experience quality control or intellectual property infringement problems, we may not be able to fill customer orders. Furthermore, our products that utilize that supplier's materials may be disqualified by one or more of our customers and we may not be able to fill their orders.

A disruption in or termination of our supply relationship with any of our significant suppliers or our inability to develop relationships with new suppliers, if required, would cause delays, disruptions or reductions in product manufacturing and shipments or require product redesigns which could damage relationships with our customers, increase our costs, reduce our margins or increase the prices we need to charge for our products and could materially and adversely affect our business, results of operations and financial condition.

### **We may be unable to adapt to technological change.**

The industries in which we conduct business are characterized by constant and rapid technological changes and product obsolescence. For example, new manufacturing process technologies using smaller feature sizes and offering better performance characteristics are generally introduced every one to two years. The introduction of new manufacturing process technologies allows us to increase the functionality of our products while at the same time optimizing performance parameters, decreasing power consumption and/or increasing storage capacity. In order to remain competitive, it is essential that we secure the capabilities to develop and qualify new manufacturing process technologies. If we are delayed in transitioning to new technologies, our business, results of operations and financial condition could be materially adversely affected.

If the lifecycle of a product is shortened as a result of the introduction of a new technology, we may be forced to transition our manufacturing capabilities to a new configuration more quickly than originally planned. This can result in increased capital and other expenditures and decreases in demand for the older technology products. As a result, we may be required to record additional obsolescence charges or an impairment on our long-lived assets, including facilities and equipment, as well as intangible assets, which would increase our expenses. When new technologies are introduced, the capacity to manufacture the new products often cannot meet the demand and product shortages can arise. If we or our suppliers cannot support such demand, we may not be able to fill customer orders or participate in new markets as they emerge.

### **We may not be able to maintain or improve our manufacturing efficiency.**

Our manufacturing efficiency can significantly affect our results of operations, and we cannot be sure that we will be able to maintain or increase our manufacturing efficiency to the same extent as our competitors. During periods when we are implementing new process technologies, manufacturing facilities may not be fully productive and may experience higher than acceptable defect rates. We may fail to achieve acceptable yields or may experience product delivery delays as a result of, among other things, capacity constraints, delays in the development of new process technologies, increased defect rates, changes in our process technologies, upgrades or expansion of existing facilities, impurities or other difficulties in the manufacturing process. Any of these occurrences could adversely impact our relationships with customers, cause harm to our reputation in the marketplace, cause customers to move future business to our competitors or cause us to make financial concessions to our customers. Improving our manufacturing efficiency in future periods is dependent on our ability to:

- develop advanced process technologies and advanced products that utilize those technologies;
- successfully transition to more advanced process technologies;
- continue to reduce test times;
- ramp product and process technology improvements rapidly and effectively to commercial volumes across our facilities;
- achieve acceptable levels of manufacturing output and yields, which may decrease as we implement more advanced technologies; and
- maintain our quality controls and rely upon the quality and process controls of our suppliers.

### **Disruption of our operations at any one of our manufacturing facilities would substantially harm our business.**

We rely on a limited number of production facilities for each of our various product lines. A disruption at one of our manufacturing facilities could adversely impact our manufacturing operations and consequently our customer relations and our business. Such a disruption could result from, among other things, local outbreaks of COVID-19 or other infectious diseases, sustained process abnormalities, government intervention, waste disposal issues, power failures or other circumstances, or from ramp-up related challenges, such as obtaining sufficient raw materials, hiring of qualified factory personnel, installation and efficient operation of new equipment and management and coordination of our logistics networks within our global operations. We maintain insurance to protect against certain claims associated with business interruption, however, our insurance may not cover all or any part of a particular loss. Since a large percentage of our production is done in a small number of facilities, a disruption to operations, or a loss that is in excess of, or excluded from, our insurance coverage could adversely impact our business, results of operations and financial condition.

## **We are subject to a number of procurement laws and regulations.**

With respect to a portion of our business, we must comply with and are affected by laws and regulations relating to the award, administration and performance of government contracts in the United States and other countries. Government contract laws and regulations affect how we do business with our customers and impose certain risks and costs on our business. A violation of specific laws and regulations by us, our employees, others working on our behalf, a supplier or a venture partner, could harm our reputation and result in the imposition of fines and penalties, the termination of our contracts, suspension or debarment from bidding on or being awarded contracts, loss of our ability to export products or services and civil or criminal investigations or proceedings. A termination arising out of our default may expose us to liability and may have a material adverse effect on our ability to compete for future contracts and orders. Additionally, if an audit or investigation uncovers improper or illegal activities, we may be subject to civil or criminal penalties and administrative sanctions, including reductions of the value of contracts, contract modifications or terminations, forfeiture of profits, suspension of payments, penalties, fines and suspension or prohibition from doing business with the government. We could also suffer serious reputational harm if allegations of impropriety were made against us. Similar government oversight exists in most other countries where we conduct business.

## **Contracts with the U.S. government may be terminated, cancelled or modified.**

Certain of the U.S. government programs in which we participate as a contractor or subcontractor may extend for several years and include one or more base years and one or more option years. Under some contracts, the government generally has the right not to exercise options to extend or expand our contracts and may otherwise terminate, cancel, modify or curtail our contracts at its convenience. Any decision by a government agency not to exercise contract options or to terminate, cancel, modify or curtail any major programs or contracts would adversely affect our revenues, revenue growth and profitability. We may experience periodic performance issues under certain of our contracts. Depending on the nature and value of the contract, a performance issue or termination for default could cause our actual results to differ from those anticipated and could harm our reputation and our operating results and financial condition.

## **Products that fail to meet specifications, are defective or that are otherwise incompatible with end uses could impose significant costs on us.**

If our products are defectively manufactured, contain defective components or are used in defective or malfunctioning systems, we could be subject to warranty and product liability claims and product recalls, safety alerts or advisory notices. For example, certain of our products are used in transportation safety devices in the rail industry. These products are certified by independent auditors to safety integrity level ("SIL") 4 standards. In the event that our products fail to perform as expected, accidents and significant losses could occur. While our contracts for the sale of these products typically contain disclaimers, there can be no assurance that we would be insulated from liability in the event of an accident. While we have product liability insurance coverage, it may not be adequate to satisfy claims made against us. We also may be unable to obtain insurance in the future at satisfactory rates or in adequate amounts. Investigations, warranty and product liability claims and product recalls, regardless of their ultimate outcome, could have an adverse effect on our business, financial condition and reputation, and on our ability to attract and retain customers. In addition, we may determine that it is in our best interest to accept product returns in circumstances where we are not contractually obligated to do so to maintain good relations with our customers. Accepting product returns may adversely impact our results of operations and financial condition.

## **Breaches of our security systems, or those of our customers, suppliers or business partners, could expose us to losses.**

We manage, store, transmit and otherwise process various proprietary information and sensitive personal or confidential data. In addition, our cloud computing businesses routinely process, store and transmit data, including sensitive and personally identifiable information, for our customers. We may experience data security incidents, cybersecurity events, data breaches, ransomware attacks or other compromises of the information technology systems we use for these purposes or that our vendors use to process data on our behalf, as criminal or other actors may be able to penetrate our or our service providers' network security and misappropriate or compromise our information or that of third parties, create system disruptions or cause shutdowns. There are numerous and evolving risks to cybersecurity and privacy, including criminal hackers, hacktivists, state-sponsored intrusions, industrial espionage, employee malfeasance and human or technological error. Computer hackers and others routinely attempt to breach the security of technology products, services and systems, and to fraudulently induce employees, customers and other third parties to disclose information or unwittingly provide access to systems or data. The risk of such attacks includes attempted breaches not only of our

own products, services and systems, but also those of customers, contractors, business partners, vendors and other third parties. Our products, services and systems may be used in critical company, customer, government or other third-party operations, or involve the storage, processing and transmission of sensitive data, including valuable intellectual property, classified information, other proprietary or confidential data, regulated data and personal information of employees, customers and others. Successful breaches, employee malfeasance or human or technological error could result in, for example, unauthorized access to, disclosure, modification, misuse, loss or destruction of company, customer, government or other third party data or systems; theft of sensitive, regulated, classified or confidential data including personal information and intellectual property; the loss of access to critical data or systems through DDOS attacks, denial-of-service attacks, ransomware attacks, destructive attacks or other means; and business delays, service or system disruptions or denials of service. Further, hardware and operating system software and applications that we produce or procure from third parties may contain defects in design or manufacture, including “bugs” and other problems that could unexpectedly interfere with the operation of such systems.

The costs to address product defects or any of the foregoing security problems and security vulnerabilities before or after a cyber incident could be significant. Remediation efforts may not be successful and could result in interruptions, delays or cessation of service and loss of existing or potential customers that may impede our sales, manufacturing, distribution or other critical functions. We could lose existing or potential customers for outsourcing services or other information technology solutions in connection with any actual or perceived security vulnerabilities in our products. In addition, breaches of our security measures and the unapproved dissemination of proprietary information or sensitive or confidential data about us or our customers or other third parties could expose us, our customers or other third parties affected to a risk of loss or misuse of this information, result in regulatory enforcement, litigation and potential liability, damage our brand and reputation or otherwise harm our business. Further, we rely in certain limited capacities on third-party data management providers and other vendors whose possible security problems and security vulnerabilities may have similar detrimental effects on us.

We are subject to laws, rules and regulations in the United States and other countries relating to the collection, use, transmission, processing and security of user and other data. Our ability to execute transactions and to possess, process, transmit and use personal information and data in conducting our business subjects us to legislative and regulatory burdens that, among other things, may require us to notify regulators and customers, employees or other individuals of a data security breach, including in the EU and the European Economic Area where the General Data Protection Regulation (“GDPR”) took effect in May 2018, in Brazil where the LGPD data privacy laws took effect in August 2021, and in the United States where the California Consumer Privacy Act (“CCPA”) recently became law and the California Privacy Rights Act (“CPRA”), Virginia Consumer Data Protection Act (“VCDPA”) and the Colorado Privacy Act (“CPA”) will come into effect in 2023. Additional U.S. states and the federal government also are considering privacy and cybersecurity legislation. We have incurred, and will continue to incur, significant expenses to comply with mandatory privacy and security standards and protocols under applicable laws, regulations, industry standards and contractual obligations. Despite such expenditures, we may face regulatory and other legal actions in the event of a data security incident, cybersecurity event or data breach or perceived or actual non-compliance with such applicable obligations. The various data privacy enactments impose significant obligations and compliance with these requirements depends in part on how particular regulators apply and interpret them. In particular, if we fail to comply with the GDPR, or if regulators assert we have failed to comply with the GDPR, it may lead to regulatory enforcement actions, which can result in monetary penalties of up to 4% of worldwide revenue, private lawsuits or reputational damage.

### **Some of our offerings utilize open source software, which may pose particular risks to our proprietary software, products and services in a manner that could harm our business.**

Many of our IPS offerings, including Linux-based products and our Scyld suite of products, incorporate software components licensed under various open source licenses. The terms of many open source licenses to which we are subject have not been interpreted by U.S. or foreign courts, and there is a risk that open source software licenses could be construed in a manner that imposes unanticipated conditions or restrictions on our ability to provide or distribute our products or services. We could face claims from third parties claiming ownership of, or demanding release of, the open source software or derivative works that we developed using such software, which could further implicate aspects of our proprietary code. These claims could result in litigation and could require us to make our software source code freely available to the public, purchase a costly license or cease offering the implicated products or services unless and until we can re-engineer them to avoid infringement, which may be costly and time-consuming.

In addition to risks related to open source license requirements, usage of open source software can lead to greater risks than use of third-party commercial software. Increased risks arise in part because open source licensors generally do not provide updates, warranties, support, indemnities or other contractual protections regarding infringement claims or the quality of the code, including with respect to security vulnerabilities where open source software may be more susceptible. These third-party open source

providers could experience service outages, data loss, privacy breaches, cyber-attacks, ransomware and other events relating to the applications and services they provide that could diminish the utility of these services, which could harm our business as a result. To the extent that IPS offerings depend upon the successful operation and continued updates and support of the open source software it uses, any undetected errors or defects in this open source software could prevent the deployment or impair the functionality of IPS offerings, delay the release of new product solutions, result in a failure of our offerings and injure our reputation. If open source programmers fail to adequately further develop and enhance open source technologies, we would have to rely on other parties to develop and enhance our offerings or we would need to develop and enhance our offerings with our own resources. We cannot predict whether further developments and enhancements to these technologies would be available from reliable alternative sources. Moreover, if third-party software programmers fail to adequately further develop and enhance open source technologies, the development and adoption of these technologies could be stifled and our offerings could become less competitive. Any of these risks could be difficult to eliminate or manage and, if not addressed, could have a material adverse effect on our business, financial condition and results of operations.

### **Open source software may make it easier for competitors, some of which may have greater resources than we have, to enter our markets and compete with us.**

One of the characteristics of open source software is that anyone may modify and redistribute the existing open source software and use it to compete with us. Such competition can develop without the degree of overhead and lead time required by traditional proprietary software companies. It is possible for competitors with greater resources than ours to develop their own open source solutions or acquire a smaller business that has developed open source offerings that compete with our offerings, potentially reducing the demand for, and putting price pressure on, our offerings. In addition, some competitors make their open source software available for free download and use on an ad hoc basis or may position their open source software as a loss leader. We cannot guarantee that we will be able to compete successfully against current and future competitors or that competitive pressure and/or the availability of open source software will not result in price reductions, reduced operating margins and loss of market share. Additionally, any failure by us to provide high-quality technical support, or the perception that we do not provide high-quality technical support, could harm our reputation and negatively impact our ability to sell subscriptions for our open source offerings to existing and prospective customers. If we are unable to differentiate our open source offerings from those of our competitors or compete effectively with other open source offerings, our business, financial condition, operation results and cash flows could be adversely affected.

In our IPS business, we regularly contribute software source code under open source licenses and have made other technology we developed available under other open licenses, and we include open source software in our products. For example, we have contributed certain technology related to our products to the OCP Foundation, a non-profit entity that shares and develops such information with the technology community, under the Open Web Foundation License. As a result of our open source contributions and the use of open source in our products, we may license or be required to license or disclose code and/or innovations that turn out to be material to our business and may also be exposed to increased litigation risk. As a result of making certain of our technology available to third parties, the value of our brands and other intangible assets may be diminished and competitors may be able to more effectively mimic our products, services and methods of operations which could have an adverse effect on our business and financial results. Likewise, if the protection of our proprietary rights is inadequate to prevent unauthorized use or appropriation by third parties, the value of our brands and other intangible assets may be diminished and competitors may be able to more effectively mimic our products, services and methods of operations. Any of these events could have an adverse effect on our business and financial results.

### **We could be prevented from selling or developing our software if our licenses are not enforceable or are modified so as to become incompatible with other open source licenses.**

A number of our IPS offerings have been developed and licensed under the GNU General Public License and similar open source licenses. These licenses state that any program licensed under them may be liberally copied, modified and distributed. It is possible that a court would hold these licenses to be unenforceable or that someone could assert a claim for proprietary rights in a program developed and distributed under them. Additionally, if any of the open source components of our offerings may not be liberally copied, modified or distributed, then our ability to distribute or develop all or a portion of our offerings could be adversely impacted. In addition, licensors of open source software employed in our offerings may, from time to time, modify the terms of their license agreements in such a manner that those license terms may become incompatible with other open source licenses in our offerings or our end user license agreement, and thus could, among other consequences, prevent us from distributing the software code subject to the modified license.



## **Our indemnification obligations to our customers and suppliers could require us to pay substantial damages.**

A number of our product sales and product purchase agreements provide that we will defend, indemnify and hold harmless our customers and suppliers from damages and costs which may arise from various matters including, without limitation, product warranty claims or claims for injury or damage resulting from defects in, or usage of, our products or the products of our suppliers. In addition, we currently have in effect a number of agreements in which we agree to defend, indemnify and hold harmless our customers and suppliers from damages and costs which may arise from the infringement or alleged infringement by our products of third-party patents, trademarks or other intellectual property rights. We periodically have to respond to claims and may have to litigate indemnification obligations in the future.

Indemnification obligations could require us to expend significant amounts of money to defend claims and/or to pay damages or settlement amounts. We maintain insurance to protect against certain claims associated with the use of our products; however, our insurance may not cover all or any part of a claim asserted against us. Our insurance does not cover intellectual property infringement in most instances. A claim brought against us that is in excess of, or excluded from, our insurance coverage could adversely impact our business, results of operations and financial condition.

## **We may need to raise additional funds, which may not be available on acceptable terms or at all.**

We may need to raise additional funds, which we may seek to obtain through, among other avenues, public or private equity offerings and debt financings. Additional funds may not be available on terms acceptable to us, or at all. If we issue equity or convertible debt securities to raise additional funds, our existing shareholders may experience dilution and the new equity or debt securities may have rights, preferences and privileges senior to those of our then existing shareholders. If we incur additional debt, it may increase our leverage relative to our earnings or to our equity capitalization, as well as impose financial and operating covenants that could restrict the operations of our business. In addition, our existing indebtedness may limit our ability to obtain additional financing in the future, as discussed in greater detail below under "Risks Relating to Our Debt – Our indebtedness could impair our financial condition and harm our ability to operate our business."

In 2021, 2020 and 2019, we spent \$47.6 million, \$32.4 million and \$33.4 million, respectively, on capital expenditures, which we used, among other things, to expand manufacturing and test capacity as well as research and development. In the third quarter of 2021, we closed our acquisition of the Cree's LED business. The consideration for this acquisition consisted of approximately \$200 million in the form of cash and an unsecured promissory note, plus an earn-out of up to \$125 million based on the revenue and gross profit performance of the LED business in the four fiscal quarters of Cree following the closing. In addition, in 2019, we spent an aggregate of approximately \$76 million to acquire SMART EC and SMART Wireless, and in 2018, we spent approximately \$45 million to acquire Penguin Computing. We plan to continue exploring additional acquisition opportunities in the future.

If adequate capital is not available when needed, we may be required to modify our business model and operations to reduce spending. This could cause us to be unable to execute our business plan, take advantage of future opportunities or respond to competitive pressures or customer requirements. It may also cause us to delay, scale back or eliminate some or all of our research and development programs, or to reduce or cease operations, which could adversely impact our business, results of operations and financial condition.

## **We may make future acquisitions and/or alliances, which involve numerous risks.**

As part of our business and growth strategy, we have in the past and may in the future acquire or make significant investments in businesses, products or technologies, such as our acquisitions of Cree's LED Business, SMART EC, SMART Wireless and Penguin Computing. Any acquisitions or investments would expose us to the risks commonly encountered in acquisitions of businesses or technologies. Such risks include, among others:

- problems integrating the purchased operations, technologies, products or personnel;
- unanticipated costs or expenses associated with an acquisition or investment, including write-offs of tangible assets as well as goodwill or other intangible assets;
- negative effects on profitability resulting from an acquisition or investment;
- adverse effects on existing business relationships with suppliers and customers;

- the risk that suppliers (such as Cree, Inc.) or customers of an acquired business are unable or unwilling to do business with us following the acquisition;
- risks associated with entering markets in which we have little or no prior experience, such as the market for LED products that we entered following our acquisition of Cree's LED Business and markets with complex government regulations;
- loss of key employees of the acquired business; and
- litigation arising from an acquired company's operations.

Problems encountered in connection with an acquisition could divert the attention of management, utilize scarce corporate resources and otherwise harm our business. If we make any future acquisitions, we could issue ordinary shares that would dilute our existing shareholders' percentage ownership, incur substantial additional debt (such as the Purchase Price Note we issued in connection with the acquisition of Cree's LED Business), expend cash and reduce our cash reserves or assume additional liabilities. Furthermore, acquisitions may require material charges and could result in adverse tax consequences, substantial depreciation, deferred compensation charges, liabilities under earn-out provisions, including under the Earnout Note we issued in connection with the acquisition of Cree's LED Business, the amortization of amounts related to deferred compensation and identifiable purchased intangible assets or impairment of goodwill or other intangibles, any of which could negatively impact our business, results of operations and financial condition. We are unable to predict whether or when any prospective acquisition candidate will become available or the likelihood that any acquisition will be completed. We may expend significant resources and management time pursuing an acquisition that we are unable to consummate. Even if we do find suitable acquisition opportunities, we may not be able to consummate the acquisitions on commercially acceptable terms or at all, or may not realize the anticipated benefits of any acquisitions we do undertake, including our acquisition of Cree's LED Business. Our investments in private companies are subject to risk of loss of investment capital. These investments are inherently risky because the markets for the technologies or products they may have under development are typically in the early stages and may never materialize. We could lose our entire investment in these companies.

### **We may fail to realize the anticipated benefits of our recent acquisition of Cree's LED business.**

We closed on the acquisition of Cree's LED business in March 2021 and consequently have only included it in our operations for two full quarters to date. As we continue to integrate the LED business into our operations and portfolio, our ability to realize some or all of the anticipated benefits of the acquisition may be impacted by the following:

- difficulties in the assimilation and successful integration of the operations, sales functions, technologies, products, personnel and development capabilities of our LED business;
- failure to maintain and expand our existing customer base of our LED business;
- difficulties in leveraging the LED business research and development and product development capabilities to expand our products portfolio;
- our failure to protect and expand the LED business expansive intellectual product and patent portfolio;
- unanticipated costs, including write-offs of tangible assets as well as goodwill or other intangible assets, litigation or other contingent liabilities associated with the acquisition;
- the diversion of management's attention from other business concerns;
- adverse effects on existing business relationships with suppliers and customers;
- risks associated with entering markets in which we have little or no prior experience and markets with complex government regulations; and
- loss of key employees of the acquired LED business.

Any of these risks or other risks arising from the integration of Cree's LED business into our operations could have a material adverse effect on our business, financial condition or results of operations and could cause the impact of the acquisition of CreeLED to be dilutive to our company.

### **We rely on third parties to sell a portion of our products and services.**

Sales of our products to some of our OEM customers are accomplished, in part, through the efforts of third-party sales representatives and, particularly in the case of our LED business, third-party distributors. We are unable to predict the extent to which these third-party sales representatives and distributors will be successful in marketing and selling our products. Moreover, many of these third-party sales representatives and distributors also market and sell competing products and may more aggressively pursue sales of our competitors' products. Our third-party sales representatives and distributors may terminate their relationships with us at any time on short or no notice. Our future performance may also depend, in part, on our ability to attract

and retain additional third-party sales representatives and distributors that will be able to market and support our products effectively, especially in markets in which we have not previously sold our products. If we cannot retain our current third-party sales representatives and distributors or recruit additional or replacement third-party sales representatives and distributors or if these sales representatives or distributors are not effective, it could have a material adverse effect on our business, results of operations and financial condition.

### **We may be unable to protect our intellectual property.**

Our success is dependent, in part, upon protecting our intellectual property rights. We rely on a combination of trade secrets, know-how, trademarks, copyright and patents. Much of the intellectual property created in our Memory Solutions and IPS groups exists in the form of know-how and trade secrets. As such, few patents are sought or procured on products created in these business areas. The absence of patent protection for these products means that we cannot prevent our competitors from reverse-engineering and duplicating them, which could harm our competitive position, sales and results of operations.

We seek to protect our confidential proprietary information, in part, by confidentiality and non-disclosure agreements and invention assignment agreements with our employees, consultants, advisors, contractors and collaborators. However, we cannot be certain that such agreements have been entered into with all relevant parties, and we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. If any of our confidential proprietary information were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position.

We also protect our intellectual property through patent protection, particularly in our LED Solutions group. If any of our issued patents are found to be invalid or if any of our patent applications are rejected, our ability to exclude competitors from making, using, importing or selling the same or similar products as us could be compromised. In addition, because we conduct a substantial portion of our operations and sell a large percentage of our products outside the United States, our ability to protect our intellectual property may be constrained. The laws of certain countries in which we operate our business or sell products may not protect proprietary rights to the same extent or in the same ways as the laws in the United States. As such, we may not be able to effectively leverage or defend our intellectual property rights against competitors in these countries, which could undermine our business interests. It is also possible that certain of our suppliers or other partners will either not protect or not respect our intellectual property rights, and that we may have difficulty enforcing our intellectual property rights while maintaining our business relationships with those partners.

### **Legal proceedings and claims could have a material adverse effect on our business, results of operations or financial condition.**

We are currently involved in, and may in the future be involved in, legal proceedings, claims or government investigations, including any identified under "Item 3. Legal Proceedings." From time to time, third parties may assert claims against us alleging infringement of their intellectual property rights on technologies that are important to our business. In addition, litigation or other actions may be necessary to protect our intellectual property rights, to determine the validity and scope of the proprietary rights of others or to defend against third party claims of infringement and/or invalidity. Litigation and other legal and administrative processes, whether as plaintiff, defendant or otherwise, could result in substantial costs and diversion of resources and management attention and could have a material adverse effect on our business, results of operations and financial condition, whether or not such litigation or other processes are ultimately determined in our favor. In the event of an adverse result in, or a settlement of, a litigation matter, we could be required to pay substantial damages or settlement amounts; cease the manufacture, use, import and sale of certain products or components; expend significant resources to develop or acquire rights to use non-infringing technology; and/or discontinue the use of certain processes or obtain licenses and pay one-time fees and/or on-going royalties to use the infringing or allegedly infringing technology. The occurrence of any of the foregoing could result in unexpected expenses or require us to recognize an impairment of our assets, which would reduce the value of our assets and increase our expenses.

### **We may be required to pay royalties or obtain licenses to sell certain products.**

The markets in which we operate are constantly undergoing rapid technological change and evolving industry standards. From time to time, third parties may claim that we are infringing upon technology to which they have proprietary rights and that we require a license to manufacture and/or sell certain of our products. If we are unable to supply certain products at competitive prices due to

royalty payments we are required to make or at all because we were unable to secure a required license, our customers might make claims against us, cancel orders or seek other suppliers to replace us, all of which could have a material adverse effect on our business, results of operations and financial condition.

### **Changes in tax laws or potential adjustments by tax authorities in key jurisdictions could materially increase our tax expense.**

Our future effective tax rates could be unfavorably affected by the resolution of issues arising from tax audits with various tax authorities in the United States and abroad; adjustments to income taxes upon finalization of various tax returns; increases in expenses not deductible for tax purposes, including write-offs of acquired in-process research and development and impairments of goodwill in connection with acquisitions; changes in available tax credits; changes in tax laws or regulations or tax rates; changes in the interpretation or application of tax laws; increases or decreases in the amount of net sales or earnings in countries with particularly high or low statutory tax rates; changes in exemptions from taxes in certain jurisdictions or in connection with certain transactions; or by changes in the valuation of our deferred tax assets and liabilities. In addition, taxable income in any jurisdiction is dependent upon acceptance of our operational practices and intercompany transfer pricing by local tax authorities as being on an arm's length basis. Due to inconsistencies in application of the arm's length standard among taxing authorities, as well as lack of adequate treaty-based protection, transfer pricing challenges by tax authorities could, if successful, substantially increase our income tax expense. While we enjoy beneficial tax treatment in certain foreign jurisdictions, most notably Brazil and Malaysia, we are subject to meeting specific conditions in order to receive the beneficial treatment, and such beneficial treatment is subject to change. For instance, in Brazil, the phase out of certain financial credits is planned for January 2022, and pending legislation contemplates an increase in the withholding taxes applicable to dividends paid from Brazil.

Additionally, we regularly assess the likelihood of outcomes resulting from tax examinations in the United States and abroad to determine the adequacy of our provision for taxes and have reserved for potential adjustments that may result from current examinations. We believe such estimates to be reasonable; however, there can be no assurance that the final determination of any examinations will be in the amounts of our estimates.

Any significant variance in the results of an examination as compared to our estimates, any failure to continue to receive any beneficial tax treatment in any of our foreign locations or any increase in our future effective tax rates due to any of the factors set forth above or otherwise could reduce net income and have a material adverse effect on our business, results of operations and financial condition.

### **Our ability to use our net operating loss carryforwards are limited.**

As of August 27, 2021, we had U.S. federal and state net operating loss carryforwards of \$120.1 million and \$55.0 million, respectively. The federal net operating loss carryforwards will expire, if not utilized, in 2026 through 2038, and the state net operating loss carryforwards will expire in 2023 through 2039, both in varying amounts, if not utilized. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended ("Code"), if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards to offset its post-change taxable income may be limited. In general, an "ownership change" will occur if there is a cumulative change in our ownership by certain "5-percent shareholders" (including groups of shareholders) that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. Our net operating loss carryforwards are subject to limitations per Section 382 of the Code. We have experienced ownership changes in the past, and we may experience ownership changes in the future as a result of future transactions in our ordinary shares, some changes of which may be outside our control. As a result, our ability to use our pre-change net operating loss carryforwards to offset post-change U.S. federal and state taxable income may be subject to additional limitations.

Further, legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, ("Tax Act"), as modified by the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") changed the federal rules governing net operating loss carryforwards. For net operating loss carryforwards arising in tax years beginning after December 31, 2017, the Tax Act limits a taxpayer's ability to utilize such carryforwards to 80% of taxable income. In addition, net operating loss carryforwards arising in tax years ending after December 31, 2017 can be carried forward indefinitely, but carryback is generally prohibited, with the exception of carrybacks reinstated by the CARES Act. Net operating loss carryforwards generated before January 1, 2018 will not be subject to the Tax Act's taxable income limitation and will continue to have a twenty-year carryforward period. Nevertheless, our net operating loss carryforwards and other tax assets could expire before utilization and could be subject to limitations.

## **We could incur substantial costs or liabilities as a result of violations of environmental laws.**

Our operations and properties are subject to various federal, state, local, foreign and international environmental laws and regulations governing, among other things, environmental licensing and registries, protection of flora and fauna, air and noise emissions, use of water resources, wastewater discharges, management and disposal of hazardous and non-hazardous materials and wastes, reverse logistics (take-back policy) and remediation of releases of hazardous materials. Our failure to comply with present and future requirements, or the management of known or identification of new or unknown contamination, could cause us to incur substantial costs, including cleanup costs, indemnification obligations, damages, compensations, fines, suspension of activities and other penalties, investments to upgrade our facilities or change our processes or curtailment of operations. For example, the presence of lead in quantities not believed to be significant have been found in the ground under one of the multi-tenant buildings we lease in Brazil. While we did not cause the contamination, we may be held responsible if remediation is required, although we may be entitled to seek indemnification from responsible parties under Brazilian law and from our lessor under our lease. In addition, as part of the acquisition of Cree's LED business, we acquired facilities in China, which could present similar issues. The identification of presently unidentified environmental conditions, more vigorous enforcement by regulatory agencies, enactment of more stringent laws and regulations or other unanticipated events may arise in the future and give rise to material environmental liabilities and related costs. The occurrence of any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

## **Our worldwide operations may be disrupted by operational issues, natural disasters or other events.**

Our operations in different parts of the world could be subject to natural disasters, including earthquakes, monsoons, cyclones and floods. For example, our U.S. headquarters in Milpitas, California, manufacturing and research and development facility in Newark, California and our Penguin Computing operations in Fremont, California are located near major earthquake fault lines. Our manufacturing facility in Penang, Malaysia is located in an area that is also prone to natural disasters, such as cyclones, monsoons and floods. In the event of a major earthquake, cyclone, monsoon or other natural or manmade disaster, we could experience business interruptions, destruction of facilities and/or loss of life, any of which could materially adversely affect our business. In addition, the outbreak of war, political unrest or terrorist activity, diseases, epidemics or pandemics in any of the locations in which we conduct business could severely disrupt our business or the business of our customers and suppliers, which could in turn materially adversely affect our business. Since a large percentage of our production is done in a small number of facilities, a disruption to operations could have a material adverse effect on our business, results of operations and financial condition.

## **Risks Relating to Our International Operations**

### **Our business is subject to the risks generally associated with international business operations.**

Sales outside of the United States accounted for 60%, 57% and 68% of our net sales in 2021, 2020 and 2019, respectively. In addition, a significant portion of our product design and manufacturing is performed at our facilities in Brazil, Malaysia and China, and a significant amount of our product design activities are performed in Taiwan and India. As a result, our business is and will continue to be subject to the risks generally associated with international business operations in Brazil, Malaysia, China, Taiwan, India and other foreign countries, including:

- compliance with numerous changing, and sometimes conflicting legal regimes on matters as diverse as tax, anticorruption, import/export controls and quotas, local manufacturing requirements, trade restrictions, tariffs, taxation, sanctions, immigration, internal and disclosure control obligations, securities regulation, anti-competition, data privacy, employment regulations and labor relations;
- changes in social, political and economic conditions;
- transportation delays;
- power and other utility shutdowns or shortages;
- limitations on foreign investment;
- disruptions in or lack of adequate infrastructure;
- challenges protecting intellectual property and trade secrets;
- exchange or currency controls and fluctuations, restrictions on currency convertibility and volatility of foreign exchange markets;
- increased trade wars;
- corruption or adverse political situations;

- governmental intervention in local economies, industries, or the operations of specific companies, including us or our competitors;
- changes or instability in local labor conditions, including strikes, work stoppages, protests and changes in employment regulations, increases in wages and the conditions of collective bargaining agreements;
- difficulties recruiting, employing and retaining qualified personnel to manage and oversee our local operations, sales and other activities;
- difficulties in managing and overseeing employees and operations in locations far from senior management, which could result in compliance, control or other issues;
- difficulties in obtaining governmental approvals and extension of existing incentives;
- difficulties in collecting accounts receivable;
- expropriation and nationalization of our assets in a particular jurisdiction; and
- restrictions, or increases in existing tax rates, on repatriation of cash, dividends or profits.

Some of the foreign countries in which we do business or have operations have been subject to social and political instability in the past, and interruptions in operations could occur in the future. Our net sales, results of operations and financial condition could be adversely affected by any of the foregoing factors.

### **We depend on Brazil markets for a significant portion of our sales.**

A significant portion of our sales and operations is focused on Brazil. Sales to customers in Brazil accounted for 30%, 35% and 44% of our net sales in 2021, 2020 and 2019, respectively. Demand for our products in Brazil is dependent upon, among other things, demand in the markets served by our customers, including the Brazil computing and mobile markets. From time to time, the markets served by our Brazil customers have experienced significant downturns, often in connection with political unrest or in connection with, or in anticipation of, declines in general economic conditions. A decline or significant shortfall in demand in any of the markets that we serve could have a significant negative impact on the demand for our products. In addition, a prolonged economic downturn in Brazil, even absent a worldwide economic downturn, may lead to higher interest rates or significant changes in currency exchange rates, the rate of inflation in Brazil or an inability of our Brazil customers and suppliers to access capital on acceptable terms. Our customers and suppliers in Brazil could experience cash flow problems, credit defaults or other financial hardships.

Any of these circumstances could have a material adverse effect on our business, results of operations and financial condition.

### **Our success in part depends on incentives in Brazilian laws for local manufacturing of electronics products. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce our profitability for products in Brazil.**

The Brazilian government has adopted economic policies intended to foster innovation and investment in local production, stimulate job growth, provide stimulus to exports and incentivize manufacturers in various industries. Through our Brazil subsidiaries, we participate in three incentive programs (the "Brazil Incentive Programs"). Two such programs incentivize the manufacture and sale of certain information technology and consumer electronics products within Brazil: 1) Lei da Informática – Processo Produtivo Básico (aka Informatics Law – Basic Productive Process Program) ("PPB/IT") and 2) Programa de Apoio ao Desenvolvimento Tecnológico da Indústria de Semicondutores (aka Program of Support of the Development of the Semiconductor Industry) ("PADIS").

The PPB/IT Program is enacted via a law that is currently legislated to remain in force through the end of 2029. It is intended to promote local manufacturing of the whole IT supply chain (i.e., from components, parts and pieces up to the equipment/device level) by allowing qualified companies to receive incentives when they sell specified IT products, including desktops, notebooks, servers, SmartTVs and mobile products that contain components that are manufactured in Brazil, conditioned upon the annual investment in R&D initiatives, based on a percentage of the incentivized sales revenues.

PADIS is a semiconductor-related policy that is intended to foster semiconductor production in Brazil, comprising the design and front and back-end activities. Subject to annual investments in research and development equivalent to 5% of gross sales made within the country (i.e., excluding exports and sales to customers located in the Manaus Free Trade Zone), PADIS grants beneficiaries incentives that range from the reduction to zero of all federal tax rates in the acquisition of raw materials, machinery and equipment,



up to a 100% reduction in the corporate income tax rate. Effective April 2020, the reduction of the federal tax rates to zero percent for sales of qualified PADIS products was replaced by financial credits, calculated based on annual investments in research and development limited to 13.1% of the total incentivized revenues, which can be used to pay federal taxes. While the reduction of the income tax rate is valid for 12 years as of the approval of the PADIS qualification on a product basis (effective for SGH through 2033), the remaining PADIS benefits are expected to expire in January 2022.

We also participate in a third, more general multi-sector policy, “Lei do Bem,” which is designed to stimulate investment in innovation. It allows up to 200% deductibility of expenses in research, development and innovation activities for income tax purposes, in addition to full depreciation of equipment and machinery dedicated to these initiatives.

The elimination of, or a reduction in the Brazil Incentive Programs, or our failure to meet the requirements of any of the regulations, could significantly reduce the demand for, the profit margins on and the competitiveness of our products in Brazil, which could have a material adverse effect on our business, results of operations and financial condition.

### **We are subject to the taxation requirements of the jurisdictions in which we operate, and if we fail to qualify for certain tax incentives or to comply with local tax regulations, we may suffer financial losses.**

We are subject to changes in tax laws, treaties and regulations or the interpretation or enforcement thereof in the Cayman Islands, United States, Brazil, Malaysia and jurisdictions in which we or any of our subsidiaries operate or are resident. We have structured our operations in a manner designed to maximize our benefit from various government incentives and/or tax holidays extended to manufacturers in Brazil and Malaysia to encourage investment and employment, and to minimize our tax liability in other jurisdictions such as the United States to the extent permitted by law. Our interpretations and conclusions regarding these tax incentives are not binding on any taxing authority. Additionally, we have been in the past and may in the future be subject to tax assessments by the relevant authorities in the jurisdictions in which we operate, including Brazil, and we have been in the past and may in the future be involved in legal disputes with regulatory or governmental authorities relating to these assessments. If our assumptions about, or interpretation or implementation of, tax and other laws are incorrect; if tax laws or regulations are substantially modified or rescinded; if the tax incentives from which we benefit in the jurisdictions in which we operate, including the PPB/IT Program, PADIS and Lei do Bem in Brazil, are substantially modified or rescinded; if we fail to meet the conditions of any of the tax incentives; or if we do not prevail in disputes with tax authorities, we could suffer material adverse tax and other financial consequences including owing significant amounts of taxes and penalties that would increase our expenses, reduce our profitability and adversely affect our cash flows, results of operations and financial condition.

### **Changes in foreign currency exchange rates could materially adversely affect our business, results of operations or financial condition.**

Our international sales and our operations in foreign countries expose us to certain risks associated with fluctuating currency values and exchange rates. Because some of our sales are denominated in U.S. dollars, increases in the value of the U.S. dollar could increase the price of our products so that they become relatively more expensive to customers in a particular country, possibly leading to a reduction in sales and profitability in that country. Volatility of currencies in countries where we conduct business, most notably the U.S. dollar, Chinese renminbi, Brazilian real, Malaysia ringgit, Japanese yen, European Union euro, British pound, South Korean won, New Taiwan dollar, Hong Kong dollar and Indian rupee have had and may in the future have an effect on our revenue or operating results. Gains and losses on the conversion to U.S. dollars of such revenue and of other associated monetary assets and liabilities, as well as profits and losses incurred in certain countries, may contribute to fluctuations in the value of our assets and our results of operations. We also have costs and expenses that are denominated in foreign currencies, and decreases in the value of the U.S. dollar could result in increases in such costs that could have a significant negative impact on our results of operations. In addition, fluctuating values between the U.S. dollar and other currencies can result in currency gains which are used in the computation of foreign taxes and can increase foreign taxable income.

In 2019, we began using foreign exchange forward contracts in Brazil to mitigate foreign currency exchange rate risk associated with foreign currency-denominated assets and liabilities, primarily third party payables. These measures, however, may not effectively address currency exchange risk.

## **We are a holding company. If enacted, exchange controls may limit our ability to receive dividends and other distributions from our foreign subsidiaries.**

We conduct all of our operations through subsidiaries and are dependent on dividends or other intercompany transfers of funds from our subsidiaries to meet our obligations and pay intercompany dividends. If enacted, restrictions on intercompany dividends or other distributions in certain jurisdictions could have a material adverse effect on our ability to transfer funds from certain subsidiaries. Certain foreign jurisdictions, such as Brazil, permit temporary restrictions on conversions of currency into foreign currencies and on remittances to foreign investors of proceeds from their investments under certain circumstance. Any imposition of restrictions on conversions and remittances could hinder or prevent us from converting foreign currencies into U.S. dollars and remitting dividends, distributions or the proceeds from operations. In addition, an increase in the existing tax rates applicable to the remittance of dividends or any other intercompany transfer of funds, as well as the enactment of any new tax related to such transfers, may either affect our ability to transfer funds from our subsidiaries or significantly reduce the amounts subject to transfer.

## **High rates of inflation in the future would adversely affect our business, results of operations and financial condition.**

In the past, Brazil has experienced extremely high rates of inflation. Inflation and some of the measures taken by the Brazilian government in an attempt to curb inflation have had significant negative effects on the Brazil economy generally. If Brazil or other countries where we operate experience substantial inflation or deflation in the future, our business may be adversely affected. In addition, we may not be able to adjust the prices we charge our customers to offset the impact of inflation on our expenses, leading to an increase in our expenses and a reduction in our net operating margin. This could have a material adverse impact on our business, results of operations and financial condition.

## **Political, economic and market conditions and the perception of risk in Brazil and emerging markets may cause the market price of our ordinary shares to decline.**

The market value of securities of companies with substantial operations in Brazil and in other jurisdictions is affected to varying degrees by political, economic and market conditions in other countries, including other Latin American and emerging market countries. Developments or economic conditions in other emerging market countries have at times significantly affected the availability of credit to the Brazil economy and resulted in considerable outflows of funds from Brazil and decreases in the amount of foreign investments in Brazil. Although economic conditions in these countries may differ significantly from economic conditions in Brazil, investors' reactions to developments in these other countries, such as the 2008-2009 developments in the global financial markets, may have an adverse effect on the market value of Brazilian companies or companies with significant operations in Brazil. Since a significant portion of our total assets is located in Brazil, a decrease of the perceived value of companies with substantial operations in Brazil could adversely impact the market price of our ordinary shares.

## **We may have limited legal recourse under the laws of China if disputes arise under our agreements with third parties.**

The Chinese government has enacted certain laws and regulations dealing with matters such as corporate organization and governance, foreign investment, currency control, commerce, taxation and trade. However, the implementation, interpretation and enforcement of these laws and regulations is still evolving, and our ability to enforce commercial claims or to resolve commercial disputes is unpredictable. If disputes arise under our agreements with other parties doing business in China, we face the risk that such party may breach any such agreement or otherwise engage in conduct relating to their relationship with us that could otherwise give rise to liability under U.S. law. The resolution of these matters may be subject to the exercise of considerable discretion by agencies of the Chinese government. Any rights we may have to specific performance, or to seek an injunction under Chinese law, in either of these cases, may be limited, and without a means of recourse by virtue of the Chinese legal system, we may be unable to prevent these situations from occurring. The occurrence of any such events could have a material adverse effect on our business, financial condition and results of operations.

## Risks Related to Our Debt

### Our indebtedness could impair our financial condition and harm our ability to operate our business.

We have a significant amount of debt outstanding as of August 27, 2021, including the debt described in “Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt.” Our indebtedness may have important consequences, including, but not limited to, the following:

- increasing our vulnerability to general economic downturns and adverse industry conditions;
- requiring us to dedicate a significant portion of our cash flows from operations to the payment of interest and principal on our debt, which would reduce the funds available to us for our working capital, capital expenditures or other general corporate requirements;
- limiting our flexibility in planning for, or reacting to, changes in our business and industry;
- placing us at a competitive disadvantage compared to our competitors with less indebtedness or more liquidity; and
- limiting our ability to obtain additional financing in the future for working capital, capital expenditures, acquisitions, general corporate purposes or other purposes.

Our ability to make scheduled payments on, to refinance or to pay off our debt obligations when due depends on the financial condition and operating performance of our business. This, to a certain extent, is subject to prevailing economic and competitive conditions, including general conditions prevailing in the financial markets and global economy, and to certain financial, business, regulatory and other factors beyond our control, including the risks described herein. Our business may not generate sufficient cash flows from operations, and future borrowings may not be available to us under our debt arrangements, including our Amended Credit Agreement and ABL Credit Agreement (as defined below), in an amount sufficient to enable us to service our debt or to fund our other liquidity needs. In addition, certain of our debt is subject to terms that may require the use of significant cash in the future under certain circumstances. For example, holders of the 2026 Notes (as defined below), may, subject to a limited exception, require us to repurchase their 2026 Notes following a “fundamental change,” as described in more detail in “Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt – Convertible Senior Notes.” In addition, upon conversion, we may satisfy part or all of our conversion obligation in cash. We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the 2026 Notes or pay the cash amounts due upon conversion. Applicable law, regulatory authorities and the agreements governing our other indebtedness, including our Amended Credit Agreement, may restrict our ability to repurchase the 2026 Notes or pay the cash amounts due upon conversion. Our failure to repurchase 2026 Notes or to pay the cash amounts due upon conversion when required will constitute a default under the Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our other indebtedness, which may result in that other indebtedness becoming immediately payable in full. We may not have sufficient funds to satisfy all amounts due under the other indebtedness and the 2026 Notes.

If we are unable to meet our debt obligations or fund our other liquidity needs, we may need to restructure or refinance all or a portion of our debt or sell certain of our assets on or before the maturity of our debt. We may not be able to restructure or refinance any of our debt on commercially reasonable terms, or at all, which could cause us to default on our debt obligations and impair our liquidity, which in turn could cause the acceleration of other indebtedness under certain of our debt agreements which could exacerbate our liquidity problems. Any refinancing of our indebtedness could be at higher interest rates and may require us to comply with more onerous covenants that could further restrict our business operations. If we are not able to refinance or restructure our debt obligations before they become due, this could cause us to default on our debt obligations and impair our liquidity.

In addition, if our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay investments and capital expenditures, or to sell assets or seek additional capital. These alternative measures may not be available to us, may not be successful and may not permit us to meet our scheduled debt service obligations, which could result in substantial liquidity problems. Our Amended Credit Agreement restricts our ability to dispose of our assets and use the proceeds from the disposition. We may not be able to consummate those dispositions or to obtain the proceeds which we could realize from them, and these proceeds may not be adequate to meet any debt service obligations then due. Any of these circumstances could have a material adverse effect on our business, results of operations and financial condition.

## **Our credit agreements may limit our flexibility in operating our business.**

We and certain of our subsidiaries are party to credit agreements, as described in more detail in “Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt.” These or future credit agreements may contain restrictive covenants that limit our ability to engage in specified transactions and prohibit us from voluntarily prepaying certain of our other indebtedness. For instance, the covenants in our Amended Credit Agreement limit the ability of the applicable loan subsidiaries to, among other things:

- incur additional indebtedness;
- pay dividends on, or repurchase or make distributions in respect of, our capital stock or make other restricted payments;
- make certain investments, including limitations on capital expenditures and acquisitions;
- sell or transfer assets;
- enter into or effect sale leaseback transactions;
- enter into swap agreements;
- prepay, repurchase, redeem, otherwise defease or amend the terms of any subordinated indebtedness;
- change fiscal periods;
- create liens;
- acquire companies;
- enter into contractual obligations that restrict our ability to grant liens on assets or capital stock;
- change the character of our business;
- consolidate, merge, sell or otherwise dispose of all or substantially all of our assets; and
- enter into certain transactions with affiliates.

Under the Amended Credit Agreement, in certain circumstances we also are required to satisfy and maintain specified financial ratios if we have outstanding debt under the revolver. Our ability to meet those financial ratios could be affected by events beyond our control, and there can be no assurance that we will meet those ratios.

The failure to comply with any of these covenants would cause a default under the relevant credit agreement. A default, if not waived, could result in acceleration of the outstanding indebtedness under the Amended Credit Agreement as well as under the 2026 Notes, in which case such indebtedness would become immediately due and payable. If any default occurs, we may not be able to pay our debt or borrow sufficient funds to refinance it. Even if new financing is available, it may not be available on terms that are acceptable to us. Complying with these covenants may cause us to take actions that we otherwise would not take or not take actions that we otherwise would take.

## **Provisions in the 2026 Notes and the Indenture could delay or prevent an otherwise beneficial takeover of us.**

Certain provisions in the 2026 Notes and the Indenture could make a third-party attempt to acquire us more difficult or expensive. For example, if a takeover constitutes a “fundamental change”, then noteholders will have the right to require us to repurchase their 2026 Notes for cash. In addition, if a takeover constitutes a “make-whole fundamental change” (as defined in the Indenture), then we may be required to temporarily increase the conversion rate. In either case, and in other cases, our obligations under the 2026 Notes and the Indenture could increase the cost of acquiring us or otherwise discourage a third party from acquiring us, including in a transaction that noteholders or holders of our ordinary shares may view as favorable.

## **Our capped call transactions may affect the value of our publicly traded debt and ordinary shares.**

In connection with the pricing of the 2026 Notes, we have entered into privately negotiated capped call transactions (“Capped Calls”), with certain financial institutions. The Capped Calls are expected generally to reduce the potential economic dilution to holders of our ordinary shares upon any conversion of the 2026 Notes, with such reduction and/or offset subject to a cap.

In connection with establishing their initial hedges of the Capped Calls, the Capped Call counterparties or their respective affiliates likely entered into various derivative transactions with respect to our ordinary shares and/or purchased ordinary shares concurrently with or shortly after the pricing of the 2026 Notes. In addition, the Capped Call counterparties and/or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our ordinary shares and/or purchasing or selling our ordinary shares or other securities of ours in secondary market transactions prior to the maturity of the

2026 Notes (and are likely to do so during any Observation Period (as defined in the Indenture) related to a conversion of 2026 Notes). This activity could also cause or avoid an increase or a decrease in the market price of our ordinary shares or the 2026 Notes.

The potential effect, if any, of these transactions and activities on the trading price of our ordinary shares or the 2026 Notes will depend in part on market conditions. Any of these activities could adversely affect the trading price of our ordinary shares or the 2026 Notes.

## **Risks Relating to Investments in Cayman Islands Companies**

**We are a Cayman Islands company and, because the rights of shareholders under Cayman Islands law differ from those under U.S. law, shareholders may have difficulty protecting their shareholder rights.**

Our corporate affairs are governed by our amended and restated memorandum and articles of association, the Cayman Islands Companies Act (2021 Revision) and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary responsibilities of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as from English common law, which has persuasive, but not binding, authority on a court in the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands has a less exhaustive body of securities laws as compared to the United States, and some states, such as Delaware, have more fulsome and judicially interpreted bodies of corporate law.

**It may be difficult to enforce a judgment of U.S. courts for civil liabilities under U.S. federal securities laws against us in the Cayman Islands.**

We are a company incorporated under the laws of the Cayman Islands. The Cayman Islands courts are unlikely:

- to recognize or enforce against us judgments of courts of the United States based on certain civil liability provisions of U.S. securities laws; or
- to impose liabilities against us, in original actions brought in the Cayman Islands, based on certain civil liability provisions of U.S. securities laws that are penal in nature.

Although there is no statutory enforcement in the Cayman Islands of judgments obtained in the United States, the courts of the Cayman Islands will recognize and enforce a foreign money judgment of a foreign court of competent jurisdiction without retrial on the merits based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the sum for which judgment has been given provided certain conditions are met. For a foreign judgment to be enforced in the Cayman Islands, such judgment must be final and conclusive and for a liquidated sum, and must not be in respect of taxes or a fine or penalty, inconsistent with a Cayman Islands judgment in respect of the same matter, impeachable on the grounds of fraud or obtained in a manner, and/or be of a kind the enforcement of which is, contrary to natural justice or the public policy of the Cayman Islands (awards of punitive or multiple damages may well be held to be contrary to public policy). A Cayman Islands Court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

As a result of all of the above, public shareholders may have more difficulty protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as public shareholders of a U.S. company.

## **Risks Related to Our Ordinary Shares**

**The trading price of our ordinary shares has been and may continue to be volatile.**

The market price of the securities of technology companies can be especially volatile. Broad market and industry factors may adversely affect the market price of our ordinary shares regardless of our actual operating performance. The market price of our

ordinary shares could be subject to wide fluctuations in response to the risk factors listed in this section and others beyond our control, including those risks described herein as well as:

- the failure of financial analysts to cover our company;
- negative or inaccurate coverage by financial analysts;
- changes in financial estimates by financial analysts, any failure by us to meet or exceed any of these estimates or changes in the recommendations of any financial analysts that elect to follow our company or our competitors;
- changes in the market valuations of other companies operating in our industry;
- announcement of, or expectation of, additional financing efforts;
- future sales of our ordinary shares;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our ordinary shares; and
- general economic and market conditions.

In addition, the stock market in general has experienced substantial price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of particular companies affected. These broad market and industry factors may materially harm the market price of our ordinary shares, regardless of our operating performance. In the past, following periods of volatility in the market price of certain companies' securities, securities class action litigation has been instituted against these companies. This litigation, if instituted against us, could adversely affect our financial condition or results of operations.

**If our estimates or judgments relating to our critical accounting estimates are based on assumptions that change or prove to be incorrect, our results of operations could fall below expectations of securities analysts and investors, resulting in a decline in the market price of our ordinary shares.**

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as described in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations," the results of which form the basis for making judgments about the carrying values of assets, liabilities, equity, revenue and expenses that are not readily apparent from other sources. Significant assumptions and estimates used in preparing our consolidated financial statements include those related to business acquisitions; income taxes; inventory valuation; impairment of long-lived assets, including property and equipment, goodwill and identified intangible assets; revenue recognition; and share-based compensation. If our assumptions change or if actual circumstances differ from those in our assumptions, our results of operations may be adversely affected and may fall below the expectations of securities analysts and investors, resulting in a decline in the market price of our ordinary shares.

**Future sales of our ordinary shares in the public market, or the perception that these sales may occur, could cause our share price to fall.**

Sales of substantial amounts of our ordinary shares in the public market, including sales of our ordinary shares by our directors or officers, or sales by us or our affiliates pursuant to one or more effective registration statements, or otherwise, or the perception that these sales may occur, could cause the market price of our ordinary shares to decline. This could also impair our ability to raise additional capital through the sale of our equity securities. Under our amended and restated memorandum and articles of association, we are authorized to issue up to 200 million ordinary shares, of which 24.4 million ordinary shares were outstanding as of August 27, 2021.

In addition, certain of our existing shareholders and holders of options, restricted share unit awards or performance-based awards, in the event they become exercisable, have the right to demand that we file a registration statement covering the offer and sale of their ordinary shares and shares issuable under such options and awards under the Securities Act and to require us to include their securities on a registration statement filed by us. If we file a registration statement in the future for the purpose of selling additional ordinary shares to raise capital and are required to include ordinary shares held by these shareholders pursuant to the exercise of their registration rights, our ability to raise capital may be impaired. In addition, if we conduct an offering under a shelf registration statement, our ability to raise capital in such offering may be impaired.



We cannot predict the size of any future sales or issuances of our ordinary shares or the effect, if any, that such future sales and issuances would have on the market price of our ordinary shares.

### **Anti-takeover provisions in our organizational documents may discourage our acquisition by a third party, which could limit shareholders' opportunity to sell their ordinary shares at a premium.**

Our amended and restated memorandum and articles of association include provisions that could limit the ability of others to acquire control of us, modify our structure or cause us to engage in change of control transactions. These provisions include, among other things:

- a classified board of directors with staggered three-year terms;
- restrictions on the ability of our shareholders to call meetings or make shareholder proposals;
- our amended and restated memorandum and articles of association may only be amended by a vote of shareholders representing at least 75% of the outstanding ordinary shares or by a unanimous written consent; and
- the ability of our board of directors, without action by our shareholders, to issue 30,000,000 preferred shares and to issue additional ordinary shares that could have the effect of impeding the success of an attempt to acquire us or otherwise effect a change in control.

These provisions could deter, delay or prevent a third party from acquiring control of us in a tender offer or similar transactions, even if such transaction would benefit our shareholders. Even in the absence of a takeover attempt, the existence of these provisions may adversely affect the prevailing market price of our ordinary shares if they are viewed as discouraging future takeover attempts.

### **We do not anticipate paying any cash dividends in the foreseeable future.**

We currently intend to retain our future earnings, if any, for the foreseeable future, to repay indebtedness and to fund the development and growth of our business. We do not intend to pay any dividends to holders of our ordinary shares. In addition, our Amended Credit Agreement contains restrictions on our ability to pay dividends. As a result, capital appreciation in the price of our ordinary shares, if any, will be your only source of gain on an investment in our ordinary shares.

## **General Risk Factors**

### **Worldwide economic and political conditions as well as other factors may adversely affect our operations and cause fluctuations in demand for our products.**

Uncertainty in global economic and political conditions poses a risk to the overall economy, as consumers and businesses have made it difficult for customers, suppliers and us to accurately forecast and plan future business activities. Declines in the worldwide semiconductor market, economic conditions or consumer confidence would likely decrease the overall demand for our products. Other factors that could cause demand for our products to fluctuate include:

- a downturn in the computing, networking, communications, storage, aerospace, government, mobile or industrial markets;
- changes in consumer confidence caused by changes in market conditions, including changes in the credit markets, expectations for employment and inflation and energy prices;
- changes in the level of customers' components inventory;
- competitive pressures, including pricing pressures, from companies that have competing products, architectures, manufacturing technologies and marketing programs;
- changes in technology or customer product needs;
- strategic actions taken by our competitors;
- market acceptance of our products;
- changes in prevailing or available interest rates or liquidity of the domestic capital and lending markets;
- exchange rates and currency controls and restrictions on the movement of capital out of country;

- inflation; and
- changes to tax and regulatory policies.

If demand for our products decreases, our manufacturing or assembly and test capacity could be underutilized, and we may be required to record an impairment on our long-lived assets, including facilities and equipment, as well as intangible assets, which would increase our expenses. In addition, if product demand decreases or we fail to forecast demand accurately, we could be required to write-off inventory or record underutilization charges, which would have a negative impact on our profitability. If product demand increases more or faster than anticipated, we may not be able to add manufacturing or assembly and test capacity fast enough to meet market demand. These changes in demand for our products, and changes in our customers' product needs, could have a variety of negative effects on our competitive position and our financial results, and, in certain cases, may reduce our net sales, increase our costs, lower our profit margins or require us to recognize impairments of our assets. The occurrence of any of the foregoing could have a material adverse effect on our business, results of operations and financial condition.

### **We and others are subject to a variety of laws, regulations, or industry standards that may have a material adverse effect on our business, results of operations, or financial condition.**

Our business is subject to regulation by various U.S. federal and state governmental agencies. Such regulation includes, without limitation, the radio frequency emission regulatory activities of the Federal Communications Commission, the antitrust regulatory activities of the Federal Trade Commission (the "FTC") and the Department of Justice, the consumer protection laws of the FTC, the import/export regulatory activities of the Department of Commerce, the product safety regulatory activities of the Consumer Products Safety Commission, the regulatory activities of the Occupational Safety and Health Administration, the environmental regulatory activities of the Environmental Protection Agency, the labor regulatory activities of the Equal Employment Opportunity Commission, the export control regulatory activities of the Department of State and tax and other regulations by a variety of regulatory authorities in each of the areas in which we conduct business. We are also subject to similar, and in some cases additional, regulation in other countries where we conduct business, including import and export laws and foreign currency control. In certain jurisdictions, such regulatory requirements may be more stringent and complex than in the United States. We are also subject to a variety of U.S. federal and state employment and labor laws and regulations, including, without limitation, the Americans with Disabilities Act, the Federal Fair Labor Standards Act, the Worker Adjustment and Restructuring Notification Act and other regulations related to working conditions, wage-hour pay, overtime pay, employee benefits, antidiscrimination and termination of employment.

Like other companies operating or selling internationally, we are subject to the Foreign Corrupt Practices Act (the "FCPA") and other laws which generally prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. companies and their intermediaries for the purpose of obtaining or retaining business or otherwise obtaining favorable treatment. We are also subject to similar or even more restrictive anticorruption laws imposed by the governments of other countries where we do business, including the UK Bribery Act, the Malaysian Anticorruption Act and the Brazil Clean Company Act. We make sales and operate in countries known to experience corruption that are rated as high-risk nations. Our business activities in such countries create the risk of unauthorized conduct by one or more of our employees, consultants, customs brokers, freight forwarders, sales agents or distributors that could be in violation of various laws including the FCPA or similar local regulations. In addition, we may be held liable for actions taken by such parties even though such parties are not subject to the FCPA or similar laws. Any determination that we have violated the FCPA or similar laws may result in severe criminal or civil sanctions, and we may be subject to other liabilities that could have a material adverse effect on our business, results of operations and financial condition.

Our Brazil operations are subject to periodic and regular investigations by labor officials and governmental bodies, including the Brazilian Ministry of Labor and the Brazilian Labor Public Prosecutor's Office, with respect to our compliance with labor rules and regulations. Although we believe that we comply with all of the laws and regulations applicable to our business and activities performed in Brazil, these investigations could result in fines and proceedings that may materially and adversely affect our business, results of operations and financial condition.

Our China operations are subject to national, regional and local regulation. The regulatory environment in China continues to evolve, and officials in the Chinese government exercise broad discretion in deciding how to interpret and apply regulations. It is possible that the Chinese government's current or future interpretation and application of existing or new regulations will negatively impact our China operations, result in regulatory investigations or lead to fines or penalties.

Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, disbarment from government projects, fines, damages, civil and criminal penalties or injunctions and reputational damage that could harm our business, results of operations and financial condition. In addition, from time to time we have received, and may receive in the future, correspondence from former employees and parties with whom we have done business, threatening to bring claims against us alleging that we have violated one or more regulations related to customs, labor and employment, foreign currency control or other laws or regulations. An adverse outcome in any litigation or proceeding related to such matters could require us to pay damages, attorneys' fees and/or other costs.

If any governmental sanctions were to be imposed, or if we were not to prevail in any civil action or criminal proceeding, our business, results of operations and financial condition could be materially adversely affected. In addition, responding to any litigation or action would likely result in a significant diversion of management's attention and resources and a significant increase in professional fees.

### **Our success depends on our ability to attract, retain and motivate highly skilled employees.**

Our future operating results depend in significant part upon the continued contributions of our key senior management and technical personnel, many of whom would be difficult to replace. Our future operating results also depend in significant part upon our ability to attract, train and retain qualified management, including for manufacturing and quality assurance, engineering, design, finance, marketing, sales and support personnel. We are continually recruiting such personnel in various parts of the world. In Brazil in particular, there is limited availability of labor with the technical skills required for our operations. As a result, we rely heavily on our ability to train personnel or relocate individuals from outside of the country. However, competition for such personnel across all of our markets can be strong and we can provide no assurance that we will be successful in attracting or retaining such personnel now or in the future. In addition, particularly in the high-technology industry, the value of stock options, restricted share unit awards or other share-based compensation is an important element in the retention of employees. Declines in the value of our ordinary shares could adversely affect our ability to retain employees and we may have to take additional steps to make the equity component of our compensation packages more attractive to attract and retain employees. These steps could result in dilution to shareholders.

The loss of any key employee, the failure of any key employee to adequately perform in his or her current position, our inability to attract, train and retain skilled employees as needed or the inability of our key employees to expand, train and manage our employee base as needed, could have a material adverse effect on our business, results of operations and financial condition.

### **Worldwide political conditions and threats of terrorist attacks may adversely affect our operations and demand for our products.**

Armed conflicts around the world could have an impact on our sales, our supply chain and our ability to deliver products to our customers. Political and economic instability in some regions of the world could also have a negative impact on our business. More generally, various events could cause consumer confidence and spending to decrease, or could result in increased economic or financial volatility, any of which could result in a decrease in demand for our products.

Additionally, the occurrence or threat of terrorist attacks may in the future adversely affect demand for our products. In addition, such attacks may negatively affect our operations directly or indirectly and such attacks or other armed conflicts may directly impact our facilities or those of our suppliers or customers. Such attacks may make travel and the transportation of our products more difficult and more expensive, ultimately having a negative effect on our business.

Any such occurrences could have a material adverse effect on our business, results of operations and financial condition.



### **Item 3. Legal Proceedings**

For a discussion of legal proceedings, see “Item 1A. Risk Factors” and “PART II – Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Commitments and Contingencies.”

### **Item 4. Mine Safety Disclosures**

Not applicable.

## PART II

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

#### Market Information for Ordinary Shares

Our ordinary shares are listed on the Nasdaq Global Select Market under the trading symbol "SGH."

#### Holders of Record

As of October 8, 2021 there were 62 registered holders of record of our ordinary shares (not including beneficial holders of our ordinary shares held in street name).

#### Dividends

We have not paid any cash dividends on our ordinary shares, and we do not currently intend to pay any cash dividends on our ordinary shares in the foreseeable future. We currently intend to retain all available funds and future earnings to support operations and to finance the growth and development of our business. Any future determination to pay dividends will be made at the discretion of our board of directors subject to applicable laws and will depend on, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Our ability in the future to pay cash dividends on our ordinary shares may also be limited by the terms of future debt, preferred securities or credit facilities.

#### Issuer Purchases of Equity Securities

On January 7, 2021, we agreed to repurchase an aggregate of 1,100,000 of our ordinary shares, \$0.03 par value per share, from Silver Lake Partners III Cayman (AIV III), L.P., Silver Lake Technology Investors III Cayman, L.P., Silver Lake Sumeru Fund Cayman, L.P. and Silver Lake Technology Investors Sumeru Cayman, L.P. at a purchase price of \$40.30 per share for aggregate consideration of \$44.3 million, in a privately negotiated transaction. The transaction closed on January 15, 2021.

Ordinary shares withheld as payment of withholding taxes and exercise prices in connection with the vesting or exercise of equity awards are also treated as common share repurchases. Those withheld shares are not required to be disclosed under Item 703 of Regulation S-K and accordingly are excluded from the description above.

#### Amended Credit Agreement

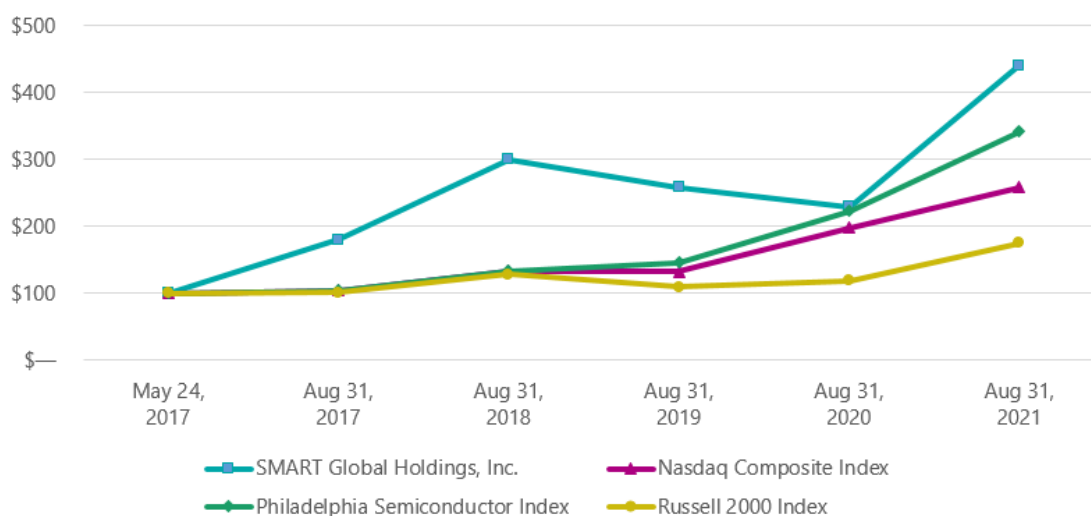
We are subject to certain restrictions with respect to the use of our working capital and our ability to pay dividends under our Amended Credit Agreement, as described in "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt."

#### Share Performance Graph

*This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act, except as shall be expressly set forth by specific reference in such filing.*



The following graph illustrates a comparison of cumulative total returns for our ordinary shares, the Nasdaq Composite Index, the Philadelphia Semiconductor Index and the Russell 2000 Index from May 24, 2017 (the day our ordinary shares began trading on the Nasdaq Global Select Market) through August 31, 2021. We operate on a 52 or 53 week fiscal year which ends on the last Friday in August. As a result, the last day of our fiscal year varies. For consistent presentation and comparison to the industry indices shown herein, we have calculated our share performance graph assuming as of August 31 for each year.



*Note: Management cautions that the share price performance information shown in the graph above may not be indicative of current share price levels or future share price performance.*

The share performance graph assumes \$100 was invested on May 24, 2017. Any dividends paid during the period presented were assumed to be reinvested. The performance was plotted using the following data:

As of	May 24, 2017	Aug 31, 2017	Aug 31, 2018	Aug 31, 2019	Aug 31, 2020	Aug 31, 2021
SMART Global Holdings, Inc.	\$ 100	\$ 181	\$ 300	\$ 258	\$ 229	\$ 441
Nasdaq Composite Index	100	105	133	132	198	258
Philadelphia Semiconductor Index	100	104	133	146	223	342
Russell 2000 Index	100	101	128	109	118	175

## Item 6. [Reserved]

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

*The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the consolidated financial statements and accompanying notes for the year ended August 27, 2021. This discussion contains forward looking statements that involve risks and uncertainties. Our actual results could differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed below and elsewhere in this report. See also “Cautionary Note Regarding Forward-Looking Statements.”*

*Our fiscal year is the 52 or 53-week period ending on the last Friday in August. Fiscal 2021, 2020 and 2019 each contained 52 weeks. All period references are to our fiscal periods unless otherwise indicated. All financial information for our subsidiaries in Brazil is included in our consolidated financial statements on a one-month lag because their fiscal years end on July 31 of each year. All tabular dollar amounts are in millions, except per share amounts.*

### Overview

For an overview of our business, including a discussion of our acquisition of our LED Solutions business from Cree and effects on us of COVID-19, see “PART I – Item 1. Business – Overview.”

As a result of our recent acquisitions and heightened focus on operational excellence over the past several years, we grew our net sales by 34% to \$1.5 billion in 2021 compared to \$1.1 billion in 2020. Over the same period, our total segment operating income grew by 90.9% to \$160.8 million, or 10.7% operating margin, in 2021, compared to \$84.2 million, or 7.5% operating margin, in 2020. See table below in “Segment Operating Income” for further details.

Our operating expenses have grown in recent periods as we drive innovation, expand our products and services portfolio and invest in greater operational capabilities to support our growth. Our total operating expenses grew in 2021, primarily as a result of the addition of the LED Solutions business. We expect to continue to see increased operating expenses in 2022 as we record a full year of operating expenses for the LED Solutions business, continue to increase our investment in new products and services for the IPS business and experience the phase-out of certain Brazil financial tax credits, which result in an increase in operating expense in Memory Solutions.

### Factors Affecting Our Operating Performance

**Macro-Economic Demand Factors.** Our business segments each have their own unique set of demand factors. Demand in our Memory Solutions group is driven by end-market demand from OEMs for customer-specific solutions in vertical markets such as industrial, government, networking, high-performance compute and enterprise storage, as well as from OEMs for memory modules used in desktop and notebook computers, smartphones, IoT and SSD products in Brazil. In addition, macro-economic factors specific to the Brazil economy affect this segment, given our sales and operations in that market. Our IPS business is driven by demand for high compute solutions across AI and machine learning initiatives, as well as traditional workload optimization and efficiency applications. Finally, demand for our LED products is derived from targeted end-market applications, such as general high-power and mid-power lighting and specialty lighting, such as video and horticulture applications. We believe our diversified business segments may provide a natural hedge against downturns in any particular industry although broader macro-economic trends, such as the COVID-19 pandemic, can adversely affect all three segments concurrently.

**Shifts in the Mix of Our Revenue.** Shifts in the mix of revenue from our operating segments, which can vary significantly from period to period, can impact our business and operating results, including gross and operating margins. For example, our Memory Solutions group, while not party to long-term fixed purchasing commitments, has nonetheless historically seen relatively stable demand and margins. By contrast, our IPS group has shown solid growth, but is subject to greater variability in its sales and margin profile from period to period, as recognition of revenue is tied to customer decisions as to the completion of delivery and system go-live events, and margin is driven by the extent to which higher margin software and managed services comprise IPS sales. In addition, while we have experienced favorable demand and overall margin uplift compared to the rest of our businesses from our LED Solutions group to date, this group is the newest segment of our business, and we may be subject to unforeseen changes in its business and operating results. Our resource commitments and planning for each segment are relatively fixed in the short term, and as such, variability in expected revenue mix will have direct implications for our operating income and margins.

**Our Ability to Identify, Complete and Successfully Integrate Acquisitions.** A substantial portion of our growth over the last several years has been driven by acquisitions, and we intend to continue to use corporate development as an engine for growth. Within our existing segments, we plan to pursue acquisitions to expand features and functionality, expand into adjacent businesses and grow our customer base and geographic footprint. From time to time, we may seek to expand our addressable market by entering new business segments where, as we did with our LED business, we identify a business opportunity at scale with a path to being accretive to our overall operations in the near term. If we are unable to identify and complete attractive acquisitions, we may not be successful in growing our revenue and/or expanding our margins. Any acquisitions we do complete may require us to raise debt or equity financing or may subject us to unforeseen liabilities or operational challenges that in turn impede our ability to realize the expected returns on our investment.

**Disruptions in Our Supply Chain May Adversely Affect Our Businesses.** We depend on third-party suppliers for key components of our products, such as commodity DRAM components from offshore foundries that we use in our specialty memory products and third-party wafers that we use in our memory and LED businesses. We have adopted this “Fab-Light” business model to reduce our capital expenditures and operating expenses, while affording greater flexibility in adapting to shifts in demand and other market trends. In recent periods, our Fab-Light business model has contributed significantly to margin expansion in our overall business. However, our reliance on third-party manufacturers exposes us to risk of supply chain disruption and lost business. For example, the current global semiconductor shortage has adversely affected our operating results. If such disruptions worsen or are prolonged, or if there is meaningful disruption in our supply arrangement with any of our third-party suppliers, our operating results and financial condition could be adversely affected.

## Results of Operations

Year ended	August 27, 2021	% of net sales <sup>(1)</sup>	August 28, 2020	% of net sales <sup>(1)</sup>	August 30, 2019	% of net sales <sup>(1)</sup>
Net sales:						
Memory Solutions	\$ 931,818	62.1%	\$ 857,237	76.4%	\$ 995,441	82.1%
Intelligent Platform Solutions	344,757	23.0%	265,140	23.6%	216,558	17.9%
LED Solutions	224,567	15.0%	—	—	—	—
Total net sales	1,501,142	100.0%	1,122,377	100.0%	1,211,999	100.0%
Cost of sales	1,192,762	79.5%	905,981	80.7%	974,472	80.4%
Gross profit	308,380	20.5%	216,396	19.3%	237,527	19.6%
Operating expenses:						
Research and development	49,274	3.3%	52,056	4.6%	47,920	4.0%
Selling, general and administrative	169,455	11.3%	119,523	10.6%	103,226	8.5%
Change in fair value of contingent consideration	32,400	2.2%	—	—	(2,700)	(0.2)%
Other operating (income) expense	2,054	0.1%	3,487	0.3%	—	—
Total operating expenses	253,183	16.9%	175,066	15.6%	148,446	12.2%
Operating income	55,197	3.7%	41,330	3.7%	89,081	7.3%
Non-operating (income) expense:						
Interest expense, net	17,600	1.2%	15,000	1.3%	20,716	1.7%
Other non-operating (income) expense	(375)	(0.0)%	16,970	1.5%	2,161	0.2%
Total non-operating expense	17,225	1.1%	31,970	2.8%	22,877	1.9%
Income before taxes	37,972	2.5%	9,360	0.8%	66,204	5.5%
Income tax provision	15,466	1.0%	10,503	0.9%	14,872	1.2%
Net income (loss)	22,506	1.5%	(1,143)	(0.1)%	51,332	4.2%
Net income attributable to noncontrolling interest	1,196	0.1%	—	—	—	—
Net income (loss) attributable to SGH	\$ 21,310	1.4%	\$ (1,143)	(0.1)%	\$ 51,332	4.2%

(1) Summations of percentages may not compute precisely due to rounding.

## Net Sales, Cost of Sales and Gross Profit

Net sales increased by \$378.8 million, or 33.7%, in 2021 compared to the prior year, due to \$224.6 million of revenue from our recent acquisition of the LED Business in March 2021 and to strong performance in our IPS and Memory Solutions businesses. IPS net sales increased by \$79.6 million, or 30.0%, primarily due to higher volumes of sales in our Penguin Computing business. Memory Solutions sales increased by \$74.6 million, or 8.7%, primarily due to a 24.7% higher volume of DRAM products and a 39.1% increase in average selling prices for mobile memory.

Net sales decreased by \$89.6 million, or 7.4%, in 2020 compared to the prior year, primarily due to \$138.2 million lower Memory Solutions revenue, partially offset by \$48.6 million higher IPS revenue. The decrease in Memory Solutions sales was mainly due to lower DRAM and mobile memory product sales, primarily resulting from 32.8% and 36.5% lower average selling prices, respectively, partially offset by higher OEM Flash memory sales resulting from 74.8% higher average selling prices and product mix. IPS sales increased by 22.4% over the prior year, primarily as the result of our two acquisitions in July 2019, which contributed to sales for the full year in 2020, partially offset by lower Penguin revenue due to lower federal spending as a result of COVID-19.

Cost of sales increased by \$286.8 million, or 31.7%, in 2021 compared to the prior year, primarily due to higher cost of materials and production costs, due to a higher level of sales for our Memory Solutions and IPS segments, and from our acquisition of the LED Business. Cost of sales decreased by \$68.5 million, or 7.0%, in 2020 compared to the prior year, primarily due to lower cost of materials and production resulting from the lower level of overall sales, which was partially offset by higher materials and production costs related to the growth in the IPS segment resulting from acquisitions in 2019, for which there was a full year reflected for the first time in 2020. Included in the cost of sales changes was a favorable foreign exchange impact of \$5.9 million and \$4.5 million due to locally sourced cost of sales in Brazil in 2021 and 2020, respectively.

Gross margin increased to 20.5% in 2021 compared to 19.6% in 2020 primarily due to inclusion of higher margin LED Solutions products in the second half of the year, as well as process and efficiency improvement in the Memory Solutions and IPS segments compared to the prior year. Gross margin remained relatively flat at 19.3% in 2020, compared to 19.6% in 2019.

## Segment Operating Income

Year ended	August 27, 2021		August 28, 2020		August 30, 2019	
Segment operating income: <sup>(1)</sup>						
Memory Solutions	\$ 91,737	9.8%	\$ 71,867	8.4%	\$ 109,314	11.0%
Intelligent Platform Solutions	32,931	9.6%	12,362	4.7%	3,579	1.7%
LED Solutions	36,126	16.1%	—	—	—	—
Total segment operating income	<u>160,794</u>	<u>10.7%</u>	<u>84,229</u>	<u>7.5%</u>	<u>112,893</u>	<u>9.3%</u>
Unallocated:						
Share-based compensation	(33,877)		(18,716)		(18,199)	
Change in fair value of contingent consideration	(32,400)		—		2,700	
Amortization of intangible assets	(20,255)		(13,654)		(5,614)	
Flow through of inventory step up	(7,090)		—		—	
Restructure and integration expense	(2,054)		(3,487)		—	
Other	(9,921)		(7,042)		(2,699)	
	<u>(105,597)</u>		<u>(42,899)</u>		<u>(23,812)</u>	
Consolidated operating income	<u>\$ 55,197</u>		<u>\$ 41,330</u>		<u>\$ 89,081</u>	

(1) Percentages represent segment operating income as a percentage of segment net sales.

In the fourth quarter of 2021, we reorganized SGH into three business units: Memory Solutions, Intelligent Platforms Solutions and LED Solutions. Two of our previous segments, specialty memory products and Brazil products, have been combined to become Memory Solutions. Intelligent Platform Solutions was formerly referred to as specialty compute and storage solutions. All prior year information in the table above has been revised to reflect the change to our three reportable segments.

Memory Solutions operating income increased by \$19.8 million, or 27.6%, in 2021 compared to the prior year primarily due to higher sales, as well as a decrease of \$10.8 million in operating expenses mainly driven by lower research and development expense due to Brazil financial credits. Memory Solutions operating income decreased by \$37.4 million, or 34.3%, in 2020 compared to the prior year primarily due to lower sales, partially offset by a decrease of \$11.3 million in operating expenses mainly driven by lower research and development expense due to Brazil financial credits and lower research & development spend, travel and personnel-related expenses, as well as favorable currency exchange rates.

IPS operating income increased by \$20.6 million, or 166.4%, in 2021 compared to the prior year primarily due to higher sales, partially offset by \$4.4 million higher operating expenses mainly driven by personnel-related expenses due to increased headcount to support the revenue growth. IPS operating income increased by \$8.8 million, or 245.4%, in 2020 compared to the prior year primarily due to higher sales, partially offset by \$23.5 million higher operating expenses due to the full year inclusion of the operations of companies acquired in 2019.

LED Solutions operating income of \$36.1 million in 2021 was due to our acquisition of the LED Business in March 2021.

## Operating and Non-operating (Income) Expense

### Research and Development

Research and development expense decreased by \$2.8 million, or 5.3%, in 2021 compared to the prior year, primarily due to an increase of \$23.6 million in the Brazil financial credits that are reflected as a reduction of research and development expenses. The credits result from amendments to the IT law implemented in April 2020. The increase in credits is partially offset by \$16.0 million additional costs from the acquisition of the LED Business, as well as higher personnel-related expenses and depreciation. In addition, research and development expense was favorably affected in 2021 by \$2.7 million from the impact of currency exchange rates. We expect research and development expense to increase in absolute dollars in 2022 as we include the full year of operations for our LED Solutions segment and the effect of the end of the Brazil financial credits, currently scheduled to occur in January 2022.

Research and development expense increased by \$4.1 million, or 8.6%, in 2020 compared to the prior year primarily due to \$12.4 million higher costs from the addition of our IPS acquisitions in 2019, partially offset by \$6.4 million of Brazil financial credits. In addition, research and development expense was unfavorably affected in 2020 by \$2.2 million from the impact of currency exchange rates.

### Selling, General and Administrative

Selling, general and administrative expense increased by \$49.9 million, or 41.8%, in 2021 compared to the prior year, primarily due to \$21.5 million of additional costs from the acquisition of the LED Business (including \$1.0 million in intangible amortization expense) as well as \$14.1 million of higher share-based compensation expense, personnel-related expenses, professional services and acquisition expenses associated with the acquisition. Included in the selling, general and administrative expense increase was a favorable foreign exchange impact of \$1.2 million. We expect selling, general and administrative expense to increase in absolute dollars in 2022 as we include the full year of operations for our LED Solutions segment.

Selling, general and administrative expense increased by \$16.3 million, or 15.8%, in 2020 compared to the prior year, primarily due to \$16.8 million of higher costs from the addition of our IPS acquisitions in 2019 (including intangible amortization expense) as well as integration expenses associated with the acquisitions. In addition, selling, general and administrative expense was favorably affected in 2020 by \$1.5 million from the impact of currency exchange rates.

### Change in Fair Value of Contingent Consideration

Our acquisition of the LED Business included contingent consideration, which we estimated the fair value as of the date of acquisition to be \$28.1 million. During the second half of 2021, we recorded charges of \$32.4 million to adjust the value as of the date of acquisition to the fair value as of the end of 2021. The change in fair value reflected new information about the probability and timing of meeting the conditions of the revenue and gross profit targets of the LED Business. See further information in "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Business Acquisitions – LED Business."

## Other Operating and Non-operating (Income) Expense

Other operating (income) expense in 2021 and 2020 primarily reflected restructuring activities in our IPS and Memory Solutions segments. Other non-operating (income) and expense primarily reflected gains and losses from changes in currency exchange rates, a loss in 2020 from the remeasurement of our Capped Calls and losses in 2020 from the extinguishment of debt. See "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Other Operating (Income) Expense" and "– Other Non-operating (Income) Expense."

## Income Tax Provision

Our provision for income taxes increased by \$5.0 million in 2021, or 47.2%, compared to the prior year primarily due to higher income in non-U.S. jurisdictions subject to tax. Provision for income taxes decreased by \$4.4 million in 2020, or 29.4%, compared to the prior year primarily due to lower income in non-U.S. jurisdictions subject to tax.

Effective February 1, 2011, SMART Brazil began to participate in PADIS. This program is specifically designed to promote the development of the local semiconductor industry. The Brazilian government has approved multiple applications for different products by SMART Brazil for certain beneficial tax treatment under the PADIS incentive. This beneficial tax treatment includes a reduction in the Brazil statutory income tax rate from 34% to 9% on taxable income for the Brazilian semiconductor operations of SMART Brazil. We have operations in Malaysia, where we have tax incentive arrangements for our pioneer status activities and our global supply chain business. The statutory tax rate for Malaysia is 24%. These Malaysia arrangements are scheduled to expire in August 2028 and are subject to certain conditions, for which we have complied in 2021, 2020 and 2019. In general, these future tax holidays will have tax rates greater than our prior approved tax holidays, and therefore we expect that our effective income tax rate in the future may be higher depending on a combination of our overall and jurisdictional profitability. For additional information, see "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Income Taxes."

## Liquidity and Capital Resources

At August 27, 2021, we had cash and cash equivalents of \$223.0 million, of which \$191.8 million was held outside of the United States. Our principal uses of cash and capital resources have been acquisitions, debt service requirements as described below, capital expenditures, research and development expenditures and working capital requirements. We expect that future capital expenditures will focus on expanding capacity of our operations, expanding our research and development activities, manufacturing equipment upgrades, acquisitions and IT infrastructure and software upgrades. Cash and cash equivalents consist of funds held in demand deposit accounts and money market funds. We do not enter into investments for trading or speculative purposes.

We expect that our existing cash and cash equivalents, borrowings available under our credit facilities and cash generated by operating activities will be sufficient to fund our operations for at least the next twelve months. We may from time to time seek additional equity or debt financing. Any future equity financing may be dilutive to our existing investors, and any future debt financing may include debt service requirements and financial and other restrictive covenants that may constrain our operations and growth strategies. In the event that we seek additional financing, we may not be able to raise such financing on terms acceptable to us or at all. If we are unable to raise additional capital or generate cash flows necessary to expand our operations and invest in continued product innovation, we may not be able to compete successfully, which would harm our business, operations and financial condition.

For information regarding our debt obligations, see "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Debt." For our operating lease obligations, see "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Leases." For our purchase obligations, see "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Commitments and Contingencies."



## Cash Flows

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Net cash provided by operating activities	\$ 153,350	\$ 87,205	\$ 169,657
Net cash used for investing activities	(84,178)	(32,041)	(109,440)
Net cash provided by financing activities	2,849	12,594	100
Effect of changes in currency exchange rates	154	(15,086)	588
Net increase in cash and cash equivalents	\$ 72,175	\$ 52,672	\$ 60,905

**Operating Activities:** Cash flows from operating activities reflects net income adjusted for certain non-cash items, including depreciation and amortization expense, share-based compensation, adjustments for changes in the fair value of contingent consideration, gains and losses from investing or financing activities and from the effects of changes in operating assets and liabilities.

Net cash provided by operating activities in 2021 was \$153.4 million, comprised primarily of net income of \$22.5 million, adjusted for non-cash items of \$132.6 million. Operating cash flows were also affected by a \$1.7 million increase in our net operating assets and liabilities, consisting primarily of increases of \$137.9 million in inventories, \$51.4 million in accounts receivable and \$17.5 million in other current assets, offset by the effects of an increase of \$215.0 million in accounts payable and accrued expenses. The increase in both inventories and accounts payable and accrued expenses was primarily due to higher inventory along all business areas, and the increase in accounts receivable was primarily due to higher gross sales primarily in our Memory Solutions and IPS segments.

Net cash provided by operating activities in 2020 was \$87.2 million, resulting primarily from a net loss of \$1.1 million, adjusted for non-cash items of \$83.1 million. Operating cash flows also benefitted from a \$5.3 million change in our net operating assets and liabilities, consisting primarily of an increase of \$70.6 million in accounts payable and accrued expenses, partially offset by an increase of \$51.8 million in inventories and an increase of \$12.3 million in accounts receivable. The increases in accounts payable and accrued expenses and in inventories were primarily due to the transition of manufacturing from contract manufacturers to the company as well as higher purchases for certain programs. The increase in accounts receivable was primarily due to timing of sales.

Net cash provided by operating activities in 2019 was \$169.7 million, comprised of net income of \$51.3 million, adjusted for non-cash items of \$47.5 million. Operating cash flows also benefitted from a \$70.8 million change in our operating assets and liabilities, consisting primarily of decreases of \$102.1 million in inventories and \$35.2 million in accounts receivable, partially offset by an increase of \$64.2 million in accounts payable and accrued expenses. The decreases in inventories and accounts payable were primarily due to the reduction of inventory among all business areas as product lead times were reduced. The decrease in accounts receivable was primarily due to lower gross sales.

**Investing Activities:** Net cash used in investing activities in 2021 was \$84.2 million, consisting primarily of \$47.6 million used for purchases of property and equipment and \$35.7 million net cash used for the acquisition of the LED Business. Net cash used in investing activities in 2020 consisted primarily of purchases of property and equipment. Net cash used in investing activities in 2019 consisted primarily of \$76.1 million net cash used for acquisitions and \$33.4 million used for purchases of property and equipment.

**Financing Activities:** Net cash provided by financing activities in 2021 was \$2.8 million, consisting primarily of \$25.0 million in net proceeds from borrowing under our line of credit, \$14.9 million in proceeds from the issuance of ordinary shares and \$11.4 million proceeds from issuance of debt, partially offset by \$48.5 million used to repurchase our ordinary shares. Net cash provided by financing activities in 2020 consisted primarily of \$243.1 million proceeds from the issuance of our convertible notes and \$5.5 million in proceeds from the issuance of ordinary shares, partially offset by \$204.9 million in payments for the extinguishment of debt, \$21.8 million for the purchase of our Capped Calls and payment of \$8.5 million for debt. Net cash provided by financing activities in 2019 was negligible.

## Critical Accounting Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures. Estimates and judgments are based on historical experience, forecasted events and various other assumptions that we believe to be reasonable under the circumstances. We evaluate our estimates and judgments on an ongoing basis. Our management believes the accounting policies below are critical in the portrayal of our financial condition and results of operations and require management's most difficult, subjective or complex judgments.

**Business Acquisitions:** Accounting for acquisitions requires us to estimate the fair value of consideration paid and the individual assets and liabilities acquired, which involves a number of judgments, assumptions and estimates that could materially affect the amount and timing of costs recognized in subsequent periods. We typically obtain independent third-party valuation studies to assist in determining fair values, including assistance in determining future cash flows, discount rates and comparable market values. Items involving significant assumptions, estimates and judgments include the following:

- Fair value of consideration paid or transferred (including contingent consideration);
- Inventory, including estimated future selling prices, timing of product sales and completion costs for work in process;
- Property, plant and equipment, including determination of values in a continued-use model;
- Debt and other liabilities, including discount rate and timing of payments;
- Intangible assets, including valuation methodology, estimates of future revenues and costs, profit allocation rates attributable to the acquired technology and discount rates; and
- Deferred taxes, including projections of future taxable income and tax rates.

The valuation of contingent consideration in connection with an acquisition may be inherently challenging due to the dependence on the occurrence of future events and complex payment provisions. Estimating the fair value of contingent consideration at an acquisition date and in subsequent periods involves significant judgments, including projecting future average selling prices, future sales volumes, manufacturing costs and gross margins. To project average selling prices and sales volumes, we review recent sales volumes, existing customer orders, current prices and other factors such as industry analyses of supply and demand, seasonal factors, general economic trends and other information. To project manufacturing costs, we must estimate future production levels and costs of production, including labor, materials and other overhead costs. Actual selling prices and sales volumes, as well as levels and costs of production, can often vary significantly from projected amounts.

**Income Taxes:** We are required to estimate our provision for income taxes and amounts ultimately payable or recoverable in numerous tax jurisdictions around the world. These estimates involve significant judgment and interpretations of regulations and are inherently complex. Resolution of income tax treatments in individual jurisdictions may not be known for many years after completion of the applicable year. We are also required to evaluate the realizability of our deferred tax assets on an ongoing basis in accordance with U.S. GAAP, which requires the assessment of our performance and other relevant factors. Realization of deferred tax assets is dependent on our ability to generate future taxable income. Our income tax provision or benefit is dependent, in part, on our ability to forecast future taxable income in these and other jurisdictions. Such forecasts are inherently difficult and involve significant judgments including, among others, projecting future average selling prices and sales volumes, manufacturing and overhead costs and other factors that significantly impact our analyses of the amount of net deferred tax assets that are more likely than not to be realized.

**Inventories:** Inventories are stated at the lower of cost or net realizable value. In our LED segment, cost is determined on a first-in, first-out method or average cost method. For all other segments, inventory value is determined on a specific identification basis for material and an allocation of labor and manufacturing overhead. At each balance sheet date, we evaluate ending inventories for excess quantities and obsolescence, including analyses of sales levels by product family, historical demand and forecasted demand in relation to inventory on hand, competitiveness of product offerings, market conditions and product life cycles. From time to time, our customers may request that we purchase and maintain significant inventory of raw materials for specific programs. Such inventory purchases are evaluated for excess quantities and potential obsolescence and could result in a provision at the time of purchase or subsequent to purchase. Inventory levels may fluctuate based on inventory held under service arrangements. Our provision for excess and obsolete inventory are also impacted by our arrangements with our customers and/or suppliers, including our ability or inability to resell such inventory to them.

**Goodwill and Intangible Assets:** We test goodwill for impairment in our fourth quarter each year, or more frequently if indicators of an impairment exist, to determine whether it is more likely than not that the fair value of the reporting unit with goodwill is less than its carrying value. For reporting units for which we conclude that it is more likely than not that the fair value is more than its carrying value, goodwill is considered not impaired and we are not required to perform the goodwill impairment test. Qualitative factors considered in this assessment include industry and market considerations, overall financial performance and other relevant events and factors affecting the fair value of the reporting unit. For reporting units for which this assessment concludes that it is more likely than not that the fair value is below the carrying value, goodwill is tested for impairment by determining the fair value of the reporting unit and comparing it to the carrying value of the net assets assigned to the reporting unit. If the fair value of the reporting unit exceeds its carrying value, goodwill is considered not impaired. If the carrying value of the reporting unit exceeds its fair value, we would record an impairment loss up to the difference between the carrying value and implied fair value.

Determining when to test for impairment, the reporting units, the assets and liabilities of the reporting unit and the fair value of the reporting unit requires significant judgment and involves the use of significant estimates and assumptions. These estimates and assumptions include revenue growth rates, forecasted manufacturing costs, budgets and other expenses developed as part of our long-range planning process. We test the reasonableness of the output of our long-range planning process by calculating an implied value per share and comparing that to current share prices, analysts' consensus pricing and management's expectations. These estimates and assumptions are used to calculate projected future cash flows for the reporting unit, which are discounted using a risk-adjusted rate to estimate a fair value. We base fair value estimates on assumptions we believe to be reasonable but that are unpredictable and inherently uncertain. Actual future results may differ from those estimates.

We test other identified intangible assets with definite useful lives when events and circumstances indicate the carrying value may not be recoverable by comparing the carrying amount to the sum of undiscounted cash flows expected to be generated by the asset. Estimating fair values involves significant assumptions, including future sales prices, sales volumes, costs and discount rates.

**Property and Equipment:** We review the carrying value of property and equipment for impairment when events and circumstances indicate that the carrying value of an asset or group of assets may not be recoverable from the estimated future cash flows expected to result from its use and/or disposition. In cases where undiscounted expected future cash flows are less than the carrying value, an impairment loss is recognized equal to the amount by which the carrying value exceeds the estimated fair value of the assets. The estimate of future cash flows involves numerous assumptions which require significant judgment by us, including, but not limited to, future use of the asset(s) for our operations versus sale or disposal of the asset(s), future selling prices for our products and future production and sales volumes. In addition, significant judgment is required in determining the groups of assets for which impairment tests are separately performed.

**Revenue Recognition:** We recognize revenue based on the transfer of control of goods and services and apply the following five-step approach: (1) identification of a contract with a customer, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract and (5) recognition of revenue as performance obligations are satisfied.

Applying the five step approach in determining whether to recognize revenue at a point in time or over time requires significant judgement. A portion of our revenue is from sales of customized product which, in some cases, are non-cancellable and/or non-refundable. Significant judgement is required to determine when control passes to the customer and whether and when our performance obligations have been satisfied. This determination can significantly affect the timing of recognizing revenue.

**Product revenue:** Product revenue is generally recognized at a point in time when control of the promised goods is transferred to customers. Contracts with customers are generally short-term in duration at fixed, negotiated prices with payment generally due shortly after delivery. We estimate a liability for returns using the expected value method based on historical rates of return. In addition, we generally offer price protection to our distributors, which is a form of variable consideration that decreases the transaction price. We use the expected value method, based on historical price adjustments and current pricing trends, to estimate the amount of revenue recognized from sales to distributors. Differences between the estimated and actual amounts are recognized as adjustments to revenue.

Non-cancellable, nonrefundable customized product sales are recognized over time on a cost incurred basis. In connection with these arrangements, customers obtain control and benefit from the services as they are performed. The terms for these arrangements provide us with a legally enforceable right to receive payment, including a reasonable profit margin upon customer cancellation, for performance completed to date. Accordingly, we recognize revenue over time as we complete the manufacture of these products.

A portion of our revenue is derived from the sale of customized products. In certain cases, we recognize revenue when control of the underlying assets pass to the customer when the customer is able to direct the use of, and obtain substantially all of the remaining benefit from, the assets; the customer has the significant risks and rewards associated with ownership of the assets; and we have a present right to payment. Under the terms of these arrangements, we cannot repurpose products without the customer's consent and accordingly, we recognize revenue at the point in time when products are completed and made available to the customer.

Service revenue: Our service revenue is derived from supply chain services as well as professional services. Supply chain services includes procurement, logistics, inventory management, temporary warehousing, kitting and packaging. Professional services include solution design, system installation, software automation and managed support services related to HPC and storage systems. A portion of our product sales include extended warranty and on-site services, subscriptions to our HPC environment, professional services, software and related support.

Agent Services: We provide certain supply chain services on an agent basis, whereby we procure materials on behalf of our customers and then resell such materials to our customers. Gross amounts invoiced to customers in connection with these agent services include amounts related to the services performed by us in addition to the cost of the materials procured. However, only the amount related to the agent component is recognized as revenue in our results of operations. We generally recognize revenue for these procurement, logistics and inventory management services upon the completion of such services, which typically occurs at the time of shipment of product to the customer. Amounts we invoice to customers for cost of materials related to services performed, which remain unpaid as of the end of a reporting period, are included in accounts receivable. Additionally, cost of materials procured for customers under these agent services, but which remain on hand as of the end of a reporting period, are included in inventories. Amounts in accounts receivable and inventories impact the determination of net cash provided by (or used in) operations.

Determining whether we are the principal or agent in these transactions requires significant judgement. This determination affects the amount of revenue we recognize; a principal recognizes revenues at the gross amount received for the goods and services, while an agent recognizes revenue at the net amount. The impact of this determination significantly impact the amount of revenue and cost of sales we recognize.

Transaction Price: The transaction price is determined based on the consideration to which we will be entitled in exchange for transferring goods or services to the customer. We allocate the transaction price to each distinct product and service based on its relative standalone selling price. The standalone selling price for products primarily involves the cost to produce the deliverable plus the anticipated margin and for services is estimated based on our approved list price.

A portion of our service revenue is from professional consulting services, including installation and other services and hardware and software related support. Each contract may contain multiple performance obligations, which requires the transaction price to be allocated to each performance obligation. We allocate the consideration to each performance obligation based on the relative selling price, determined as the best estimate of the price at which we would transact if it sold the deliverable regularly on a stand-alone basis.

Contract Costs: As a practical expedient, we recognize the incremental costs of obtaining a contract, specifically commission expenses that have an amortization period of less than twelve months, as an expense when incurred. Additionally, we account for an expense when incurred. Additionally, we account for shipping and handling costs, if any, that occur after control transfers to the customer as a fulfillment activity. We record shipping and handling costs related to revenue transactions within cost of sales as a period cost.

**Share-Based Compensation:** Share-based compensation is estimated at the grant date based on the fair value of the award and is recognized as expense using the straight-line amortization method over the requisite service period. For performance-based share awards, the expense recognized is dependent on our assessment of the likelihood of the performance measure being achieved. We utilize forecasts of future performance to assess these probabilities and this assessment requires significant judgment.

Determining the appropriate fair-value model and calculating the fair value of share-based awards at the grant date requires significant judgment, including estimating share price volatility and expected option life. We develop these estimates based on historical data and market information which can change significantly over time. A small change in the estimates used can result in a relatively large change in the estimated valuation. We use the Black-Scholes option valuation model to value employee options and awards granted under our employee share purchase plan. We estimate share price volatility based on an average of historical volatility and the implied volatility derived from traded options on our shares.

## Item 7A. Quantitative and Qualitative Disclosure About Market Risk

### Foreign Exchange Risk

We are subject to inherent risks attributed to operating in a global economy. Our international sales and our operations in foreign countries subject us to risks associated with fluctuating currency values and exchange rates. Because a significant portion of our sales are denominated in United States dollars, increases in the value of the United States dollar could increase the price of our products so that they become relatively more expensive to customers in a particular country, possibly leading to a reduction in sales and profitability in that country. In addition, we have certain costs that are denominated in foreign currencies, and decreases in the value of the U.S. dollar could result in increases in such costs, which could have a material adverse effect on our results of operations.

As a result of our international operations, we generate a portion of our net sales and incur a portion of our expenses in currencies other than the U.S. dollar, particularly the Brazilian real. We present our consolidated financial statements in U.S. dollars, and we translate the assets, liabilities, net sales and expenses of a substantial portion of our foreign operations into U.S. dollars at applicable exchange rates. Consequently, increases or decreases in the value of the U.S. dollar may affect the value of these items with respect to our non-U.S. dollar businesses in our consolidated financial statements, even if their value has not changed in their local currency. Our customer pricing and material cost of sales are generally based on U.S. dollars. Accordingly, the impact of currency fluctuations to our consolidated statements of operations is primarily to our other costs of sales (i.e., non-material components) and our operating expenses as those items are typically denominated in local currency. Our consolidated statements of operations are also impacted by foreign currency gains and losses arising from transactions denominated in a currency other than the functional currency of the respective subsidiary. These translations could significantly affect the comparability of our results between financial periods or result in significant changes to the carrying value of our assets, liabilities and equity. As a result, changes in foreign currency exchange rates impact our reported results.

Approximately 30%, 35% and 44% of our net sales in 2021, 2020 and 2019, respectively, originated in Brazilian real. We utilize foreign exchange forward contracts to mitigate foreign currency exchange rate risk associated with foreign currency-denominated assets and liabilities in Brazil. We do not use foreign currency contracts for speculative or trading purposes.

Based on our monetary assets and liabilities denominated in foreign currencies as of August 27, 2021 and August 28, 2020, we estimate that a 10% adverse change in exchange rates versus the U.S. dollar would result in losses recorded in non-operating expense of \$7.7 million and \$9.7 million, respectively, to revalue these assets and liabilities.

### Interest Rate Risk

We are subject to interest rate risk in connection with our variable-rate debt under the ABL Credit Agreement and the Amended Credit Agreement. As of August 27, 2021, we had a revolving balance outstanding of \$25.0 million, however, the ABL Credit Agreement and Amended Credit Agreement provide for borrowings of up to an aggregate of \$150 million. Assuming that we would satisfy the financial covenants required to borrow and that the amounts available under the ABL Credit Agreement and Amended Credit Agreement were fully drawn, a 1.0% increase in interest rates would result in an increase in annual interest expense and a decrease in our cash flows of \$1.5 million per year.

## Item 8. Financial Statements and Supplementary Data

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# SMART Global Holdings, Inc.

## Consolidated Balance Sheets

(In thousands, except par value amount)

As of	August 27, 2021	August 28, 2020
<b>Assets</b>		
Cash and cash equivalents	\$ 222,986	\$ 150,811
Accounts receivable, net <sup>(1)</sup>	313,393	215,918
Inventories	363,601	162,991
Other current assets	50,838	26,990
Total current assets	950,818	556,710
Property and equipment, net	156,266	54,705
Operating lease right-of-use assets	40,869	25,013
Intangible assets, net	101,073	55,671
Goodwill	74,255	73,955
Other noncurrent assets	21,517	20,554
Total assets	<u>\$ 1,344,798</u>	<u>\$ 786,608</u>
<b>Liabilities and Equity</b>		
Accounts payable and accrued expenses	\$ 484,107	\$ 253,363
Current debt	25,354	—
Other current liabilities	74,337	29,126
Total current liabilities	583,798	282,489
Long-term debt	340,484	195,573
Acquisition-related contingent consideration	60,500	—
Noncurrent operating lease liabilities	32,419	20,829
Other noncurrent liabilities	8,673	5,613
Total liabilities	<u>1,025,874</u>	<u>504,504</u>
Commitments and contingencies		
SMART Global Holdings shareholders' equity:		
Ordinary shares, \$0.03 par value. Authorized 200,000 shares; 25,770 issued and 24,368 outstanding as of August 27, 2021; 24,568 issued and 24,419 outstanding as of August 28, 2020	773	737
Additional paid-in-capital	396,851	348,163
Retained earnings	184,787	163,477
Treasury shares, 1,402 and 149 shares held as of August 27, 2021 and August 28, 2020, respectively	(50,545)	(2,032)
Accumulated other comprehensive income (loss)	(221,615)	(228,241)
Total SGH shareholders' equity	310,251	282,104
Noncontrolling interest in subsidiary	8,673	—
Total equity	<u>318,924</u>	<u>282,104</u>
Total liabilities and equity	<u>\$ 1,344,798</u>	<u>\$ 786,608</u>

(1) Receivables from related parties were \$14,057 and \$6,546 as of August 27, 2021 and August 28, 2020, respectively.

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

# SMART Global Holdings, Inc.

## Consolidated Statements of Operations

(In thousands, except per share amounts)

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Net sales <sup>(1)</sup>	\$ 1,501,142	\$ 1,122,377	\$ 1,211,999
Cost of sales	1,192,762	905,981	974,472
Gross profit	308,380	216,396	237,527
Operating expenses:			
Research and development	49,274	52,056	47,920
Selling, general and administrative	169,455	119,523	103,226
Change in fair value of contingent consideration	32,400	—	(2,700)
Other operating (income) expense	2,054	3,487	—
Total operating expenses	253,183	175,066	148,446
Operating income	55,197	41,330	89,081
Non-operating (income) expense:			
Interest expense, net	17,600	15,000	20,716
Other non-operating (income) expense	(375)	16,970	2,161
Total other non-operating expense	17,225	31,970	22,877
Income before taxes	37,972	9,360	66,204
Income tax provision	15,466	10,503	14,872
Net income (loss)	22,506	(1,143)	51,332
Net income attributable to noncontrolling interest	1,196	—	—
Net income (loss) attributable to SGH	\$ 21,310	\$ (1,143)	\$ 51,332
Earnings (loss) per share:			
Basic	\$ 0.88	\$ (0.05)	\$ 2.24
Diluted	\$ 0.83	\$ (0.05)	\$ 2.19
Shares used in per share calculations:			
Basic	24,279	23,994	22,959
Diluted	25,792	23,994	23,468

(1) Sales to related parties were \$76,488, \$75,837 and \$117,403 in 2021, 2020 and 2019, respectively.

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

# SMART Global Holdings, Inc.

## Consolidated Statements of Comprehensive Income (Loss)

(In thousands)

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Net income (loss)	\$ 22,506	\$ (1,143)	\$ 51,332
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	6,626	(50,375)	(1,871)
Comprehensive income (loss)	29,132	(51,518)	49,461
Comprehensive income attributable to noncontrolling interest	1,196	—	—
Comprehensive income (loss) attributable to SGH	\$ 27,936	\$ (51,518)	\$ 49,461

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

# SMART Global Holdings, Inc.

## Consolidated Statements of Shareholders' Equity

(In thousands)

	Shares Issued	Amount	Additional Paid-in-capital	Retained Earnings	Treasury Shares	Accumulated Other Comprehensive Income (Loss)	Total SGH Shareholders' Equity	Non-controlling Interest in Subsidiary	Total Equity
<b>As of August 31, 2018</b>	22,583	\$ 678	\$ 250,954	\$ 112,254	\$ (763)	\$ (175,995)	\$ 187,128	\$ —	\$ 187,128
Net income	—	—	—	51,332	—	—	51,332	—	51,332
Other comprehensive loss	—	—	—	—	—	(1,871)	(1,871)	—	(1,871)
Shares issued under equity plans	772	23	7,350	—	—	—	7,373	—	7,373
Repurchase of ordinary shares	—	—	—	—	(520)	—	(520)	—	(520)
Shares issued or issuable in connection with acquisition of Inforce	383	11	10,774	—	—	—	10,785	—	10,785
Share-based compensation expense	—	—	18,199	—	—	—	18,199	—	18,199
Cumulative effect from adoption of ASC 606	—	—	—	1,034	—	—	1,034	—	1,034
<b>As of August 30, 2019</b>	23,738	\$ 712	\$ 287,277	\$ 164,620	\$ (1,283)	\$ (177,866)	\$ 273,460	\$ —	\$ 273,460
Net loss	—	—	—	(1,143)	—	—	(1,143)	—	(1,143)
Other comprehensive loss	—	—	—	—	—	(50,375)	(50,375)	—	(50,375)
Shares issued under equity plans	762	23	5,456	—	—	—	5,479	—	5,479
Repurchase of ordinary shares	—	—	—	—	(749)	—	(749)	—	(749)
Shares issued in connection with acquisition of Inforce	68	2	(2)	—	—	—	—	—	—
Share-based compensation expense	—	—	18,716	—	—	—	18,716	—	18,716
Reclassification of Capped Calls to equity	—	—	(14,106)	—	—	—	(14,106)	—	(14,106)
Issuance of convertible notes	—	—	50,822	—	—	—	50,822	—	50,822
<b>As of August 28, 2020</b>	24,568	\$ 737	\$ 348,163	\$ 163,477	\$ (2,032)	\$ (228,241)	\$ 282,104	\$ —	\$ 282,104
Net income	—	—	—	21,310	—	—	21,310	1,196	22,506
Other comprehensive income	—	—	—	—	—	6,626	6,626	—	6,626
Shares issued under equity plans	1,202	36	14,887	—	—	—	14,923	—	14,923
Repurchase of ordinary shares	—	—	—	—	(48,513)	—	(48,513)	—	(48,513)
Share-based compensation expense	—	—	33,801	—	—	—	33,801	—	33,801
Acquisition of LED Business	—	—	—	—	—	—	—	7,477	7,477
<b>As of August 27, 2021</b>	25,770	\$ 773	\$ 396,851	\$ 184,787	\$ (50,545)	\$ (221,615)	\$ 310,251	\$ 8,673	\$ 318,924

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

# SMART Global Holdings, Inc.

## Consolidated Statements of Cash Flows

(In thousands)

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ 22,506	\$ (1,143)	\$ 51,332
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation expense and amortization of intangible assets	49,111	36,430	29,206
Amortization of debt discounts and issuance costs	8,798	5,866	2,803
Share-based compensation expense	33,877	18,716	18,199
Loss (gain) from change in fair value of contingent consideration	32,400	—	(2,700)
Amortization of operating lease right-of-use assets	7,537	5,060	—
Loss on remeasurement of Capped Calls	—	7,719	—
Loss on extinguishment of debt	—	6,822	—
Other	829	2,471	(13)
Changes in operating assets and liabilities:			
Accounts receivable	(51,440)	(12,348)	35,240
Inventories	(137,889)	(51,840)	102,083
Other current assets	(17,480)	5,760	(1,606)
Accounts payable and accrued expenses	214,959	70,570	(64,168)
Operating lease liabilities	(6,851)	(4,763)	—
Deferred income taxes, net	(3,007)	(2,115)	(719)
<b>Net cash provided by operating activities</b>	<b>153,350</b>	<b>87,205</b>	<b>169,657</b>
<b>Cash flows from investing activities:</b>			
Capital expenditures and deposits on equipment	(47,580)	(32,445)	(33,433)
Acquisitions of businesses, net of cash acquired	(35,677)	—	(76,088)
Other	(921)	404	81
<b>Net cash used for investing activities</b>	<b>(84,178)</b>	<b>(32,041)</b>	<b>(109,440)</b>
<b>Cash flows from financing activities:</b>			
Proceeds from borrowing under line of credit	172,500	103,000	254,500
Proceeds from issuance of ordinary shares	14,923	5,479	7,373
Proceeds from issuance of debt	11,439	243,125	—
Repayments of borrowings under line of credit	(147,500)	(103,000)	(254,500)
Payments to acquire ordinary shares	(48,513)	(749)	(520)
Repayments of debt	—	(213,436)	(6,753)
Purchase of capped calls	—	(21,825)	—
<b>Net cash provided by financing activities</b>	<b>2,849</b>	<b>12,594</b>	<b>100</b>
Effect of changes in currency exchange rates on cash and cash equivalents	154	(15,086)	588
<b>Net increase in cash and cash equivalents</b>	<b>72,175</b>	<b>52,672</b>	<b>60,905</b>
Cash and cash equivalents at beginning of period	150,811	98,139	37,234
<b>Cash and cash equivalents at end of period</b>	<b>\$ 222,986</b>	<b>\$ 150,811</b>	<b>\$ 98,139</b>
<b>Supplement disclosures:</b>			
Interest paid, net of amounts capitalized	\$ 8,029	\$ 12,983	\$ 20,648
Income taxes paid, net	6,702	9,151	15,306

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

# SMART Global Holdings, Inc.

## Notes to Consolidated Financial Statements

(Tabular amounts in thousands, except per share amounts)

### Significant Accounting Policies

#### Basis of Presentation

Since our inception over 30 years ago, SMART Global Holdings, Inc. ("SGH" or "Company") has grown into a diversified group of businesses focused on the design and manufacture of specialty solutions for the computing, memory and LED markets. Our success is based on a customer-focused approach characterized by a commitment to quality, advanced technical expertise, quick time-to-market, build-to-order flexibility and excellence in customer service.

The accompanying consolidated financial statements include SGH and its consolidated subsidiaries and have been prepared in accordance with accounting principles generally accepted in the United States of America. Intercompany balances and transactions have been eliminated in consolidation.

**Reclassifications:** Certain reclassifications have been made to prior period amounts to conform to current period presentation, including, among others, presenting: (i) treasury shares separate from additional paid-in-capital in the consolidated balance sheets and consolidated statements of shareholders' equity; (ii) components of accounts payable and accrued expenses in the consolidated balance sheet and footnotes; (iii) components of property and equipment in the footnotes; and (iv) the operating cash flow impacts of reclassifications in consolidated statements of cash flows.

**Fiscal Year:** Our fiscal year is the 52 or 53-week period ending on the last Friday in August. Fiscal 2021, 2020 and 2019 each contained 52 weeks. All period references are to our fiscal periods unless otherwise indicated. All financial information for our subsidiaries in Brazil is included in our consolidated financial statements on a one-month lag because their fiscal years end on July 31 of each year.

**Out-of-Period Adjustment:** During the second quarter of 2021, we recorded an out-of-period adjustment to correct errors originating in previous periods related to understated import tax costs, which resulted in a \$4.3 million increase in cost of sales, \$0.8 million increase in interest expense and \$1.7 million benefit for income taxes. The adjustment was not considered material to the interim or annual consolidated financial statements for the year ended August 27, 2021 nor to any previously issued interim or annual consolidated financial statements.

#### Cash and Cash Equivalents

Cash equivalents include highly liquid short-term investments, readily convertible to known amounts of cash, with original maturities of three months or less.

#### Derivative Instruments

We use derivative instruments to manage our exposure to changes in currency exchange rates from certain monetary assets and liabilities denominated in currencies other than the U.S. dollar. Derivative instruments are measured at their fair values and recognized as either assets or liabilities. The accounting for changes in the fair value of derivative instruments is based on the intended use of the derivative and the resulting designation. For derivative instruments that are not designated for hedge accounting, gains or losses from changes in fair values are recognized in other non-operating (income) expense. We do not use foreign currency contracts for speculative or trading purposes.



## Fair Value Measurements

We measure and report certain financial assets and liabilities at fair value on a recurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date. U.S. GAAP has established a hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are those that can be obtained from independent sources and can be validated by a third party, whereas unobservable inputs reflect assumptions regarding what a third party might use in pricing an asset or liability. The fair value hierarchy is categorized into three levels, based on the reliability of inputs, as follows:

- Level 1 – Valuations based on quoted prices in active markets for identical assets or liabilities;
- Level 2 – Valuations based on inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3 – Valuations based on unobservable inputs for the asset or liability.

## Functional Currency

Our primary functional currency is the U.S. dollar. Gains and losses from the remeasurement of non-functional currency balances are recorded in non-operating (income) expense. The functional currency of our subsidiaries in Brazil is the Brazilian real. Assets and liabilities of our Brazil subsidiaries are translated into U.S. dollars each period at the current exchange rate, while revenues and expenses are translated at the average exchange rate prevailing during the period. Cumulative translation gains and losses are included in accumulated other comprehensive income (loss).

## Goodwill

We test goodwill for impairment in the fourth quarter of each year, or more frequently if indicators of an impairment exist, to determine whether it is more likely than not that the fair value of the reporting unit with goodwill is less than its carrying value. Qualitative factors considered in this assessment include industry and market considerations, overall financial performance and other relevant events and factors affecting the fair value of the reporting unit. No impairment of goodwill was recognized through August 27, 2021.

## Government Incentives

We receive incentives from governmental entities related to certain expenses and other activities. These government incentives may require that we meet or maintain specified spending levels and other operational metrics and are recorded in the financial statements in accordance with their purpose. Incentives related to specific operating activities are recorded against the related expense in the period the expense is incurred. Government incentives received prior to being earned are included in other current liabilities, whereas government incentives earned prior to being received are included in other current assets. Cash received from government incentives related to operating expenses is included as an operating activity in the consolidated statement of cash flows.

## Income Taxes

We recognize current and deferred income taxes based on reported income before income taxes. Deferred income taxes reflect the effect of temporary differences and carryforwards recognized for financial reporting and income tax purposes. Deferred tax assets and liabilities are recognized based on the differences between the financial statement carrying amounts of assets and liabilities and their respective tax bases, utilizing tax rates that are expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. We recognize valuation allowances to reduce deferred tax assets to the amount that we estimate, based on available evidence and management judgment, will more likely than not be realized. We record a valuation allowance in the period the determination is made that all or part of the net deferred tax assets will not be realized. We record interest and penalties related to unrecognized tax benefits in tax expense.

## Intangible Assets

Intangible assets are stated at cost and amortized on a straight-line basis over their estimated useful lives of generally four to eight years for technology, four to eight years for customer relationships, five to seven years for trademarks/tradenames and less than one year for order backlog. Intangible assets are retired in the period they become fully amortized.

We review the carrying value of identified intangible assets for impairment when events and circumstances indicate that their carrying value may not be recoverable from the estimated future cash flows expected to result from their use and/or disposition. In cases where undiscounted expected future cash flows are less than the carrying value, an impairment loss is recognized equal to the amount by which the carrying value exceeds the estimated fair value of the identifiable intangible assets.

## Inventories

Inventories are stated at the lower of cost or net realizable value. In our LED segment, cost is determined on a first-in, first-out method or average cost method. For all other segments, inventory value is determined on a specific identification basis for material and an allocation of labor and manufacturing overhead. At each balance sheet date, we evaluate ending inventories for excess quantities and obsolescence, including analyses of sales levels by product family, historical demand and forecasted demand in relation to inventory on hand, competitiveness of product offerings, market conditions and product life cycles.

## Leases

We have operating leases through which we acquire or utilize facilities, offices and equipment in our manufacturing operations, research and development activities and selling, general and administrative functions. In determining the lease term, we assess whether it is reasonably certain we will exercise options to renew or terminate a lease, and when or whether we would exercise an option to purchase the right-of-use asset. Measuring the present value of the initial lease liability requires exercising judgment to determine the discount rate, which we base on interest rates for similar borrowings issued by entities with credit ratings similar to ours.

We recognize right-of use assets and corresponding lease liabilities for leases with an initial term of more than 12 months and do not separate lease and non-lease components. Recognized leases are included in operating lease right-of-use assets and corresponding lease liabilities are included in other current liabilities or noncurrent operating lease liabilities. For operating leases of buildings, we account for non-lease components, such as common area maintenance, as a component of the lease and include the components in the initial measurement of our right-of-use assets and corresponding liabilities. Operating lease assets are amortized on a straight-line basis in operating expenses over the lease term.

## Property and Equipment

Property and equipment is stated at cost and depreciated using the straight-line method over estimated useful lives of generally two to five years for equipment, five to forty years for buildings and building improvements and two to five years for furniture, fixtures and software. Land leases are amortized using the straight-line method over their lease terms, which expire from 2057 to 2082.

We review the carrying value of property and equipment for impairment when events and circumstances indicate that the carrying value of an asset or group of assets may not be recoverable from the estimated future cash flows expected to result from its use and/or disposition. In cases where undiscounted expected future cash flows are less than the carrying value, an impairment loss is recognized equal to the amount by which the carrying value exceeds the estimated fair value of the assets.

## Research and Development

Research and development expenditures are expensed in the period incurred.

## Revenue Recognition

We recognize revenue based on the transfer of control of goods and services and apply the following five-step approach: (1) identification of a contract with a customer, (2) identification of the performance obligations in the contract, (3) determination of the transaction price, (4) allocation of the transaction price to the performance obligations in the contract and (5) recognition of revenue as performance obligations are satisfied.

**Product Revenue:** Product revenue is generally recognized at a point in time when control of the promised goods is transferred to customers. Contracts with customers are generally short-term in duration at fixed, negotiated prices with payment generally due shortly after delivery. We estimate a liability for returns using the expected value method based on historical rates of return. In addition, we generally offer price protection to our distributors, which is a form of variable consideration that decreases the transaction price. We use the expected value method, based on historical price adjustments and current pricing trends, to estimate the amount of revenue recognized from sales to distributors. Differences between the estimated and actual amounts are recognized as adjustments to revenue.

Non-cancellable, nonrefundable customized product sales are recognized over time on a cost incurred basis. In connection with these arrangements, customers obtain control and benefit from the services as they are performed. The terms for these arrangements provide us with a legally enforceable right to receive payment, including a reasonable profit margin upon customer cancellation, for performance completed to date. Accordingly, we recognize revenue over time as we complete the manufacture of these products.

A portion of our revenue is derived from the sale of customized products. In certain cases, we recognize revenue when control of the underlying assets passes to the customer when the customer is able to direct the use of, and obtain substantially all of the remaining benefit from, the assets; the customer has the significant risks and rewards associated with ownership of the assets; and we have a present right to payment. Under the terms of these arrangements, we cannot repurpose products without the customer's consent and accordingly, we recognize revenue at the point in time when products are completed and made available to the customer.

**Service Revenue:** Our service revenue is derived from supply chain services as well as professional services. Supply chain services includes procurement, logistics, inventory management, temporary warehousing, kitting and packaging. Professional services include solution design, system installation, software automation and managed support services related to high performance computing ("HPC") and storage systems. A portion of our product sales include extended warranty and on-site services, subscriptions to our HPC environment, professional services, software and related support.

**Agent Services:** We provide certain supply chain services on an agent basis, whereby we procure materials on behalf of our customers and then resell such materials to our customers. Gross amounts invoiced to customers in connection with these agent services include amounts related to the services performed by us in addition to the cost of the materials procured. However, only the amount related to the agent component is recognized as revenue in our results of operations. We generally recognize revenue for these procurement, logistics and inventory management services upon the completion of such services, which typically occurs at the time of shipment of product to the customer. Amounts we invoice to customers for cost of materials related to services performed, which remain unpaid as of the end of a reporting period, are included in accounts receivable. Additionally, cost of materials procured for customers under these agent services, but which remain on hand as of the end of a reporting period, are included in inventories. Amounts in accounts receivable and inventories impact the determination of net cash provided by (or used in) operations.

**Transaction Price:** The transaction price is determined based on the consideration to which we will be entitled in exchange for transferring goods or services to the customer. We allocate the transaction price to each distinct product and service based on its relative standalone selling price. The standalone selling price for products primarily involves the cost to produce the deliverable plus the anticipated margin and for services is estimated based on our approved list price.

A portion of our service revenue is from professional consulting services, including installation and other services and hardware and software related support. Each contract may contain multiple performance obligations, which requires the transaction price to be allocated to each performance obligation. We allocate the consideration to each performance obligation based on the relative selling price, determined as the best estimate of the price at which we would transact if it sold the deliverable regularly on a stand-alone basis.

**Contract Costs:** As a practical expedient, we recognize the incremental costs of obtaining a contract, specifically commission expenses that have an amortization period of less than twelve months, as an expense when incurred. Additionally, we account for shipping and handling costs, if any, that occur after control transfers to the customer as a fulfillment activity. We record shipping and handling costs related to revenue transactions within cost of sales as a period cost.

## Share-Based Compensation

Share-based compensation is measured at the grant date, based on the fair value of the award, and recognized as expense under the straight-line attribution method over the requisite service period. We account for forfeitures as they occur.

## Treasury Shares

Treasury shares are carried at cost. When treasury shares are retired, any excess of the repurchase price paid over par value is allocated between additional capital and retained earnings.

## Use of Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires that we make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosures. Estimates and judgments are based on historical experience, forecasted events and various other assumptions. Significant items subject to such estimates and assumptions include business acquisitions, income taxes, inventories, goodwill and intangible assets, property and equipment, revenue recognition and share-based compensation. Actual results could differ from the estimates made by management.

## Recently Adopted Accounting Standards

In June 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-13 – *Measurement of Credit Losses on Financial Instruments*, which requires a financial asset (or a group of financial assets) measured on the basis of amortized cost to be presented at the net amount expected to be collected. This ASU requires that the income statement reflect the measurement of credit losses for newly recognized financial assets as well as the increases or decreases of expected credit losses that have taken place during the period. This ASU requires that credit losses of debt securities designated as available-for-sale be recorded through an allowance for credit losses and limits the credit loss to the amount by which fair value is below amortized cost. We adopted ASU 2016-13 in the first quarter of 2021 under the modified retrospective adoption method. The adoption of this ASU did not have a significant impact on our financial statements.

In February 2016, the Financial Accounting Standards Board issued ASU 2016-02 – *Leases* (“ASC 842”), which amends a number of aspects of lease accounting, including requiring lessees to recognize operating leases with a term greater than one year on their balance sheet as a right-of-use asset and corresponding lease liability, measured at the present value of lease payments. We adopted this ASU in the first quarter of 2020 under the modified retrospective method and elected to not recast prior periods. We elected the practical expedients available under the transition guidance, including but not limited to, not reassessing past lease accounting or using hindsight to evaluate lease term. In addition, we elected to not separate lease and non-lease components for leases. In connection with our adoption of ASC 842, we recognized \$24.3 million for operating lease right-of-use assets and \$25.0 million for operating lease liabilities. The difference between the operating lease right-of-use assets and operating lease liabilities primarily related to deferred rent.

## Recently Issued Accounting Standards

In August 2020, the FASB issued ASU 2020-06 – *Debt – Debt with Conversion and Other Options and Derivatives and Hedging – Contracts in Entity’s Own Equity*, which simplifies the accounting for convertible debt instruments by reducing the number of accounting models and the number of embedded conversion features that could be recognized separately from the primary contract. This ASU requires a convertible debt instrument to be accounted for as a single liability measured at its amortized cost, as long as no other features require bifurcation and recognition as derivatives. This ASU requires an entity to use the if-converted

method in the diluted earnings per share calculation for convertible instruments. This ASU is effective for us in the first quarter of 2023, with early adoption permitted beginning in the first quarter of 2022, and permits the use of either the modified retrospective or fully retrospective method of transition. We are evaluating the timing and effects of adoption of this ASU on our financial statements.

In December 2019, the FASB issued ASU 2019-12 – *Income Taxes – Simplifying the Accounting for Income Taxes*, which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740. The amendments also improve consistent application of and simplify GAAP for other areas of Topic 740 by clarifying and amending existing guidance. ASU 2019-12 is effective for us in the first quarter of 2022. We expect to adopt this ASU on a prospective basis and do not expect the adoption to have a significant impact on our financial statements.

## Business Acquisitions

### LED Business

On March 1, 2021, pursuant to the previously announced Asset Purchase Agreement dated October 18, 2020, as amended by the Amendment to Asset Purchase Agreement dated March 1, 2021 (as amended, the “CreeLED Purchase Agreement”), (i) we acquired the LED business of Cree, Inc. (“Cree”), including (a) certain equipment, inventory, intellectual property rights, contracts and real estate comprising Cree’s LED products segment, (b) all of the issued and outstanding equity interests of Cree Huizhou Solid State Lighting Company Limited, a limited liability company organized under the laws of the People’s Republic of China and an indirect wholly owned subsidiary of Cree and (c) Cree’s 51% ownership interest in Cree Venture LED Company Limited (“Cree Joint Venture”), Cree’s joint venture with San’an Optoelectronics Co., Ltd. (“San’an”) and (ii) we assumed certain liabilities related to the LED business (collectively, (i) and (ii), the “LED Business”). In connection with the transaction, Cree retained certain assets used in and pre-closing liabilities associated with its LED products segment.

In connection with this transaction, Cree and the Company also entered into certain ancillary and related agreements, including (i) an Intellectual Property Assignment and License Agreement, (ii) a Transition Services Agreement, (iii) a Wafer Supply and Fabrication Services Agreement and (iv) a Real Estate License Agreement. Under the acquisition method of accounting, the assets acquired and liabilities assumed of the LED Business were recorded as of the acquisition date at their respective fair values. The LED Business’s results of operations are included in the consolidated financial statements from the date of acquisition.

The acquisition of the LED Business, a global industry leader, further enhances our growth and diversification strategy and fits well with our other specialty businesses in computing and memory. The LED Business comprises a broad portfolio of highly efficient LED chips and high-performance LED components within the industry, including general lighting, specialty lighting, large-format video screens and outdoor and architectural lighting. The LED Business will operate as our LED Solutions segment.

**Purchase Price:** The purchase price for the LED Business consisted of (i) a payment of \$50 million in cash, subject to customary adjustments, (ii) an unsecured promissory note issued to Cree by the Company in the amount of \$125 million (“LED Purchase Price Note”), (iii) an earn-out payment of up to \$125 million based on the revenue and gross profit performance of the LED Business in Cree’s first four full fiscal quarters following the closing (“Earnout Period”), with a minimum payment of \$2.5 million, payable in the form of an unsecured promissory note to be issued by us (“Earnout Note”) and (iv) the assumption of certain liabilities. The LED Purchase Price Note bears interest at LIBOR plus 3.0% and is due on August 15, 2023. The Earnout Note will begin to bear interest upon completion of the Earnout Period at LIBOR plus 3.0% and is due on March 27, 2025. The purchase price was as follows:

Cash	\$	50,000
Additional payment for net working capital adjustment <sup>(1)</sup>		22,398
Fair value of LED Purchase Price Note		125,000
Fair value of Earnout Note		28,100
	<u>\$</u>	<u>225,498</u>

(1) Includes \$15.3 million paid at closing and \$7.1 million paid in the fourth quarter of 2021 upon completion of the review of the net working capital assets acquired and liabilities assumed.

**Contingent Consideration:** The Earnout Note is accounted for as contingent consideration. The fair value of the Earnout Note was estimated as of the date of acquisition to be \$28.1 million and was valued using a Monte Carlo simulation analysis in a risk-neutral

framework with assumptions for volatility, market price of risk adjustment, risk-free rate and cost of debt. The fair value measurement was based on significant inputs not observable in the market.

The Earnout Note is revalued each quarter and changes in valuation are reflected in results of operations. In the second half of 2021, we recorded charges of \$32.4 million to adjust the value of the Earnout Note to the fair value as of August 27, 2021. The change in fair value reflected new information about the probability and timing of meeting the conditions of the revenue and gross profit targets of the LED Business. As of August 27, 2021, the fair value of the Earnout Note was \$60.5 million.

**Valuation:** We estimated the fair value of the assets and liabilities of the LED Business as of March 1, 2021, the acquisition date. The purchase price has been allocated to the tangible and intangible assets acquired and liabilities assumed based on these valuation analyses. The valuation of the LED Business assets acquired and liabilities assumed, noncontrolling interest in subsidiary and consideration was as follows:

Cash and cash equivalents	\$	36,721
Accounts receivable		45,608
Inventories		60,423
Other current assets		5,204
Property and equipment		70,116
Operating lease right-of-use assets		7,494
Intangible assets		64,500
Other noncurrent assets		26
Accounts payable and accrued expenses		(23,673)
Other current liabilities		(27,509)
Noncurrent operating lease liabilities		(4,019)
Other noncurrent liabilities		(1,916)
Total net assets acquired		232,975
Noncontrolling interest in subsidiary		(7,477)
Consideration	\$	225,498

The fair values and useful lives of the intangible asset acquired was as follows:

	Amount	Estimated useful life (in years)
Technology	\$ 49,800	7-8
Trademarks/tradenames	6,100	5
Customer relationships	5,200	7-8
Order backlog	3,400	less than 1
	\$ 64,500	

- *Technology intangible assets* were valued using the multi-period excess earnings method based on the discounted cash flow and technology obsolescence rate. The discounted cash flow requires the use of significant assumptions, including projected revenue, expenses, capital expenditures and other costs and discount rates calculated based on the cost of equity adjusted for various risks, including the size of the acquiree, industry risk and other risk factors.
- *Trademarks/tradenames intangible assets* were valued using the relief from royalty method, which is the discounted cash flow savings accruing to the owner by virtue of the fact that the owner is not required to license the tradenames/trademarks from a third party. Key assumptions included attributable revenue expected from the tradenames/trademarks, royalty rates and assumed asset life.
- *Customer relationships intangible assets* were valued using the multi-period excess earnings method, which is the present value of the projected cash flows expected to be generated by the existing intangible asset after reduction by an estimated fair rate of return on contributory assets required to generate the customer relationship revenues. Key assumptions included discounted cash flow, estimated life cycle and customer attrition rates.
- *Order backlog intangible assets* represent the value of existing firm purchase orders in place at the time of acquisition and were valued using the discounted cash flow method, which accounts for the expected profit related to the purchase orders.



**Unaudited Pro Forma Financial Information:** The following unaudited pro forma financial information presents our combined results of operations as if the acquisition of the LED Business had occurred on August 31, 2019. The unaudited pro forma financial information is based on various adjustments and assumptions and is not necessarily indicative of what our results of operations actually would have been had the acquisition been completed as of August 31, 2019 or will be for any future periods. Furthermore, the pro forma financial information does not include adjustments to reflect any potential revenue, synergies or dis-synergies or cost savings that may be achievable in connection with the acquisition, or the associated costs that may be necessary to achieve such revenues, synergies or cost savings.

The unaudited pro forma financial information for the year ended August 27, 2021 combines our results of operations for the year ended August 27, 2021 (which include the results of the LED Business beginning on the March 1, 2021 acquisition date) and the results of operations of the LED Business for the six months ended December 27, 2020. The unaudited pro forma financial information for the year ended August 28, 2020 combines our results of operations for the year ended August 28, 2020 and the results of operations of the LED Business for the year ended June 28, 2020.

Year ended	August 27, 2021	August 28, 2020
Net sales	\$ 1,705,366	\$ 1,555,689
Net loss attributable to SGH	(142,319)	(95,926)
Earnings (loss) per share:		
Basic	\$ (5.86)	\$ (4.00)
Diluted	(5.86)	(4.00)

The unaudited pro forma financial information above reflects the following adjustments:

- Incremental cost of sales related to the estimated fair value of inventories.
- Incremental depreciation expense related to the estimated fair value of property and equipment.
- Incremental amortization expense related to the estimated fair value of identifiable intangible assets.
- Incremental interest expense related to the LED Purchase Price Note and the Earnout Note.
- The impacts to income tax expense as a result of the pro forma adjustments.

In 2021 and 2020, we incurred costs related to the acquisition of \$5.3 million and \$1.1 million, respectively, which were included in selling, general and administrative expense. From March 1, 2021, the acquisition date, to August 27, 2021, revenues for the LED Business were \$224.6 million and, for the same period, net income for the LED Business was \$16.3 million, which excludes any expenses recognized to adjust the Earnout Note to its fair value.

## SMART EC

In July 2019, we acquired Artesyn Embedded Computing, Inc. ("Artesyn"), which we subsequently renamed SMART Embedded Computing, Inc. ("SMART EC"), for \$77.4 million. The purchase price consisted of (i) cash paid at closing, subject to customary adjustments and (ii) an earn-out payment of up to \$10 million based on Artesyn's achievement of specific gross revenue levels through December 31, 2019 plus additional earn-out payments of \$0.10 for each dollar of gross revenue through December 31, 2019 over an agreed upon achievement level. The earn-out was payable, at our option in either cash or ordinary shares of SGH. No earn-out was achieved by Artesyn. The operations of SMART EC are part of our Intelligent Platforms Solutions segment. The purchase price was as follows:

Cash	\$ 74,719
Fair value of contingent consideration	2,700
	\$ 77,419

The initial fair value of the contingent consideration was estimated using a real options technique which incorporated various estimates, including projected gross revenue for the period, a volatility factor applied to gross revenue based on year-on-year growth in gross revenue of comparable companies, discount rates and the estimated amount of time until final payment was due.

Under the acquisition method of accounting, the assets acquired and liabilities assumed were recorded as of the acquisition date at their respective fair values. Assets acquired and liabilities assumed were as follows:

Tangible assets acquired	\$	16,482
Intangible assets		41,900
Liabilities assumed		(7,840)
Goodwill		26,877
Total net assets acquired	\$	<u>77,419</u>

The excess of purchase price over the fair value amounts assigned to the assets acquired and liabilities assumed represents goodwill resulting from the acquisition. The goodwill is not deductible for tax purposes. The estimated fair values and useful lives of the intangible assets acquired included customer relationship assets with a fair value of \$31.8 million and estimated useful lives of 4-6 years and technology assets with a fair value of \$10.1 million and estimated useful lives of 4 years.

In 2020 and 2019, we incurred costs related to the acquisition of \$0.6 million and \$1.0 million, respectively, which were included in selling, general and administrative expense. SMART EC's results of operations are included in the condensed consolidated financial statements from the date of acquisition.

## SMART Wireless

In July 2019, we acquired Inforce Computing, Inc. ("Inforce"), which we subsequently renamed SMART Wireless Computing, Inc. ("SMART Wireless"), for \$14.6 million. The purchase price consisted of (i) a payment of \$3.2 million in cash paid at closing, subject to customary adjustments, (ii) 382,788 ordinary shares of SGH valued at \$9.2 million and (iii) amounts retained by us as security for the sellers' indemnification obligations as well as any post-closing adjustments to the purchase price consisting of \$0.7 million in cash and 67,550 ordinary shares of SGH valued at \$1.6 million. In 2020, we paid \$0.4 million of the retained cash and issued all the retained shares. The operations of SMART Wireless are part of our Intelligent Platforms Solutions segment. The purchase price was as follows:

Cash	\$	3,157
Fair value of shares issued at closing		9,167
Cash initially retained and paid in 2020		413
Fair value of shares initially retained and issued in 2020		1,618
Cash paid for post-closing adjustments		246
	\$	<u>14,601</u>

Under the acquisition method of accounting, the assets acquired and liabilities assumed were recorded as of the acquisition date at their respective fair values. Assets acquired and liabilities assumed were as follows:

Tangible assets acquired	\$	5,266
Intangible assets		6,700
Liabilities assumed		(5,643)
Goodwill		8,278
Total net assets acquired	\$	<u>14,601</u>

The excess of purchase price over the fair value amounts assigned to the assets acquired and liabilities assumed represents goodwill resulting from the acquisition. The goodwill is not deductible for tax purposes. The estimated fair values and useful lives of the intangible assets acquired included customer relationship assets with a fair value of \$5.8 million and estimated useful lives of 5 years and technology assets with a fair value of \$0.9 million and estimated useful lives of 5 years.

In 2020 and 2019, we incurred costs related to the acquisition of \$0.2 million and \$0.5 million, respectively, which were included in selling, general and administrative expense. SMART Wireless' results of operations are included in the consolidated financial statements from the date of acquisition.

At the time of the acquisition, Inforce's selling shareholders included our CEO and two members of our Board of Directors. In connection with the acquisition, these individuals received an aggregate of 397,407 ordinary shares of SGH valued at \$9.5 million, consisting of 337,692 shares issued upon closing and the balance issuable upon satisfaction of certain post-closing criteria. The remaining shares were issued in the fourth quarter of 2020.

## Inventories

As of	August 27, 2021	August 28, 2020
Raw materials	\$ 163,610	\$ 89,943
Work in process	92,901	16,672
Finished goods	107,090	56,376
	<u>\$ 363,601</u>	<u>\$ 162,991</u>

As of August 27, 2021 and August 28, 2020, 11% and 17%, respectively, of total inventories were inventories owned and held under our supply chain services.

## Property and Equipment

As of	August 27, 2021	August 28, 2020
Equipment	\$ 182,493	\$ 113,035
Buildings and building improvements	53,502	26,498
Furniture, fixtures and software	32,114	21,528
Land	16,126	1,208
	<u>284,235</u>	<u>162,269</u>
Accumulated depreciation	(127,969)	(107,564)
	<u>\$ 156,266</u>	<u>\$ 54,705</u>

Depreciation expense for property and equipment was \$28.9 million, \$22.8 million and \$23.6 million in 2021, 2020 and 2019, respectively.

## Intangible Assets and Goodwill

	As of August 27, 2021		As of August 28, 2020	
	Gross Amount	Accumulated Amortization	Gross Amount	Accumulated Amortization
Intangible assets:				
Technology	\$ 61,307	\$ (9,142)	\$ 10,350	\$ (3,085)
Customer relationships	57,500	(22,393)	52,300	(12,899)
Trademarks/tradenames	19,200	(6,628)	13,100	(4,095)
Order backlog	3,800	(2,571)	400	(400)
	<u>\$ 141,807</u>	<u>\$ (40,734)</u>	<u>\$ 76,150</u>	<u>\$ (20,479)</u>
Goodwill by segment:				
Intelligent Platform Solutions	\$ 40,401		\$ 40,401	
Memory Solutions	33,854		33,554	
	<u>\$ 74,255</u>		<u>\$ 73,955</u>	

In 2021 and 2019, we capitalized \$65.7 million and \$48.6 million, respectively, for intangible assets, primarily acquired in connection with business acquisitions, with weighted-average useful lives of 6.7 years and 4.8 years, respectively. Amortization expense for intangible assets was \$20.3 million, \$13.7 million and \$5.6 million in 2021, 2020 and 2019, respectively. Amortization expense is expected to be \$23.9 million for 2022, \$21.9 million for 2023, \$18.1 million for 2024, \$15.3 million for 2025 and \$8.3 million for 2026 and \$13.6 million thereafter. Goodwill of our Memory Solutions segment increased in 2021 by \$0.3 million from translation adjustments. Goodwill of our Memory Solutions segment decreased in 2020 by \$7.2 million from translation adjustments and, for our Intelligent Platforms Solutions, by \$0.3 million from adjustments to the purchase price allocation of business acquisitions.

## Accounts Payable and Accrued Expenses

As of	August 27, 2021	August 28, 2020
Accounts payable <sup>(1)</sup>	\$ 429,640	\$ 224,660
Salaries, wages and benefits	37,795	16,862
Income and other taxes	14,319	7,495
Other	2,353	4,346
	<u>\$ 484,107</u>	<u>\$ 253,363</u>

(1) Includes accounts payable for property and equipment of \$3.1 million and \$1.8 million as of August 27, 2021 and August 28, 2020, respectively.

## Debt

As of	August 27, 2021	August 28, 2020
Convertible Senior Notes	\$ 203,992	\$ 195,573
LED Purchase Price Note	125,000	—
ABL Credit Agreement	25,000	—
Other	11,846	—
	<u>365,838</u>	<u>195,573</u>
Less current debt	(25,354)	—
Long-term debt	<u>\$ 340,484</u>	<u>\$ 195,573</u>

## Reference Rate Reform

In July 2017, the Financial Conduct Authority (which regulates LIBOR) announced it intends to stop compelling banks to submit rates for the calculation of LIBOR after 2021. As a result, the Federal Reserve Board and the Federal Reserve Bank of New York organized the Alternative Reference Rates Committee, which identified the Secured Overnight Financing Rate ("SOFR") as its preferred alternative to LIBOR in derivatives and other financial contracts. On March 5, 2021, the Financial Conduct Authority confirmed a partial extension of this deadline announcing that it will cease the publication of the one-week and two-month USD LIBOR settings immediately following December 31, 2021. The remaining U.S. dollar LIBOR settings will continue to be published until June 30, 2023.

For each of our debt instruments that provide for interest based on LIBOR, the SOFR, as published by the Federal Reserve Bank of New York, is listed as the alternative index to replace LIBOR if a different alternative index is not agreed to prior such cessation of the LIBOR rate.

## Convertible Senior Notes

In February 2020, we issued \$250.0 million in aggregate principal amount of 2.25% convertible senior notes due 2026 (the "2026 Notes"). The 2026 Notes are general unsecured obligations, bear interest at an annual rate of 2.25% per year, payable semi-annually

on February 15 and August 15, and mature on February 15, 2026, unless earlier converted, redeemed or repurchased. The 2026 Notes are governed by an indenture (the "Indenture") between us and U.S. Bank National Association, as trustee. The initial conversion rate of the 2026 Notes is 24.6252 ordinary shares per \$1,000 principal amount of notes, which represents an initial conversion price of approximately \$40.61 per ordinary share. The conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the Indenture.

**Conversion Rights:** Holders of the 2026 Notes may convert them under the following circumstances:

- i. during any fiscal quarter commencing after the fiscal quarter ended on May 28, 2020 (and only during such fiscal quarter) if the last reported sale price per ordinary share exceeds 130% of the conversion price for at least 20 trading days in the 30 consecutive trading days ending on the last trading day of the immediately preceding fiscal quarter;
- ii. during the five consecutive business days immediately after any 10 consecutive trading day period (such 10 consecutive trading day period, the "Measurement Period") in which the trading price per \$1,000 principal amount of notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sale price per ordinary share on such trading day and the conversion rate on such trading day;
- iii. on or after August 15, 2025 until the close of business on the second scheduled trading day immediately before the maturity date;
- iv. upon the occurrence of certain corporate events or distributions on our ordinary shares, as provided in the Indenture; or
- v. the 2026 Notes are called for redemption.

Upon conversion, we will pay or deliver, as applicable, cash, ordinary shares or a combination of cash and ordinary shares at our election. Our intent is to settle in cash the principal amount of our convertible notes upon conversion and may, at our option, settle any excess of the conversion value over the principal amount in cash, ordinary shares or any combination thereof.

Upon the occurrence of a "make-whole fundamental change" (as defined in the Indenture), we will in certain circumstances increase the conversion rate for a specified period of time. In addition, upon the occurrence of a "fundamental change" (as defined in the Indenture), holders of the 2026 Notes may require us to repurchase their notes at a cash repurchase price equal to the principal amount of the 2026 Notes to be repurchased, plus accrued and unpaid interest.

If any taxes imposed or levied by or on behalf of the Cayman Islands (or certain other jurisdictions described in the Indenture) are required to be withheld or deducted from any payments or deliveries made under or with respect to the 2026 Notes, then, subject to certain exceptions, we will pay or deliver to the holder of each note such additional amounts as may be necessary to ensure that the net amount received by the beneficial owner of such note after such withholding or deduction (and after withholding or deducting any taxes on the additional amounts) will equal the amounts that would have been received by such beneficial owner had no such withholding or deduction been required.

**Cash Redemption at Our Option:** We have the right to redeem the 2026 Notes, in whole or in part, at our option at any time, and from time to time, from February 21, 2023 through the 40th scheduled trading day immediately before the maturity date, at a cash redemption price equal to the principal amount of the 2026 Notes to be redeemed, plus accrued and unpaid interest. However, the repurchase right is only applicable if the last reported per share sale price of our ordinary shares exceeds 130% of the conversion price on each of at least twenty trading days during the thirty consecutive trading days ending on, and including, the trading day immediately before the redemption notice date for such redemption.

**Other:** In connection with the issuance of the 2026 Notes, we separated the par value of the 2026 Notes into liability and equity components. The liability component of \$197.5 million was calculated by using a discount rate of 6.53%, which was our borrowing rate on the date of the issuance of the 2026 Notes for a similar debt instrument without the conversion feature. The equity component of \$52.5 million, representing the conversion option, was determined by deducting the liability component from the par value of the 2026 Notes. The equity component of the 2026 Notes is included in additional paid-in capital and is not remeasured as long as it continues to meet the conditions for equity classification, which we reassess every reporting period. The difference between the debt recorded at issuance and its principal amount is accreted using the effective interest method through interest expense over the term of the 2026 Notes.

Debt issuance costs for the 2026 Notes were \$8.0 million, consisting of initial purchasers' discount and other issuance costs, and were allocated to the liability and equity components using the same proportions as the allocation of the proceeds from the 2026 Notes. Transaction costs attributable to the liability component were \$6.3 million and are netted with the debt balance and

amortized to interest expense over the term of the 2026 Notes. Transaction costs attributable to the equity component were \$1.7 million and are netted with the equity component in additional paid-in-capital.

Interest expense for the 2026 Notes consisted of 2.25% contractual stated interest of \$5.6 million and \$3.1 million in 2021 and 2020, respectively, and amortization of discount and issuance costs of \$8.4 million and \$4.4 million in 2021 and 2020, respectively, resulting in an effective interest rate of 7.06%.

As of both August 27, 2021 and August 28, 2020, the carrying amount of the equity components of the 2026 Notes, which are included in additional paid-in-capital, was \$50.8 million.

## LED Purchase Price Note

In connection with the acquisition of the LED Business in March 2021, we issued an unsecured promissory note to Cree in the amount of \$125 million. The LED Purchase Price Note bears interest at LIBOR plus 3.0%, payable quarterly, and is due on August 15, 2023. The LED Purchase Price Note requires that we maintain a secured leverage ratio not in excess of 3.50:1.00 as of the end of each fiscal quarter. See "Business Acquisitions – LED Business."

## Asset-Based Lending Credit Agreement

In December 2020, our subsidiaries, SMART Modular, SMART EC and Penguin Computing, Inc. (collectively the "ABL Borrowers"), and certain other U.S. subsidiaries of the Company party thereto as guarantors (such other U.S. subsidiaries, together with the ABL Borrowers, collectively the "ABL Loan Parties") entered into a Loan, Guaranty and Security Agreement (the "ABL Credit Agreement"), which provides for a senior secured asset-based revolving credit facility in an aggregate principal amount of up to \$100 million. Under the ABL Credit Agreement, we have the option to increase the total amount available to \$150 million, subject to certain conditions, including obtaining commitments from one or more lenders. The ABL Credit Agreement, which expires on December 23, 2023, provides that up to \$30 million of revolving credit facility is available for issuances of letters of credit, and allows for swingline loans in an amount not to exceed \$15 million. There are no requirements to make any scheduled amortization payments of drawn amounts. Borrowings under the ABL Credit Agreement are available based upon monthly (or, in certain cases, weekly) borrowing base certifications valuing eligible inventory and eligible accounts receivable, as reduced by certain reserves in effect from time to time.

**Interest and Fees:** The ABL Credit Agreement bears interest at a rate per annum equal to either, at the ABL Borrowers' option, a LIBOR rate or a base rate, in each case plus an applicable margin. The applicable margin is (i) 1.75% per annum with respect to LIBOR borrowings, and 0.75% per annum with respect to base rate borrowings when average daily Availability, as defined in the ABL Credit Agreement, is equal to or greater than \$50 million, (ii) 2.00% per annum with respect to LIBOR borrowings, and 1.00% per annum with respect to base rate borrowings when average daily Availability is less than \$50 million and greater than or equal to \$35 million and (iii) 2.25% per annum with respect to LIBOR borrowings, and 1.25% per annum with respect to base rate borrowings when average daily Availability is less than \$35 million. We are subject to a monthly unused facility fee (i) 0.35%, if average daily Revolver Usage (as defined in the ABL Credit Agreement) was less than 50% of the Commitments (as defined in the ABL Credit Agreement) during the preceding calendar month, or (ii) 0.25%, if average daily Revolver Usage was equal to or greater than 50% of the Commitments during such month.

**Covenants:** The ABL Credit Agreement contains customary affirmative and negative covenants and restrictions typical for a financing of this nature that, among other things, restrict the ABL Loan Parties' ability to incur additional debt, pay dividends and make distributions, make certain investments and acquisitions, enter into certain transactions, repurchase its stock and prepay certain indebtedness, create liens, enter into agreements with affiliates and transfer and sell material assets and merge or consolidate. In the event that certain minimum availability thresholds are not met on the last day of any period of four fiscal quarters, the ABL Borrowers will be required to maintain (i) a minimum Borrower Fixed Charge Coverage Ratio (as defined in the ABL Credit Agreement) of not less than 1.0 to 1.0 and (ii) a minimum Global Fixed Charge Coverage Ratio (as defined in the ABL Credit Agreement) of not less than 1.0 to 1.0, in each case, as of such last day of any period of four fiscal quarters. Subject to the Intercreditor Agreement (as defined below), non-compliance with one or more of the covenants and restrictions could result in the full or partial principal balance of the ABL Credit Agreement becoming immediately due and payable and termination of the commitments available thereunder.

**Security:** The ABL Credit Agreement is jointly and severally guaranteed on a senior basis by the ABL Loan Parties. In addition, the ABL Credit Agreement is secured by a pledge of the capital stock of, or equity interests in, the ABL Loan Parties and by substantially all of the assets of the ABL Loan Parties subject to customary exceptions. In connection with the ABL Credit Agreement, the ABL Loan Parties entered into a customary intercreditor agreement (the "Intercreditor Agreement") which governs how the collateral securing the respective obligations under the ABL Credit Agreement and the Amended Credit Agreement will be treated among the secured parties. Pursuant to the ABL Credit Agreement and Intercreditor Agreement, the obligations under the ABL Credit Agreement are secured by (i) a first-priority security interest, subject to certain customary exceptions, in assets held by the ABL Loan Parties consisting of accounts receivable, inventory and intangible assets to the extent attached to the foregoing, books and records related to the foregoing and the proceeds thereof and (ii) a second-priority security interest, subject to certain customary exceptions, in substantially all other present and future tangible and intangible assets held by the ABL Loan Parties and proceeds of the foregoing; and the obligations under the Amended Credit Agreement are secured by (i) a second-priority security interest, subject to certain customary exceptions, in assets held by the ABL Loan Parties consisting of accounts receivable, inventory and intangible assets to the extent attached to the foregoing, books and records related to the foregoing and the proceeds thereof and (ii) a first-priority security interest in, subject to certain customary exceptions, substantially all other present and future tangible and intangible assets held by the Loan Parties and proceeds of the foregoing.

## Amended Credit Agreement

In March 2020, three of our subsidiaries, SMART Worldwide Holdings, Inc. ("SMART Worldwide"); SMART Modular Technologies (Global), Inc. ("SMART Global"); and SMART Modular Technologies, Inc. ("SMART Modular") (collectively, "Borrowers") entered into a third amended and restated credit agreement ("Amended Credit Agreement"), which provides for \$50 million of revolving loans with a maturity date of March 6, 2025.

**Interest:** Amounts outstanding under the Amended Credit Agreement bear interest at a rate of:

- When the First Lien Leverage Ratio, as defined in the Amended Credit Agreement, is greater than 2.25 to 1.00:
  - o 3.75% per annum with respect to LIBOR borrowings and
  - o 2.75% per annum with respect to base rate borrowings
- When the First Lien Leverage Ratio is less than or equal to 2.25 to 1.00:
  - o 3.50% per annum with respect to LIBOR borrowings and
  - o 2.50% per annum with respect to base rate borrowings.

**Covenants:** The Amended Credit Agreement contains various representations and warranties and affirmative and negative covenants that are usual and customary for loans of this nature including, among other things, limitations on the Credit Group's ability to incur debt and liens, issue preferred equity, engage in certain transactions, make investments, dispose of assets, pay dividends and engage in certain transactions with affiliates. The Amended Credit Agreement also requires the financial maintenance covenant included therein to be set at a First Lien Leverage Ratio of 3.50 to 1.00 and to be applicable only if drawn revolving loans (plus issued letters of credit in excess of \$10 million) outstanding as of the last day of any quarter exceed 30% of the aggregate revolving commitments available under the Amended Credit Agreement.

**Security:** The Amended Credit Agreement is jointly and severally guaranteed on a senior basis by certain subsidiaries of Global (excluding, among other subsidiaries, SMART Modular Technologies Sdn. Bhd. ("SMART Malaysia")). In addition, the Amended Credit Agreement is secured by a pledge of the capital stock of, or equity interests in, most of the subsidiaries of SMART Worldwide (including, without limitation, SMART Malaysia, Penguin Computing; SMART EC and SMART Wireless) and by substantially all of the assets of the subsidiaries of SMART Worldwide, excluding the assets of SMART Malaysia and certain other subsidiaries.

## Other

Through one of our Brazil subsidiaries, we are party to a credit facility with the Funding Authority for Studies and Projects ("FINEP"), an organization of the Brazilian federal government under the Ministry of Science, Technology and Innovation devoted to funding science and technology in Brazil. The facility provides for borrowings of up to R\$102.2 million (or \$20.0 million) for investments in technology innovation projects used in infrastructure and research and development conducted in Brazil as well as for the acquisition of equipment. The facility bears interest at 2.8% per annum and provides for unused commitment fees of 0.1% per month. The agreement also provides for initial administration fees of 1.09%, deducted from each advance of funds. Amounts outstanding and available under the facility are guaranteed by two unrelated parties, subject to a guarantee fee of 1.5% per annum. The facility includes customary conditions and can be terminated in the event of a change of effective control. Amounts borrowed under the agreement are due in monthly installments of principal and interest beginning in June 2022, with the final



payment due in December 2027. On December 30, 2020, we borrowed R\$60.7 million (or \$11.9 million) under the agreement and, as of August 27, 2021, the outstanding balance was \$11.8 million.

## Maturities of Debt

As of August 27, 2021, maturities of debt were as follows:

2022	\$	354
2023		127,122
2024		2,122
2025		2,122
2026		252,122
Thereafter		3,004
Less unamortized discount and issuance costs		(46,008)
	<u>\$</u>	<u>340,838</u>

Maturities in the table above exclude amounts drawn under our ABL Credit Agreement, which expires in December 2023. As of August 27, 2021, there was \$25.0 million included in current debt for amounts drawn under this facility.

## Leases

As of August 27, 2021 and August 28, 2020, we had operating leases through which we utilize facilities, offices and equipment in our manufacturing operations, research and development activities and selling, general and administrative functions. Sublease income was not significant in 2021 or 2020. Operating lease expense in 2019, prior to our adoption of ASC 842, was \$5.0 million. The components of operating lease expense were as follows:

Year ended	August 27, 2021	August 28, 2020
Fixed lease cost	\$ 9,377	\$ 6,743
Variable lease cost	1,445	842
Short-term lease cost	288	295
	<u>\$ 11,110</u>	<u>\$ 7,880</u>

Cash flows used for operating activities in 2021 and 2020 included payments for operating leases of \$7.5 million and \$5.1 million, respectively. Noncash acquisitions of right-of-use assets were \$24.5 million and \$8.8 million in 2021 and 2020, respectively.

As of August 27, 2021 and August 28, 2020, the weighted-average remaining lease term for our operating leases was 6.1 years and 7.6 years, respectively. Certain of our operating leases include one or more options to extend the lease term for periods from two to five years. In determining the present value of our operating lease liabilities, we have assumed we will not extend any lease terms. As of August 27, 2021 and August 28, 2020, the weighted-average discount rate for our operating leases was 6.7% and 8.0%, respectively.

Minimum payments of lease liabilities as of August 27, 2021 were as follows:

2022	\$	12,319
2023		10,553
2024		7,342
2025		5,151
2026		3,599
2027 and thereafter		15,498
		<u>54,462</u>
Less imputed interest		(11,787)
Present value of total lease liabilities	\$	<u>42,675</u>

The table above excludes lease liabilities for leases that have been executed but not yet commenced. As of August 27, 2021, we had such lease commitments relating to operating lease payment obligations of \$51.8 million for a building lease with a term of 16 years. We will recognize a right-of-use asset and an associated lease liability at the time such asset becomes available for our use. Such lease is currently expected to commence in the second half of calendar 2022.

## Commitments and Contingencies

### Commitments

As of August 27, 2021, we had commitments of \$170.0 million for purchase obligations, a substantial majority of which will be due within one year. Purchase obligations include payments for the acquisition of inventories, property and equipment and other goods or services of either a fixed or minimum quantity.

### Product Warranty and Indemnities

We generally provide a limited warranty that our products are in compliance with applicable specifications existing at the time of delivery. Under our standard terms and conditions of sale, liability for certain failures of product during a stated warranty period is usually limited to repair or replacement of defective items or return of amounts paid for such items. Our warranty obligations are not material.

We are party to a number of agreements in which we have agreed to defend, indemnify and hold harmless our customers and suppliers from damages and costs, which may arise from product defects as well as from any alleged infringement by our products of third-party patents, trademarks or other proprietary rights. We believe our internal development processes and other policies and practices limit our exposure related to such indemnities. Maximum potential future payments cannot be estimated because many of these agreements do not have a maximum stated liability. However, to date, we have not had to reimburse any of our customers or suppliers for any losses related to these indemnities. We have not recorded any liability for such indemnities.

### Contingencies

From time to time, we are involved in legal matters that arise in the normal course of business. Litigation in general, and intellectual property, employment and shareholder litigation in particular, can be expensive and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict. Additionally, from time to time, we are a party in the normal course of business to a variety of agreements pursuant to which we may be obligated to indemnify another party. It is not possible to predict the maximum potential amount of future payments under these types of agreements due to the conditional nature of our obligations and the unique facts and circumstances involved in each particular agreement. Historically, our payments under these types of agreements have not had a material adverse effect on our business, results of operations or financial condition. We regularly review contingencies to determine whether the likelihood of loss has changed and to assess whether a reasonable estimate of the loss or range of loss can be made.

# Equity

## SGH Shareholders' Equity

### Ordinary Share Repurchases

In January 2021, we repurchased an aggregate of 1.1 million of our ordinary shares from Silver Lake Partners III Cayman (AIV III), L.P., Silver Lake Technology Investors III Cayman, L.P., Silver Lake Sumeru Fund Cayman, L.P. and Silver Lake Technology Investors Sumeru Cayman, L.P. at a purchase price of \$40.30 per share for an aggregate amount of \$44.3 million in a privately negotiated transaction. The repurchased shares were recorded as treasury shares.

Ordinary shares withheld as payment of withholding taxes and exercise prices in connection with the vesting or exercise of equity awards are also treated as ordinary share repurchases. An aggregate of 153 thousand, 28 thousand and 18 thousand shares were acquired for \$4.2 million, \$0.7 million and \$0.5 million in 2021, 2020 and 2019, respectively.

### Capped Calls

In connection with the offering of the our 2026 Notes in February 2020, we entered into capped call transactions ("Capped Calls"), at arms-length, which have initial strike prices of approximately \$40.61 per share, subject to certain adjustments, corresponding to the initial conversion price of the 2026 Notes, and initial cap prices of \$54.145 per share, which are subject to certain adjustments. The Capped Calls cover, subject to anti-dilution adjustments, approximately 6.2 million ordinary shares of the Company and are generally intended to reduce the potential economic dilution upon any conversion of 2026 Notes and/or offset any potential cash payments we may be required to make in excess of the principal amount of converted 2026 Notes, as the case may be, with such reduction and/or offset subject to a cap based on the cap price. The Capped Calls expire February 15, 2026 (the maturity date of the 2026 Notes), subject to earlier exercise. The Capped Calls are subject to either adjustment or termination upon the occurrence of specified extraordinary events affecting the Company, including mergers, tender offers and delistings involving the Company. In addition, the Capped Calls are subject to certain specified additional disruption events that may give rise to a termination of the Capped Calls, including insolvency filings and hedging disruptions.

The Capped Calls were originally classified as noncurrent derivative assets because they could be settled only in cash. In March 2020, our shareholders approved a proposal to amend our memorandum and articles of association to permit us to purchase or otherwise acquire our ordinary shares. The amendment also enabled us to utilize shares or cash, or any combination thereof, to settle the capped call transactions, which resulted in the reclassification of the noncurrent derivative assets to additional paid in capital in an amount equal to the \$14.1 million fair value of the Capped Calls as of March 30, 2020. In connection therewith, we recognized a loss of \$7.7 million in 2020 in other non-operating expense from the revaluation of the Capped Calls.

## Noncontrolling Interest in Subsidiary

In connection with our acquisition of the LED Business, we have a 51% ownership interest in the Cree Joint Venture. The remaining 49% ownership interest is held by San'an. The Cree Joint Venture has a five-member board of directors, three of which are designated by us and two of which are designated by San'an. As a result of our majority voting interest, we consolidate the operations of the Cree Joint Venture and report its results of operations within our LED Solutions segment.

The Cree Joint Venture has a manufacturing agreement pursuant to which San'an supplies it with mid-power LED products and we and the Cree Joint Venture have a sales agent agreement pursuant to which we are the independent sales representative of the Cree Joint Venture. The Cree Joint Venture produces and delivers to market high performing, mid-power lighting class LEDs in an exclusive arrangement serving the expanding markets of North and South America, Europe and Japan, and serves China markets and the rest of the world on a non-exclusive basis.

The 49% ownership interest held by San'an is classified as noncontrolling interest. Subsequent to the acquisition of the LED Business, noncontrolling interest increased by an aggregate of \$1.2 million in 2021 for San'an's share of net income from the Cree Joint Venture. Cash and other assets of the Cree Joint Venture are generally not available for use by us in our other operations.

## Government Incentives

### Brazil Financial Credits

Through our Brazil subsidiaries, we participate in two programs (“Brazil Incentive Programs”), pursuant to which the Brazilian government incentivizes the manufacture and sale of certain information technology and consumer electronics products within Brazil. The programs include 1) Lei da Informática – Processo Produtivo Básico Program (aka Informatics Law – Basic Productive Process Program) (“PPB/IT”) and 2) Programa de Incentivo ao Setor de Semicondutores (aka Program of Incentives for the Semiconductor Sector) (“PADIS”). The financial credits available through PADIS are currently set to expire in January 2022.

The Brazil Incentive Programs provide for reduced import and other transaction-related taxes for certain procurement, manufacturing and sales activities. In exchange, we must invest in certain research and development activities related to semiconductors and displays in aggregate amounts that exceed a specified percentage of our gross revenues recognized in connection with sales in Brazil. Accordingly, financial credits earned in connection with the Brazil Incentive Programs are reflected as a reduction of research and development expense. Financial credits available under the Brazil Incentive Programs are subject to limitations, which range from approximately 11% to 14% of gross revenues recognized for sales in Brazil.

Pursuant to the Brazil Incentive Programs, we recognized aggregate financial credits, reflected as a reduction of research and development expense, of \$30.0 million and \$6.4 million in 2021 and 2020, respectively. Financial credits earned under the Brazil Incentive Programs may be refunded in cash or used to offset liabilities for Brazil federal taxes. As of August 27, 2021 and August 28, 2020, earned but unused financial credits of \$19.8 million and \$6.4 million, respectively, were included in other current assets. Financial credits earned but unused as of August 27, 2021 can be utilized through August 2026.

## Fair Value Measurements

Cash and cash equivalents as of August 27, 2021 included money market funds of \$2.7 million which were valued based on Level 1 measurements using quoted prices in active markets for identical assets.

Fair value measurements of other assets and liabilities were as follows:

	As of August 27, 2021		As of August 28, 2020	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Derivative financial instrument assets	\$ 883	\$ 883	\$ 112	\$ 112
Derivative financial instrument liabilities	(50)	(50)	(912)	(912)
Convertible Senior Notes	(335,668)	(203,992)	(221,500)	(195,573)
LED Purchase Price Note	(125,000)	(125,000)	—	—
ABL Credit Agreement	(25,000)	(25,000)	—	—
Debt – other	(10,702)	(11,846)	—	—
Acquisition-related contingent consideration	(60,500)	(60,500)	—	—

The fair values of our derivative financial instruments, as measured on a recurring basis, were based Level 2 measurements, including market-based observable inputs of currency exchange spot and forward rates, interest rates and credit-risk spreads.

The fair value of our Convertible Senior Notes (excluding the value of the equity component of our convertible notes), as measured on a non-recurring basis, was determined based on Level 2 measurements, including the trading price of the convertible notes. The fair values of our LED Purchase Price Note, ABL Credit Agreement and other debt, as measured on a non-recurring basis, were estimated based on Level 2 measurements, including discounted cash flows and interest rates based on similar debt issued by parties with credit ratings similar to ours.

Acquisition-related contingent consideration relates to our acquisition of the LED Business and is included in other noncurrent liabilities. The fair value, as measured on a recurring basis, was based on Level 3 measurements, which includes significant inputs not observable in the market. The fair value was estimated using a Monte Carlo simulation analysis in a risk-neutral framework with assumptions for volatility, market price of risk adjustment, risk-free rate and cost of debt. Assumptions used in the determination of fair value also included estimates of future revenue and gross profit of the LED Business in Cree's first four full fiscal quarters following the closing of the acquisition. Generally, changes in the assumptions for projected future revenue, gross profit and volatility would be accompanied by a directionally similar change in the fair value measurement. Conversely, changes in the discount rate would be accompanied by a directionally opposite change in the related fair value measurement. However, due to the contingent consideration having a maximum payout amount, changes in these assumptions would not affect the fair value of the contingent consideration if they increase (decrease) beyond certain amounts. Subsequent to the acquisition date, at each reporting date, the contingent consideration liability is remeasured to fair value with changes recorded in our results of operations. See "Business Acquisition – LED Business."

## Derivative Instruments

We use currency forward contracts to mitigate our exposure of certain monetary assets and liabilities from changes in currency exchange rates. Realized and unrealized gains and losses on derivative instruments without hedge accounting designation as well as the changes in the underlying monetary assets and liabilities from changes in currency exchange rates are included in other non-operating (income) expense. For derivative instruments without hedge accounting designation, in 2021, we recognized net realized losses of \$2.3 million and net unrealized gains on the change in the fair value of the non-designated forward contracts of \$2.1 million. In 2020, we recognized realized gains of \$11.1 million and net unrealized gains on the change in the fair value of the non-designated forward contracts of \$0.3 million. In 2019, we recognized net realized losses in the amount of \$2.6 million and net unrealized losses on the change in the fair value of the non-designated forward contracts in the amount of \$0.1 million.

## Equity Plans

Our Amended and Restated 2017 Share Incentive Plan (as amended, the "2017 Plan") provides for the issuance of equity awards to our employees, directors and consultants. Such awards include both incentive and non-qualified options, share appreciation rights, restricted share awards ("RSAs"), restricted share units ("RSUs") and performance-based awards such as performance-based restricted stock awards ("PRSAs") and performance-based restricted share units ("PSUs"). As of August 27, 2021, 2.0 million of our ordinary shares were available for issuance under the 2017 Plan.

Our 2021 Share Inducement Plan (the "Inducement Plan" and together with the 2017 Plan, our "SGH Plans") provides for the issuance of equity awards to provide inducements for certain individuals to enter into employment with us within the meaning of Rule 5635(c)(4) of the Nasdaq Marketplace Rules, and to motivate such persons to contribute to, and to enable them to share in any long-term growth and financial success we may experience. Such awards include options, share appreciation rights, RSAs, RSUs and performance-based awards such as PRSAs and PSUs. As of August 27, 2021, 0.9 million of our ordinary shares were available for issuance under the Inducement Plan.

Our employee share purchase plan ("ESPP") has been offered to substantially all employees since April 2018 and generally permits eligible employees to purchase our ordinary shares through payroll deductions of up to 15% of their eligible compensation, subject to certain limitations. As of August 27, 2021, 0.8 million of our ordinary shares were available for issuance under the ESPP.

Options granted under the SGH Plans have an exercise price not less than the fair market value of a share of our common stock on the date of grant. Options and RSUs generally vest over a period of four years, and options generally have a ten-year term, though options granted after August 26, 2011 and before Sept. 23, 2014 have an eight-year term.

## Restricted Share Awards and Restricted Share Units Awards (“Restricted Awards”)

	Shares	Weighted Average Grant Date Fair Value Per Share	Aggregate Intrinsic Value
Outstanding as of August 28, 2020	1,273	\$ 26.19	\$ 31,721
Granted	2,325	\$ 39.19	
Vested	(591)	\$ 26.63	
Forfeited and cancelled	(188)	\$ 36.18	
Outstanding as of August 27, 2021	<u>2,819</u>	\$ 36.16	\$ 134,425

Aggregate Restricted Award activity and assumptions were as follows:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Awards granted	2,325	840	652
Weighted average grant-date fair value per share	\$ 39.19	\$ 24.41	\$ 24.22
Aggregate vesting-date fair value of shares vested	\$ 21,381	\$ 12,464	\$ 6,837

In May 2020, we granted a PRSA that had both service and performance conditions. As of August 28, 2020, we deemed it was probable that the service condition would be met, and the attainment of the performance condition for this award was probable. On October 20, 2020, we modified this award, as well as another time-based award, each for our former CEO, to accelerate the remaining service-based vesting requirements such that they became fully vested as of the acceleration date. These modifications resulted in additional share-based compensation expense in the first quarter of 2021 of \$5.8 million.

As of August 27, 2021, total aggregate unrecognized compensation costs for unvested Restricted Awards was \$87.6 million, which was expected to be recognized over a weighted average period of 3.02 years.

## Share Options

As of August 27, 2021, there were 1.9 million share options outstanding, which are generally exercisable in increments of either one-fourth or one-third per year beginning one year from the date of grant. Share options generally expire seven to ten years from the date of grant. The total intrinsic value for options exercised was \$8.6 million, \$3.0 million and \$7.4 million in 2021, 2020 and 2019, respectively.

	Shares	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
Outstanding as of August 28, 2020	2,109	\$ 29.45	6.95	\$ 7,225
Granted	250	\$ 26.99		
Exercised	(434)	\$ 26.09		
Forfeited and cancelled	(36)	\$ 28.98		
Outstanding as of August 27, 2021	<u>1,889</u>	\$ 29.91	6.33	\$ 33,602
Exercisable as of August 27, 2021	957	\$ 29.33	5.69	\$ 17,572

Share option activity and assumptions were as follows:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Share options granted	250	963	356
Weighted average grant-date fair value per share	\$ 13.30	\$ 11.46	\$ 10.16
Average expected term in years	6.25	6.25	6.25
Weighted-average expected volatility	52.07%	49.18%	42.47%
Weighted-average risk-free interest rate	0.49%	1.32%	2.51%
Expected dividend yield	—	—	—

The fair value of share options is estimated on the date of grant using the Black-Scholes option pricing model. The expected volatility is based on the historical volatilities of the common stock of comparable publicly traded companies. The expected term of options granted represents the weighted average period of time that options granted are expected to be outstanding. We apply the simplified approach in which the expected term is the mid-point between the vesting date and the expiration date. The risk-free interest rate is based on the average U.S. Treasury yield curve at the end of the quarter in which the option was granted.

As of August 27, 2021, total aggregate unrecognized compensation costs for unvested options was \$6.4 million, which was expected to be recognized over a weighted average period of 1.6 years.

In March 2018, we granted two performance-based options that contained a stock market index as a benchmark for performance ("Market-Based Options"). Share-based compensation expense for these options is recognized over the requisite service period by tranche. The exercisability of Market-Based Options will depend upon the 30-trading day rolling average closing price of our ordinary shares. If the target price is not achieved by the end of 4th or 7th anniversary of the respective grant date, the options will expire. The fair value of Market-Based Options was determined by using a Monte Carlo valuation model, using the following assumptions: expected term of 1.10-4.00 years, expected volatility of 46.29%, risk-free interest rate of 2.75% and no expected dividends. One of the Market-Based Options was cancelled in November 2019, resulting in an additional \$2.0 million share-based compensation expense recorded in the first quarter of 2020. In August 2020, we modified the terms of the remaining Market-Based Option to remove one of the service conditions to allow the continuation of vesting of the unvested options subject to the remaining service condition. The modification resulted in an updated fair value using the Monte Carlo valuation model, with the following assumptions: expected volatility of 56.07% and risk-free interest rate of 0.34%. The modification of this Market-Based Option, as well as a time-based option also granted in March 2018, resulted in the reversal of \$2.3 million share-based compensation expense in the fourth quarter of 2020.

## Employee Share Purchase Plan

The SMART Global Holdings, Inc. Employee Share Purchase Plan has been offered to substantially all employees since April 2018 and generally permits eligible employees to purchase our ordinary shares through payroll deductions of up to 15% of their eligible compensation, subject to certain limitations. The purchase price of the shares under the ESPP equals 85% of the lower of the fair market value of our ordinary shares on either the first or last day of each offering period, which is generally six months. Compensation expense is calculated as of the beginning of the offering period as the fair value of the employees' purchase rights utilizing the Black-Scholes option valuation model and is recognized over the offering period. Under the ESPP, employees purchased 0.2 million ordinary shares for \$3.6 million in 2021, 0.2 million shares for \$3.0 million in 2020 and 0.1 million shares for \$2.3 million in 2019.



## Share-Based Compensation Expense

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Share-based compensation expense by caption:			
Cost of sales	\$ 4,593	\$ 3,022	\$ 2,485
Research and development	4,429	3,069	2,654
Selling, general and administrative	24,855	12,625	13,060
	<u>\$ 33,877</u>	<u>\$ 18,716</u>	<u>\$ 18,199</u>

Income tax benefits related to the tax deductions for share-based awards are recognized only upon the settlement of the related share-based awards. Share-based compensation expense in 2021, 2020 and 2019 reflects de minimis income tax benefits, which is consistent with our treatment of income or loss from our U.S. operations.

## Employee Savings and Retirement Plan

We have a 401(k) retirement plan under which U.S. employees may contribute up to 60% of their eligible pay, subject to Internal Revenue Service annual contribution limits, to various savings alternatives, none of which include direct investment in the Company's shares. We may make matching contributions, which vest immediately, at our discretion. Contribution expense for the 401(k) plan was \$3.4 million, \$2.3 million and \$2.0 million in 2021, 2020 and 2019, respectively.

## Revenue and Customer Contract Balances

We disaggregate revenue by segment and geography and by product and service revenue. See "Segment and Other Information."

### Net Sales and Gross Billings

Net sales by products and services and gross amounts billed for services, including those services in which we act as an agent for our customers, were as follows:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Net sales:			
Products	\$ 1,465,765	\$ 1,090,173	\$ 1,169,472
Services	35,377	32,204	42,527
	<u>\$ 1,501,142</u>	<u>\$ 1,122,377</u>	<u>\$ 1,211,999</u>
Gross billings in connection with services:			
Services	\$ 35,377	\$ 32,204	\$ 42,527
Cost of materials <sup>(1)</sup>	751,985	604,698	946,303
	<u>\$ 787,362</u>	<u>\$ 636,902</u>	<u>\$ 988,830</u>

- (1) Included in gross billings in connection with services are amounts billed to customers for the cost of materials procured in an agent capacity in connection with our procurement, logistics, inventory management, temporary warehousing, kitting and packaging services. While we take title to inventory under such arrangements, control of such inventory does not transfer to us as we do not, at any point, have the ability to direct the use, and thereby obtain the benefits of, the inventory.

## Customer Contract Balances

As of	August 27, 2021	August 28, 2020
Contract assets	\$ 4,247	\$ 5,068
Contract liabilities:		
Deferred revenue	\$ 19,271	\$ 20,124
Customer advances	15,835	3,917
	\$ 35,106	\$ 24,041

- (1) Contract assets are included in other current assets.
- (2) Contract liabilities are included in other current liabilities and noncurrent liabilities based on the timing of when our customer is expected to take control of the asset or receive the benefit of the service.

Contract assets represent amounts recognized as revenue for which we do not have the unconditional right to consideration. Contract assets as of August 27, 2021 related to amounts expected to be invoiced during the next 12 months. Contract assets of \$5.1 million as of August 28, 2020 were invoiced during 2021.

Deferred revenue related to amounts received from customers in advance of satisfying performance obligations. As of August 27, 2021, we expect to recognize revenue of \$14.1 million of the balance of \$19.3 million in the next 12 months, and the remaining amount thereafter. In 2021, we recognized revenue of \$17.3 million from satisfying performance obligations related to amounts included in deferred revenue as of August 28, 2020. Customer advances represent amounts received from customers for advance payments to secure product and services within the next 12 months.

As of August 27, 2021, other current liabilities included \$24.9 million for estimates of consideration payable to customers, including estimates for pricing adjustments and returns.

## Other Operating (Income) Expense

In the fourth quarter of 2021, we initiated plans that included workforce reductions and the elimination of certain projects in our Intelligent Platforms Solutions segment. In connection therewith, we recorded restructure charges of \$2.1 million, primarily for employee severance costs and other benefits. We do not expect additional costs to be incurred in connection with these restructure actions and, as of August 27, 2021, \$0.5 million remained unpaid.

In the fourth quarter of 2020, we initiated plans to cease manufacturing and selling our battery product line. In connection therewith, we recorded restructure charges in our Memory Solutions segment of \$3.5 million, including \$2.7 million of asset impairment, \$0.4 million of receivables for value-added taxes and \$0.4 million for contract termination costs. We do not expect additional costs to be incurred in connection with these restructure actions and, as of August 27, 2021, no amounts remained outstanding or unpaid.

## Other Non-operating (Income) Expense

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Foreign currency (gains) losses	\$ 719	\$ 3,408	\$ 3,148
Loss from remeasurement of Capped Calls	—	7,719	—
Loss on extinguishment of debt	—	6,822	—
Other	(1,094)	(979)	(987)
	\$ (375)	\$ 16,970	\$ 2,161

Foreign currency (gains) and losses relate primarily to our Brazil operating subsidiaries.

The loss from remeasurement of our Capped Calls resulted from the reclassification of the Capped Calls from a noncurrent derivative asset to additional paid in capital in an amount equal to their fair value as of March 30, 2020. See "Equity."

In February 2020, we used \$208.7 million from the net proceeds from the offering of the 2026 Notes to repay in full our then-outstanding term loans under our Amended Credit Agreement, including the payment of accrued interest, premiums, related fees and expenses. Related unamortized debt discounts and issuance costs of \$4.6 million were charged to operations in connection with the extinguishment. As a result, we recognized a loss on the extinguishment of debt of \$6.6 million. In the third quarter of 2020, we restructured our Amendment Credit Agreement and recognized debt extinguishment losses of \$0.2 million.

## Income Taxes

Our income tax provision (benefit) consisted of the following:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Income (loss) before income taxes:			
U.S.	\$ (28,326)	\$ (13,120)	\$ 4,279
Foreign	66,298	22,480	61,925
	<u>\$ 37,972</u>	<u>\$ 9,360</u>	<u>\$ 66,204</u>
Income tax provision (benefit):			
Current:			
Federal	\$ —	\$ —	\$ (163)
State	623	143	120
Foreign	18,022	12,164	15,633
	<u>18,645</u>	<u>12,307</u>	<u>15,590</u>
Deferred:			
Federal	(13)	258	(1,445)
State	3	37	229
Foreign	(3,169)	(2,099)	498
	<u>(3,179)</u>	<u>(1,804)</u>	<u>(718)</u>
	<u>\$ 15,466</u>	<u>\$ 10,503</u>	<u>\$ 14,872</u>

In applying the statutory tax rate in the effective income tax rate reconciliation, we used the U.S. statutory tax rate, rather than the Cayman Islands zero percent tax rate. The table below reconciles our tax provision (benefit) based on the U.S. federal statutory rate to our effective rate:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Statutory tax rate	21.0%	21.0%	21.0%
Foreign income taxes at different rates	19.9%	58.5%	1.3%
State income tax, net of federal benefit	4.2%	3.5%	3.6%
Tax on uncertain tax positions	0.1%	0.6%	0.1%
Change in valuation allowance	26.9%	22.4%	(3.0)%
Non-deductible expenses (non-taxable income)	(5.7)%	5.1%	(0.8)%
Brazil financial credit incentive	(26.9)%	—	—
Other	1.1%	1.1%	0.3%
Effective income tax rate	<u>40.6%</u>	<u>112.2%</u>	<u>22.5%</u>

Deferred income taxes reflect the net tax effects of temporary differences between the bases of assets and liabilities for financial reporting and income tax purposes as well as carryforwards. Net deferred tax assets are included in other noncurrent assets and consisted of the following:

As of	August 27, 2021	August 28, 2020
Deferred tax assets:		
Accruals and allowances	\$ 22,629	\$ 6,316
Share-based compensation	8,581	6,284
Research and other tax credit carryforwards	8,971	7,155
Property and equipment	—	244
Operating lease liability	7,721	4,473
Tax amortizable goodwill	7,086	—
Net operating loss carryforwards	29,834	31,920
Gross deferred tax assets	84,822	56,392
Less valuation allowance	(49,154)	(38,921)
Deferred tax assets, net of valuation allowance	35,668	17,471
Deferred tax liabilities:		
Right-of-use assets	(7,280)	(4,199)
Property and equipment	(14,078)	—
Intangible assets	(9,643)	(10,117)
Deferred tax liabilities	(31,001)	(14,316)
Net deferred tax assets	\$ 4,667	\$ 3,155

As of August 27, 2021, we had U.S. federal and state net operating loss carryforwards of \$120.1 million and \$55.0 million, respectively. Federal net operating loss carryforwards of \$107.9 million will expire in 2026 through 2038, if not utilized, and the remaining \$12.2 million is indefinite lived. The state net operating loss carryforwards will expire in 2023 through 2039, both in varying amounts. In addition, we have U.S. federal and state tax credit carryforwards of \$7.3 million and \$0.9 million, respectively. Federal and state carryforwards prior to 2018 are subject to an annual limitation, under the provisions of Section 382 of the Internal Revenue Code of 1986. Section 382 provides an annual limitation on net operating loss and credit carryforwards following an ownership change. Any unused annual limitation is carried forward and added to the limitation in the subsequent year. We have foreign net operating loss carryforwards of \$16.2 million which will expire in 2022 through 2025.

Activity related to our deferred tax valuation allowance was as follows:

	Balance at Beginning of Period	Charged (Credited) to Operations	Charged to Other Accounts	Business Acquisitions	Balance at End of Period
Deferred tax valuation allowance:					
Year ended August 27, 2021	\$ 38,921	\$ 10,234	\$ —	\$ —	\$ 49,155
Year ended August 28, 2020	36,722	2,199	—	—	38,921
Year ended August 30, 2019	32,497	(3,415)	—	7,640	36,722

In connection with our acquisition of SMART EC in 2019, we recognized a deferred tax asset valuation allowance of \$7.6 million. See "Business Acquisitions – SMART EC."

Our valuation allowance on deferred tax assets primarily relates to our U.S. net operating loss carryforwards and tax credit carryforwards and Netherlands net operating loss carryforwards. The increase in valuation allowance of \$10.2 million is primarily attributable to the valuation allowance on deferred tax assets related to the LED Business subsequent to the date of acquisition. We intend to maintain a valuation allowance until sufficient positive evidence exists to support the realizations of such deferred tax assets.

Provisions have been made for deferred income taxes on undistributed earnings of foreign subsidiaries to the extent that dividend payments by such foreign subsidiaries are expected to result in additional tax liability. The undistributed foreign earnings would not be included in U.S. taxable income because the U.S. subsidiaries are not direct or indirect shareholders of these foreign subsidiaries. SGH, a Cayman Islands entity, is the indirect holding company for which the Cayman Islands do not assess income taxes. The foreign country withholding taxes on undistributed foreign earnings would have an insignificant impact on our consolidated results if it were to be distributed to SGH due to foreign tax laws and rulings.

Effective February 1, 2011, SMART Brazil began to participate in PADIS. This program is specifically designed to promote the development of the local semiconductor industry. The Brazilian government has approved multiple applications for different products by SMART Brazil for certain beneficial tax treatment under the PADIS incentive. This beneficial tax treatment includes a reduction in the Brazil statutory income tax rate from 34% to 9% on taxable income for the Brazilian semiconductor operations of SMART Brazil. We have operations in Malaysia, where we have tax incentive arrangements for our pioneer status activities and our global supply chain business. The statutory tax rate for Malaysia is 24%. These arrangements are scheduled to expire in August 2028 and are subject to certain conditions, for which we have complied in 2021, 2020 and 2019. The effect of these tax incentive arrangements reduced our income tax provision, as compared to the statutory rates of Malaysia and Brazil, by \$15.6 million (benefiting our diluted earnings per share by \$0.65) in 2021, \$13.5 million (\$0.56 per diluted share) in 2020 and \$16.3 million (\$0.70 per diluted share) in 2019.

Below is a reconciliation of the beginning and ending amount of our unrecognized tax benefits:

<b>Year ended</b>	<b>August 27, 2021</b>	<b>August 28, 2020</b>
Beginning unrecognized tax benefits	\$ 16,514	\$ 15,037
Increases related to prior year tax provisions	—	67
Decreases related to prior year tax provisions	(397)	—
Increases related to current year tax provisions	1,337	1,410
Ending unrecognized tax benefits	<u>\$ 17,454</u>	<u>\$ 16,514</u>

As of August 27, 2021 and August 28, 2020, the total amount of unrecognized tax benefits that would affect our effective tax rate, if recognized, was \$1.8 million and \$1.7 million, respectively. Amounts accrued for interest and penalties related to uncertain tax positions were not material for any period presented. The resolution of tax audits or expiration of statute of limitations could also reduce our unrecognized tax benefits. Although the timing of final resolution is uncertain, the estimated potential reduction in our unrecognized tax benefits in the next 12 months would not be material.

We and our subsidiaries file income tax returns with the U.S. federal government, various U.S. states and various foreign jurisdictions throughout the world. We regularly engage in discussions and negotiations with tax authorities regarding tax matters, including transfer pricing, and we continue to defend any and all such claims presented. Our U.S. federal and state tax returns remain open to examination for 2005 through 2020. In addition, tax returns that remain open to examination in non-U.S. subsidiaries, including Malaysia, Brazil, Luxembourg, United Kingdom, Hong Kong and China vary by country. We believe that adequate amounts of taxes and related interest and penalties have been provided, and any adjustments as a result of examinations are not expected to materially adversely affect our business, results of operations or financial condition.

## Earnings Per Share

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Net income (loss) attributable to SGH – Basic and Diluted	\$ 21,310	\$ (1,143)	\$ 51,332
Weighted-average shares outstanding – Basic	24,279	23,994	22,959
Dilutive effect of equity plans and convertible notes	1,513	—	509
Weighted-average shares outstanding – Diluted	25,792	23,994	23,468
Earnings (loss) per share:			
Basic	\$ 0.88	\$ (0.05)	\$ 2.24
Diluted	\$ 0.83	\$ (0.05)	\$ 2.19

Below are potentially dilutive shares, as of the end of the periods shown, that were not included in the computation of diluted earnings per share because to do so would have been antidilutive:

As of	August 27, 2021	August 28, 2020	August 30, 2019
Equity plans	1,481	1,333	1,549
Convertible notes	—	6,156	—
	1,481	7,489	1,549

We have the option to pay cash, issue shares, or any combination thereof for the aggregate amount due upon any conversion of our 2026 Notes. It is our intent to settle the principal amount of the 2026 Notes in cash upon any conversion. As a result, only the amounts payable in excess of the principal amounts upon conversion of the 2026 Notes are considered in diluted earnings per share under the treasury stock method. As a result, the 2026 Notes would be dilutive when the average share price of the Company's ordinary shares for a reporting period exceeds the conversion price of the 2026 Notes of \$40.61 per share. See "Debt – Convertible Senior Notes."

## Segment and Other Information

Segment information presented below is consistent with how our chief operating decision maker evaluates operating results to make decisions about allocating resources and assessing performance.

In the fourth quarter of 2021, we reorganized SGH into three business units: Memory Solutions, Intelligent Platforms Solutions and LED Solutions. Two of our previous segments, specialty memory products and Brazil products, have been combined to become Memory Solutions. Intelligent Platform Solutions was formerly referred to as specialty compute and storage solutions. All prior year information in the tables below has been revised to reflect the change to our three reportable segments.

- **Memory Solutions:** Our Memory Solutions group provides high performance and reliable memory solutions through the design, development and advanced packaging of leading-edge to extended lifecycle products. These specialty products are tailored to meet customer-specific requirements across networking and communications, enterprise storage, computing, including desktop, notebook and server applications, smartphones and other vertical markets. These products are marketed to OEMs and to commercial and government customers. The Memory Solutions group also offers SMART Supply Chain Services, which provides customized, integrated supply chain services to enable our customers to better manage supply chain planning and execution, reduce costs and increase productivity.
- **Intelligent Platform Solutions ("IPS"):** Our IPS group consists of Penguin Computing and Penguin Edge. Penguin Computing offers specialized platform solutions for high-performance computing, artificial intelligence, machine learning and advanced modeling for technology research. We provide these leading-edge solutions to customers in the government, hyper-scale, energy, financial services and education markets. Penguin Edge encompasses the operations of SMART EC and SMART Wireless and offers solutions for embedded and wireless applications, specializing in high-reliability

products for a wide range of customers in government, telecommunications, health care, smart city, network edge and industrial applications.

- **LED Solutions:** Our LED Solutions group offers a broad portfolio of application-optimized LEDs focused on improving on lumen density, intensity, efficacy, optical control and reliability. Backed by expert design assistance and superior sales support, our LED products enable our customers to develop and market LED-based products for lighting, video screens and specialty lighting applications. Our LED Solutions is comprised of the LED business we acquired from Cree, Inc. on March 1, 2021.

Segments are determined based on sources of revenue, types of customers and operating performance. There are no differences between the accounting policies for our segment reporting and our consolidated results of operations. Operating expenses directly associated with the activities of a specific segment are charged to that segment. Certain other indirect operating income and expenses are generally allocated to segments based on their respective percentage of net sales. We do not allocate interest, other non-operating (income) expense or taxes to segments.

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
<b>Net sales:</b>			
Memory Solutions	\$ 931,818	\$ 857,237	\$ 995,441
Intelligent Platform Solutions	344,757	265,140	216,558
LED Solutions	224,567	—	—
	<u>\$ 1,501,142</u>	<u>\$ 1,122,377</u>	<u>\$ 1,211,999</u>
<b>Segment operating income:</b>			
Memory Solutions	\$ 91,737	\$ 71,867	\$ 109,314
Intelligent Platform Solutions	32,931	12,362	3,579
LED Solutions	36,126	—	—
Total segment operating income	<u>160,794</u>	<u>84,229</u>	<u>112,893</u>
<b>Unallocated:</b>			
Share-based compensation	(33,877)	(18,716)	(18,199)
Change in fair value of contingent consideration	(32,400)	—	2,700
Amortization of intangible assets	(20,255)	(13,654)	(5,614)
Flow through of inventory step up	(7,090)	—	—
Restructure and integration expense	(2,054)	(3,487)	—
Other	(9,921)	(7,042)	(2,699)
	<u>(105,597)</u>	<u>(42,899)</u>	<u>(23,812)</u>
Consolidated operating income	<u>\$ 55,197</u>	<u>\$ 41,330</u>	<u>\$ 89,081</u>

Depreciation included in segment operating income was as follows:

Year ended	August 27, 2021	August 28, 2020	August 30, 2019
Memory Solutions	\$ 19,547	\$ 19,118	\$ 21,132
Intelligent Platform Solutions	3,275	3,659	2,461
LED Solutions	6,034	—	—
	<u>\$ 28,856</u>	<u>\$ 22,777</u>	<u>\$ 23,593</u>

## Concentrations

Our concentrations of credit risk consists principally of cash and cash equivalents and accounts receivable. Our revenues and related accounts receivable reflect a concentration of activity with certain customers. We generally do not require collateral or other security to support accounts receivable. We perform periodic credit evaluations of our customers to minimize collection risk on accounts receivable and maintain allowances for potentially uncollectible accounts.



A significant portion of our net sales is concentrated with a select number of customers. In 2021, 2020 and 2019, sales to our ten largest customers were 65%, 66% and 73%, respectively, of total net sales. As of August 27, 2021, three customers accounted for 16%, 10% and 10%, respectively, of accounts receivable.

Net sales to a number of customers exceed 10% of our total net sales in the past three years. Net sales to a Memory Solutions customer were 12%, 17% and 18% of total net sales in 2021, 2020 and 2019, respectively. Net sales to an IPS customer were 10% of total net sales in 2021. Additionally, net sales to another Memory Solutions customer were 11% of total net sales in 2020; and net sales to two additional Memory Solutions customers were 13% and 11% of total net sales in 2019. No other customers accounted for more than 10% of our total net sales in 2021, 2020 or 2019.

We rely on four suppliers for a significant portion of our raw materials. Purchases from these suppliers in 2021, 2020 and 2019 were \$1.3 billion, \$1.0 billion and \$1.2 billion, respectively. At August 27, 2021 and August 28, 2020, accounts payable and accrued expenses included \$190.2 million and \$139.5 million, respectively, for amounts owed to these suppliers.

## Geographic Information

Net sales by geographic area, based on customer ship-to location, were as follows:

<b>Year ended</b>	<b>August 27, 2021</b>	<b>August 28, 2020</b>	<b>August 30, 2019</b>
United States	\$ 601,728	\$ 477,975	\$ 383,316
Brazil	447,249	390,021	536,510
China	213,989	90,705	129,911
Europe	84,216	37,758	42,497
Other	153,960	125,918	119,765
	<u>\$ 1,501,142</u>	<u>\$ 1,122,377</u>	<u>\$ 1,211,999</u>

Long-lived assets by geographic area, including property and equipment and right-of-use assets, were as follows:

<b>As of</b>	<b>August 27, 2021</b>	<b>August 28, 2020</b>
Brazil	\$ 63,858	\$ 37,601
China	61,405	—
United States	56,746	28,775
Malaysia	11,329	10,318
Other	3,797	3,024
	<u>\$ 197,135</u>	<u>\$ 79,718</u>

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of SMART Global Holdings, Inc.

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of SMART Global Holdings, Inc. and subsidiaries (the "Company") as of August 27, 2021 and August 28, 2020, the related consolidated statements of operations, comprehensive income (loss), shareholders' equity, and cash flows for each of the three years in the period ended August 27, 2021, and the related notes, (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 August 27, 2021 and August 28, 2020, and the results of its operations and its cash flows for each of the three years in the period ended August 27, 2021, in conformity with accounting principles generally accepted in the United States of America.

We have also 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 August 27, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated October 25, 2021, expressed an unqualified opinion on the Company's internal control over financial reporting.

### Change in Accounting Principle

As discussed in the notes to the financial statements, the Company has changed its method of accounting for leases in the year ended August 28, 2020 due to the adoption of Accounting Standards Update No. 2016-02, *Leases (Topic 842)*, using the modified retrospective approach.

### 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 Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

### **Business Acquisitions — Refer to the notes to the financial statements**

#### *Critical Audit Matter Description*

On March 1, 2021, the Company acquired certain net assets of the LED business of Cree, Inc. ("Cree") for \$225.5 million, which includes an earn-out payment of up to \$125 million based on the revenue and gross profit performance of the LED business. The Company allocated the fair value of the purchase consideration to the tangible and intangible assets acquired and liabilities

assumed based on their estimated fair values. The Company estimated the fair value of identifiable intangible assets to be \$64.5 million, including \$49.8 million related to developed technology. The estimated fair value of the contingent consideration liability on the date of the acquisition was \$28.1 million.

The contingent consideration liability is revalued each quarter to fair value. During the year ended August 27, 2021, the Company adjusted the fair value of the contingent consideration liability to the fair value as of year end of \$60.5 million.

There was a high degree of auditor judgment and subjectivity in applying audit procedures relating to the fair value measurement of intangible assets acquired, specifically the developed technology, and the fair value measurement of contingent consideration liability due to the significant amount of judgment by management when developing its estimates. Significant audit effort was required in performing procedures and evaluating the significant assumptions relating to the estimates and the audit effort involved the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained from these procedures.

#### *How the Critical Audit Matter Was Addressed in the Audit*

Our audit procedures related to management's estimates of the fair value of the developed technology intangible assets and the contingent consideration liability included the following, among others:

- We tested the effectiveness of internal controls over business combinations including (i) the controls over the valuation of the acquired intangible assets and contingent consideration liability and (ii) controls over the forecasted financial information including assumptions of projected revenue and gross margin and discount rates selected by management.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodologies and (2) discount rates, including testing the underlying source information, testing the mathematical accuracy of the calculations, and developing a range of independent estimates and comparing those to the discount rates selected by management;
- We evaluated the reasonableness of management's forecasts of revenue growth rates and gross margin by comparing to:
  - Historical net sales for the LED business.
  - Underlying inputs to the estimates including but not limited to backlog, customer purchase order information, and contractual terms with customers.
  - Analyst reports for the Company and the LED business, as well as industry reports, and comparison of historical rates to companies in the peer group.
  - Inquiries with appropriate individuals within the Company's operations, engineering and finance departments regarding the forecasts of revenue growth rates and gross margin.
- We evaluated whether the audit evidence obtained through these procedures was consistent with evidence obtained in other areas of the audit.

/s/ DELOITTE & TOUCHE LLP  
San Jose, California  
October 25, 2021

We have served as the Company's auditor since 2014.

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

None.

## Item 9A. Controls and Procedures

### Evaluation of Disclosure Controls and Procedures

An evaluation was performed under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Based upon that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, concluded that, as of August 27, 2021, our disclosure controls and procedures were effective to ensure the information required to be disclosed by an issuer in the reports that it files or submits under the Securities Exchange Act of 1934 is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures, including the possibility of human error and the circumvention or overriding of the controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives.

### Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f). Internal control over financial reporting includes maintaining records that, in reasonable detail, accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for the preparation of consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; providing reasonable assurance that receipts and expenditures of company assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of company assets that could have a material effect on the consolidated financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our consolidated financial statements would be prevented or detected.

In March 2021, we completed the acquisition of Cree Inc.'s LED business. For further discussion of this acquisition, refer to "Item 8. Financial Statements and Supplementary Data – Notes to Consolidated Financial Statements – Business Acquisitions – LED Business." The SEC permits companies to exclude acquisitions from their assessment of internal control over financial reporting during the first year of an acquisition, and our management has elected to exclude the LED Business from its assessment as of August 27, 2021. The LED Business (excluding acquired intangible assets) constituted 22% and 15% of our consolidated total assets and consolidated net sales, respectively, as of and for the year ended August 27, 2021.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that our internal control over financial reporting was effective as of August 27, 2021. The effectiveness of our internal control over financial reporting as of August 27, 2021 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included in this Annual Report on Form 10-K.

## Changes in Internal Control Over Financial Reporting

**Remediation:** Following the identification of a material weakness in prior periods as previously disclosed related to non-timely accounting for import taxes and correctness of import tax codes on legacy products (being those products introduced or commencing importation prior to 2015), management commenced the development and execution of a remediation plan. The following remediation steps were completed:

- Engaged an independent technical consultant to review the import tax codes assigned to our legacy products (being those products introduced or commencing importation prior to the process change adopted in 2015). The review has been completed, which identified an incorrect import tax code that was corrected in the second quarter of fiscal 2021. The underreported import tax and related interest has been paid, and was not considered material.
- Strengthened the controls and procedures for the identification, review and approval of import tax codes.
- Enhanced training for responsible personnel involved in determining import tax codes.

As of the date of this Annual Report on Form 10-K, we have remediated such material weakness.

Other than the remediation actions described above, during the fourth quarter of fiscal 2021, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of SMART Global Holdings, Inc.

### Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of SMART Global Holdings, Inc. and subsidiaries (the "Company") as of August 27, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* 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 August 27, 2021, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended August 27, 2021, of the Company and our report dated October 25, 2021, expressed an unqualified opinion on those financial statements and included an explanatory paragraph relating to the Company's adoption of Accounting Standards Update No. 2016-02, *Leases (Topic 842)*.

As described in Management's Report on Internal Control Over Financial Reporting, management excluded from its assessment the internal control over financial reporting at the LED business acquired from Cree Inc. (LED business), which was acquired on March 1, 2021, and whose financial statements (excluding acquired intangible assets) constitute 22% of assets and 15% of net sales of the consolidated financial statement amounts as of and for the year ended August 27, 2021. Accordingly, our audit did not include the internal control over financial reporting at the LED business.

### 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/ DELOITTE & TOUCHE LLP  
San Jose, California  
October 25, 2021

## **Item 9B. Other Information**

None.

## **Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections**

Not applicable.



## **PART III**

The information required by Items 10, 11, 12, 13 and 14 is incorporated herein by reference to our 2021 Proxy Statement for our next Annual General Meeting to be filed with the SEC within 120 days after August 27, 2021.

### **Item 10. Directors, Executive Officers and Corporate Governance**

### **Item 11. Executive Compensation**

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

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

### **Item 14. Principal Accountant Fees and Services**

## **PART IV**

### **Item 15. Exhibits and Financial Statement Schedules**

(a) The following documents are filed as part of this report:

1. Financial Statements. See "Item 8. Financial Statements and Supplementary Data."
2. Certain Financial Statement Schedules have been omitted since they are either not required, not applicable or the information is otherwise included.
3. Exhibits. See "Index to Exhibits" within Item 15 below.

## INDEX TO EXHIBITS

Exhibit No.	Description	Filed Herewith	Incorporated by Reference			Filing Date
			Form	File No.	Exhibit	
2.1	Agreement and Plan of Merger, dated as of June 8, 2018, by and among SMART Global Holdings, Inc., Glacier Acquisition Sub, Inc., Penguin Computing, Inc. and Fortis Advisors LLC		8-K	001-38102	2.1	06/11/2018
2.2	Stock Purchase Agreement, dated as of July 8, 2019, by and among Artesyn Embedded Computing, Inc., Pontus Intermediate Holdings II, LLC, Pontus Holdings, LLC and SMART Global Holdings, Inc.		8-K	001-38102	2.1	07/12/2019
2.3**	Asset Purchase Agreement dated October 18, 2020, between Cree, Inc., SMART Global Holdings, Inc. and CreeLED, Inc. (formerly known as Chili Acquisition, Inc.)		8-K	001-38102	2.2	03/03/2021
2.4**	Amendment to Asset Purchase Agreement dated March 1, 2021, between Cree, Inc., SMART Global Holdings, Inc. and CreeLED, Inc.		8-K	001-38102	2.2	03/03/2021
3.1	Second Amended and Restated Memorandum and Articles of Association of SMART Global Holdings, Inc.		10-Q	001-38102	3.1	03/31/2020
4.1	Description of Securities Registered Under Section 12 of the Exchange Act	X				
4.2	Indenture, dated as of February 11, 2020, between SMART Global Holdings, Inc. and US Bank National Association		8-K	001-38102	4.1	02/11/2020
4.3	Form of 2.25% Convertible Senior Notes due 2026 (included as Exhibit A to Exhibit 4.10)		8-K	001-38102	4.2	02/11/2020
10.1*	SMART Global Holdings, Inc. Amended and Restated 2017 Share Incentive Plan		10-Q	001-38102	10.1	06/29/2017
10.2*	Amendment to the SMART Global Holdings, Inc. Amended and Restated 2017 Share Incentive Plan		DEF 14A	001-38102	Exhibit A	12/14/2018
10.3*	Amendment to the SMART Global Holdings, Inc. Amended and Restated 2017 Share Incentive Plan		DEF 14A	001-38102	Exhibit A	12/21/2020
10.4*	SMART Global Holdings, Inc. 2021 Inducement Plan (effective as of February 15, 2021)		8-K	001-38102	99.1	01/22/2021
10.5*	Form of Restricted Share Unit Award Agreement Under the SMART Global Holdings, Inc. 2021 Inducement Plan		10-Q	001-38102	10.5	04/06/2021
10.6*	SMART Global Holdings, Inc. Employee Share Purchase Plan		S-8	333-249619	99.3	10/22/2020
10.7*	Offer Letter by and between the Registrant and Mark Adams, dated August 12, 2020		8-K	001-38102	10.1	08/13/2020
10.8*	Amended and Restated Employment Agreement between SMART Modular Technologies, Inc. and Jack Pacheco, dated December 19, 2017		10-Q	001-38102	10.2	03/22/2018
10.9*	Offer Letter by and between SMART Global Holdings, Inc. and Ken Rizvi, dated January 31, 2021		8-K	001-38102	10.1	02/02/2021
10.10*	Form of Indemnification Agreement entered into with each of the Registrant's officers and directors		S-1/A	333-217539	10.1	05/11/2017
10.11	Third Amended and Restated Credit Agreement, dated as of March 6, 2020, among SMART Modular Technologies (Global Memory Holdings), Inc., SMART Modular Technologies (Global), Inc., SMART Modular Technologies, Inc., the Lender Parties thereto and Barclays Bank, PLC, as Administrative Agent		8-K	001-38102	10.1	03/11/2020
10.12	Master Guarantee Agreement, dated as of August 26, 2011, among SMART Modular Technologies (Global Memory Holdings), Inc., SMART Modular Technologies (Global), Inc., SMART Modular Technologies, Inc., the subsidiary guarantors identified therein and JPMorgan Chase Bank, N.A. as Administrative Agent		S-1	333-217539	10.11	04/28/2017

10.13	Collateral Agreement, dated as of August 26, 2011, among SMART Modular Technologies, Inc., the other grantors party thereto and JPMorgan Chase Bank, N.A. as Administrative Agent	S-1	333-217539	10.12	04/28/2017
10.14	Form of Confirmation for the Base Capped Call Transactions	8-K	001-38102	99.1	02/11/2020
10.15	Form of Confirmation for the Additional Capped Call Transactions	8-K	001-38102	99.2	02/11/2020
10.16	Loan, Guaranty and Security Agreement dated as of December 23, 2020, among SMART Modular Technologies, Inc., SMART Embedded Computing, Inc., and Penguin Computing, Inc., as borrowers, the financial institutions party thereto as Lenders, and Bank of America, N.A. as the agent for the lenders	8-K	001-38102	10.1	12/29/2020
10.17	Promissory Note, dated March 1, 2021, made by SMART Global Holdings, Inc. in favor of CreeLED, Inc.	8-K	001-38102	10.1	03/03/2021
10.18	Form of Earnout Note	8-K	001-38102	10.2	03/03/2021
21.1	List of Subsidiaries of Registrant				X
23.1	Consent of Independent Registered Public Accounting Firm				X
24.1	Power of Attorney (contained in the signature page to this Annual Report on Form 10-K)				X
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				X
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				X
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				X
101.INS	Inline XBRL Instance Document – the instance document does not appear in the Interactive Data File because XBRL tags are embedded within the Inline XBRL document				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document				X
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document				X
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document				X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document				X
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)				X

\* Constitutes a management contract or compensatory plan or arrangement.

\*\* Portions of this exhibit have been omitted pursuant to Rule 601(b)(2) of Regulation S-K. The omitted information is not material and would likely cause competitive harm to the registrant if publicly disclosed.

## ITEM 16. Form 10-K Summary

Not applicable.

## 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.

Date: October 25, 2021

SMART Global Holdings, Inc.

By: /s/ Mark Adams

Mark Adams

President and Chief Executive Officer

By: /s/ Ken Rizvi

Ken Rizvi

Senior Vice President and Chief Financial  
Officer

## POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Mark Adams, Ken Rizvi and Anne Kuykendall, and each of them, as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

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 in the capacities and on the dates indicated.

<u>/s/ Mark Adams</u> Mark Adams	President and Chief Executive Officer and Director (Principal Executive Officer)	October 25, 2021
<u>/s/ Ken Rizvi</u> Ken Rizvi	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	October 25, 2021
<u>/s/ Ajay Shah</u> Ajay Shah	Chairman of the Board of Directors	October 25, 2021
<u>/s/ Randy Furr</u> Randy Furr	Director	October 25, 2021
<u>/s/ Penelope Herscher</u> Penelope Herscher	Director	October 25, 2021
<u>/s/ Bryan Ingram</u> Bryan Ingram	Director	October 25, 2021
<u>/s/ Sandeep Nayyar</u> Sandeep Nayyar	Director	October 25, 2021
<u>/s/ Mukesh Patel</u> Mukesh Patel	Director	October 25, 2021
<u>/s/ Maximiliane Straub</u> Maximiliane Straub	Director	October 25, 2021
<u>/s/ Jason White</u> Jason White	Director	October 25, 2021



## CORPORATE INFORMATION

As of December 1, 2021

### LEADERSHIP TEAM

**Mark Adams**

President and Chief Executive Officer

**Jack Pacheco**

Chief Operating Officer and President of SMART Modular Technologies

**Ken Rizvi**

Senior Vice President and Chief Financial Officer

**Claude Demby**

Senior Vice President and President, Cree-LED

**Bruce Goldberg**

Vice President and Chief of Staff

**Kiwan Kim**

Executive Vice President of Emerging Markets

**Anne Kuykendall**

Vice President and General Counsel

**Jean McDaniel**

Vice President of the Office of Transformation

**Thierry Pellegrino**

Senior Vice President and President, Intelligent Platform Solutions

**Valerie Sassani**

Vice President of Marketing and Communications

### BOARD OF DIRECTORS

**Ajay Shah**

Chairman of the Board

**Mark Adams**

Director, President and Chief Executive Officer

**Randy Furr**

Director

**Penelope Herscher**

Director

**Bryan Ingram**

Director

**Sandeep Nayyar**

Lead Independent Director

**Mukesh Patel**

Director

**Maximiliane Straub**

Director

**Jason White**

Director



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