CORPORATE SUSTAINABILITY REPORT 2019

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MR. AJAY SHAH
President and Chief Executive Officer

"The leadership of SMART is committed to developing and delivering high-quality products, fostering advanced technical expertise, streamlining time to market, and providing unparalleled customer service."

Over the years, **SMART** continues to attract and retain highly talented, exceptionally motivated team members that work to propel the company towards its goals and develop lifetime customers. Our current leadership team is charting a course for operational and technological excellence that will benefit customers, end users, and the entire **SMART** family.

SMART is committed to business practices that are as environmentally sustainable as they are beneficial to our stakeholders and the community. Our memory and embedded storage products help our customers achieve their sustainability goals. We have dramatically reduced the use of hazardous substances in our products and manufacturing processes. At the same time, we have developed technologies that improve performance, reduce power consumption and extend endurance in our products.

SMART's diverse global workforce is the heart of the company. We provide our employees a comfortable work environment, foster teamwork, and endeavour to ensure their health and safety. In turn, our employees actively give back to their communities. This report is a summary of **SMART**'s responsible and sustainable business policies and practices.

Through ethical work with partners, our people and products are making a positive impact on the planet.

Ajay Shah

President and Chief Executive Officer

SMART Global Holdings

INTRODUCTION

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Why Choose SMART?

Experience, Engineering, Quality, Product Solutions, and More

Find Out Why

SMART Global Holdings is a proven technology leader in the design, development and deployment of current and next-generation specialty high value memory, storage and compute products and solutions.

SECTOR	INDUSTRY	FOUNDED
Technology	Semiconductors	1988
ADDRESS		
Corporate Headquarters, Newark, CA 19870 Eureka Dr. Newark CA 94560		
PHONE & WEBSITE		
T : (+1)510-623-1231		
E : www.smartm.com		

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Longevity

- ☑ Ability to weather all market cycles
- ☑ 30+ years' experience in the memory business
- ☑ Long-term experience supporting all types of customers and applications
- ☑ Experienced management team

Long-Term Partnerships with Suppliers

- ☑ Superior buying power compared to other 3rd party module makers
- ☑ Long-term supplier relationships leverages pricing and component availability

Enduring Relations with Customers

- ☑ Steady, uninterrupted supply chain
- ☑ Able to provide long-term, consistent support through all market and technology cycles

Engineering

- ☑ Focus on leading-edge capabilities and preparation
- ☑ Focus on continuity-of-supply solutions
- ☑ Focus on legacy support

Experience

- ☑ In-depth knowledge and expertise of memory technologies
- ☑ Ability to identify and solve problems
- ☑ Long-term supplier of Enterprise Memory

Quality

- ☑ 100% focus on delivering high quality products
- ☑ Leading-edge manufacturing equipment and processes

Application & Product Solutions

- ☑ Wide variety of products targeted to support unique industry requirements and challenges
- ☑ Ruggedized products for high-temp applications and extreme environmental exposure

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SMART Profile

Our Vision
- A global electronic industry that creates sustainable value for workers, the environment and business.

Our Mission
- Members, suppliers and stakeholders collaborate to improve working and environmental conditions through leading standards and practices

SMART Global Holdings (SGH) is a global leader in specialty memory solutions, serving the electronics industry for over 25 years and holds a leading, international, market position, as measured by revenue, in specialty memory. Its strategic presence in the U.S., Europe, Asia and Latin America enables SMART to provide customized, integrated supply chain services assisting OEM customers in the management and execution of their procurement processes and asset management on a worldwide basis.

In our specialty memory solutions business, we focus on design and manufacture of application-specific 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 networking, communications, storage, industrial, medical and automotive industries. In this business, we offer an extensive portfolio of over 2,000 products, which includes all generations of DRAM, as well as embedded and removable Flash, enterprise memory and hybrid volatile and non-volatile memory solutions.

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In Brazil, SMART has established itself as a market leader as the largest in-country manufacturer of mobile memory products for smartphones, and the largest in-country manufacturer of memory components and modules for desktops, notebooks and servers. Close collaboration with customers while providing custom designs, extended life cycle solutions and proprietary supply chain services, creates significant customer engagements and loyalty.

Penguin Computing, a subsidiary of SMART Global Holdings, specializes in innovative Linux infrastructure, including Open Compute Project (OCP) and EIA-based high-performance computing (HPC) on-premises and in the cloud, AI, software-defined storage (SDS), and networking technologies, coupled with professional and managed services including sys-admin-as-a-service, storage-as-a-service, and hosting, as well as highly rated customer support.

Through Penguin Computing and SCSS, we expanded our serviceable markets into areas requiring specialized computing platforms in artificial intelligence, or AI, and machine learning (ML), advanced modelling and high performance computing serving a broad base of enterprise and government customers.

Customers rely on SMART as a strategic supplier offering extensive customer specific design capabilities and quality products with value added testing services, technical support, a global footprint and the ability to provide locally manufactured memory products in multiple geographies. SMART's global, diversified customer base of more than 250 customers includes some of the well-recognized names in the technology industry.

We also offer integrated supply chain services to enable our customers to manage supply chain planning and execution, which reduces costs and increases productivity. Our SMART Supply Chain Services (SSCS) delivers comprehensive, customized, and flexible supply chain and value-added services, such as programming and fulfillment in a secure and confidential environment for its customers.

The SSCS team averages over 10 years each of supply chain experience and over 1,000 years of combined professional expertise in logistics. With its know-how and tools, SSCS has become a leading qualified and cost-competitive supply chain provider across a span of industries, including those featured below.

With **SMART**'s global reach, our supply chain network and services range worldwide from its headquarters in California, to Brazil, Mexico, China, Malaysia, Taiwan, the Czech Republic, Hungary, and the UK. SMART Supply Chain Services observes the same environmental policies and guidelines as its parent, SMART Modular Technologies.

In 2019 with the recent acquisitions of Artesyn Embedded Computing and Inforce Computing, we now providing standard and custom products for over 35 years to a wide range of customers and this combination makes SMART Embedded Computing a leader in the design and manufacture of highly reliable embedded computing solutions offering an entire range of Industrial, Defense and Communication products covering system infrastructure to end user IoT application nodes.

SMART Embedded Computing's high-end advanced computing system solutions include application-ready platforms, enclosures, blades, edge servers and network accelerator cards. **SMART**'s low profile embedded computing modules include System-On-Modules (SOMs) and Single-Board-Computers (SBCs) for all forms of connected devices.

Specialty Memory
(High Mix)
- DRAM Modules
- Flash Products
- Persistent Memory
- Supply Chain Services

Brazil
(High Volume)
- DRAM Packaging/Modules
- Flash Packaging/Modules
- Mobile Memory Products
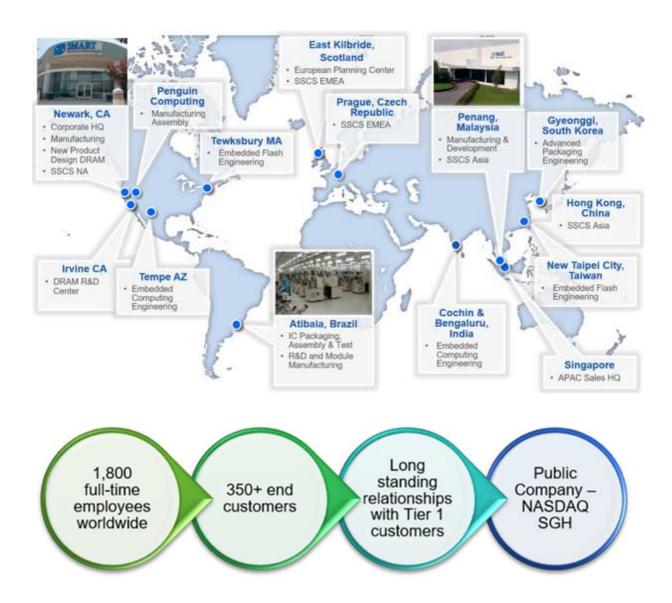- Battery and Other Products

Specialty Compute & Storage
- AI/Machine Learning Systems
- HPC/Commercial and Federal Systems
- Embedded Computing Platform
- System on Module/Single Board Computers

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SMART's presence in the U.S., Mexico, Europe, Asia, and Latin America enables it to provide its customers with proven expertise in international logistics, asset management and worldwide supply-chain management.

SMART Global Footprint

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Management System Compliance

SMART QEHS Management System defines the principles and elements by which **SMART** conducts its global business to protect its employees and stakeholders, the public, company property and the environment.

It provides the framework to develop, implement, monitor, review and continuously improve QEHS objectives, targets and performance standards to eliminate or minimize our exposure to risks. The QEHS Management System applies to all **SMART's** business locations, business units and functions, as well as all aspects of our global business processes.

SMART is committed to quality, customer satisfaction, and continuous improvement. The company is certified for ISO9001 (Quality), ISO14001 (Environment) and ISO45001 (Occupational Safety & Health) standards, which provide the framework for its management system.

Quality, Environmental, Health and Safety (QEHS) Policy

SMART Global Holdings will deliver quality products and services that satisfy applicable requirements and expectations through enhanced QEHS performance and continually improving the effectiveness of the QEHS management system. SMART's management is committed to :

- Involving all employees to prevent conditions that pose a threat to human health, safety or the environment in our processes and where possible implementing best practice strategies to comply with and exceed QEHS legal and other requirements to which SMART subscribes.

- Facilitating an environment where employee health and safety, and environment protection are core values on our journey toward reducing safety and ill health incidents.

- Identifying and eliminating hazards and reducing risks to as low as reasonably practicable to ensure safety of people and operational integrity is not compromised.

- Protecting the environment, including preventing pollution through waste minimization and emission reduction.

- Involving participation and consultation of employees and where they exist, employees' representatives on appropriate QEHS matters.

Ajay Shah, President and CEO

SMART continuously seeks to improve its management system and enhance performance. Internal audits are conducted periodically to ensure conformance to established policy and procedures. **SMART** also receives ad-hoc and planned periodic audits from certification bodies, regulatory bodies, as well as customers**,** in evaluating compliance with international standards, customer, legal, and other requirements.

Continual improvements are tracked through periodic management reviews. **SMART's** executive management conducts reviews of objectives, targets, and actual performance to ensure that its management system meets quality, environment, health, safety, labour and ethics standards.

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Responsible Business Alliance (RBA) Compliance

Our Mission
- To be an employer of choice within our industry and community

Our Goal
- We are committed to treat our employees and associates Fairly; we are committed to an Open door policy; we are committed to Zero tolerance for unethical behavior.

SMART has been a member of the Responsible Business Alliance (RBA) since 2012 and fully supports the vision and goal of the RBA. **SMART** strives to perform across a range of practices, including labour, health and safety, environmental practices, ethics, and management systems. **SMART** Penang has obtained the Gold Star Rating and awarded the "Factory of Choice Award"

In particular, **SMART**'s labour and ethics policy articulates its commitment in adhering to the requirements specified by the RBA, including freely chosen employment, child labour, reasonable working hours, fair wages and benefits, humane treatment, non-discrimination, freedom of association, business integrity, and privacy protection, all of which are important in creating and sustaining a positive and productive work environment. In line with these requirements, **SMART** conducts internal audits to ensure its processes and practices follow the RBA requirements as well as labour and ethics policy.

SMART joined RBA as a member to show its initiative in helping to improve labour, health and safety, environment practices, ethics, and management systems for those parties involved in the electronic supply chain. Through this initiative, **SMART** communicated the RBA requirements to its employees, customers and suppliers. **SMART** expect those parties to adhere to the Code of Conduct that **SMART** subscribes to in the design and manufacturing of products.

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Our RBA Principles:

Freedom of association	Harassment free workplace & No unfair discrimination	No Force Labor - Freely chosen employment	Compensation & benefit comply with applicable law
Education , Training & Development	Safe & Healthy working environment	Preserve the environment for future generation	Business partners to adopt similar policies & principles

Freedom of association	SMART employees openly communicate and share ideas and concerns regarding working conditions without fear of discrimination, reprisal, intimidation or harassment.
Harassment free workplace & No unfair discrimination	
No Force Labor	Freely chosen employment.
Compensation & benefit comply with applicable law	We spend a great deal of time ensuring people are compensated appropriately.
Education , Training & Development	We offer a broad range of choice and opportunities for continued professional growth to support our people through diverse range of development programs and training opportunities.
Safe & Healthy working environment	Identifying and eliminating hazards and reducing risks to as low as reasonably practicable to ensure safety of people and operational integrity is not compromised.
Preserve the environment for future generation	Protecting the environment, including preventing pollution through waste elimination and emission reduction.
Business partners to adopt similar policies & principles	Partners in Innovation.

PRODUCTS

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SMART Diversified Product Portfolio

SMART Modular Technologies is a leading international developer and manufacturer of memory modules and embedded/removable storage solutions for OEMs in today's fastest growing application markets around the world. **SMART**'s comprehensive lines of DRAM memory modules, removable flash embedded storage solutions and flash values series that satisfy a broad range of applications.

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DRAM Modules

Available in registered, unbuffered, and ECC configurations, SMART's DRAM memory modules use technologies from DDR4 to legacy FPM and EDO and are available in form factors that include standard height and very low profile DIMMs, SO-DIMMs, NVDIMMs and mini-DIMMs.

Removable Flash Storage

SMART designs and manufactures commercial and industrial grade removable flash memory products in a wide variety of form factors including CF Card, SD Card, microSD, 2.5" SATA, and Memory Key Drives that utilize Linear and USB technologies.

Embedded Flash Storage

SMART offers commercial and industrial grade embedded flash-based products, including M.2 SATA, mSATA, slim SATA, and eUSB form factors equipped with SATA II, SATA III and USB interfaces.
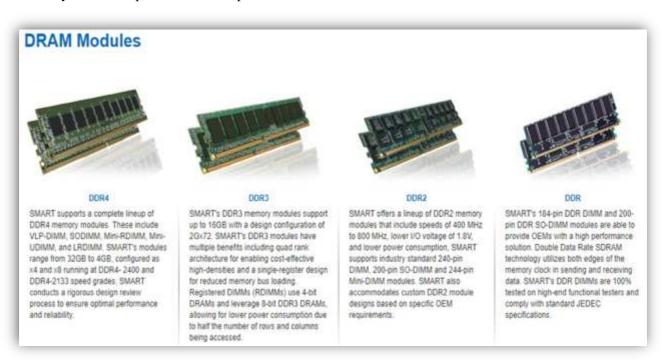
Flash Value Series

SMART supplies economic alternatives to our standard embedded flash drives in M.2 SATA, mSATA and Slim SATA form factors. These cost-effective choices to our standard products are all industry compliant and can be ordered and delivered within a minimal timeframe.

SMART has a long history of successfully partnering with customers to satisfy their specific design needs. With extensive industry and design expertise and global manufacturing capabilities, **SMART** offers a unique combination of advantages that can support customers' designs from conception to manufacturing through final testing and logistics. This blend of abilities allows **SMART** to efficiently and reliably customize products to meet particular customer need.

DRAM Modules

DDR4

SMART supports a complete lineup of DDR4 memory modules. These include VLP-DIMM, SODIMM, Mini-RDIMM, Mini-UDIMM, and LRDIMM. SMART's modules range from 32GB to 4GB, configured as x4 and x8 running at DDR4-2400 and DDR4-2133 speed grades. SMART conducts a rigorous design review process to ensure optimal performance and reliability.

DDR3

SMART's DDR3 memory modules support up to 16GB with a design configuration of 2Gx72. SMART's DDR3 modules have multiple benefits including quad rank architecture for enabling cost-effective high-densities and a single-register design for reduced memory bus loading. Registered DIMMs (RDIMMs) use 4-bit DRAMs and leverage 8-bit DDR3 DRAMs, allowing for lower power consumption due to half the number of rows and columns being accessed.

DDR2

SMART offers a lineup of DDR2 memory modules that include speeds of 400 MHz to 800 MHz, lower I/O voltage of 1.8V, and lower power consumption. SMART supports industry standard 240-pin DIMM, 200-pin SO-DIMM and 244-pin Mini-DIMM modules. SMART also accommodates custom DDR2 module designs based on specific OEM requirements.

DDR

SMART's 184-pin DDR DIMM and 200-pin DDR SO-DIMM modules are able to provide OEMs with a high performance solution. Double Data Rate SDRAM technology utilizes both edges of the memory clock in sending and receiving data. SMART's DDR DIMMs are 100% tested on high-end functional testers and comply with standard JEDEC specifications.

Removable Flash-Based Products

CF Card

Offering reliable high performance operation in an industry standard CompactFlash® form factor, SMART's CF Card products are suitable for the most demanding OEM applications. SMART's XL and XL+ CF Cards are designed to reduce field failures and unscheduled service maintenance.

SD Card

Incorporating onboard error detection & correction algorithms and static & dynamic wear leveling techniques, SMART's SD Card products insure years of reliable operation over a product's life.

microSD

SMART's commercial and industrial grade microSD data transfer rate accommodates data-intensive content of next generation mobile applications. microSDs include copyright protection mechanism that complies with SDMI security standards.

2.5" SATA SSD

SMART's commercial and industrial grade 2.5" SATA N200 SSD brings the advantages of non-volatile memory to embedded computing applications. It provides low-power, high reliability mass storage in a 2.5" form factor and can be used as a direct replacement for an HDD. The N200 is a triple level cell (TLC) drive.

Enterprise USB Memory Key

SMART's Enterprise USB Memory Keys provide enhanced reliability by incorporating on-board error detection and correction, and global wear leveling algorithms that provide reliable operation over the product life cycle.

Embedded Flash-Based Products

M.2 SATA

The M.2 SATA N200, X10, and XR+ solid state commercial and industrial grade SATA modules are designed to serve applications that require reliable internal storage yet demand a small footprint. M.2 modules can be used for storing and executing boot up code, operating systems, and also for data tables and general purpose storage. The N200 is triple level cell (TLC), while the X10 and XR+ are multi-level cell (MLC).

mSATA (MO-300A)

mSATA MO-300A N200, X10, and XL+ commercial and industrial grade modules easily integrate into a host system without any special BIOS modifications or additional device drivers thanks to their industry-standard SATA interface. SMART offers single level cell (SLC), multi-level cell (MLC) and TLC mSATA drives.

Slim SATA (MO-297)

The Slim SATA MO-297 N200, X10, and XL+ commercial and industrial grade are robust commercial and industrial grade small form factors (SFF) embedded, solid state drive SATA modules. The small form factor, low power consumption, and fast data throughput are major advantages of the Slim SATA module over traditional rotating hard disk drives (HDDs). The N200 is triple level cell (TLC), while the X10 and XL+ are multi-level cell (MLC).

eUSB Drive SLC

SMART's Embedded USB (eUSB) is a flash based drive designed to be used as a main boot and storage device for embedded systems. The eUSB's small form factor, lower power consumption and fast access times offer distinct technical advantages over more traditional mass storage devices.

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Flash-Based Products Value Series

M.2 MLC Value Series

M.2 SATA Value Series embedded solid state drives utilize the industry standard SATA-IO interface and ATA protocol along with Self-Monitoring Analysis and Reporting Technology (S.M.A.R.T.) feature. The Value Series provides economic, highly reliable mass storage in an M.2 PCIe form factor. SMART's M.2 SATA modules are offered in in two different lengths, 42mm and 80mm versions, densities up to 256GB. Applications include personal PCs, communications, embedded computing, POS, networking, servers and storage.

mSATA MLC Value Series

mSATA Value Series products meet the MO-300 standard form factor specifications and are available with MLC Flash in densities up to 64GB. The Value Series provides economic, highly reliable mass storage that is an excellent alternative to a hard disk drive. The mSATA Values Series product line is a SATA III solid state storage solution that offers excellent sequential read/write performance. It is suitable for embedded applications that require lower drive capacity and utilize the drive for boot up code and OS code storage. Applications include NAS/SAN storage, x86 server-storage appliances, cloud servers, telecom, industrial control, defense, gaming, and printers.

Slim SATA MLC Value Series

Slim SATA Value Series products meet the MO-297 standard form factor specifications and are available with MLC Flash options and are offered in densities up to 64GB. The Value Series provides economic, highly reliable mass storage and is an excellent alternative to a hard disk drive. The new Slim SATA Value Series SATA III offers sequential and random read/write performance in high capacity drives for transaction intensive applications. Applications include personal PCs, embedded computing, POS, networking, servers and storage.

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Brazil

In Brazil, SMART has established itself as a market leader as the largest in-country manufacturer of mobile memory products for smartphones and the largest in-country manufacturer of memory components and modules for desktops, notebooks and servers.

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SMART RUGGED develops ultra-rugged, reliable and secure memory that meets the needs of a wide variety of demanding applications found in the defense, aerospace, industrial automation, transportation, medical, energy, telecommunications and other industries. The company features technologies such as Parallel Array Technology and Secure Data Elimination Technology (SDET) and combines them with a comprehensive set of flash management features to provide extremely robust storage that can endure harsh environments. **SMART** RUGGED is part of the **SMART** family of global companies.

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T5E TLC & pSLC SSD

T5E 2.5" SATA SSDs deliver high performance, high capacity storage solutions optimized for defense, aerospace and other applications.

M4 MLC SSD

M4 2.5" SATA SSDs combine high performance, superior reliability and data security into a single ruggedized design.

S5E SLC SSD

S5E 2.5" SATA SSDs deliver high performance storage solutions optimized for defense, aerospace, industrial and other applications.

M1HC MLC SSD

M1HC 2.5" SATA SSDs provide ultimate security and deliver high performance designed to withstand extreme environments.

M4P MLC SSD

M4P 2.5" SATA SSDs combine high performance, superior reliability and data security into a single ruggedized design.

M1 & M2 MLC SSD

M1 2.5" SATA SSDs combine high performance, superior reliability and data security into a single design, for demanding applications.

Industrial

Military

Security

Testing

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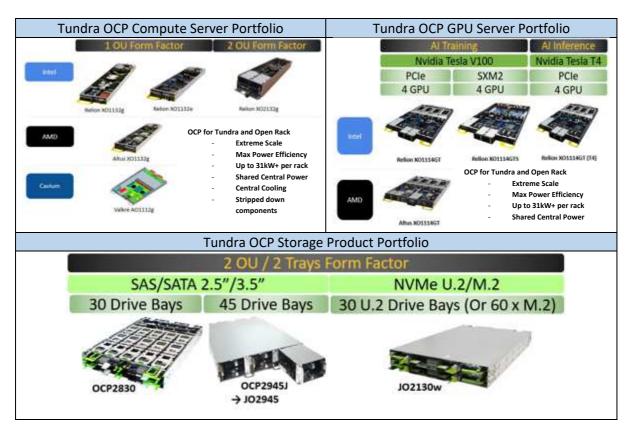
WHAT WE DO

We provide complete compute, storage, cloud and networking solutions that deliver the advantages of open technologies and help our customers solve the most complex technology and business challenges.

HOW WE DO IT

AI, engineering, and computer science experts use deep technical knowledge and out-of-the-box thinking to reimagine what is possible.
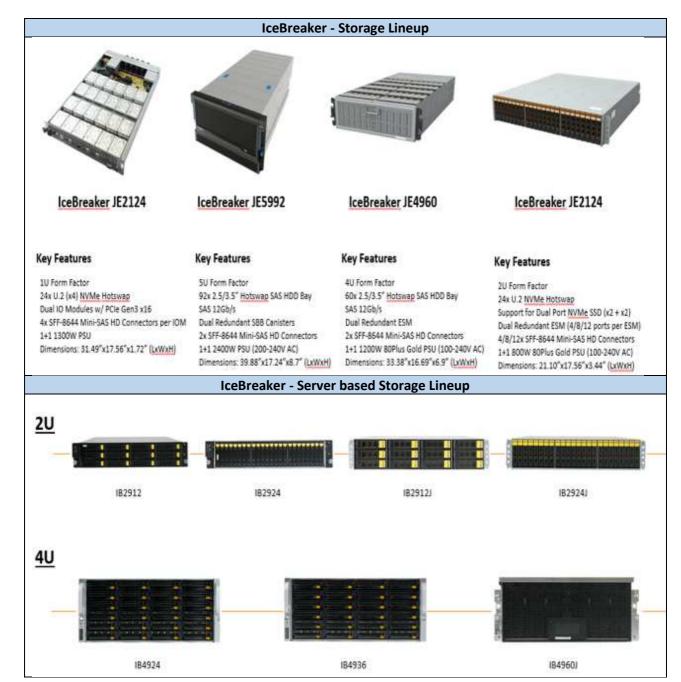
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Relion EIA 19" Server Series - *26 flavors, 13=Xeon SP (Cascade Lake)*

Intel 19" EIA GPU Line Up

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IceBreaker - Storage Lineup

IceBreaker JE2124

Key Features

1U Form Factor
24x U.2 (x4) NVMe Hotswap
Dual IO Modules w/ PCIe Gen3 x16
4x SFF-8644 Mini-SAS HD Connectors per IOM
1+1 1300W PSU
Dimensions: 31.49"x17.56"x1.72" (LxWxH)

IceBreaker JE5992

Key Features

5U Form Factor
92x 2.5/3.5" Hotswap SAS HDD Bay
SAS 12Gb/s
Dual Redundant SBB Canisters
2x SFF-8644 Mini-SAS HD Connectors
1+1 2400W PSU (200-240V AC)
Dimensions: 39.88"x17.24"x8.7" (LxWxH)

IceBreaker JE4960

Key Features

4U Form Factor
60x 2.5/3.5" Hotswap SAS HDD Bay
SAS 12Gb/s
Dual Redundant ESM
2x SFF-8644 Mini-SAS HD Connectors
1+1 1200W 80Plus Gold PSU (100-240V AC)
Dimensions: 33.38"x16.69"x6.9" (LxWxH)

IceBreaker JE2124

Key Features

2U Form Factor
24x U.2 NVMe Hotswap
Support for Dual Port NVMe SSD (x2 + x2)
Dual Redundant ESM (4/8/12 ports per ESM)
4/8/12x SFF-8644 Mini-SAS HD Connectors
1+1 800W 80Plus Gold PSU (100-240V AC)
Dimensions: 21.10"x17.56"x3.44" (LxWxH)

IceBreaker - Server based Storage Lineup

2U

IB2912   IB2924   IB2912J   IB2924J

4U

IB4924   IB4936   IB4960J

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SMART Wireless Computing (formerly known as Inforce Computing Inc.), a manufacturer based in Newark, CA, is a fast growing developer of high-performance production-ready ARM® ISA based embedded computing platforms for IoT applications. Enhanced by key partnerships with Qualcomm® Technologies Inc., SMART Wireless designs and manufactures Snapdragon™ processor-based ingenious system-on-modules (SOMs), single board computers (SBCs), and development kits.

SMART Wireless's hardware platforms come in eco-aware, low-profile and tiny footprints, and are available off-the-shelf to serve growing markets enabled by the next generation of connected devices. With these miniature platforms, our OEM customers design cutting-edge devices for applications in sophisticated medical imaging, videoconferencing/collaboration, AR/VR based hands-free computing, industrial internet-of-everything, commercial drones and robotics. Together with our silicon, software and system partners, SMART Wireless is pioneering products with an optimized delivery model for emerging markets. SMART Wireless is a one stop for concept-to-prototype-to-volume manufacturing.

	410f	660	820	845
	Qualcomm	Qualcomm	Qualcomm	Qualcomm
System On Modules	**Inforce 6301 Micro SOM**	**Inforce 6502 Micro SoM**	**Inforce 66X1 Micro SoM**	**Inforce 67X1 Micro SoM**
• Small form factor of 28x50mm • Production Ready • Electrical / Mechanical pin-compatibility across SoMs	• 1/8 GB eMCP memory • Onboard WiFi/BT, GPS, Audio codec • MIPI-CSI; MIPI-DSI; USB-HS; SDIO	• 3GB LPDDR4/32GB eMMC • Onboard WiFi/BT, GPS, Audio codec • USB-C with 4K display	• 4GB LPDDR4/64GB UFS • Onboard WiFi/BT, GPS, Audio codec • Upto 3xMIPI-CSI; Dual MIPI-DSI; 2xUSB-SS; PCIe; SDIO	• 4GB LPDDR4/64GB UFS • Onboard WiFi/BT3.0, GPS, Audio codec • Upto 3xMIPI-CSI; Dual MIPI-DSI; 2xUSB3.1; 2xPCIe; SDIO
SoM based Reference Designs	**Inforce SYS6301**	**Inforce SYS6502**	**Inforce SYS6601**	**Inforce SYS67X1**
• Evaluate SoMs to achieve quick turnaround for production	• Low cost Minimal carrier • Relevant IOs like HDMI, USB, UART/I2C/SPI; µSD	• Small carrier that brings out all native interfaces of SDA660	• Mini-ITX carrier that expands all I/O and connectivity	• Small carrier that brings out all native interfaces of SDA845
Single Board Computers	**Inforce 6309 Micro SBC**	**Inforce 6560 Pico - ITX**	**Inforce 6640 Pico - ITX**	
• Production Ready • OEM engagement options for BTO and custom variants	• LVDS/HDMI, WiFi, BT, GPS, GoE, PoE • Upstream Linux BSP • Ext Temp (-25° - 70°C) • All SKUs CE Certified	• USB-C with 4K display • 802.11 ac WiFi, BT5.5; • HEVC playback/capture@4k • Low profile	• HEVC playback @4k60/capture@4k30 • 802.11 ac WiFi, BT, PoE • Upstream Linux BSP • All SKUs CE Certified	
Strategic Platforms	**Inforce 6320**	**Inforce 6503 Nano SoM**		
• Volume conscious pricing • Created to enable large scale production	• 802.3at PD/PSE compliant PoE; • Ind Temp (-40° - 85°C); • Networking platform with routing capabilities; Fanless metal enclosure	• USB-C (3.1 Gen 1) with AR; • Dual MIPI-DSI; Audio; • Ext Temp (-20° - 70°C) • LGA SoM, 248 pins; 3GB/32GB eMCR, WiFi/BT, GPS; 2x MIPI-CSI; Haptics		

SMART Embedded Computing (formerly Artesyn Embedded Computing) is part of the SMART Global Holdings, Inc. family of companies. We are a global leader in the design and manufacture of highly reliable embedded computing solutions for a broad range of defense, industrial IoT (IIoT), edge computing, and communications customers.

Building on the acquired heritage of industry leaders such as Motorola Computer Group and Force Computers, SMART EC is a recognized leading provider of advanced computing solutions including application-ready platforms, single board computers, enclosures, blades, enabling software and professional services.

For more than 40 years, customers have trusted us to help them accelerate time-to-market, reduce risk and shift development efforts to the deployment of new, value-add features and services that build market share. The engineering and technical expertise is backed by world-class manufacturing, global sales offices and advanced worldwide logistics capabilities that can significantly reduce time-to-market and help customers gain a clear competitive edge.

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ATCA

SMART EC has the largest installed base of ATCA systems and blades with applications in communications, military, aerospace, security, surveillance, and signals intelligence.

SIL4 Certified COTS ControlSafe® Rail Platforms

SMART EC's ControlSafe® Platforms are application-ready SIL4 certified, fault-tolerant, fail-safe COTS systems for train control and rail signalling.

MaxCore™ Microserver Platforms

SMART Embedded Computing MaxCore™ platforms offers a versatile and dense architecture to achieve maximum compute and media processing density serving the edge of the network.

PCI Express Server Accelerators

SMART EC's PCIe server accelerators enable existing servers to scale up to higher densities, and support higher-density traffic at a fraction of the cost and server footprint, ultimately reducing CapEx and OpEx costs.

Servers & Accelerators

SMART EC's carrier grade servers offer a range of compute and media processing densities that scale from edge to core of communications, broadcast, datacenter, military, and industrial networks.

VME

SMART EC has consistently worked to enhance VMEbus technology and now offers arguably the widest range of VME (MVME) single board computers (SBC) based on Freescale processors using the Power Architecture.

Computer-on-Module (COM Express)

Computer-on-Modules (COMs) are highly integrated single-board computers that provide the core functionality of a system, allowing application-specific features to be designed onto a carrier board creating a semi-custom embedded PC solution.

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For over 30 years, SMART Embedded Computing engineering experts have been designing and developing embedded computing technologies for a broad range of industries such as telecom, military and aerospace, medical, and diverse automation and industrial markets.

Our broad portfolio of integrated hardware, software and support services enables SMART EC to offer customer-focused solutions that are flexible and scalable.
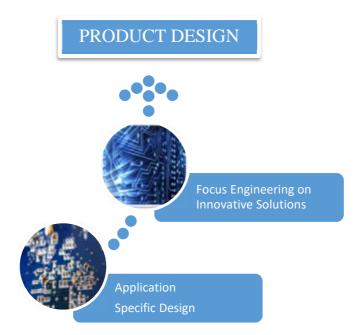
Product Design, Technology & Reliability

Product design, manufacturing and test technologies developed by **SMART** Global Holdings companies are the key reason that **SMART** products deliver higher performance, last longer and are more reliable than comparable competing products. **SMART** incorporates design for manufacturing (DFM) from the product development stage all the way through to mass production, resulting in shorter development cycles and superior manufacturability.

By working closely with our customers, we are able to deliver technically advanced products designed to meet their specific needs. Our engineers focus on applications development, component selection, schematic design, layout, firmware, and software driver development. The layouts for memory modules are complex due to their high component and trace densities. These complexities increase as the speed of memory semiconductors increases. Our advanced engineering and design capabilities allow us to address our customers' increasingly complex needs.

PRODUCT DESIGN

Focus Engineering on Innovative Solutions

Application Specific Design

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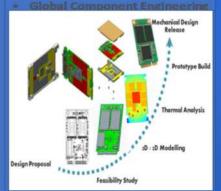
PCB Design
- Global Center for PCB library (Footprint, Schematic symbol and Panel Drawing) for all product lines.
- Design and release Test Adapters, Engineering project & PCB Layouts
- Focus on JEDEC Gerber's.
- Global Specialty Flash PCB design works.

Component Engineering
- Part numbers creation & AVL database maintenance.
- Product MTBF calculations.
- Feasibility study on FIT rate.
- Supplier PCN Review
- Datasheet creation and publication – Specialty Memory & Specialty Flash.

Mechanical Engineering
- Global Component Engineering

Test Software Development
- Test Script Development
- FW Validation
- Advance Test SW Development and validation
- In depth Failure Analysis & Reliability Testing
- Multiple Test Platform integration
- Customize Test hardware development

Design Validation Testing
- Reliability and Qualification
- Specific Customer

✓ Electrical Tests
✓ Operational Tests
✓ Performance Tests
✓ Environmental Tests
✓ Mechanical Validation
✓ Reliability Qualification
✓ Compliance Tests
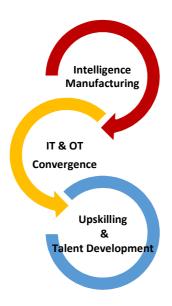
Centralized Design Library
- Sole Source for Global Design activity based out of Penang.
- Design Process Optimization
- Eliminates discrepancies and re-spin probabilities
- Increased efficiency through standardization of Design files
- Total Ownership to create, validate and release design files Application Support
- Centralize Product datasheet creation and publication

SMART is also working together with IBM by initiating transformation to cyber-physical systems representing the **4th Industrial Revolution (Industry 4.0)** towards the end-to-end value chain with Industrial IoT and decentralized Intelligence in Manufacturing engineering and production.

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Automation Initiatives:
- ✓ Machine To Machine Collaboration
- ✓ Collaborative Robots
- ✓ Augmented Reality
- ✓ Visual Insights
- ✓ 3D Printing
- ✓ IoT Development
- ✓ Data Science
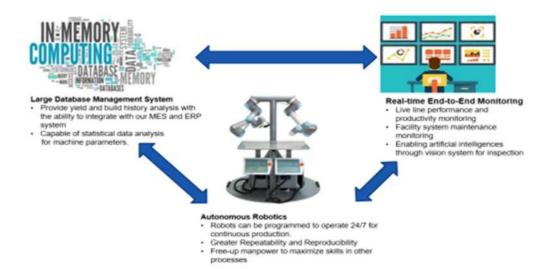- ✓ Vertical Lift Module
- ✓ Automated Gantry Vehicle

SMARTs Initiatives on **SMART**s machines to machine (M2M) work by communicating to each other through network resource. Automated data transmission, command, analyse and measurement among the machines are integrated in the system where helps to support humans by collecting and visualizing information. With the help of cyber-physical systems that monitor physical processes, a virtual copy of the physical world can be designed. Thus, these systems have the ability of making decentralized decisions on their own and reach a high degree of autonomy

On the other hand, Robotics and **SMART** Visual Insights Initiatives in whole helps to minimize handling and free-up manpower in order to be used in other processes with maximized skills. Fully integrated solution to communicate with tester and shop floor system replacing human on repetitive manual tasks. To compliment further, Augmented Reality Technology used to simulate the environment of robot into virtual environment viewable through handheld devices (e.g. iPad) and it is useful for training for new technicians, operators and for troubleshooting.

Large Database Management System
- Provide yield and build history analysis with the ability to integrate with our MES and ERP system
- Capable of statistical data analysis for machine parameters.

Real-time End-to-End Monitoring
- Live line performance and productivity monitoring
- Facility system maintenance monitoring
- Enabling artificial intelligences through vision system for inspection

Autonomous Robotics
- Robots can be programmed to operate 24/7 for continuous production.
- Greater Repeatability and Reproducibility
- Free-up manpower to maximize skills in other processes

3D Technology Initiatives on 3D Printing 'Additive Manufacturing" for rapid prototyping and In-house Tooling able to produce functional end parts at low to mid volume which offers a huge time saving advantage when compared to traditional manufacturing techniques. With this initiatives, the Design Engineer able to verify a design printing a production –ready prototype within few hours. We work closely with our customers and suppliers to design competitive solutions to satisfy our customers' memory requirements and shorten their time to market.

SMART is also working out to establish Global Data Science and IoT Development Team using the said technology to provide better insights and decision making with our existing generated data. We have established a symbiotic relationship with IBM where **SMART** shares its expertise in hardware development while IBM harness its technology to provide a comprehensive I 4.0 solutions. In addition, **SMART** is working on Autonomous Gantry Vehicle (AGV) to reduce the need for human movement to move materials.

Furthermore, initiatives on space optimization for warehousing using Vertical Lift Module the latest technology with secure and centralized tracking and system integration with ERP system has been implemented.
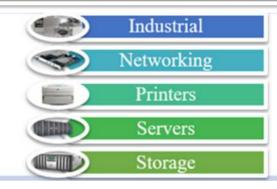
Our vision of highly digitized and connected manufacturing operations is possible through factory automation, which was instrumental in enabling our operations to be highly productive and efficient with a pool of upskilled workforce to compete in Industry 4.0.

Applications

Automotive	Industrial
Communications	Networking
Computing	Printers
Defense	Servers
Gaming	Storage

AUTOMOTIVE

Automotive applications require reliable, embedded, removable, and memory technology to support their state-of-the-art systems, such as GPS, pre-collision, and active park assist.

INDUSTRIAL

Industrial applications often need replacement storage solutions with extended life cycles and a guarantee of a long-term supply. Key features include reliability, security, and performance.

COMMUNICATIONS

These applications typically require small to standard form factors, reduced voltage demands, high performance, and high reliability. They need to support a broad range of

NETWORKING

Requiring small to standard form factors, networking applications have strict footprint and thermal specifications and need storage solutions with low latency as well as high performance and signal integrity

COMPUTING

These applications have unique needs that span multiple architectures, configurations, densities, speeds, and packages.

PRINTERS

Printers require compatible, certified memory in a range of speeds, densities, form factors and technologies that offer high-quality, leading performance, and world-class service.

DEFENSE

Key needs include: rugged designs that offer proven reliability in extreme conditions (shock, vibration, dust, humidity, and temperature), first-class technical assistance and support, and low-power operation.

SERVERS

Server applications need reliable, high-quality, high-density memory modules with the lowest power consumption. SMART's industrial grade, low-voltage, and ECC options to help meet critical requirements.

GAMING

These applications need storage products that are secure and reliable while reducing field-service costs and improving performance.

STORAGE

Storage solutions need to be available in a range of speeds, densities, form factors and technologies offering high quality and performance, compatibility with existing designs, and world-class service.

Product Content

Full Material Disclosure

SMART's commitments towards restriction of hazardous substances are initiated at the design stage of product. This is in line with European Union's Restriction on Hazardous Substances (RoHS) and Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) regulations. SMART has a clear action plan to eliminate and manage the materials which contains the banned substances.

Lead Free/RoHS Compliance

As part of its commitment, **SMART** works closely with customers and continuously with our suppliers to ensure the components we use are lead-free and compliant with the latest versions of the European Union's Restriction of Hazardous Substances (RoHS) directive. Our aim is to minimize any negative impact on our environment, and we encourage our suppliers to find creative and innovative ways to eliminate the use of any substances that may put our environment at risk. To execute the material declaration process, SMART has adopted Green Data Manager from GreenSoft Technology, Inc. This is the tool used to compile, manage and validate the substances present in the supply chain.

REACH Compliance

SMART also supports the REACH regulations to manage the risks from chemicals to our employees, communities, and the environment. REACH is a European Community Regulation on chemicals and their safe use. Its aim is to help protect human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances.

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Responsible Mineral Sourcing

As many organization in the electronic industry, **SMART** and it's supply chain use metals in the manufacturing process including Tin, Tungsten, tantalum and Gold (3TG) and newly added Cobalt. These metals also identified as 'Conflict Minerals'. As a committed member Responsible Business Alliance (RBA), **SMART** prohibits using in its products tin, tungsten, tantalum, gold or cobalt from any source whose supply chain, traces back to the mines of origin of the minerals used to produce these metals in a conflict zone. **SMART** supports seeking a sustainable solution to the issue of Conflicts Minerals and the mining sector to improve both the traceability of minerals and the transparency of global supply chains.

Global Procurement Policy
CONFLICT MINERALS

SMART Global Holdings (SMART) is committed to the highest standards of ethical conduct and full compliance with all applicable national and international laws. SMART strives to increase internal controls and create due diligence measures regarding the source and chain of custody of conflict minerals (cassiterite, columbite-tantalite, gold and wolframite and their derivatives, tin, tantalum, tungsten and cobalt) (hereinafter all referred to as, "Conflict Minerals") throughout its supply chain. SMART is concerned with the potential that the mining and trade of Conflict Minerals from the eastern provinces of the Democratic Republic of the Congo (DRC) and the adjoining countries where revenues may be financing military conflict, related human rights violations and environmental degradation. SMART strives to discourage the use of Conflict Minerals in its manufactured products and its manufacturing process. Suppliers shall evaluate the origin or source of their materials throughout their supply chains to verify whether they have been obtained from the Democratic Republic of Congo and discourage the use of minerals sourced from the DRC. SMART supports seeking a sustainable solution to the issue of Conflict Minerals and the mining sector to improve both the traceability of minerals and the transparency of global supply chains.

Supplier Expectations:
- ✓ SMART expects its suppliers to source materials from socially responsible suppliers.
- ✓ SMART expects all its suppliers to follow the GeSI guidelines and provide all required identification regarding their source and chain of custody.
- ✓ SMART expects its suppliers to pass on this requirement to their supply chain if they don't source directly from smelters with regard to source and chain of custody.
- ✓ Suppliers who are non-compliant to these requirements shall be reviewed for future business and may not be invited to bid on new business or retain current business.
- ✓ SMART maintains a mechanism to enable the reporting of any customer facing questions related to Conflict Minerals and other supply chain matters.

For any questions or concerns about SMART Global's Conflict Minerals program, please contact us at conflictminerals@smartm.com .

PEOPLE

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Health and Safety

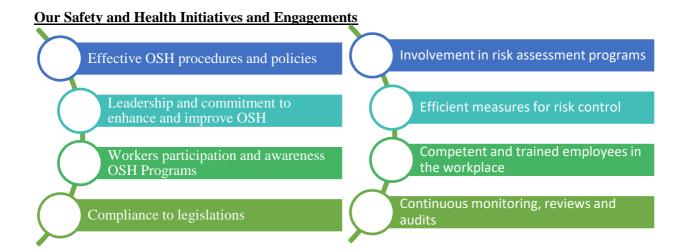Health and safety are always **SMART's** first priority.

Every employee contributes to maintaining a safe and healthy work environment. The EHS committee and ERT team play a key role in ensuring employees' health and safety. **SMART** conducts its business activities in light of QEHS policy, whereby it ensures compliance with applicable health and safety laws and regulations. **SMART** is also aware that prevention is always the best mitigation measure, thus, implementing the best prevention practices in all manufacturing processes.

At **SMART**, we assure of a safe working environment through ensuring compliance to all related OSH legislation, ISO 45001 standard and through effective OSH procedures and policy implementation.

We conduct Safety and Health Programs such as Crime Prevention, Fire Prevention Programs and CPR Awareness Programs to promote a healthier and safer work environment and work diligently to minimize employee exposure to potential safety hazards through risk assessments and controls.

Periodic safety inspections by the management team and safety personnel have been used to identify areas for improvement in safety and prevention. With the continuous effort from the team, safety related incidents have been reduced and are kept at low levels with the number of 12 cases of incidents and accidents.

<u>Our Safety and Health Initiatives and Engagements</u>

Effective OSH procedures and policies

Leadership and commitment to enhance and improve OSH

Workers participation and awareness OSH Programs

Compliance to legislations

Involvement in risk assessment programs

Efficient measures for risk control

Competent and trained employees in the workplace

Continuous monitoring, reviews and audits

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OSH Awards & Achievements

In 2018, **SMART** Penang was selected for the national level "In- Compliance and Control for Chemical Best Practice" under the MALAYSIAN DEPARTMENT OF SAFETY & HEALTH (DOSH) Program**.** **SMART** Penang was awarded as the "Winner of the Chemical Safety Element" at National Convention of SOHELP (Systematic Occupational Health Enhancement level Program). In addition, **SMART** Penang won the Best Presentation award for the category.
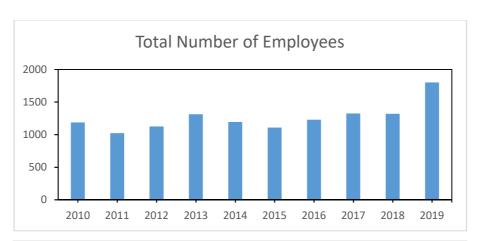
Diversity

SMART adheres to a non-discrimination policy, whereby **SMART** practices people-oriented and fair treatment principles in the recruitment, promotion, performance evaluation, compensation, training, and retirement of employees. **SMART** also recognizes that a diverse workforce is its most vital asset that enables creative, think-outside-the-box problem solving.
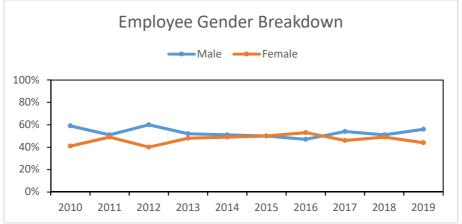
SMART's global workforce is extremely diverse, bringing together many different cultures, languages,

backgrounds, and career experiences. **SMART** promotes equality of race, color, ancestry, religion, sex, gender, age, national origin, sexual orientation, marital status, physical or mental disability, and any other legally protected characteristics, to create a working environment with equal opportunity employment so that workers are treated with fairness and respect.

Figures below show the number of employees and the employee gender ratio.

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SMART is aware that human capital is an important asset for the organization. Every year, **SMART** invests in trainings such as, internal auditor training, soft skills trainings, management skills training, process related trainings, EHS trainings, so on and so forth. The trainings are conducted based on training need analysis by the training department. Since 2014, RBA awareness trainings were conducted for its employees and suppliers through online training, classroom training and town hall briefings. RBA accredited personnel to train RBA internal auditors provided internal auditor trainings. The figures below show the investment in training over the past ten years.

Investment in Training (USD)

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Work Environment

SMART promotes a work-life balanced environment whereby in addition to being active in business development.

- **SMART** organizes team building activities and an annual banquet to celebrate the year's achievements.

- **SMART** celebrates various festivals with their employees. Every year, **SMART** employees decorate their office and organize open house events for major holidays including Christmas, Chinese New Year, Hari Raya Aidilfitri and Deepavali to celebrate the occasions.

- **SMART** design rewards programs to attract, retain and motivate the right people, in the right place, at the right time. We review our rewards programs annually to ensure that they remain competitive with industry practices.

- **SMART** is also actively involved in recreational activities. **SMART Football Club** has been actively playing in local football leagues.

- **SMART** is actively shows appreciation through various communication tools to the respective team/ individual and encourage them.

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ENVIRONMENT

Greenhouse Gas Reporting

As a leading manufacturer and supplier of memory modules and solid-state storage products, SMART takes its commitment to the environment seriously. All of our worldwide manufacturing facilities comply with global lead-free initiatives and produce products that are RoHS compliant. In addition, all of our employees are encouraged to reduce our emissions of greenhouse gases resulting from operations and manufacturing processes by improving overall energy efficiency. We also assist our customers in improving their product's energy efficiency by reducing power consumption in our memory and solid-state storage products.

As part of our corporate energy conservation, recycle or reuse, and responsible manufacturing efforts, SMART works to improve energy efficiency and reduce our overall greenhouse gas emissions. Our Quality Manufacturing team sets goals, compliance requirements, and overall prevention efforts for our global manufacturing, R&D, and operations facilities. Our aim is to reduce our emission of greenhouse gases and rigorously seek out, identify, and address any waste streams that can be reduced or eliminated, in order to foster a cleaner and healthier environment for our employees, communities, and the world.

SMART recognizes that climate change is a serious issue and poses social, economic and environmental consequences to every living thing. Since 2009, SMART has measured Greenhouse gas emissions produced during production. As part of the commitment to reducing carbon footprint, SMART has implemented programs that address energy efficiency and consumption. Through various energy saving programs, SMART managed to control CO_2 gas emission from year 2010 to 2019, even with increasing business volume. SMART has defined the yearly target reduction of emissions by business operation and technology available in the respective country. SMART Brazil targeting a reduction of 2.5% of emissions, followed by SMART Newark and Penang of 2% target and lastly Penguin Computing with 1% target.
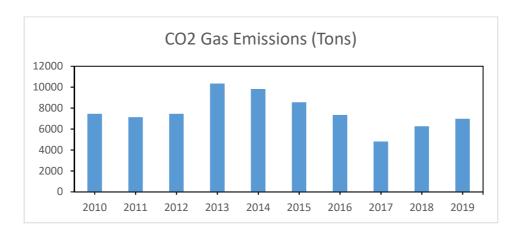
Since 2017, Brazil Team has focused GHG data reporting on scope 1 and 2 emissions from the manufacturing location, as that is where we believe our biggest opportunity rests. Scope 1 emissions include our direct emissions such as stationary, mobile and fugitive emissions while scope 2 emissions represent the emissions affiliated with our purchased energy. For the most current information on our greenhouse gas performance, please see our annual disclosure to CDP.

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Brazil began to work with the company, NEOENERGIA to contract in the free market for the purchase of electrical energy sourced from renewable sources and now uses a combination of biomass, natural gas sources, solar, and wind energy to power the site.

SMART has achieved some of the goals set for our emissions reductions in the past and we hope to continue this downtrend of carbon emissions by setting new and more ambitious targets. To do this, **SMART** has committed to the Science Based Targets initiative (SBTi) and will have set clear targets by the year 2020. The source of electricity at the Brazil site changed in late 2016, which is what caused the drastic drop in emissions in 2017.

SMART is working to reduce the CO_2 gas emissions in the coming year. As a reward for the excellence in energy efficiency, the Energy Commission, Ministry of Energy, Green Technology, and Water, Malaysia awarded the "Energy Industry Award" in the category of "Energy Efficiency Management Excellence Award" the Penang site in 2011. The Penang site was also recognized in 2016 by the ASEAN Energy Business Forum and awarded for **Energy Management for Building & Industries.** The figure below shows greenhouse gas (CO_2e) emission for **SMART**.

SMART further were into CDP Scoring and Reporting for both Climate change and water and this allows us to understand on which categories require attention in order to reach higher levels. **SMART** falls in the category Disclosure band, which shows **SMART**'s transparency about climate issues. For Climate change reporting, **SMART** has improvised scoring from previous year on value chain engagement, governance and emissions reduction initiatives. As for water reporting, **SMART** has improvised scoring from previous year on water related risk exposure, risk assessment, policy, governance, target and goal. This enables us to work towards improvisation of climate governance.

Energy and Resources Conservation

SMART strives to protect the environment, conserve resources, and reduce its footprint on the planet in every way possible. **SMART** maintains sustainable manufacturing policies and processes. As one of its commitments to the sustainability of the environment, **SMART** implemented various energy and water saving programs. Meeting scheduled yearly to discuss establishment of sustainability goals, targets and to monitor progress, which is done at corporate level.

Starting in 2011, energy saving equipment and appliances, such as power conditioners, temperature controllers, LED bulbs etc., have been progressively replaced in **SMART**'s plants. Overall, our 2019 energy consumption worldwide was 39, 099 MWh including all sites.
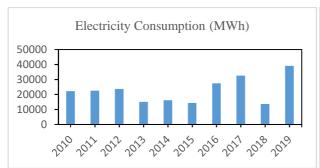
Water is critical for assembly operations in **SMART**'s plants and the water withdrawals are metered by local authority with a valid record of water withdrawals. For **SMART**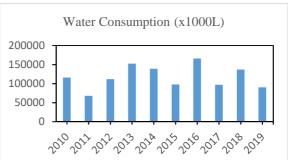 Penang and Newark Plant, water are discharged to 3rd party destination which is also local authority. As for Brazil Plant, the sanitary wastewater is sent to a wastewater treatment station in the business park where **SMART** is located. The business complex appropriately treats the water before discharge into a fresh surface water source (water stream). **SMART**'s plants has industrial wastewater treatment, which used about 30 – 50% of it in our operations.

The main water related opportunities for our company pertain to hydropower generation. Using this type of alternative energy brings down the overall carbon emissions of the company. The only place where this opportunity exists and is feasibly accomplished is in the Kuala Muda River in Malaysia. This opportunity has already been put to use to decrease the carbon dioxide emissions. **SMART** Penang has water conservation target of 5% for the reporting year to reduce the depletion of natural resources

Electricity Consumption (MWh) — bar chart showing years 2010 through 2019

Water Consumption (x1000L) — bar chart showing years 2010 through 2019

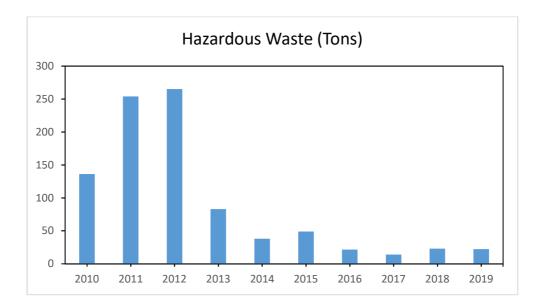*Verification of current revision online is required before use.*

Hazardous Waste Management

Hazardous waste management remains a focus and challenge due to increasingly complex manufacturing processes. In daily business and its manufacturing processes, **SMART** focuses on environmental issues, such as the generation, minimization, and recycling of waste. Solder waste, which is one of the hazardous wastes produced, is collected and sold to licensed waste vendors to be recycled. The figure below shows the amount of hazardous waste generated and recycled. The amount of hazardous waste being recycled increases from year to year with an effective hazardous waste management program.

Hazardous Waste (Tons)

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Recycling

As an initiative in promoting environmental consciousness, **SMART** conducts an ongoing recycling program every year. **SMART** employees offer support by contributing recyclable items from their homes. In 2014, the Penang site managed to collect 6.6 ton of recyclable items and contribute to a local recycle centre.

In 2016, **SMART**'s Newark facility was nominated and received STOPWASTE award for Business Efficiency and waste reduction. This was accomplished through improved use of resources, waste reduction and waste diversion.

In 2018, **SMART** Penang Plant has initiated the 3R program to improve and recycle the generated waste until this year.
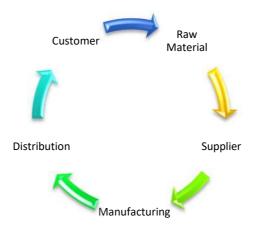
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PARTNERS

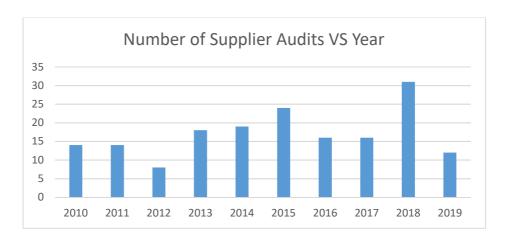*Verification of current revision online is required before use.*

Supply Chain Management

At its core, supply chain management is the act of overseeing a supply chain to improve the flow of goods and services and transform raw materials into products for the end buyer. As a leader in the memory and storage subsystems industry, **SMART** has a global network of components and raw materials suppliers. Every year, **SMART** conducts supplier audits, which cover management systems, records, design control, supplier quality, traceability, process control, inspection, calibration, nonconformity control, handling, packaging, storage, and delivery to ensure goods and services supplied are in line with the management system.

As a sustainable manufacturer, **SMART** maintains a good relationship with suppliers to uphold product quality. **SMART**'s diverse group of suppliers co-operate in quality, environmental, health, safety, labour and ethics consciousness to help improve mutual business growth.

The figure below shows the number of supplier audits that have been conducted from year 2010 through 2019.

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COMMUNITY

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![SMART GLOBAL HOLDINGS logo]

Highlights of Community Engagement Programs

SMART's efforts to enrich the quality of people's lives in the local communities take several forms including direct corporate giving, and matching employee donations. In addition to charitable contributions, we provide employment opportunities and organizational leadership.

We share our interest in community involvement and social responsibility with non-profit organizations dedicated to the following:

Arts & Culture	Community and civic affairs	Education	Environment	Health & human services

Being a caring and socially responsible organization, **SMART** organizes various community services and charity programs. At its corporate headquarters in Newark, CA, **SMART** celebrated charities of Leukemia Lymphoma Society (LLS), Make A Wish Foundation and Wounded Warrior Project with a walk around the business park. Employees donated money towards these charities by donating their vacation hours. In 2019, **SMART** contributed in total of USD $ 212607 to charity organizations.

SMART also engages in other community programs, namely a blood donation program as an annual activity and recycling as an ongoing program. Every year, the blood donation campaign is carried out to help replenish the blood bank storage for local medical service centres.

SMART as well involved in performing physical, recreational and leisure activities in areas of social vulnerability, establishing the link between the citizen (adult and/or child) and the community around.

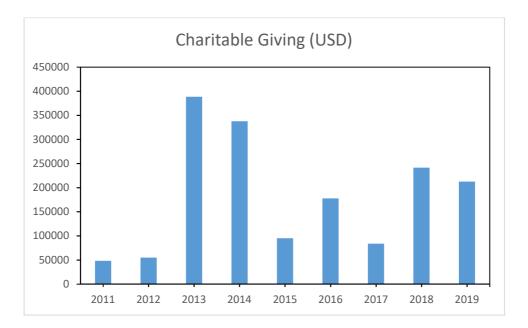*Verification of current revision online is required before use.*

From Christmas to Hari Raya Aidilfitri, Chinese New Year, and Deepavali, **SMART** globally aids orphans, single mothers, disabled and seniors with various outreach programs.

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The chart below shows charity giving over the past ten years.

Charitable Giving (USD)

Year	Amount
2011	~48000
2012	~55000
2013	~388000
2014	~338000
2015	~95000
2016	~177000
2017	~83000
2018	~240000
2019	~212000

GOALS

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Corporate Sustainability Goals

To drive continual improvement toward corporate sustainability, **SMART** sets goals in key areas to ensure accountability for performance.

Products and customers
- Continue working toward shipping zero defective products to customers
- Achieve higher levels of customer satisfaction than previous years, as measured by solicited and unsolicited customer feedback.

People
- Maintain safety performance by achieving a target safety rate of 100%, as measured by internal data analysis

Environment
- Become a leader in environmental sustainability by setting science-based targets for reducing carbon emissions
- Programs to eliminate the use of any substances that may put environment at risk.
- Complete third party verification of GHG calculations

Partners
- Inform supplier base of RBA requirements aby end of 2019.
- Drive all key suppliers to comply with RBA requirements by end of 2022.

Community
- Continue to participate in local community outreach programs and help the less fortunate.

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For more information, visit SMART's websites:
http://www.smartm.com
http://www.smartrugged.com
https://www.penguincomputing.com
http://smartsscs.com
https://www.inforcecomputing.com
https://www.smartembedded.com