



Data Persistence at Speed

Driving the MRAM Revolution

Investor Presentation
May 2019

Safe Harbor Statement

Forward-Looking Statements

This presentation contains “forward-looking statements” that involve risks, uncertainties and assumptions. If the risks or uncertainties materialize or the assumptions prove incorrect, our results may differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking statements, including, but not limited to: any estimates of addressable market size and our ability to capture that market, market trends and market opportunities, customer growth, product availability, technology developments, or other future events; any statements about historical results that may suggest future trends for our business; any statements regarding our plans, strategies or objectives with respect to future operations or business performance; any statements regarding future economic conditions; and any statements of assumptions underlying any of the foregoing. These statements are based on estimates and information available to us at the time of this presentation and are not guarantees of future performance. Actual results could differ materially from our current expectations as a result of many factors, including, but not limited to: market adoption of our products; our limited operating history; our ability to raise capital; our history of losses; our rate of growth; our ability to predict customer demand for our existing and future products; our ability to hire, retain and motivate employees; the effects of competition, including price competition; technological, regulatory and legal developments; and developments in the economy and financial markets. We assume no obligation, and do not intend, to update these forward-looking statements, except as required by law.

Everspin: MRAM Technology Pioneer

Everspin is a Leading Provider of Non-volatile Memory Technology and Products to Mission-Critical **Data Center, Industrial** and **Auto/Transportation** Applications

- Origins in Motorola/Freescale
- Publicly traded : MRAM
- Independent since 2008
- Long-served tier-1 customers

600+

Customers across many markets

110M+

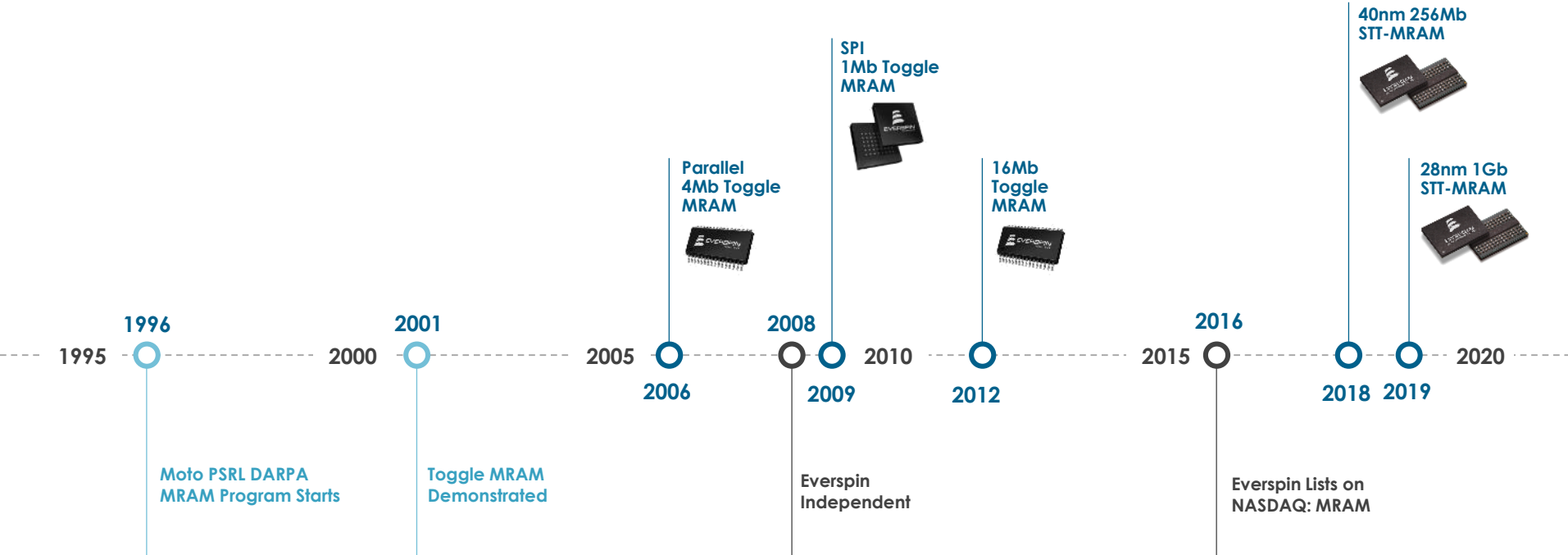
Units shipped

500+

Patents and applications WW

Our products bring the unique benefits of MRAM to our customers where Performance, Persistence, Endurance and Reliability are critical

MRAM Leadership Through Heritage of Innovation



Shipped World's First Pre-Production 1Gb STT-MRAM Samples

Everspin Ships the World's First Pre-Production 28 nm 1 Gb STT-MRAM Customer Samples

Next generation product family expands portfolio of non-volatile persistent memory solutions.

January 08, 2019 07:00 AM Eastern Standard Time

CHANDLER, Ariz.--(BUSINESS WIRE)--Everspin Technologies, Inc. (NASDAQ: MRAM), the world's leading developer and manufacturer of Magnetoresistive RAM (MRAM), today announces that it commenced shipment of pre-production customer samples of its 28 nm 1-Gigabit (Gb) Spin Torque Transfer Magnetoresistive Random Access Memory (STT-MRAM) product in December 2018. This achievement follows Everspin's successful commercialization of its 40 nm 256 Mb STT-MRAM and builds upon months of close work with customers and manufacturing partners to mature this product technology. These are the world's first 1 Gb STT-MRAM parts that meet customer specifications for endurance, performance and reliability in persistent write buffer applications.

"We now look forward to working with customers to bring the next generation of STT-MRAM-enabled products to market."

 [Tweet this](#)

Everspin's STT-MRAM devices enable enterprise infrastructure providers to increase the reliability and performance of systems where high performance data persistence is critical by delivering protection against power loss without the use of supercapacitors or batteries.

"Our team is proud to reach this significant milestone of shipping pre-production 1 Gb parts, further establishing STT-MRAM's presence in the memory product landscape. It represents years of Everspin focus on driving the MRAM revolution and is a testament to our strong partnership with GLOBALFOUNDRIES," said Kevin Conley, Everspin's President and CEO. "We now look forward to working with customers to bring the next generation of STT-MRAM-enabled products to market."

Everspin's 1 Gb product family includes both 8-bit and 16-bit DDR4 compatible (ST-DDR4) interface versions of the device and are available in a similar BGA package to Everspin's existing portfolio of 256 Mb parts, providing a fourfold increase in density in the same physical space. Production ramp for the 1 Gb products is scheduled to begin in the second half of 2019.

About Everspin Technologies

Headquartered in Chandler, Arizona, Everspin Technologies, Inc. is the worldwide leader in the design, volume production and distribution of Magnetoresistive RAM (MRAM) into markets and applications where data persistence, performance, and endurance are paramount. Serving applications across the data center, industrial, and transportation markets, Everspin has built the strongest and fastest-growing foundation of MRAM users in the world. For more information, visit www.everspin.com.

- 28nm technology from GLOBALFOUNDRIES JDA
- Shipped customer samples in December 2018
- Shipped qualification units in March 2019
- Production ramp 2H 2019

Fab Partnership Expansion to Meet The Growing Demand



GLOBALFOUNDRIES®

Strong Partnership With GF Continues for STT-MRAM























- 40nm 256Mb discrete chip mass production,
- 28nm 1Gb discrete chip preproduction
- 22nm FDX embedded for GF SOC customers
- Continue joint technology development for future

GROWTH PLAN FOR TOGGLE

- Long-term Chandler manufacturing operation continues
- Manufacturing expansion with SilTerra starting in 2020



Diversified Top-Tier Customer Base in Significant Markets

INDUSTRIAL AUTOMATION	AEROSPACE/ TRANSPORT	GAMING	NETWORK/ INFRASTRUCTURE	ENTERPRISE
     	 AIRBUS Honeywell COBHAM e2v Koyo  BOMBARDIER NORTHROP GRUMMAN	NOVOMATIC  KONAMI  MEDICAL  Canon CANON MEDICAL  GE Healthcare	    	 DELL EMC   MICROCHIP  inspur 

Our Strategic Focus

Investing across multiple horizons to drive sustained growth and leadership

NEAR-TERM

Ramp volume shipments
of 256Mb STT-MRAM

Qualify and secure design
wins for 1Gb STT-MRAM

Strengthen Toggle
MRAM business

**Build Strength in Large
Targeted Applications**

MID-TERM

Broaden STT-MRAM
product family

Expand Toggle MRAM
supply

Expand STT-MRAM
market penetration

**Accelerate Growth into
Adjacent Markets**

LONG-TERM

Innovate for continued
market leadership

Drive MRAM to higher
density and lower bit cost

Keep focus on high-growth
markets

Disrupt Mainstream Markets

The background of the slide is a dark blue gradient. On the right side, there are several horizontal, slightly curved lines of glowing blue light. Overlaid on these lines and the background is a pattern of binary code (0s and 1s) in a lighter blue, semi-transparent font, giving the impression of digital data flowing or being processed.

Technology/Product

MRAM: Persistence, Performance, Endurance & Reliability



PERSISTENCE

Maintains memory contents without requiring power



PERFORMANCE

SRAM & DRAM-like performance with low latency



ENDURANCE

Superior durability supports memory workloads without sophisticated management

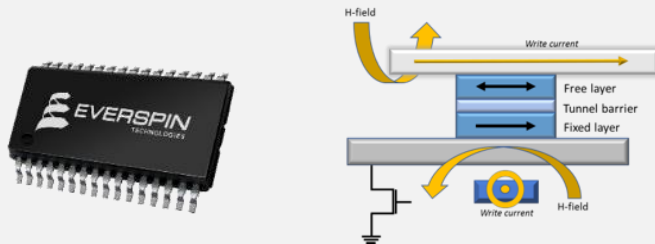


RELIABILITY

Best-in-class robustness designed and tested for extreme conditions

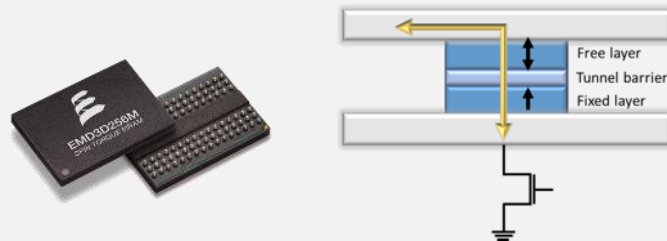
Product Technology Portfolio Overview

Toggle MRAM as Persistent SRAM



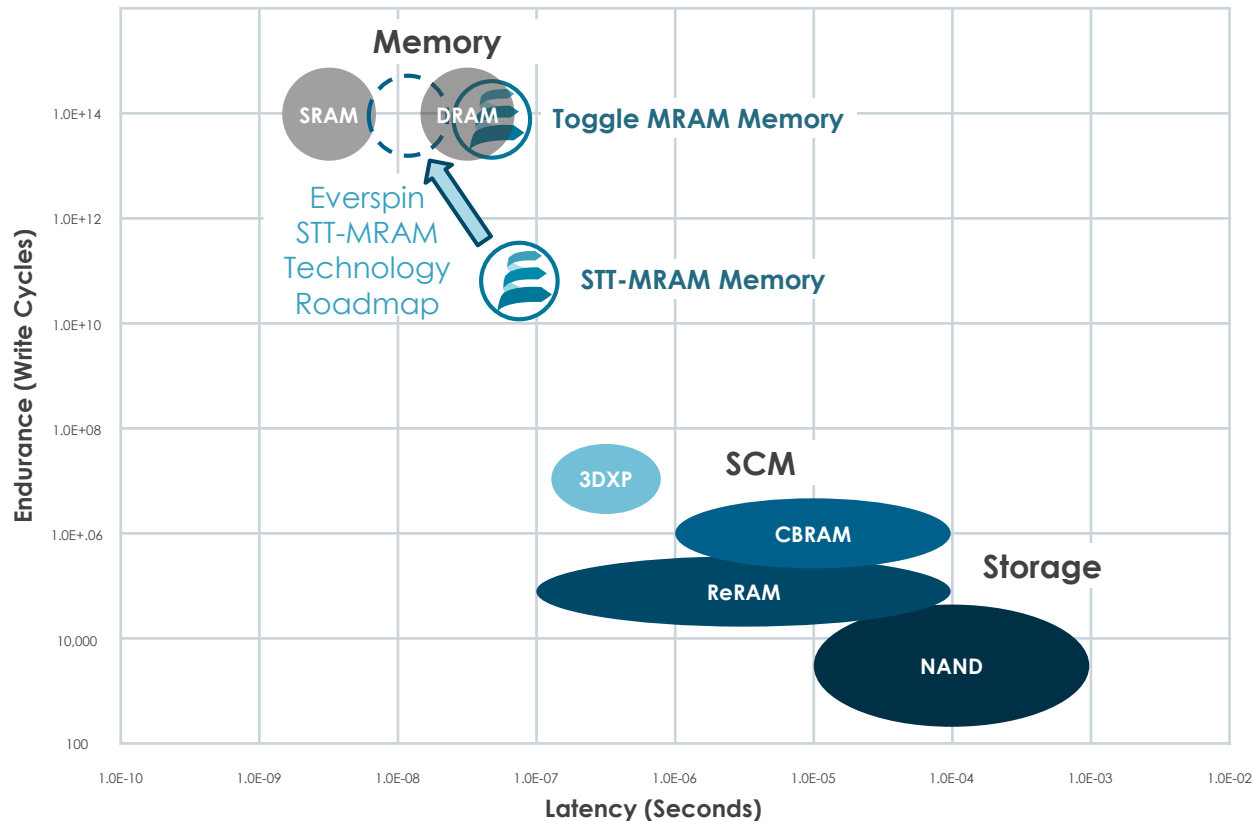
- Standard SPI and Parallel I/F
- Replacement for nvSRAM, FRAM, BBSRAM and NOR Flash
- Robust operating reliability across extended temperature
- Steadily growing long-term market value

STT-MRAM As Persistent DRAM



- DDR3 & DDR4 compatible
- Complementary to DRAM & Flash
- High performance NVM with high chip capacity
- Disruptive value as non-volatile write buffer
- New market growth driver



MRAM Brings Native Persistence to Memory Workloads



MRAM COMBINES PERFORMANCE OF MEMORY WITH PERSISTENCE OF STORAGE

- **Non-Volatile:** Maintains data without power or refresh
- **Fast:** Read/write similar to DRAM
- **Endurance:** Handles memory workloads

Everspin Product Portfolio

Technology	Capacity	Interface	Package	2018	2019	2020
	128kb	SPI	DFN	MP		
	256kb	Parallel, SPI	DFN, SOIC, BGA, TSOP2	MP		
	1Mb	Parallel, SPI, QSPI	DFN, BGA, TSOP2, SOIC	MP		
	4Mb	Parallel, SPI	DFN, BGA, TSOP2	MP		
	16Mb	Parallel	BGA, TSOP2	MP		
	256Mb	ST-DDR3	BGA	MP		
	1Gb	ST-DDR4	BGA	ES	CS	MP

MRAM products address a wide array of applications with long design life

*Everspin Estimates

The background of the slide is a dark blue gradient. On the right side, there are several horizontal, slightly curved lines of glowing blue light. Overlaid on these lines and the background is a pattern of white binary code (0s and 1s) that appears to be moving or flowing from left to right, creating a sense of digital motion.

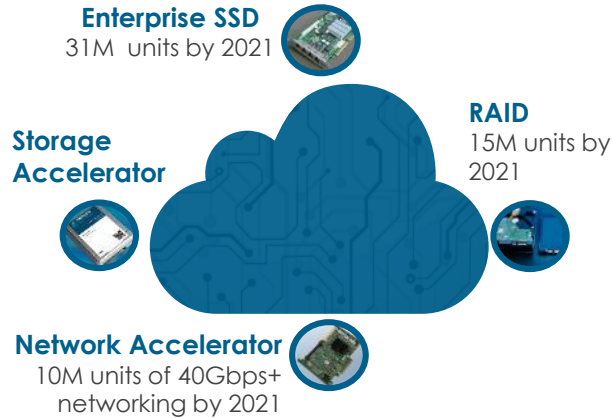
Market View

MRAM Transforming Datacenter Core to End Points

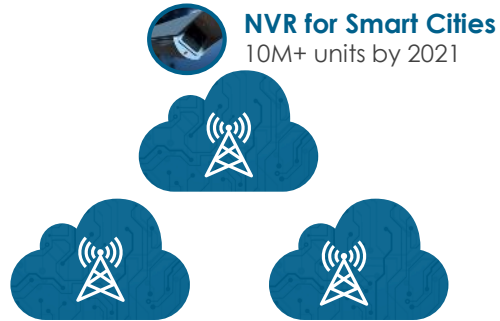
125 Zettabytes of data
by 2025

By 2025 75% of enterprise data will be
created and processed outside the
Datacenter

27B Networked Devices by 2021



Core

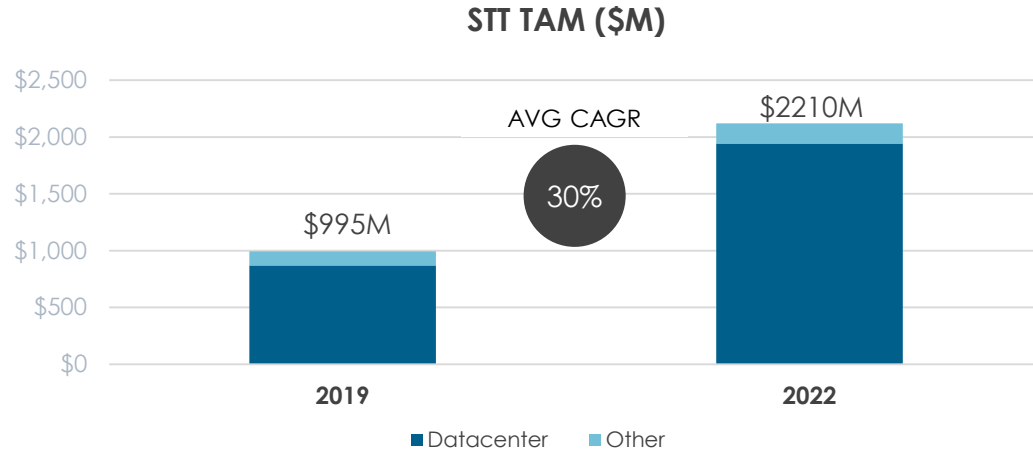


Edge



End Points

Significant STT Growth: Key Focus on SSD



KEY SUCCESS FACTORS

- Expanded SSD/AFA Penetration
- Market validation with IBM engagement
- Value Proposition of persistent write buffer in other segments
- FPGA platform enablement (Short term growth driver)
- Controller ASIC ecosystem enablement (Long term growth driver)

CORE FOCUS SEGMENT



Enterprise PCIe SSD

GROWTH OPPORTUNITIES



RAID



Storage Accelerator



Fabric Accelerator



NVR

*Everspin internal estimate

The Cost of Latency

The Importance of Storage Latency QOS



A 10X increase in the write buffer allows a 45% improvement in 99.99999% Latency QOS

Amazon found that every 100ms of latency cost them 1% in sales.

Databases, Virtual Machines, VDI (Desktop Virtualization), **OLTP** (On Line Transaction Processing) applications demand storage with latencies of less than 1ms down to a few tens of μ s.

Google, if a page takes more than 500ms to load, the site traffic drops by 20%. An additional delay of 400ms in search responses reduces search volume by nearly 1%.

A broker could lose as much as \$4 million in revenues per ms if its **electronic trading platform** was only 5ms behind the competition. A 1ms advantage in latency can be worth upwards of \$100 million per year.

Akamai shows that a 1 second delay in page response can result in a 7% reduction in conversions.

For **Bing**, 500ms of latency decreases revenue per user by 1.2%.

ms = millisecond μ s = microsecond



STT-MRAM

in Enterprise Storage

In Partnership With:



Large Buffer For
Low Latency



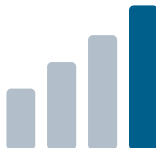
High QOS

10X More Space
For Streams



*Extended
Drive Life*

Optimized
Bandwidth



*Higher Data
Throughput*

More Space For
NAND Memory



*Higher Storage
Density*

Improved System
Reliability



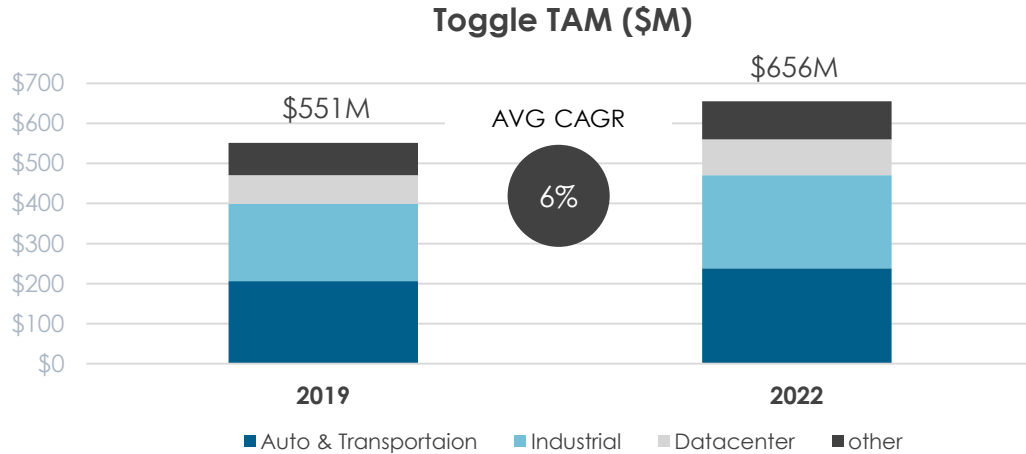
*Lower Failure
Rates*

Simplified
Architecture
*Speeds
Time To Market*



*Increased Value
Capture*

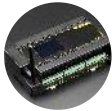
Above Market Toggle Growth in Broad Applications



KEY SUCCESS FACTORS

- Focus on high value segments that need higher performance and reliability
- Leverage expanded supply
- Re-engagement in the Auto segment
- Additional growth through extended product roadmap

CORE FOCUS SEGMENTS



PLC



Gaming



Medical



Smart Meter



RAID
Journal



Industrial
Others

GROWTH OPPORTUNITY



Auto

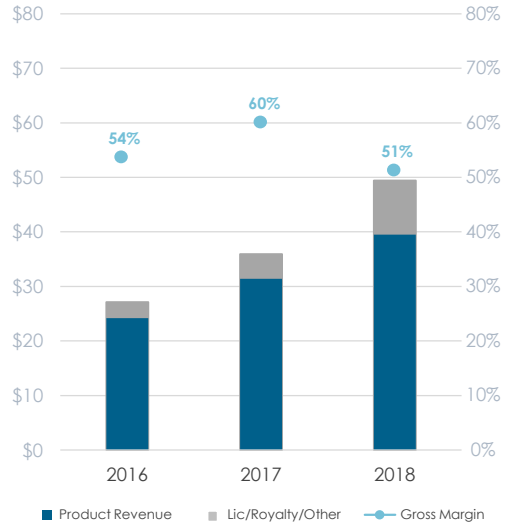
*Everspin internal estimate

Financial Data

Key Financial Indicators

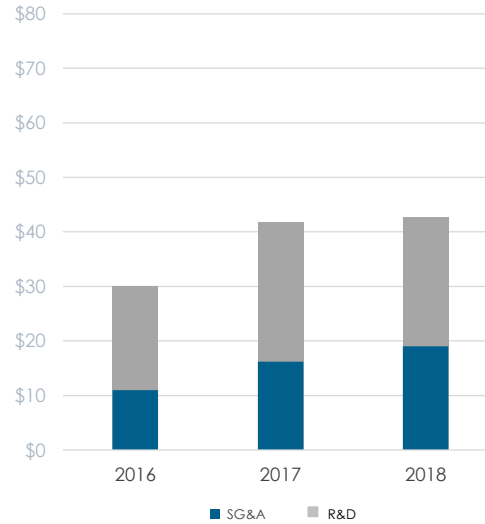
38% YoY Growth With Robust Margins

Revenue



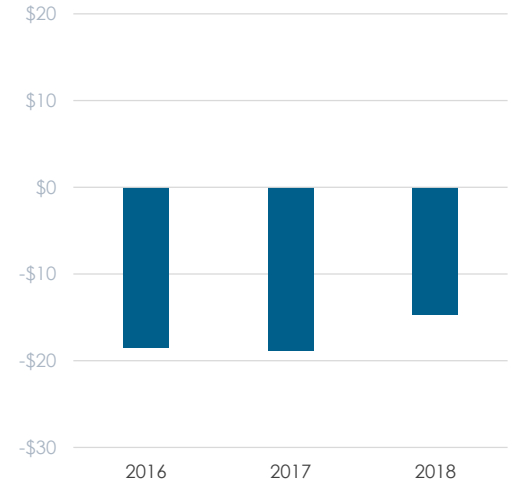
Well Controlled OPEX

OPEX



Moving Toward Profitability

Operating Cash Burn



Income Statement

Income Statement (\$M)	2017	2018	1Q19
Revenue	\$35.9	\$49.4	\$10.0
Gross Profit	\$21.5	\$25.3	\$4.8
R&D	\$25.4	\$23.6	\$4.0
SG&A	\$16.3	\$19.0	\$5.0
Operating Income	-\$20.2	-\$17.3	-\$4.2

Balance Sheet

Balance Sheet (\$M)	2017	2018	1Q19
Cash & Equivalents	\$13.0	\$23.4	\$18.5
Assets	\$31.4	\$45.0	\$42.2
Debt	\$12.2	\$12.5	\$10.5
Liabilities	\$20.6	\$20.1	\$20.8
Equity	\$10.9	\$24.9	\$21.4

Target Operating Model

	2018 Actual	Long-Term Target @ \$100M
Total Revenue	\$49.4M	100%
Gross Margin	51.3%	>55%
R&D	\$23.6M	25%
SG&A	\$19.0M	17%
Operating Income	(\$17.3M)	15%

Our focus is on building a sustainable business

Investment Summary



MRAM products have differentiated value proposition that deliver performance, persistence and endurance while reducing safety and reliability concerns



Sole supplier of Toggle MRAM and STT-MRAM to Tier-1 customers in important stable and growing markets



Growing IP portfolio of over 500 patents and applications generating licensing and royalty revenue



Management team and Board with experience commercializing technology in our target markets



Solid track record of revenue growth, strong margins and consistent cost control



Strategic manufacturing, distribution and customer engagement relationships



Solidly growing Toggle revenue base with incremental market opportunity for STT-MRAM with large growth potential

Thank you.



Data Persistence at Speed