

# DELIVERING NON-VOLATILE MEMORY WITH EXCEPTIONAL SPEED AND ENDURANCE

**Investor Presentation – May 2018** 

### 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 Company Overview**

Unique Market Position

- Only MRAM production supplier
- 10+ years in MRAM production
- 70M+ units shipped
- · Thousands of customers

**Strong IP Legacy** 

- Founded in Motorola Labs in 1996
- 500+ WW patents & applications

Strengthening Business

- 59% revenue growth rate (1Q17-1Q18)
- >55% annual gross margins

**Company Facts** 

- Offices in Chandler AZ & Austin TX
- Freescale spinout 2008

- Initial Public Offering 2016
- NASDAQ: MRAM

#### Growing Strategic Markets







Automotive & Transportation

Industrial

Enterprise Compute & Storage

#### Tier One Customer Base













#### **Strong Partnerships**







### Why MRAM Now?

#### Discrete for System Integration

- Key markets have rising need for discrete persistent memory solutions
- Everspin has a broad Toggle MRAM portfolio
- Everspin 256Mb STT-MRAM in mass production
- Everspin 1Gb STT-MRAM in development



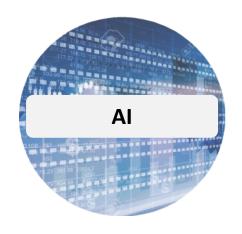
#### Embedded for SOC

- eFlash not practical at technology nodes below 28nm
- eMRAM provides more efficient memory cell than eSRAM & eDRAM below 28nm
- eMRAM brings operating power benefits over eSRAM/eDRAM as well as system level through non-volatility
- Four major foundries have announced STT-MRAM embedded production; Everspin/GLOBALFOUNDRIES are in the forefront





### Trends Driving Need for Persistent Memory



Artificial Intelligence (AI)
brings data closer to compute,
driving need for low latency
and power efficiency from
memory



Edge computing requirements demand solutions that can capture critical data quickly, support analysis and store it reliably while waiting for network connectivity



Safety, growing storage capacity and shrinking physical form factors driving need for persistent data buffering



We believe MRAM is aligned to today's most exciting applications

### MRAM: Persistence, Performance & Endurance



**Persistence** 

Maintains memory contents without requiring power



**Performance** 

DRAM-like performance with low latency



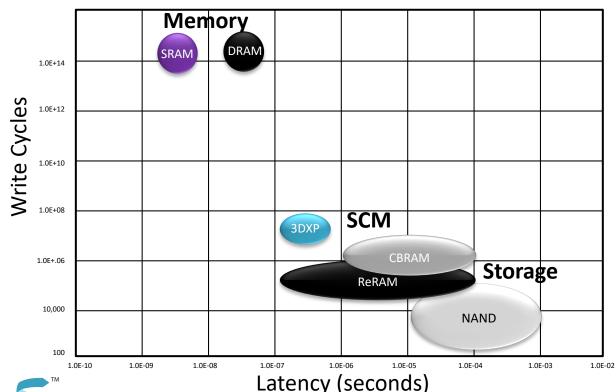
**Endurance** 

Superior durability supports memory workloads without sophisticated management



We believe that MRAM is an ideal technology to meet persistent memory needs

### Legacy Discrete Memory Solutions

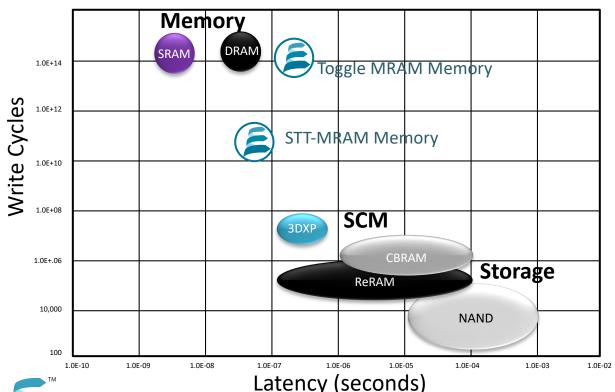


- DRAM is fast, but volatile and requires refresh cycle
- **SRAM** has lower density than DRAM, but also volatile

  Both require external batteries or capacitors to provide constant power
- SCM (Storage Class Memory) is faster than NAND, but lower endurance
- NAND Flash is non-volatile, but slow and low endurance
  - Flash difficult to scale



### **Legacy Discrete Memory Solutions**



## MRAM Combines Performance of Memory with Persistence of Storage

- High Performance DRAMclass write performance
- Non-Volatile maintains memory without power
- Fast Read/Write Speeds similar to SRAM and DRAM
- Superior Durability survives memory workloads
- No Refresh data requires no charge



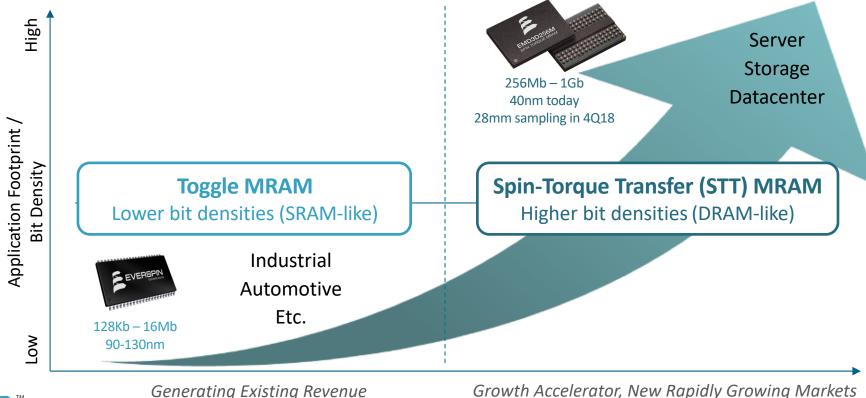
### A Market View of Memory Technologies

	DRAM	NAND	MRAM	
		TOSHIBA GB-NAND	E	
Market	Commodity	Commodity	Targeted	
Application	Compute, Buffer	Storage Compute, Buffer, Buffer, Compute, Buffer, Compute, Buffer, Compute, Buffer, B		
Primary Competitors	Samsung SK Hynix Micron	Samsung Toshiba Western Digital	N/A	
Barriers to New Entry	High	High	High	
Design Lifecycle	1-2 years	1-2 years	2-5 years	
Purchase Driver	Cost per Gb	Cost per Gb	Functional Value	



Our differentiation and markets enable Everspin to sell on value, not price

### Product Offerings: Bit Density Drives Higher Volume





Growth Accelerator, New Rapidly Growing Markets

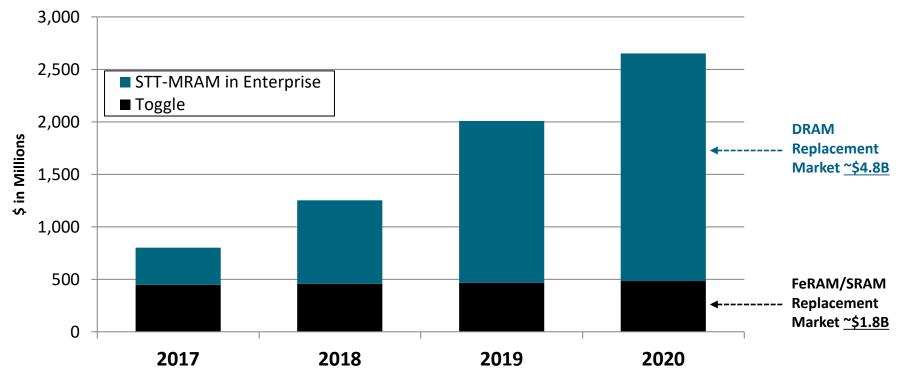
### **Everspin Product Portfolio**

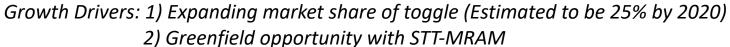
Technology	Capacity	Interface	Package	2018	2019	2020
Toggle	128kb	Serial	DFN		MP	
EVERBIN	256kb	Parallel, Serial	DFN, SOIC, BGA TSOP2		MP	
	1Mb	Parallel, Serial, QSPI	DFN, BGA, TSOP2, SOIC		MP	
EVERBN	4Mb	Serial, Parallel	DFN, BGA, TSOP2		MP	
	16Mb	Parallel	BGA, TSOP2		MP	
STT-MRAM	256Mb	ST-DDR3	BGA		MP	
	1Gb	ST-DDR4	BGA	ES	cs	MP



\*Everspin Estimates

### Everspin's Served Available Market Opportunity







\* Everspin estimates

### Strong Top-Tier Customer Base in Growing Markets

#### **Industrial**

- Automation
- PLC
- Motor Control
- Lighting

- Network
- Smart Meter
- Casino Gaming





#### **Automotive & Transportation**

- Infotainment
- Transmission Control
- Tachograph/ Odometer

- Electric Brakes
- Engine Management
- Event Recorder
- ADAS







#### **Enterprise**

- Enterprise SSD
- RAID

Server

Enterprise HDD

Storage Appliance





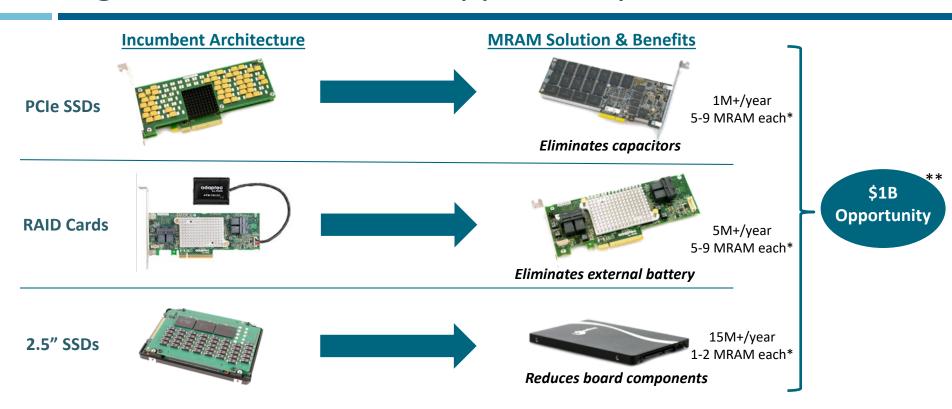


#### **Toggle MRAM Shipments**

**Initial STT-MRAM Focus** 



### Significant STT-MRAM Opportunity





MRAM Maximizes capacity, increases reliability, reduces form factor

<sup>\*</sup> MRAM content per system and unit shipments are Everspin estimates.

<sup>\*\*</sup> Everspin estimate.

### Channels to Market

#### **Discrete Component Sales**



#### **Distributors**

Value added designs into end customer applications



#### **Direct Customers**

Direct sales to OEMs for integration into their platforms



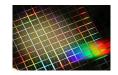


#### **Go-to-Market Partner**

MRAM chips sold as part of storage modules in partnership with SMART Modular Technologies



#### **Embedded MRAM Licensing**



#### **Fab Partner**

Wafer royalty revenue from co-developed eMRAM technology that is used in SoC applications





### nvNITRO Now Available from SMART Modular Technologies

#### Joint Go-to-market Accelerates Technology







Design & develop, building on Everspin's core technology

Leverage SMART's product strength to productize & sell

#### **Target Markets**

Targeting financial, AI, supercomputing

### **9X Advantage**

Over SSDs in financial logging applications

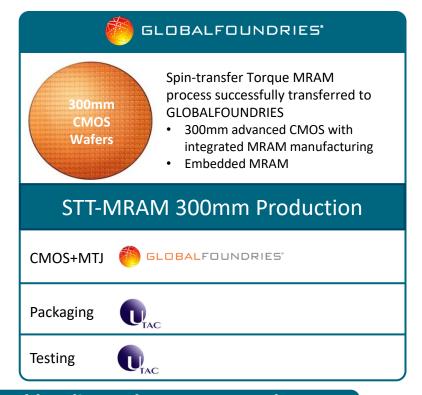




Direct to customer sales accelerates path to market

### **Operational Footprint**







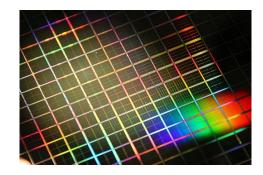
Manufacturing excellence and leading-edge outsourced manufacturing capabilities

### Demonstrated Execution and Partner Success



In four shorts years, Everspin moved from partner agreement to shipping STT-MRAM product, a significant achievement for a new memory technology

We believe our ability to ship discrete MRAM in volume accelerates GLOBALFOUNDRIES' ability to deliver embedded MRAM





We believe only Everspin can scale and excel in both discrete and embedded

### The Executive Team



**Kevin Conley** President & CEO

SanDisk



**Jeff Winzeler** Chief Financial Officer



**Annie Flaig** SVP, Sales

**AMD** 





**Pat Patla** SVP, Marketing





**Rizwan Ahmed** VP, Strategic Marketing



SanDisk



Sanjeev Aggarwal VP, Manufacturing & Process Technology **TEXAS INSTRUMENTS** 



**Tom Andre** 





**Angelo Ugge** VP, Corp Bus. Dev.





**Norm Armour** VP, Operations





Jim Everett VP, Human Resources







### Solid and Growing Revenue Base





Consistently delivering revenue growth with 55%+ annual gross margin

### **Target Operating Model**

	2017	Long-Term Target @\$100M		
Total Revenue	\$35.9M	100%		
Gross Margin	59.5%	>55%		
R&D	\$25.4M	25%		
SG&A	\$16.3M	17%		
Operating Income	(\$21.1M)	15%		



### Today's Investment Over Three Horizons

#### Investing across multiple areas to drive success

#### **Near-term**

- Optimize Toggle MRAM Business
- Grow STT-MRAM Market for 256Mb
- 1Gb DDR in development

Build Strength in Large Niche Applications

#### Mid-term

- Expand STT-MRAM to Adjacent Markets
- Broaden STT-MRAM Product Family

Accelerate Growth into Adjacent Markets

#### Long-term

- Innovate for Continued Market Leadership
- Drive STT-MRAM
   Density Higher & Bit
   Cost Down

Disrupt Mainstream
Markets



<sup>\*</sup> Based on Everspin plans and estimates

### **Everspin Strengths**

#### **MRAM**

MRAM delivers performance, power and persistence while reducing safety concerns

#### **Embedded & Discrete**

As MRAM becomes the memory of choice, we believe that only Everspin delivers both

#### **Tier 1 Customers**

Sole supplier to tier-1 customers in important growing markets

#### Management

Management team with a strong track record of growth in our target markets

#### Relationships

Strategic manufacturing, distribution and customer engagement relationships

#### Growth

This market is in its infancy and we believe it is just starting to take off

#### **Expertise**

Unique technology expertise with 500+ patents and applications





FOR MORE INFORMATION, PLEASE VISIT WWW.EVERSPIN.COM