

Microsemi Analyst Day

September 8, 2016



Microsemi Analyst Day Agenda

- 9:00-9:05 Introduction & Highlights**
James J. Peterson, Chairman & Chief Executive Officer
- 9:05-9:15 Shareholder Value Proposition**
Paul Pickle, President & Chief Operating Officer
- 9:15-9:45 Storage and Data Center**
Derek Dicker, Vice President & Business Unit Manager,
Performance Storage
- 9:45-10:00 Ethernet Switching**
Jacques Issa, Vice President & Business Unit Manager,
Communications
- 10:00-10:15 Timing Solutions**
Maamoun Seido, Vice President & Business Unit Manager, Timing
- 10:15-10:30 Optical Networking – OTN**
Babak Samimi, Vice President & Business Unit Manager, OTN
- 10:30-10:40 Break**

Microsemi Analyst Day Agenda

10:40-11:00 Aerospace

Siobhan Dolan, Vice President & General Manager, Discretes

11:00-11:15 FPGAs

Esam Elashmawi, Vice President & General Manager, IC Solutions

11:15-11:30 Financial Performance

John Hohener, Executive Vice President & Chief Financial Officer

11:30-11:35 Acquisition Strategy

Steve Litchfield, Executive Vice President & Chief Strategy Officer

11:35-11:40 Executive Summary

James J. Peterson, Chairman & Chief Executive Officer

11:40-12:00 Q&A

12:00-1:00 Management Luncheon

Disclaimer

- This presentation contains projections or other forward-looking statements regarding future events or the future financial performance of Microsemi Corporation.
- We wish to caution you that these statements are only predictions and that actual events or results may differ materially. We refer you to all of the documents that the company filed with the Securities and Exchange Commission. Please pay special attention to the Company's most recent Form 10-K and subsequent Form 10-Qs.
- These documents contain and identify important factors that could cause the actual results to differ materially from those contained in our projections or forward-looking statements.

Introduction & Highlights



James J. Peterson

Chairman & CEO

Shareholder Value Proposition



Paul Pickle

President & Chief Operating Officer

Microsemi's Shareholder Value Proposition

- **The Case for Growth**

- Higher value, growing markets, strengthened value proposition

- **Market Share – Increasing the Customer Engagement**

- Minority market share position in high growth markets

- **Top Tier Profitability**

- Updating our target model

- **Focused Use of Cash**

- De-levering, executing ahead of plan

- **Tied to Shareholder Value Creation**

- Total shareholder return, our growing commitment



Storage and Data Center



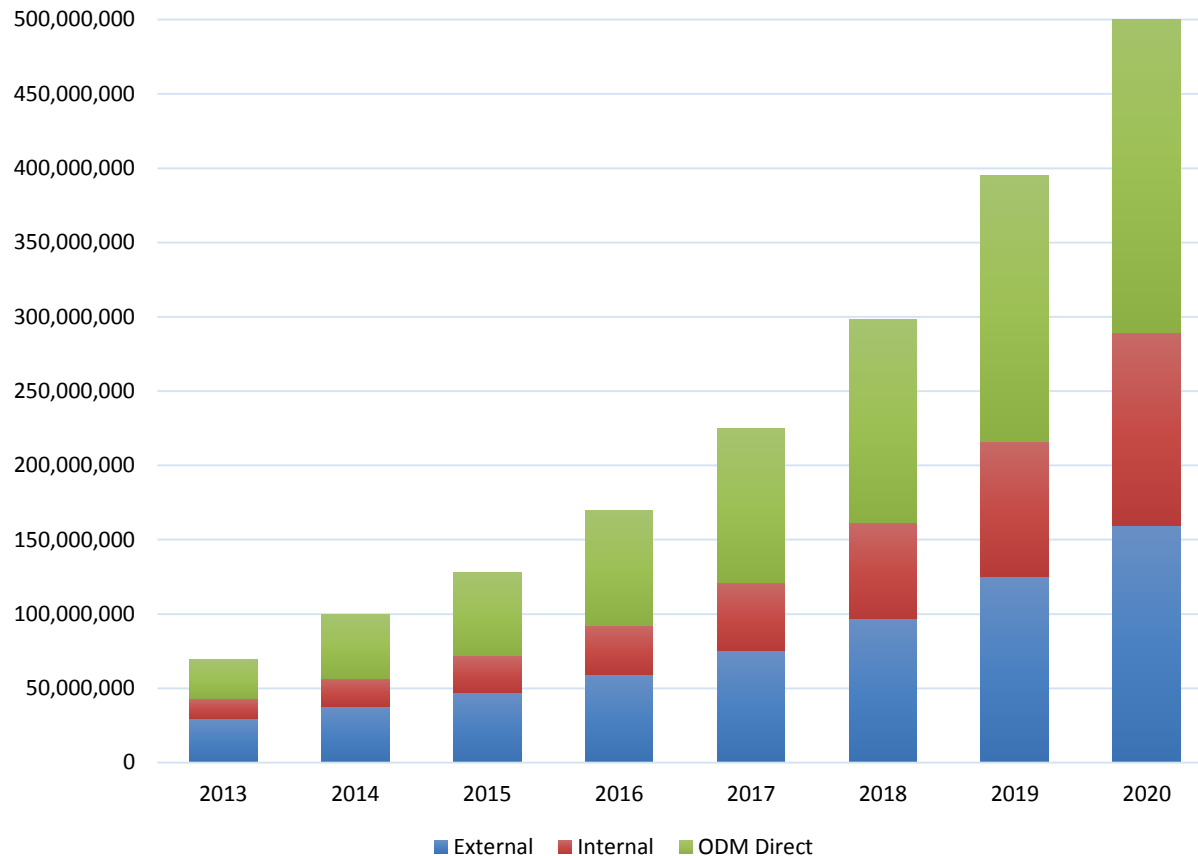
Derek Dicker

VP & Business Unit Manager, Performance Storage

A Healthy Fundamental Growth Driver

Capacity Shipped

Worldwide Enterprise Storage Systems Capacity Shipped (TB)

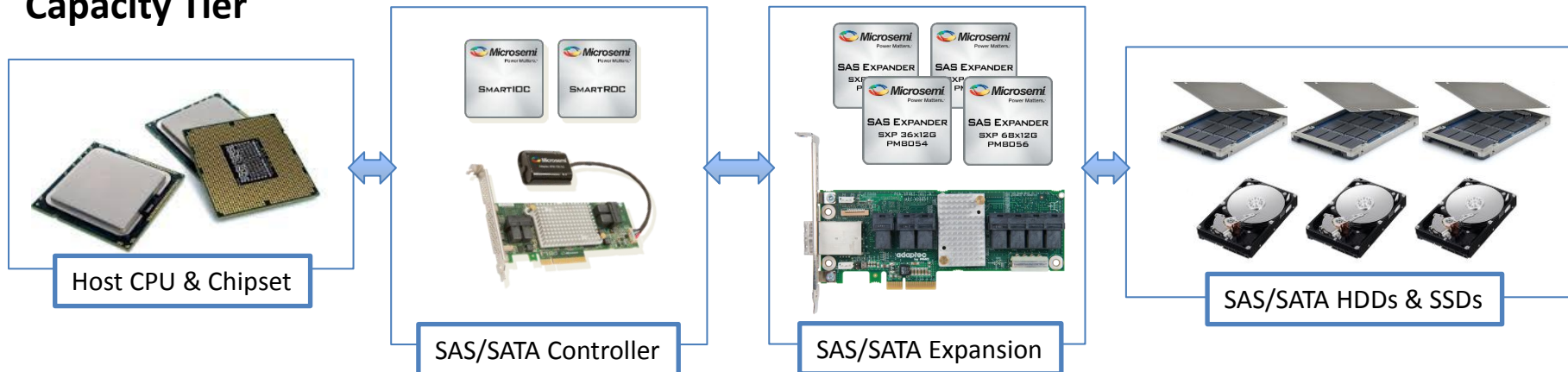


Source: IDC, Worldwide Enterprise Storage Systems ODM Direct Forecast (#US41301116), May 2016

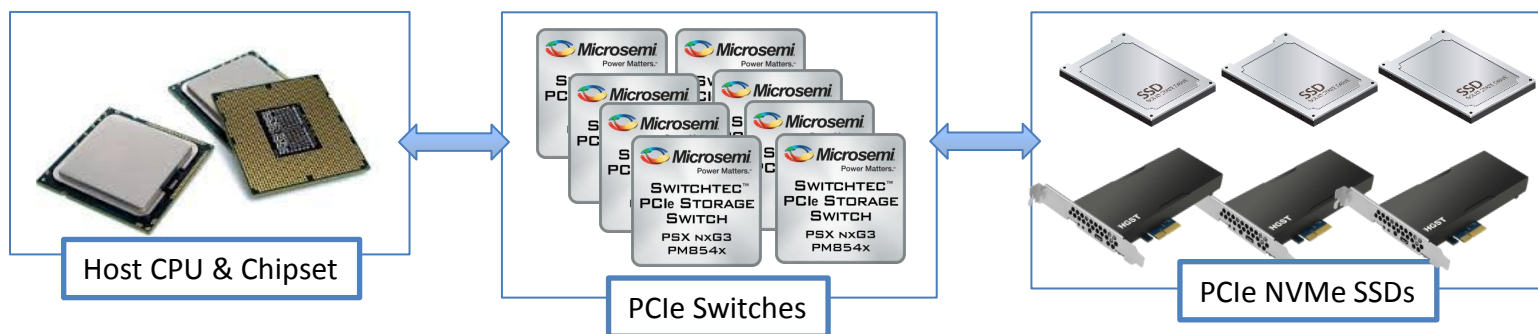
Storage 101

The Business of Connecting Drives

Capacity Tier

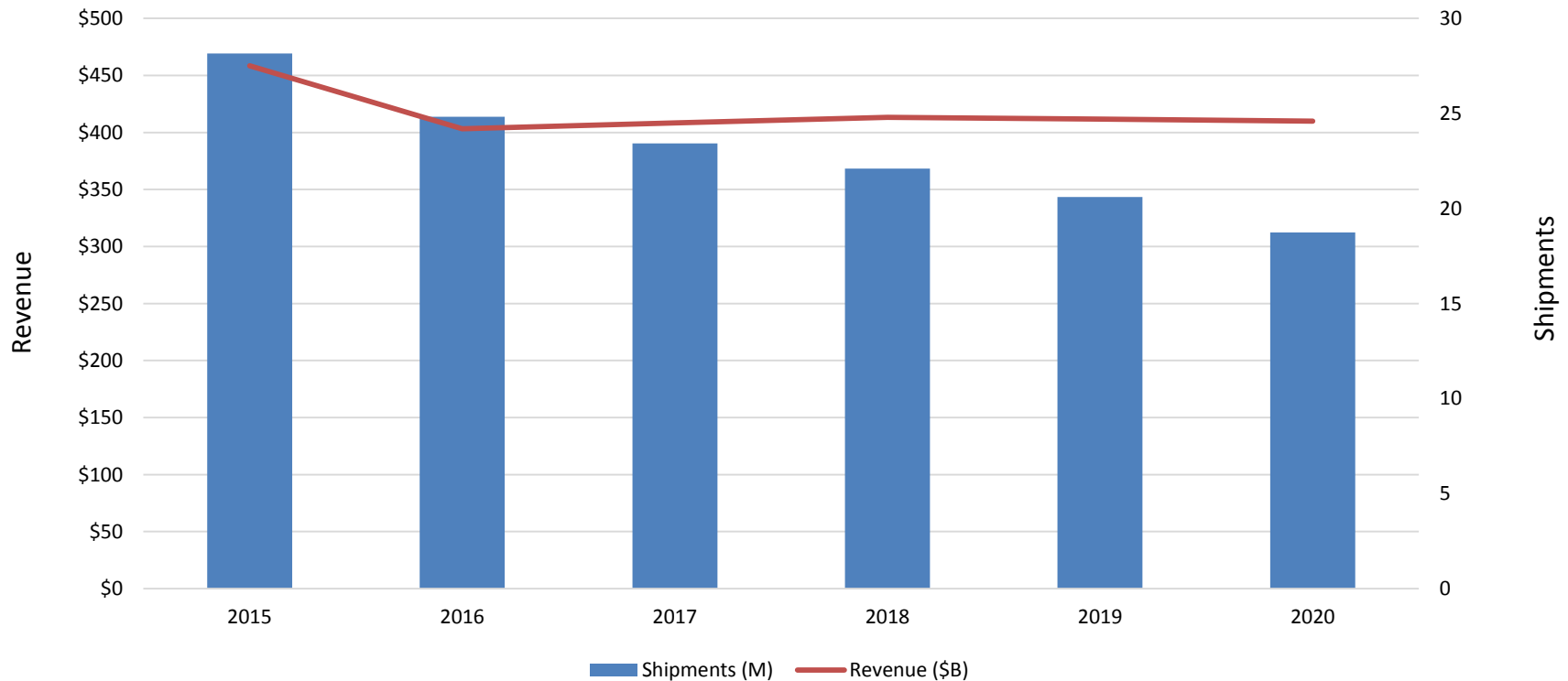


Performance Tier



WW Hard Disk Drive Revenue Flattens...

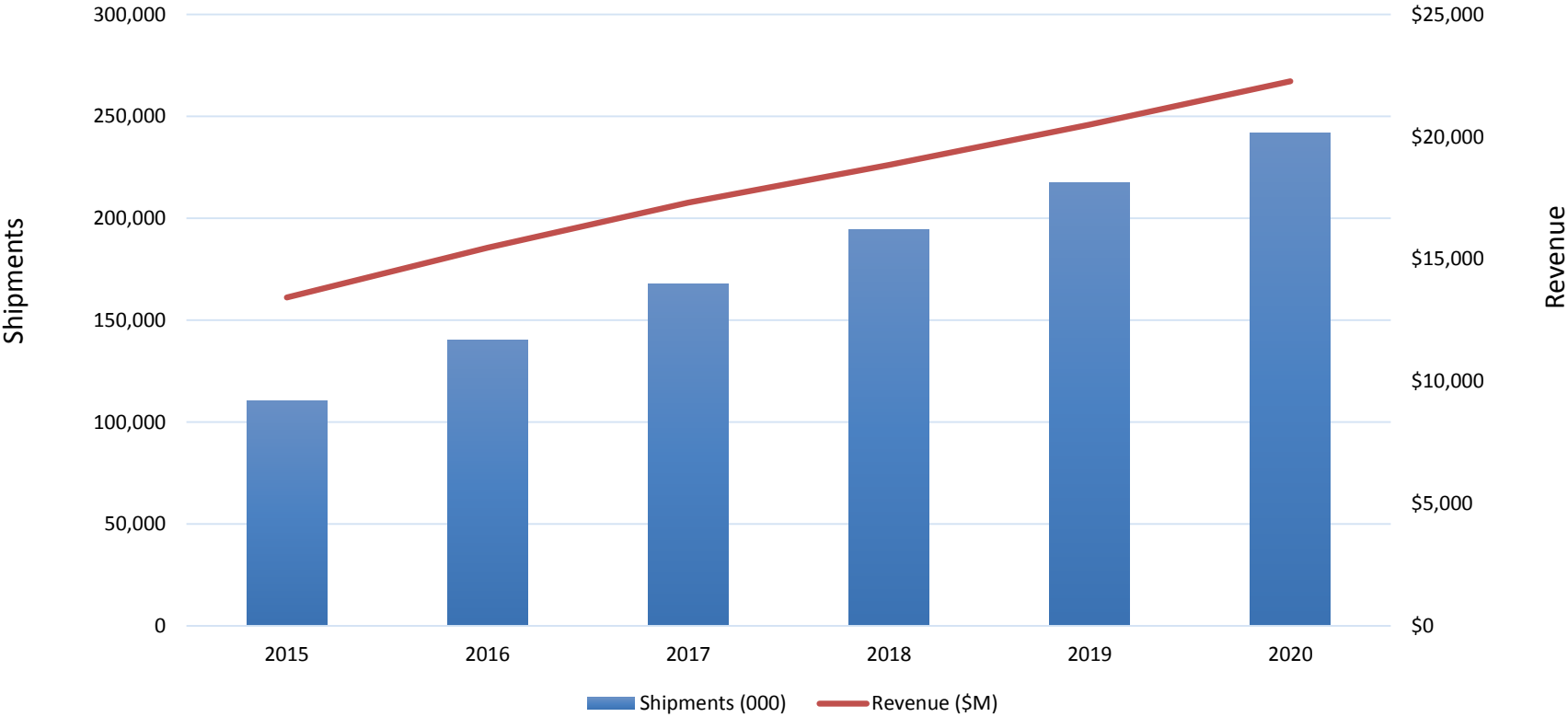
Worldwide HDD Shipments and Revenue (2015-2020)



Source: IDC, Worldwide Hard Disk Drive Forecast (#US41223716), May 2016

...While WW Solid State Drives Ramp

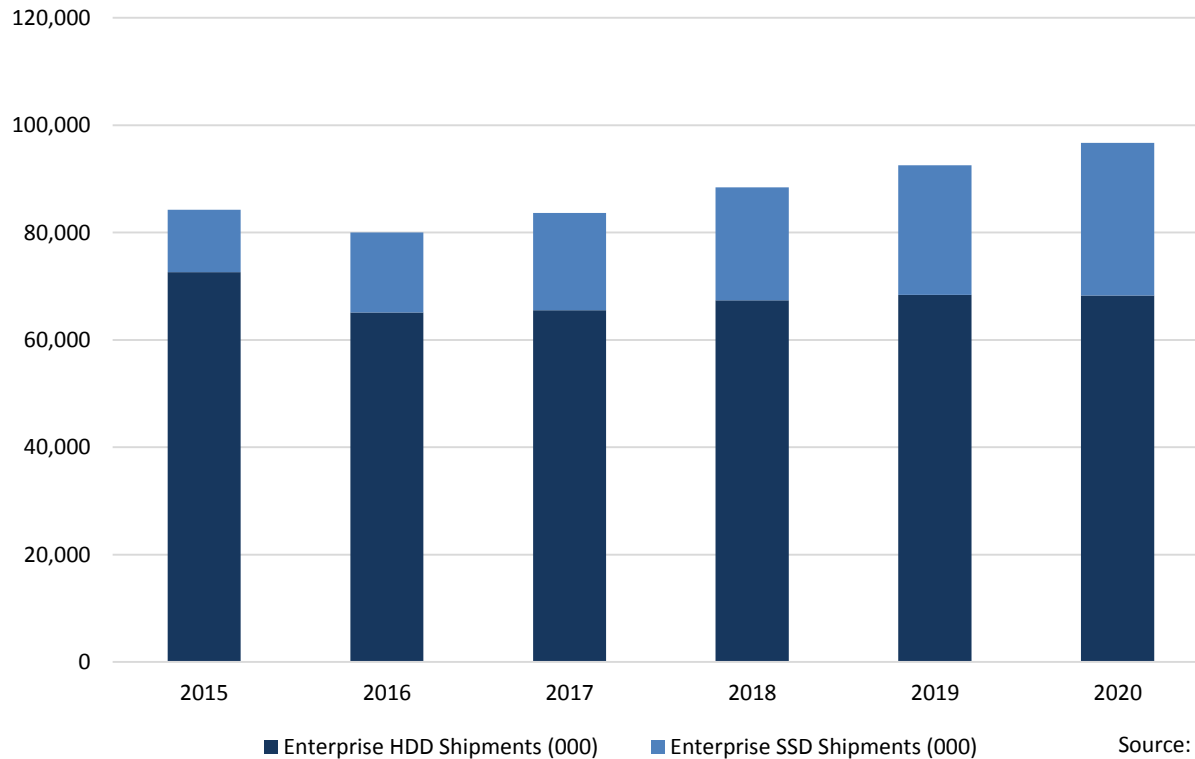
Worldwide Solid State Drive Forecast



Source: IDC, Worldwide Solid State Drive Forecast Update, 2016-2020 (#US 40422516), May 2016

Enterprise HDDs Healthy, SSDs Growing

Worldwide Enterprise HDD & SSD Shipments



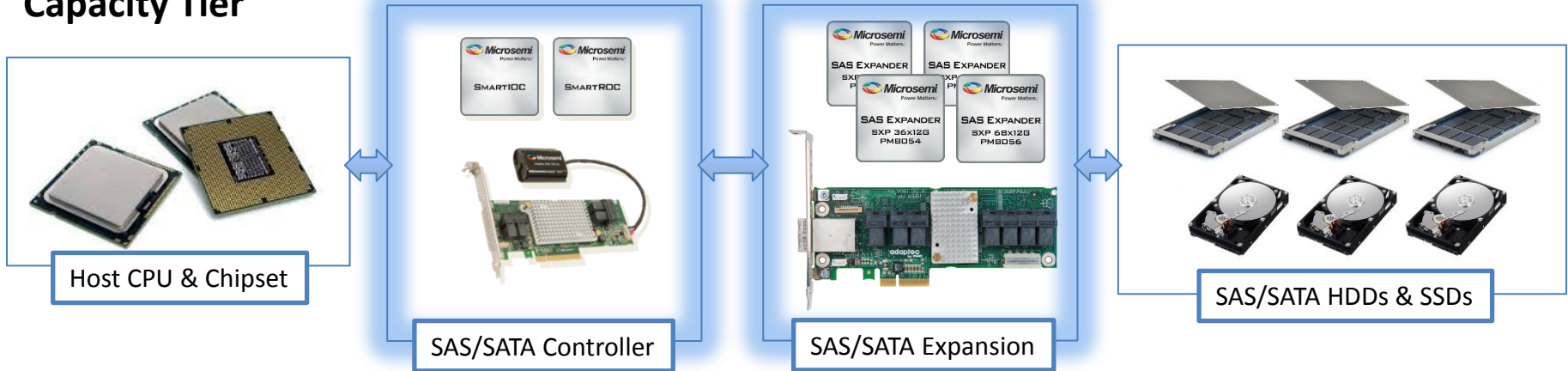
Source: IDC, Worldwide Hard Disk Drive Forecast (#US41223716), May 2016 & Worldwide Solid State Drive Forecast Update, 2016-2020 (#US 40422516), May

- Enterprise SSDs growing at 19.7% CAGR (2015-2020)
- Enterprise HDDs modest growth (2016-2020)
 - Growth segment is capacity optimized 3.5" HDDs at 7.1% CAGR (50M units in 2020)

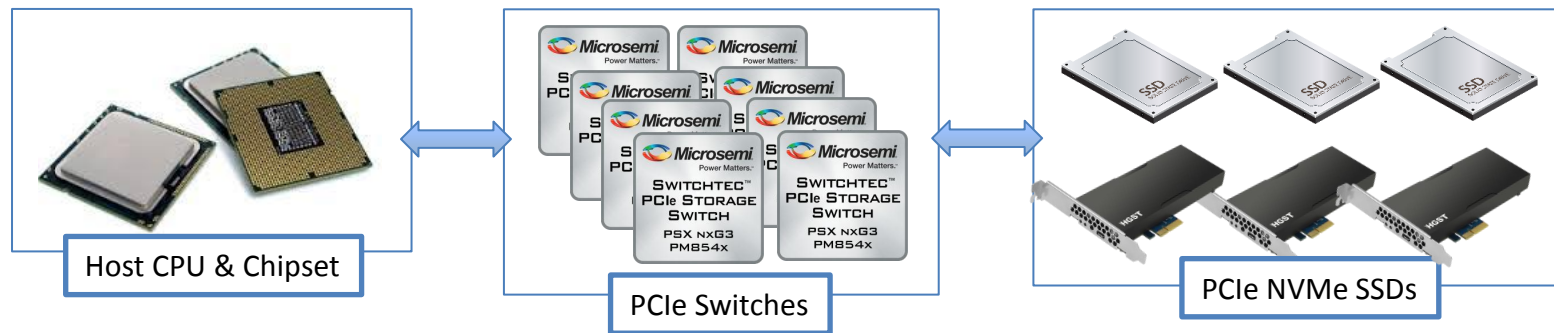
Storage 101

The Business of Connecting Drives

Capacity Tier

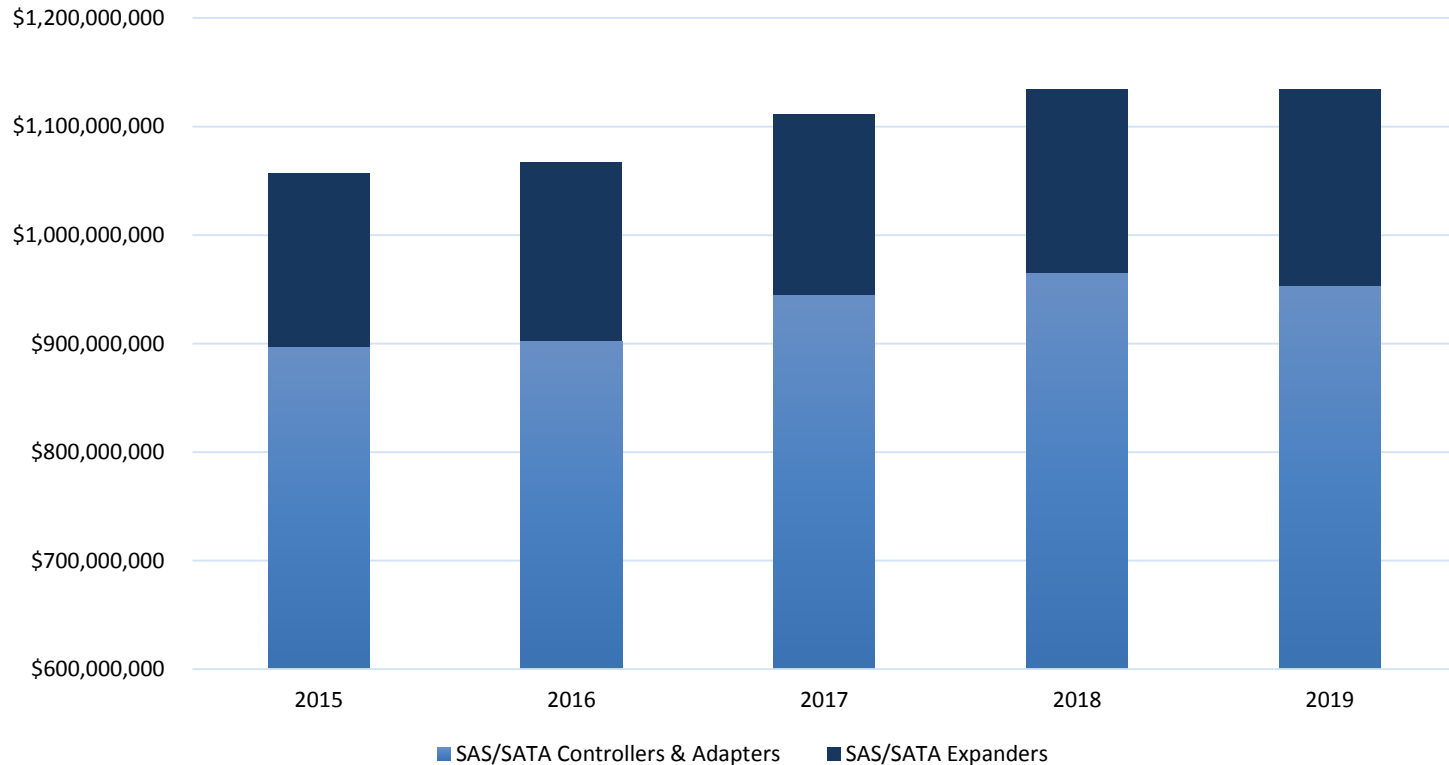


Performance Tier



Microsemi SAS/SATA SAM

Microsemi SAS / SATA Serviceable Available Market (SAM)



Source: Microsemi estimates

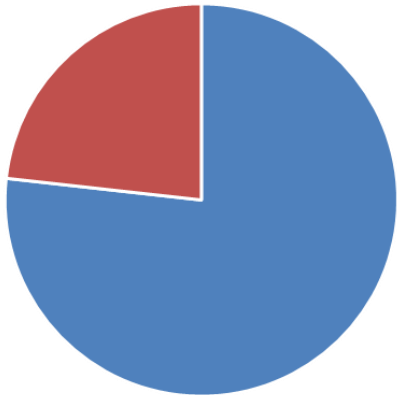
Healthy Market Segment with Substantial Opportunity for Share Capture

Growing Share in Transitions

2014

6G SAS

Intel Romley



Market Position:

Strategic Supplier to #1 Server OEM

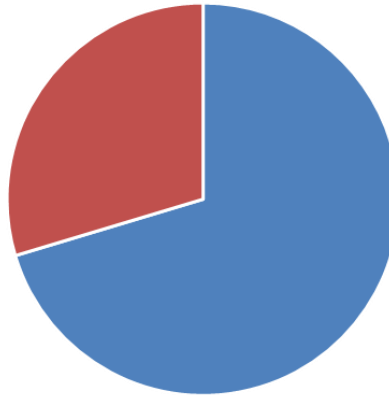
#1 in OEM Storage

Embedded Solutions Focus

2016

12G SAS

Intel Grantley



Growth Contributors:

China Market

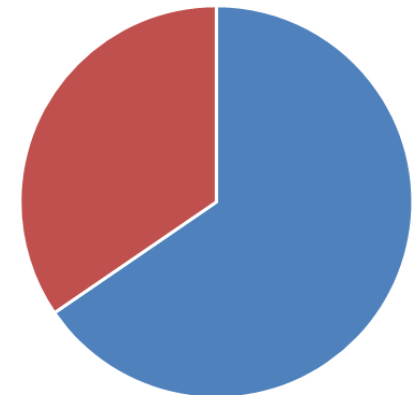
Data Center Direct

Increased Adapter Content

2018e

12G SAS

Intel Purley



Growth Contributors:

Additional Server OEM Share Gains

Increased Adapter Content

Data Center Direct Share Growth

Source: Share gains are based on current design wins and company estimates

Power Matters: Microsemi HBA1000

Driving Down TCO for Data Centers

Product	Microsemi Typical Power	Power Advantage vs. Comp "A"	TCO Savings <u>per</u> HBA
HBA 1000-8i	9.4 W	3.6W advantage (13.0W typical)	\$86
HBA 1000-8e	8.7 W	5.8W advantage (14.5W typical)	\$139
HBA 1000-16i	11.8 W	4.4W advantage (16.2W typical)	\$105

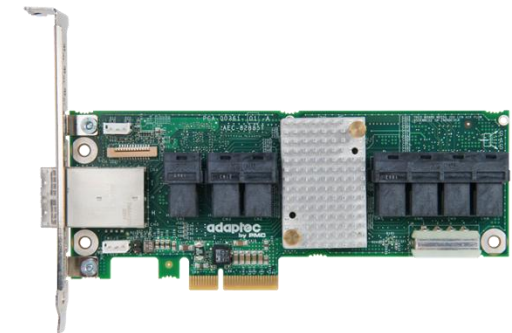
*Assumes \$6 per W per year, 4 year lifespan, fully burdened
 Source: Microsemi

Low-power HBA 1000 solutions significantly reduce total cost of ownership!



Power Matters: Microsemi SAS Expanders

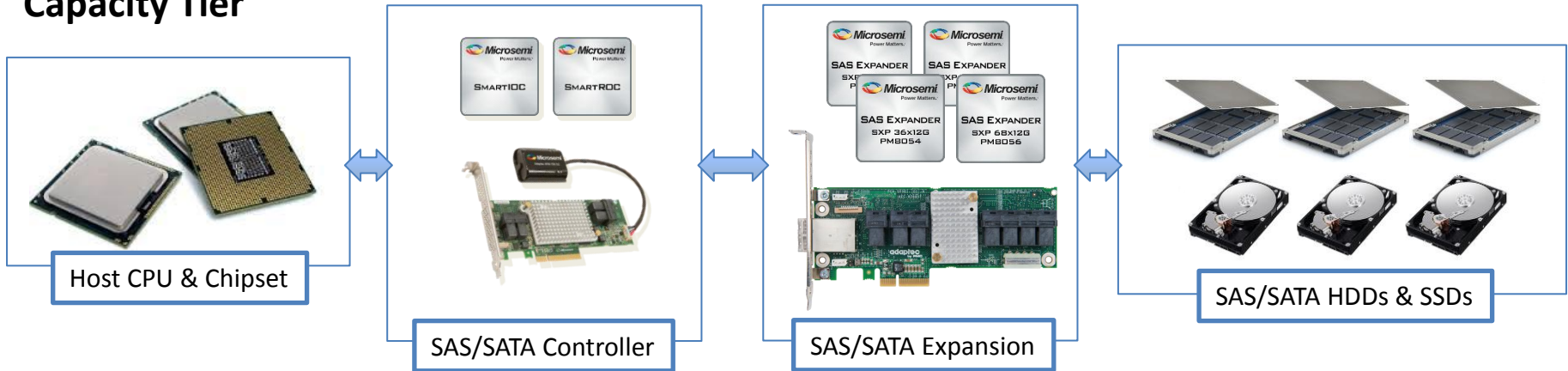
- Industry's Lowest Power Consumption
 - Competitive solutions require 20-40% higher power
- Leading Density
 - 24 to 68 physical layer interfaces (PHYs) in a single device
- Superior Signal Integrity
 - Enables extended printed circuit board (PCB) trace/cables
- SAS/SATA Buffering
 - Boosts performance up to 80%



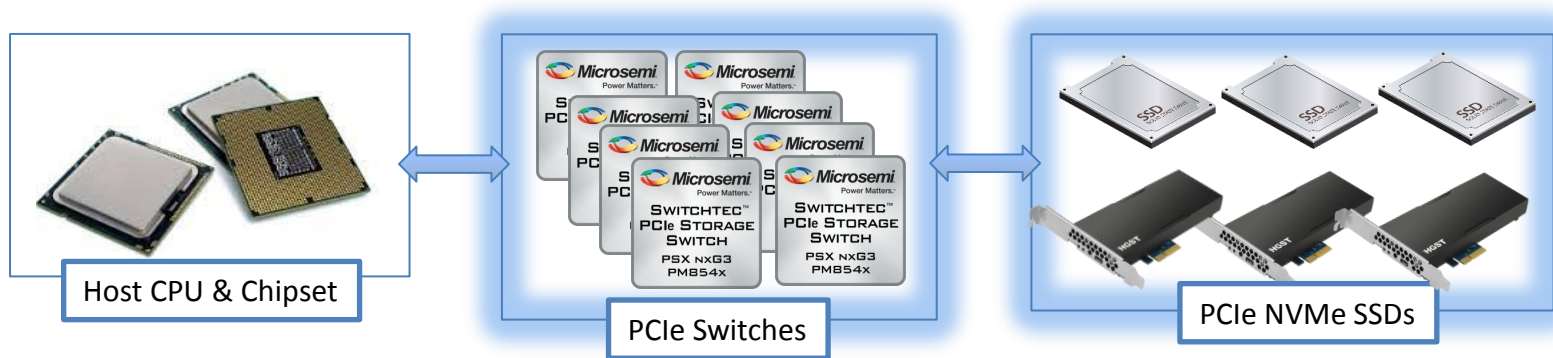
Storage 101

The Business of Connecting Drives

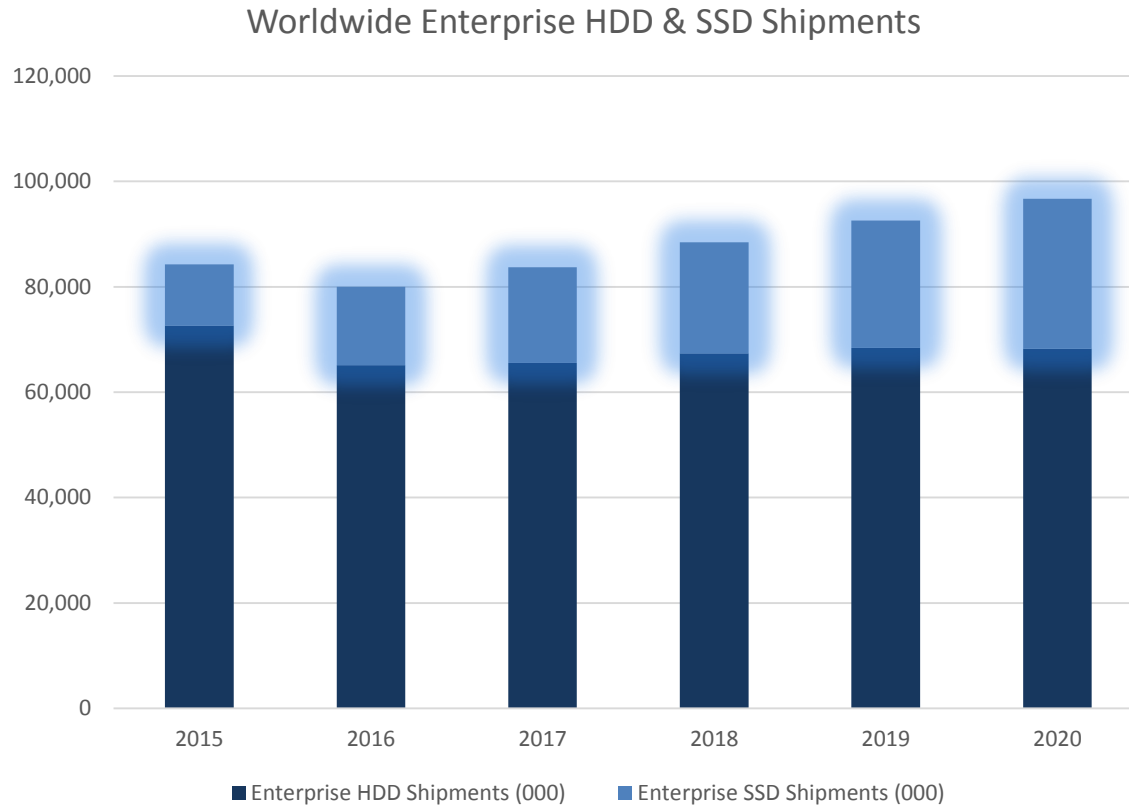
Capacity Tier



Performance Tier



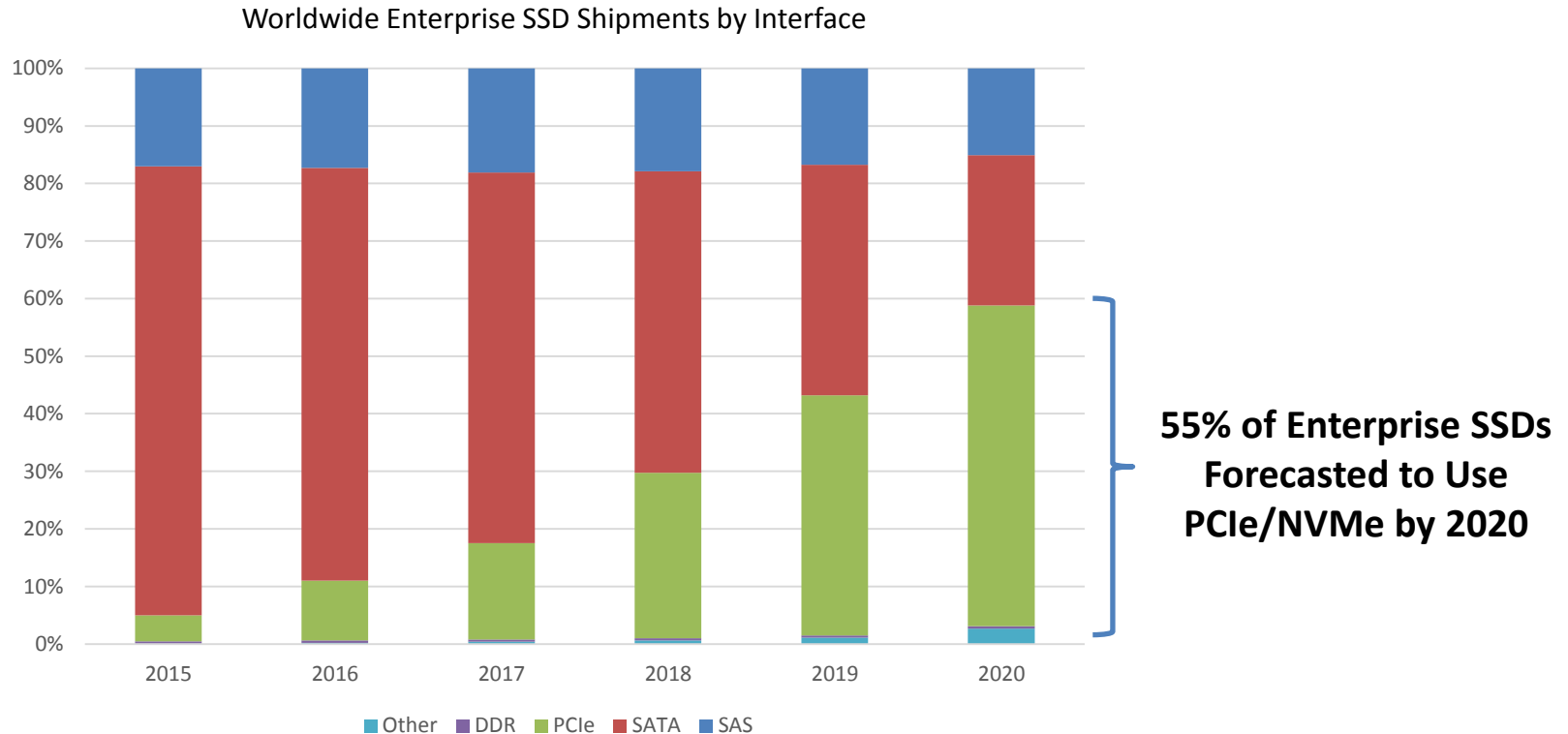
Enterprise HDDs Healthy, SSDs Growing



Source: IDC, Worldwide Hard Disk Drive Forecast (#US41223716), May 2016 & Worldwide Solid State Drive Forecast Update, 2016-2020 (#US40422516), May

- Enterprise SSD shipments growing at 19.7% CAGR (2015-2020)
- Enterprise HDD modest growth (2016-2020)
 - Growth segment is capacity optimized 3.5" HDDs at 7.1% CAGR (50M units in 2020)

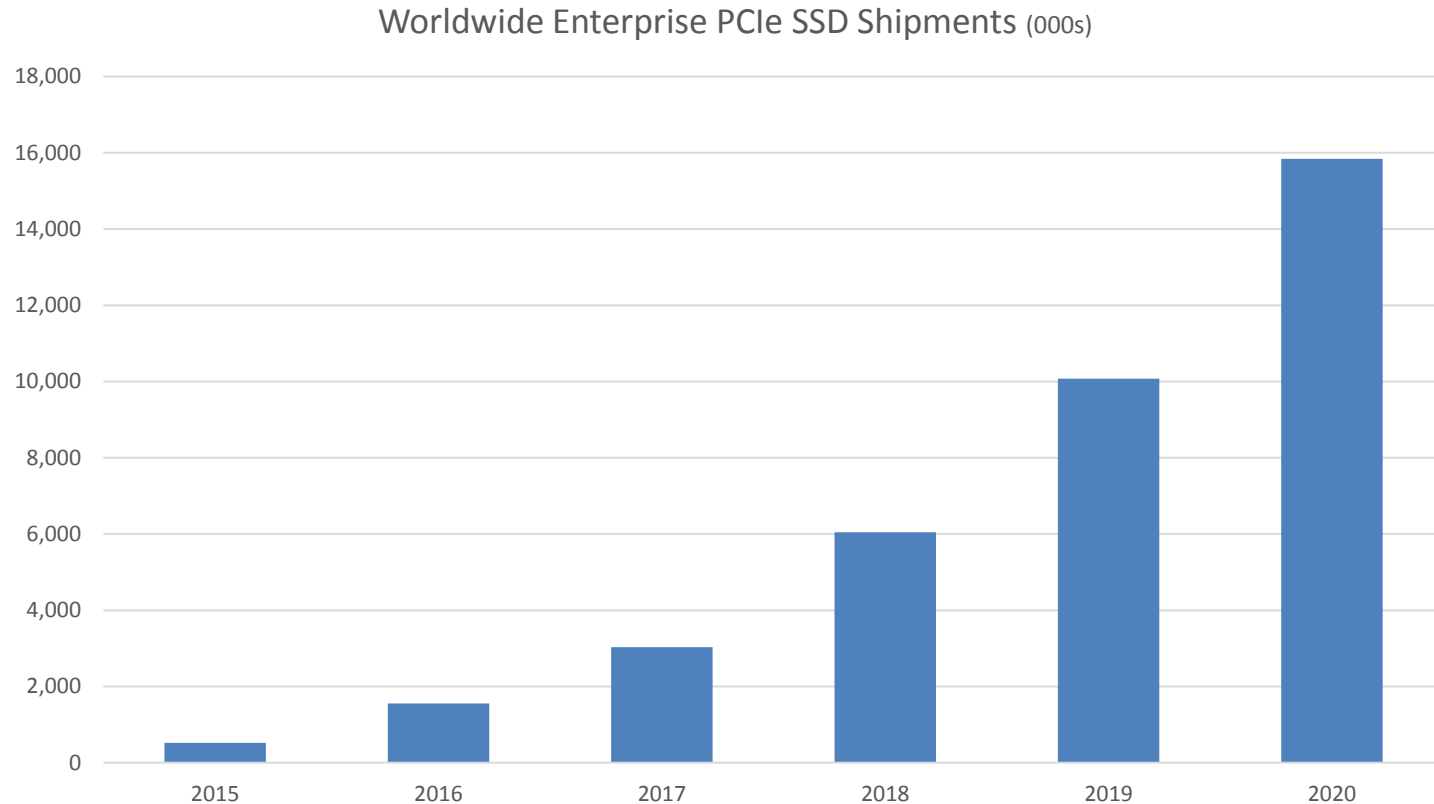
PCIe/NVMe Grows to Majority Share



Source: IDC, Worldwide Solid State Drive Forecast Update, 2016-2020 (#US 40422516), May 2016

- NVMe value proposition includes CPU efficiency, performance and price
- Intel Purley Platform (2017): Performance SKUs with some primary storage use cases
- Next-Generation Intel Platform (2019+): Broader use as primary storage

Enterprise PCIe/NVMe SSD Ramp



Source: IDC, Worldwide Solid State Drive Forecast Update, 2016-2020 (#US 40422516), May 2016

PCIe SSDs represent the strongest growth in enterprise SSD with 98% CAGR.

Solid State Drive (SSD) Elements

- Flash Memory
 - Where data is stored in the SSD
- SSD Controller
 - Controls how system CPU talks to flash memory
 - Connects to system CPU via interconnect
 - E.g. PCIe, SAS or SATA
- Firmware (typically resides on controller)
 - Manages critical functions (e.g., storage tiering, wear leveling, error correction code)



Microsemi Flashtec NVMe Controllers



World's Fastest & Highest Capacity Enterprise PCIe SSD Controller

- Up to 1 million IOPS
- Over 8x SATA SSD system level performance
- Up to 20TB capacity
- First to integrate DDR4 DRAM



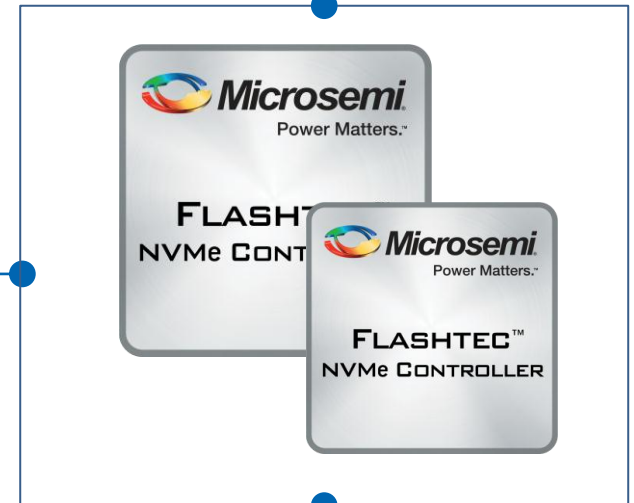
Programmable Platform to Maximize Flexibility and Differentiation

- Optimize solutions for: cost, performance, and endurance
- Flexible NAND IF support



Advanced LDPC Engine Designed for Next-Gen NAND flash

- Supports latest NAND technology nodes and industry's widest selection of memory types, including 3-D and TLC NAND

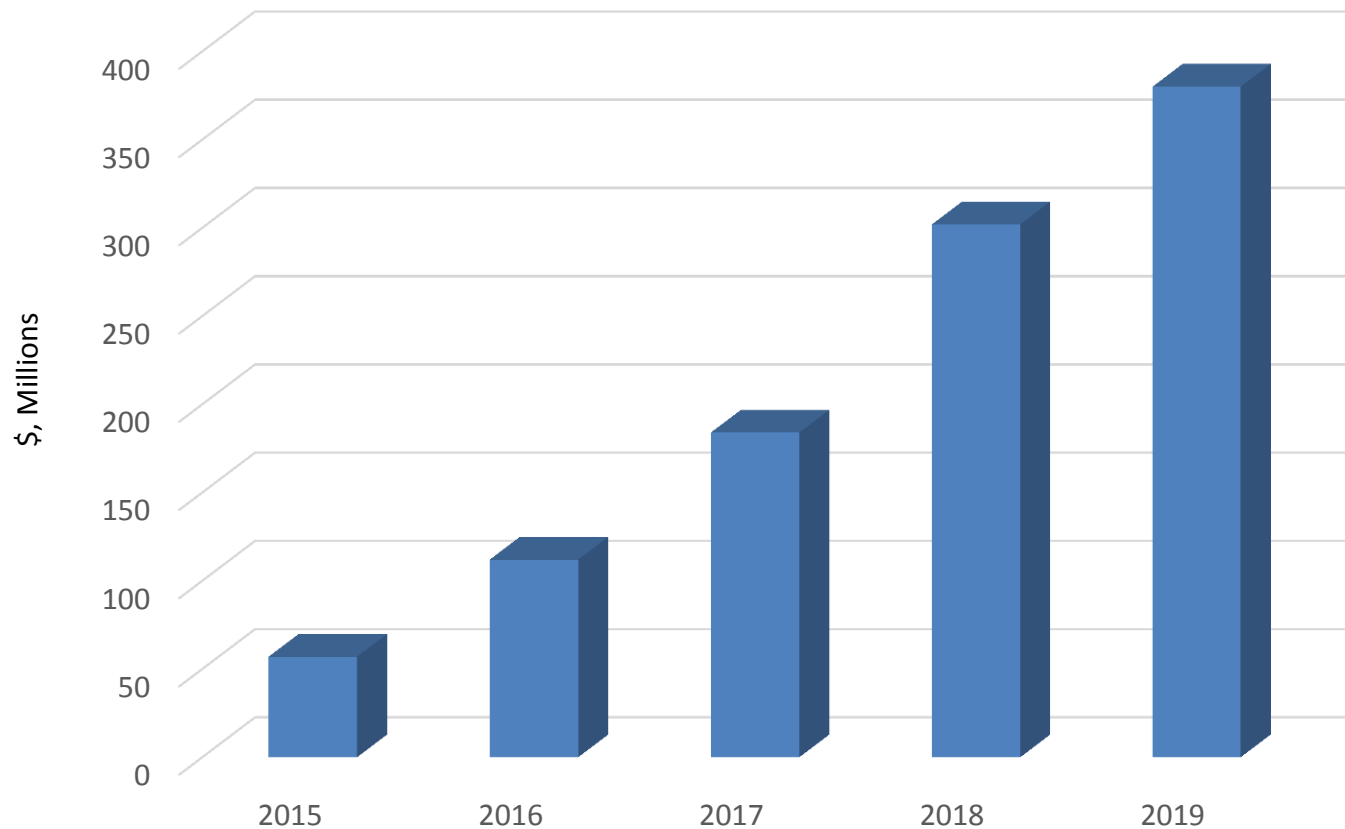


Microsemi Flashtec SSD Controller Momentum

- Captive-use Hyperscale Companies, SSD Manufacturers, and All Flash Array Companies
- Add-in Card, 2.5", and Custom Form Factors
- 5 of 6 NAND Manufacturers



Enterprise SSD Controller Market TAM



Source: Microsemi estimates



Microsemi Extends Flashtec Product Line with NVMe Controllers Optimized for Mainstream, High-Capacity Enterprise and Data Center SSDs

New Devices Were Showcased at Flash Memory Summit Aug. 9-11 in Santa Clara, California



PRESS RELEASE

Switchtec PSX/PFX PCIe Gen3 Switches

Competitive Product Differentiation



Industry's Highest Density Switch

- Up to 48 ports, 48 NTBs and 24 virtual switch partitions

Lowest Power and Lower Bill of Materials Costs

- 28nm low power devices
- 60% lower power than competitive solutions*
- Flexible x2/4/8/16 port bifurcation allows efficient use of lanes
- Integrated peripheral I/O, CPU and management interfaces

Resilient PCIe

- Error containment to prevent system crashes and blue-screening
- Hot-, surprise-plug support
- SerDes – best in class signal integrity
- Extensive diagnostics and debug

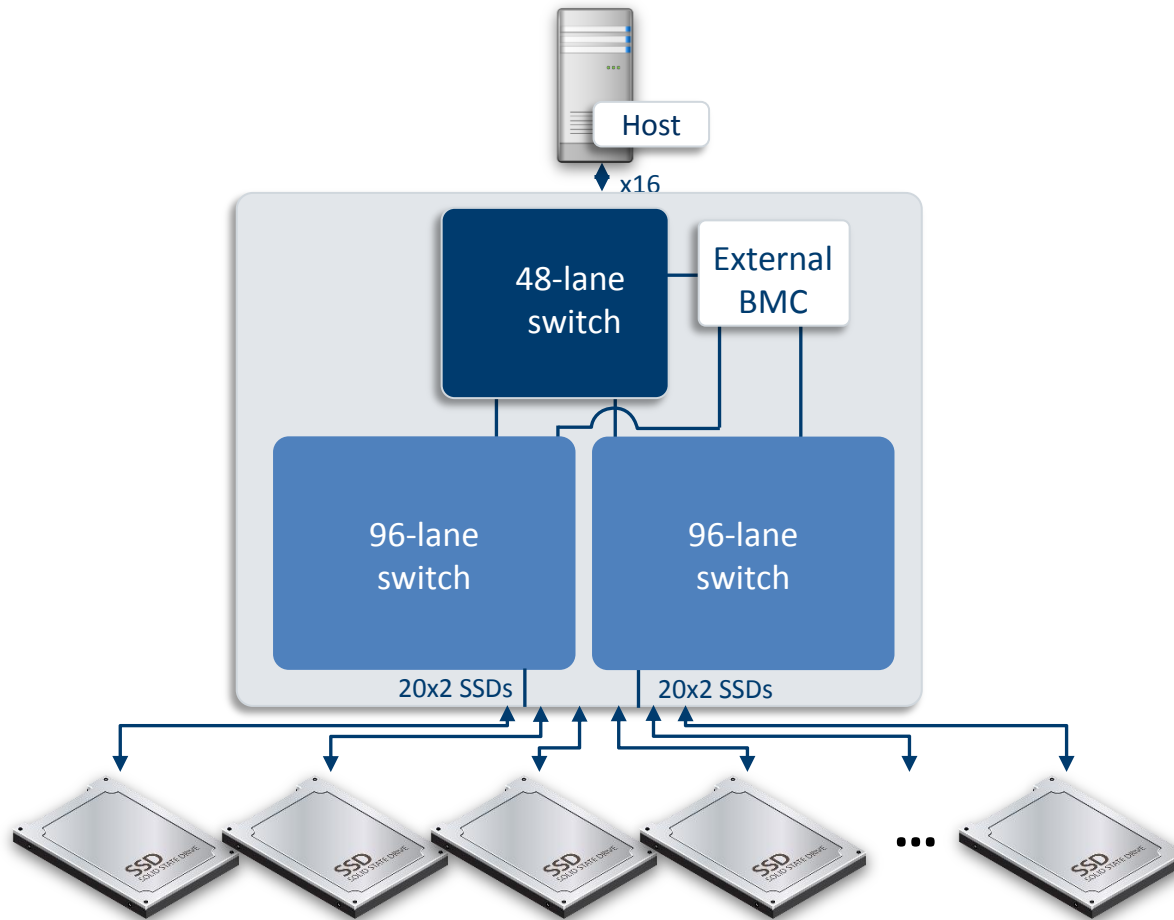
Industry's First Programmable PCIe Switch (PSX)

- Enables PCIe switch programmability and customer product differentiation
- Integrated enclosure management processor and SDK

* 24 NVMe SSD configuration

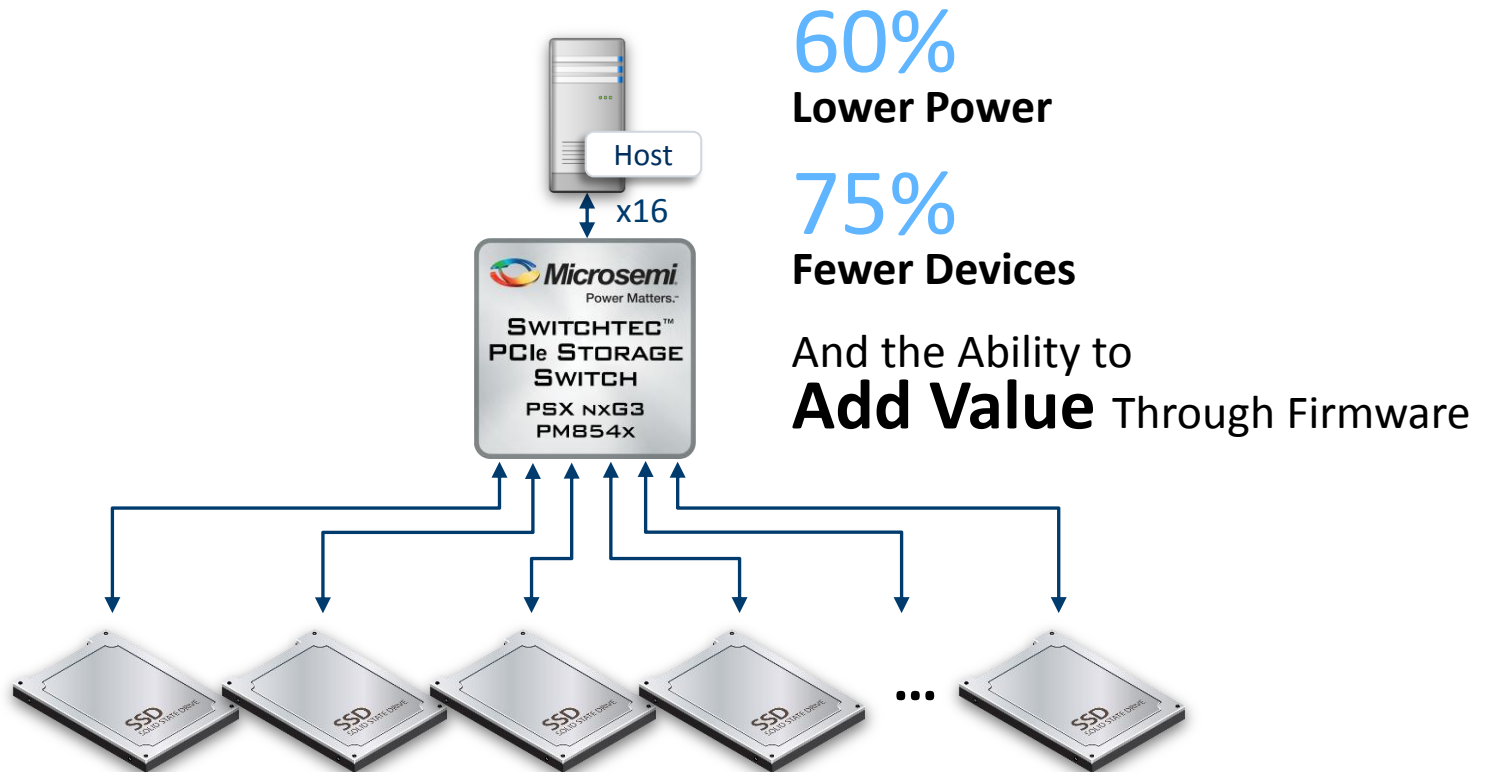
“Before”

Use Case: 40 SSD NVMe JBOF



“After”

Use Case: 40 SSD NVMe JBOF





facebook

Introducing Lightning: A Flexible NVMe JBOF

Source: <https://code.facebook.com/posts/989638804458007/introducing-lightning-a-flexible-nvme-jbof/>



Celestica™



“Nebula 2U”
NVMe Expansion Storage System

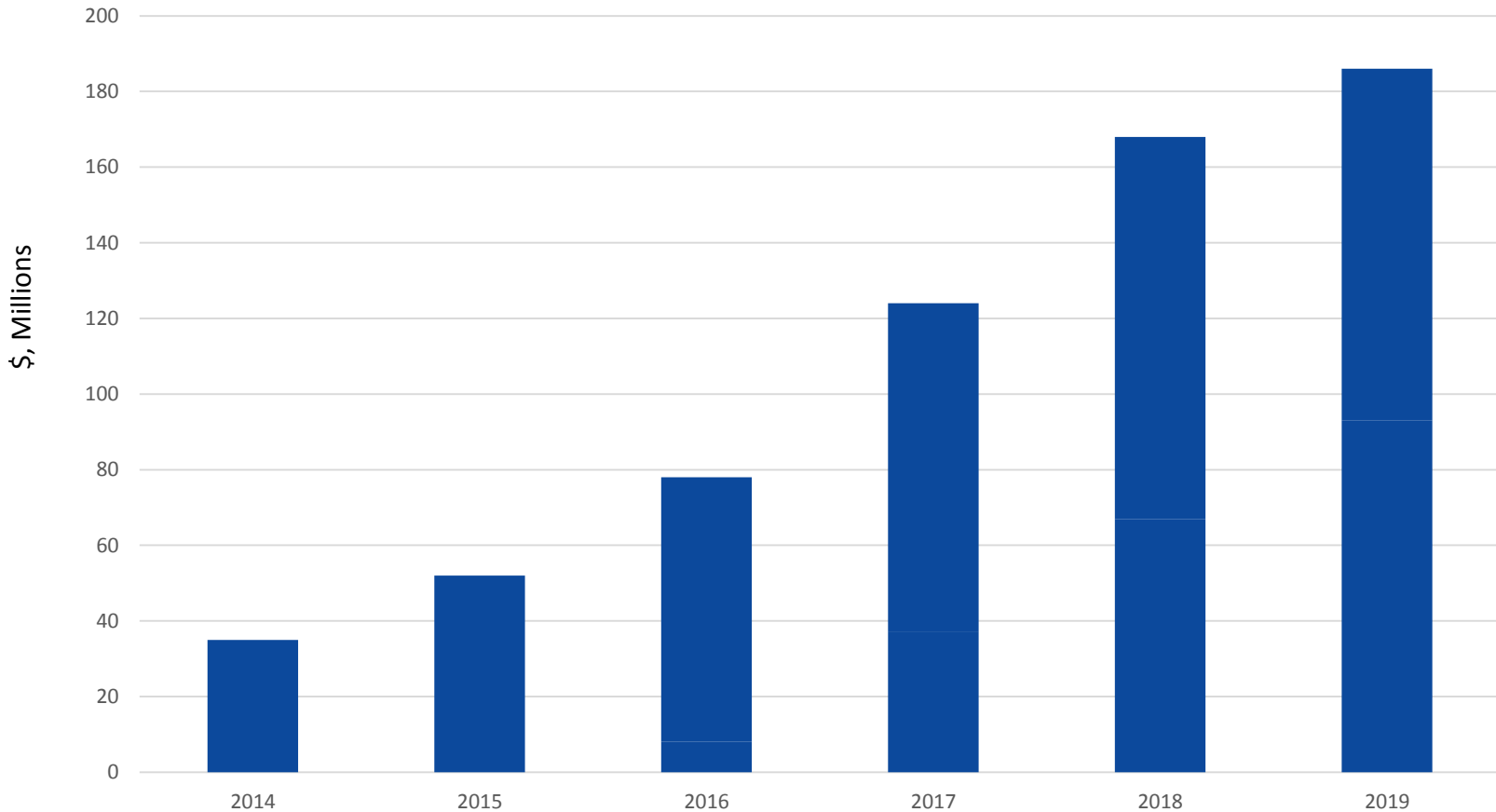




 **Microsemi**
Power Matters.™
SWITCHTEC™
PSX PCIe®
STORAGE SWITCH

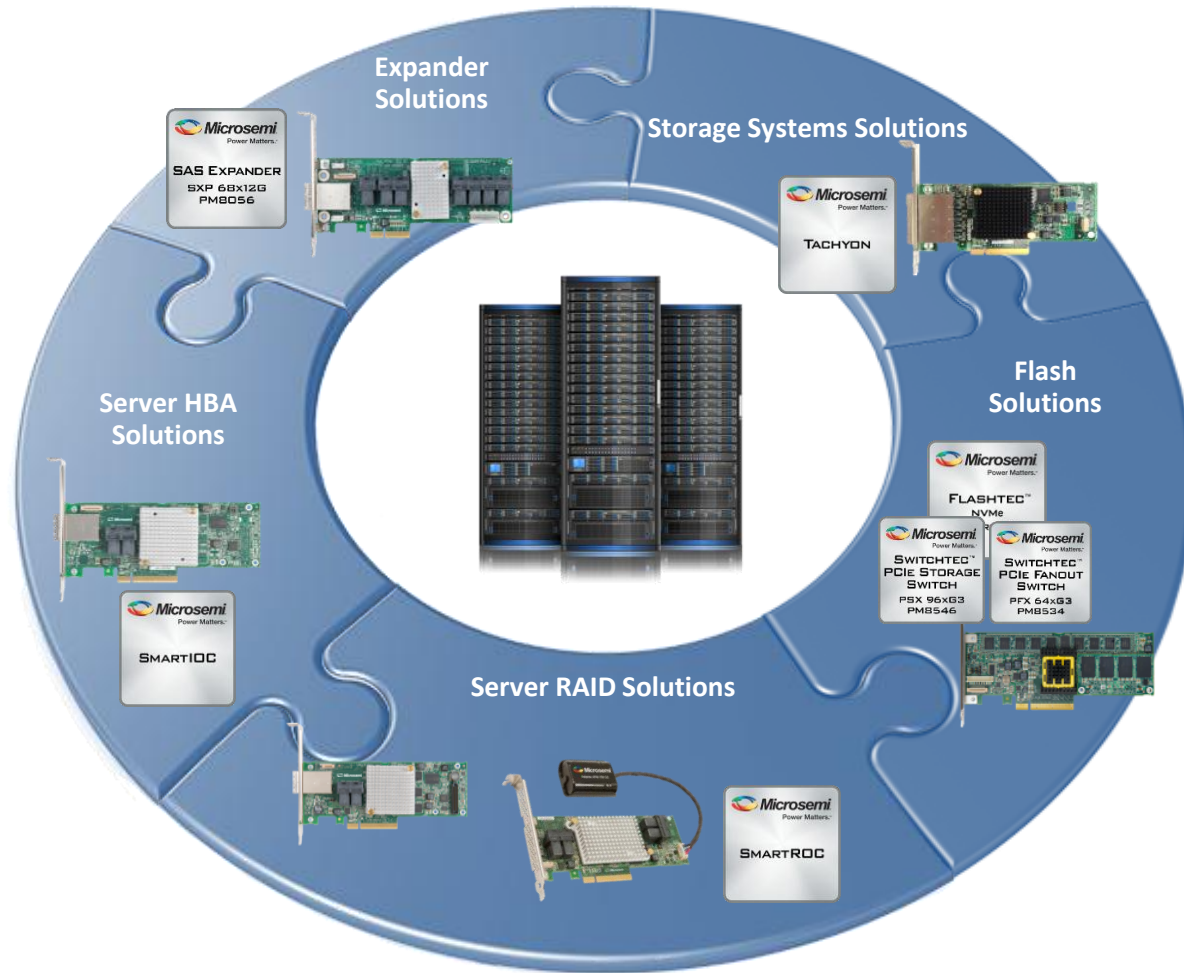
 **Microsemi**
Power Matters.™
FLASHTEC™
NVMe CONTROLLER
NVMe 2032/2016

The PCIe Gen3 Switch Opportunity Serviceable Available Market (SAM)



Storage use case is forecasted to represent 50% of Gen3 switch SAM by 2019.

The Microsemi Storage Portfolio



Ethernet Switching

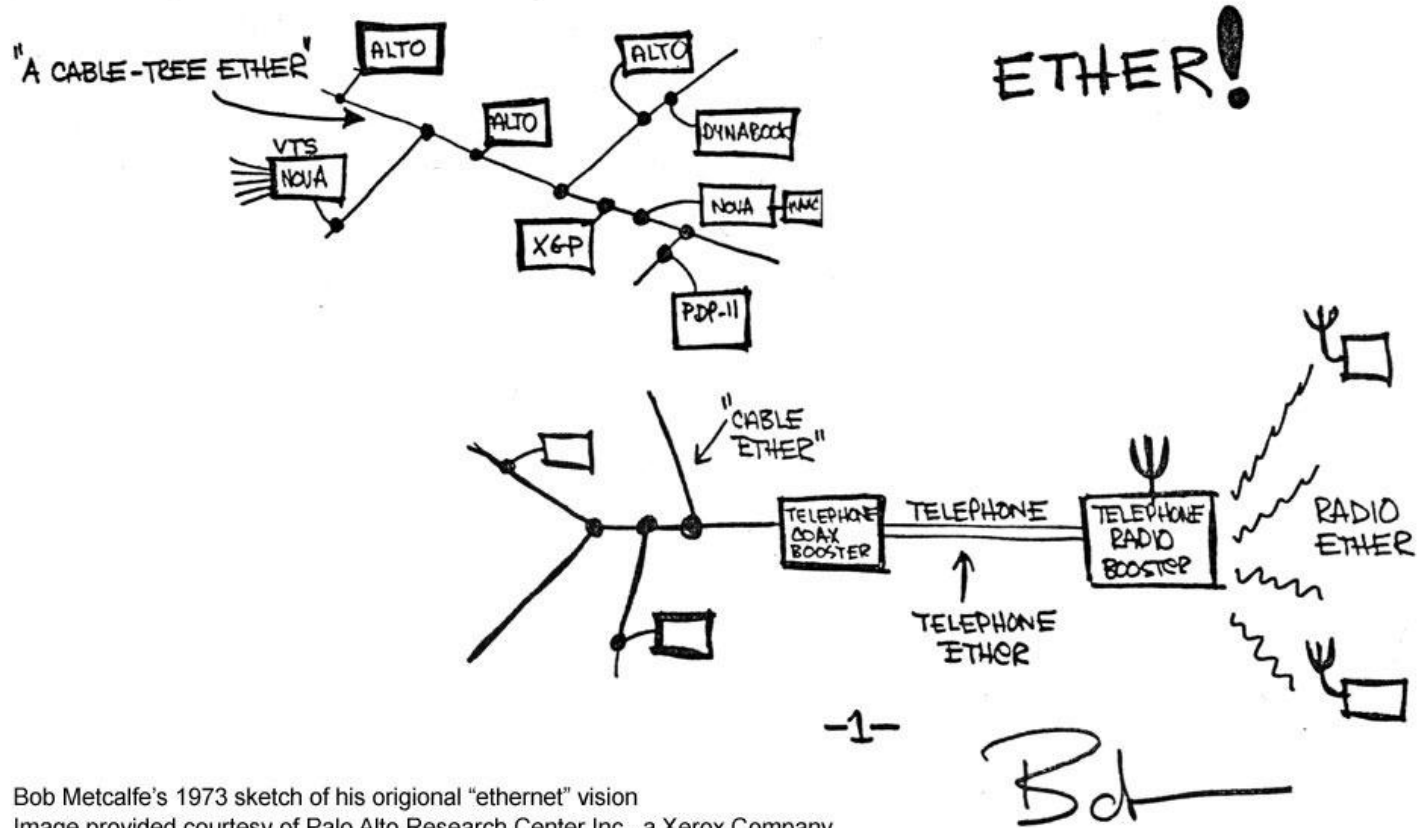


Jacques Issa

VP & Business Unit Manager, Communications

Ethernet Vision

Bob Metcalfe 1973!



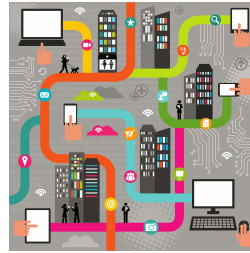
Bob Metcalfe's 1973 sketch of his original "ethernet" vision
Image provided courtesy of Palo Alto Research Center Inc., a Xerox Company

The Ethernet Evolution

LAN to WAN to Storage, IIoT and Automotive



Carrier, IP Edge
Mobile
Ethernet Cloud Services



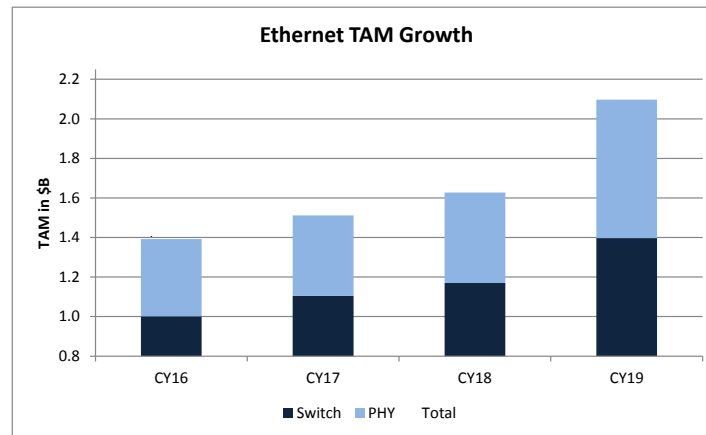
Industrial-IoT
 AUTOMATION, PROCESS,
 TRANSPORTATION,
 SMART CITIES,
 SURVEILLANCE, SMART
 ENERGY



Enterprise
Ethernet Cloud Access,
Cloud Managed



Storage
Ethernet Object
Storage



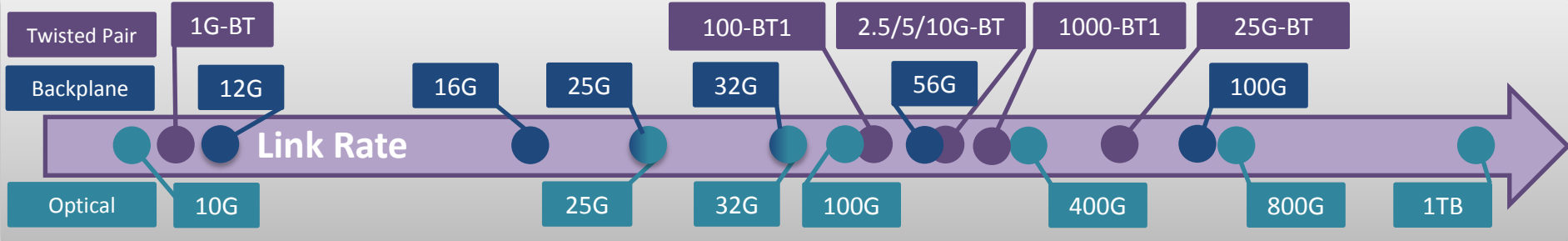
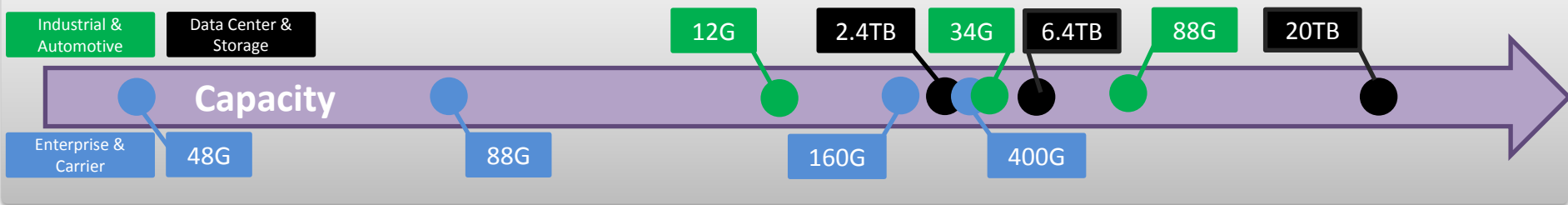
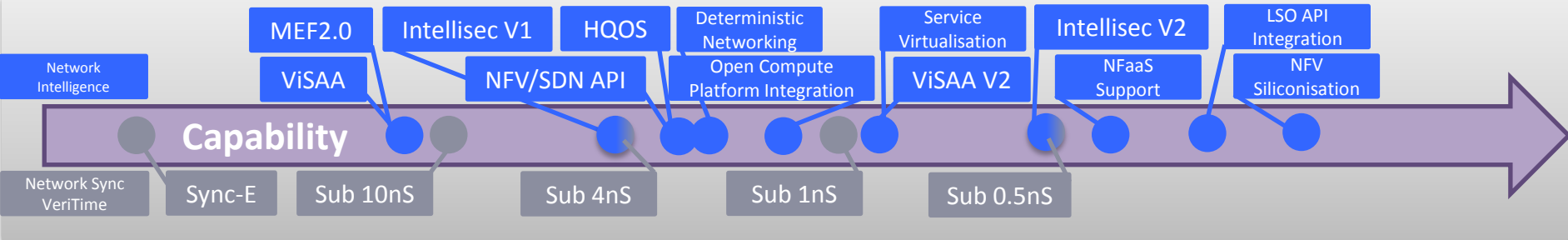
\$1.3B TAM In 2016 growing to >\$2B By 2019*



Automotive
Ethernet in the Car,
Connected to the Cloud

*Sources: IHS, ARC, HRI, Bosch, Microsemi

Ethernet: The Next 10 Years!



< 2010 2010 2012 2014 2016 2018 2020 2022 2024 2026

The Microsemi Advantage

A Complete Ethernet Networking Solution



**Synchronization
(complete solution)**



**Security
(L2 Encryption)**



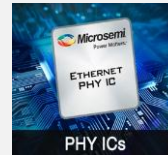
Switching + PoE



CE2.0 Software



**Optimized portfolio
For Industrial Eth.**



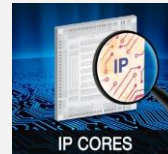
Ethernet PHY ICs

Highly advanced feature integration at low power, compact footprint, and low cost



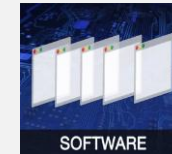
Ethernet Switch ICs

Engineered for reliability, interoperability, and scalability



Ethernet IP Cores

Critical building blocks for your ASIC, FPGA, or ASSP logic designs



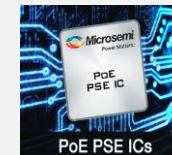
Ethernet Software

Feature-rich software complementing Microsemi's Ethernet IC portfolio



PoE PD ICs

Available with and without integrated PWM controllers, IC portfolio to receive power



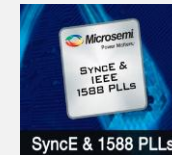
PoE PSE ICs

Capable of delivering up to 95 W over a single Cat5 cable



PoE Midspans/PoE Injectors/PoE Switches

Complete systems to inject Power-over-Ethernet in an intelligent way



SyncE & IEEE 1588 PLLs

Flexible options for easy migration from SyncE to IEEE 1588 or combined SyncE and IEEE 1588 for both frequency and phase alignment

Target Markets

\$1.3B TAM for low to moderate bandwidth applications with carrier-class features, reliability, and performance

Carrier

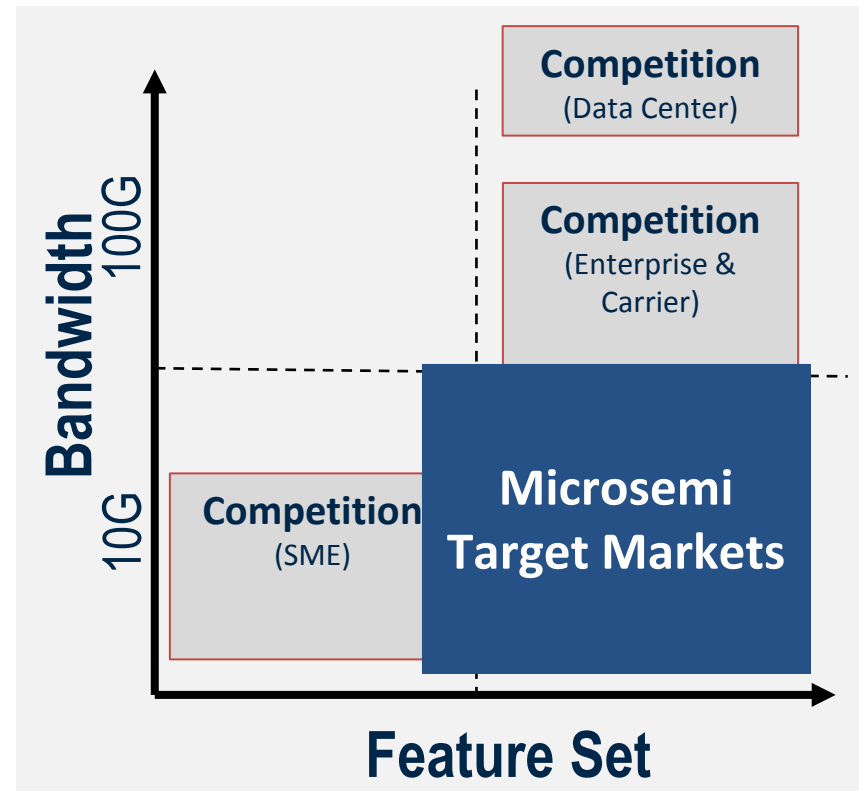
4G/LTE and 5G Backhaul
Ethernet Business Services

Enterprise

Small and Medium Enterprise,
Cloud-Managed

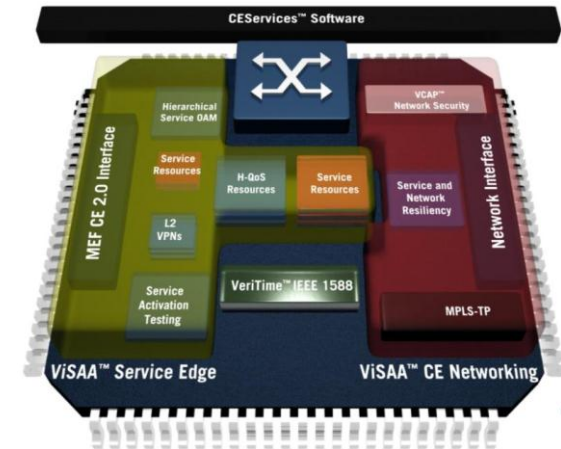
Industrial IoT

Factory Automation, Transportation,
Smart Energy, Surveillance



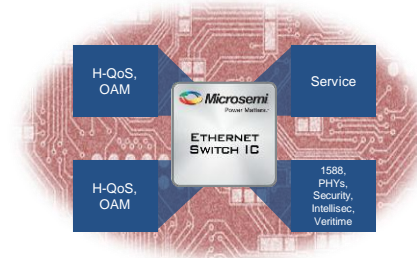
Microsemi: Leadership in Carrier Ethernet

- Hardware-based performance, power and scalability
- Complemented by carrier-grade Linux software stack
- Industry's only service-aware switching architecture targeted for CE Access network
 - Access aggregation
 - Enterprise and industrial



Switch, PHYs,
and PLLs

CEServices™
Software

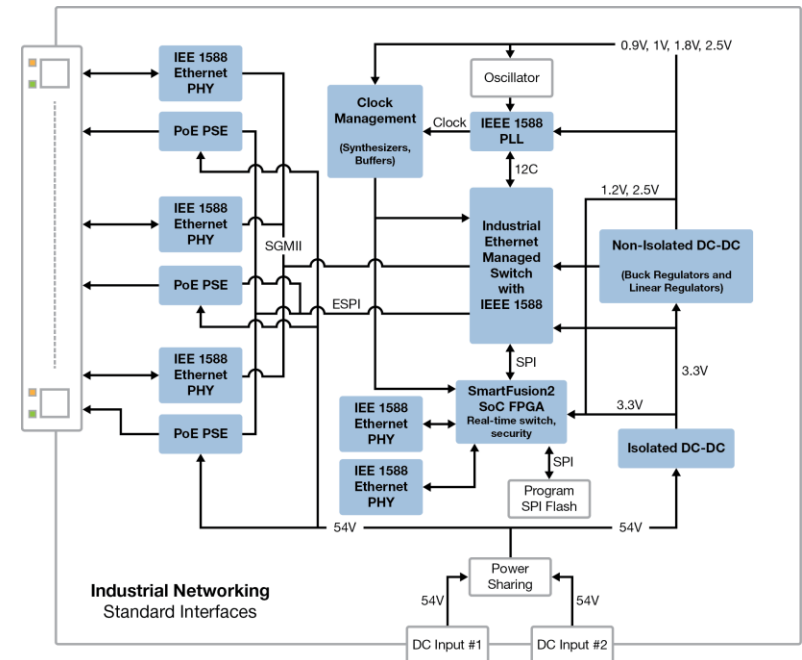


Microsemi: Leadership in Industrial IoT (IIoT)

- Optimized to enable Ethernet migration
 - Microsemi focus is synergistic with market needs: low bandwidth, reliability, and flexibility
 - Comprehensive portfolio includes ICs, systems, and software
 - Roadmap for Time Sensitive Networking (TSN) + Ethernet enables deterministic backbone for IIoT networks
- Multi-layered IIoT security
 - Encryption
 - Secure boot
 - Software



N-port Industrial Ethernet Switch (Ocelot)



Accelerating Customer Time-to-Market with Targeted Software Solution

- Faster time-to-market and lower development costs
- Access to industry-proven and certified solutions
- Ability to differentiate through customization



Small Medium Enterprise

- Basic Layer 2 enterprise-managed switching
- Incorporates full web management and standards compliance



Enterprise, Cloud Access

- Advanced Layer 2 and 3 enterprise-managed switching for medium and large enterprises
- Incorporates industry-standard CLI plus full support for remote management (SDN applications)



Industrial IoT

- Industrial Ethernet switching for automation, smart grid, and intelligent transport systems
- Supports advanced L2 and Industrial Ethernet protocols for synchronisation and resiliency



Carrier and IP Edge

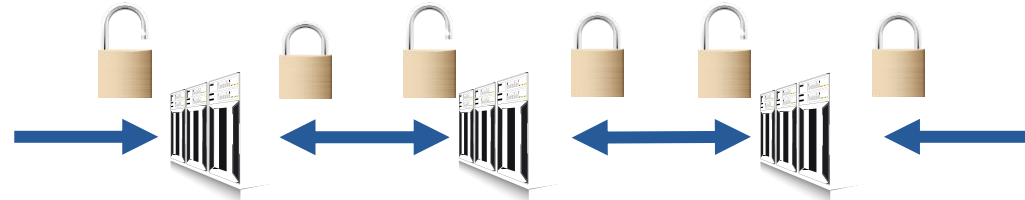
- Carrier Ethernet switching for Tier 1/2/3 telecom providers and wireless backhaul applications
- Full Carrier Ethernet feature support for service deployment, management, and policy enforcement

Broad portfolio of software solutions

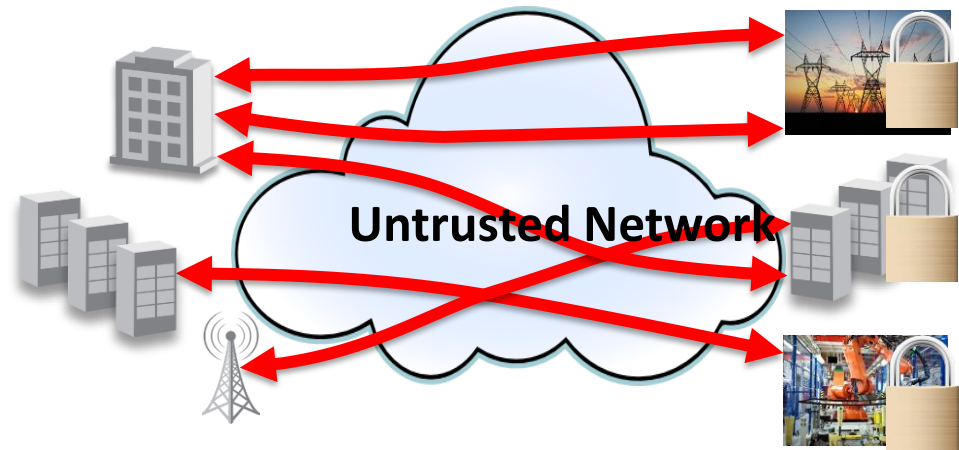
Microsemi Expands Further Into Enterprise

- One of only two silicon suppliers that can provide Ethernet switches, PHYs, PoE, and software for a complete enterprise solution
- Microsemi PHYs securely authenticate and authorize remote devices even over untrusted intermediate networks
- The industry's only 1GE and 10GE PHY portfolio FIPS certified for 256-bit AES encryption

MACsec-secured links hop by hop



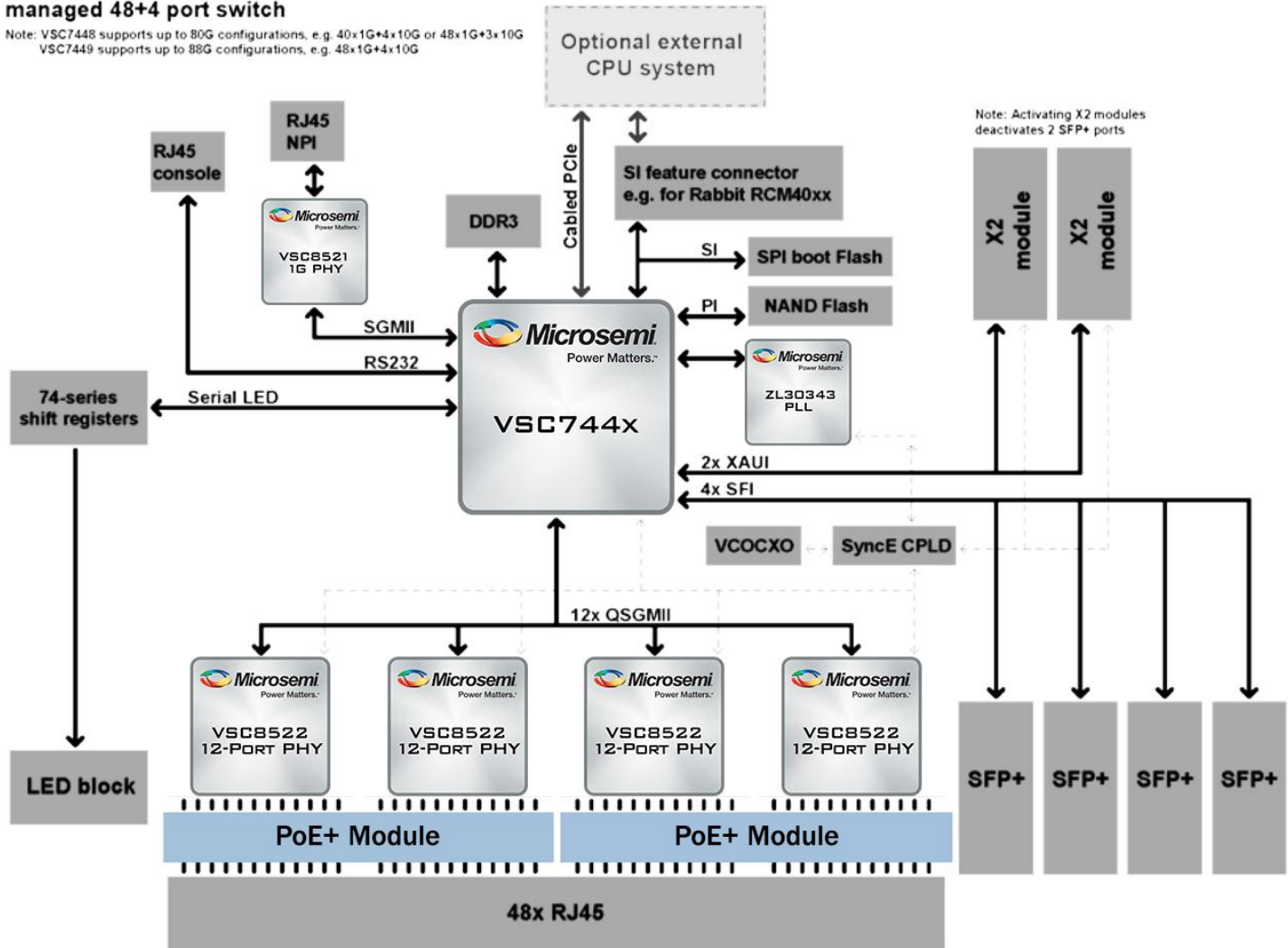
Microsemi Intellisec extends MACsec to network security



Enterprise Reference Design

Block diagram of VSC7448/VSC7449 managed 48+4 port switch

Note: VSC7448 supports up to 80G configurations, e.g. 40x1G+4x10G or 48x1G+3x10G
 VSC7449 supports up to 88G configurations, e.g. 48x1G+4x10G

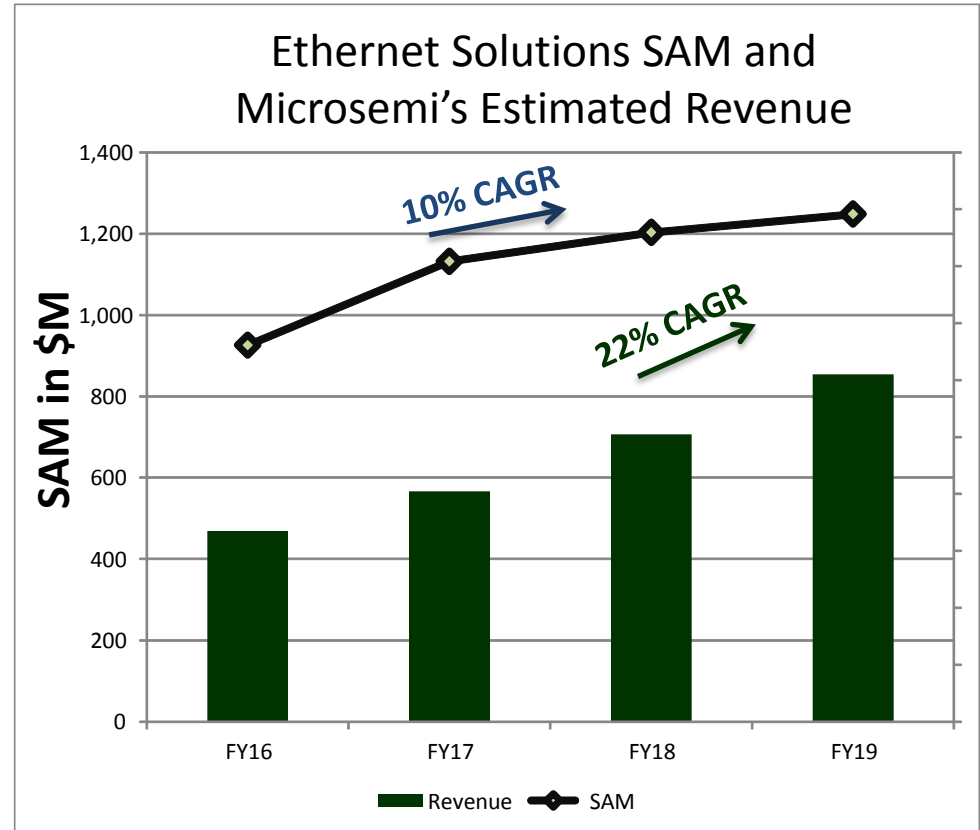


Note: Activating X2 modules deactivates 2 SFP+ ports

Microsemi Ethernet Solutions

Expanding Target Markets

- Opportunities growth
 - Record number of new opportunities 3 quarters in a row
- Market dynamics
 - Recognized as a key telecom and networking supplier by various strategic customers
- Strengthening customer relationships
 - Comprehensive portfolio of products
 - Stable technology and roadmap
 - Stable financials



Revenue estimates are not to scale with respect to SAM

Timing Solutions



Maamoun Seido

Vice President & Business Unit Manager, Timing

Microsemi's End-to-End Precise Time Solutions



Grandmaster Systems

Uses GPS to distribute "precise time" using the IEEE 1588 protocol



Network Supervision & Management

Timing problem notification, analysis and SLA compliance



Chip Scale Atomic Clocks

High accuracy, low power and stability for portable applications



IEEE1588 Timing ICs

Field proven high performance time and frequency synchronization solutions for packet networks



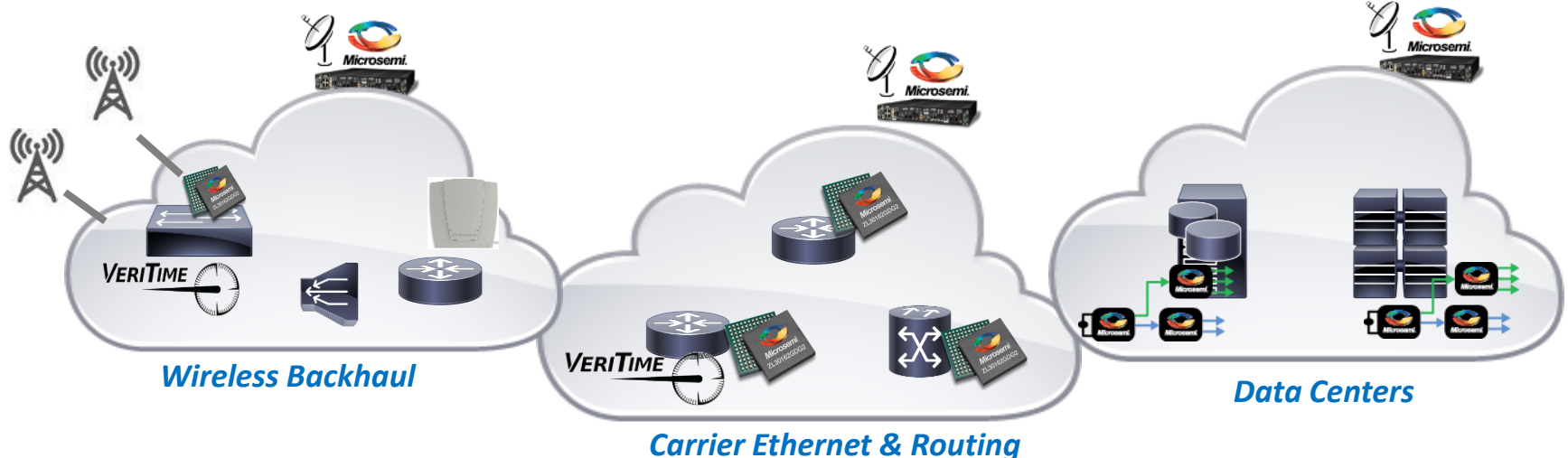
Clock Management Timing ICs

Clock synthesis, jitter attenuation and clock buffers to ease design and increase reliability



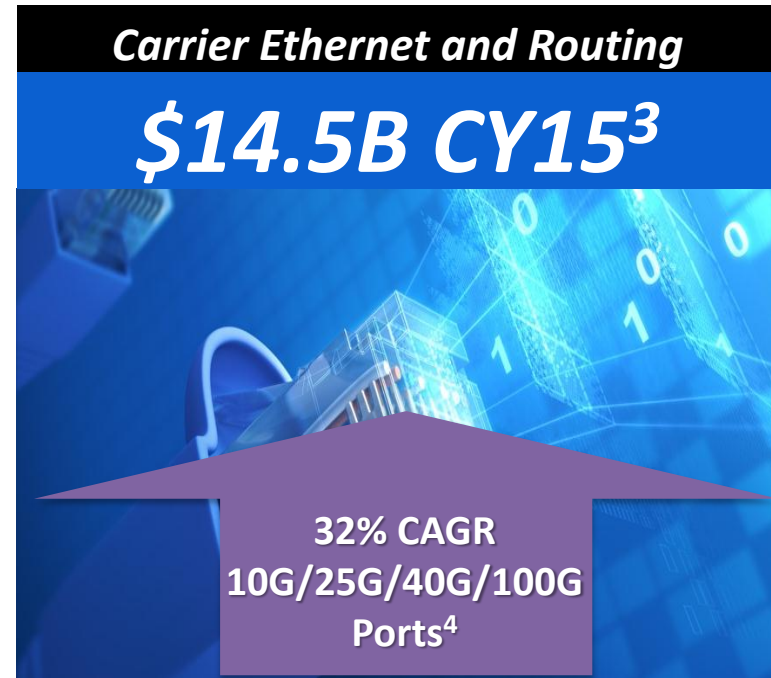
IEEE1588 Ethernet PHY

High-precision IEEE1588 Ethernet PHY with MACSec

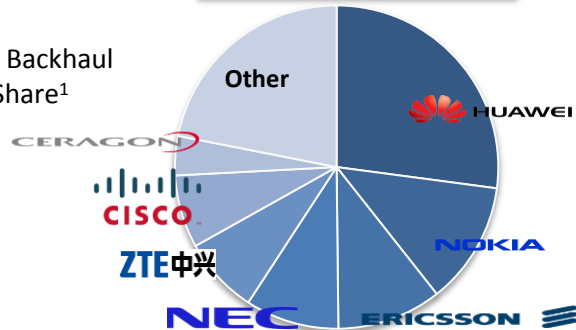


Microsemi “Precision Timing”

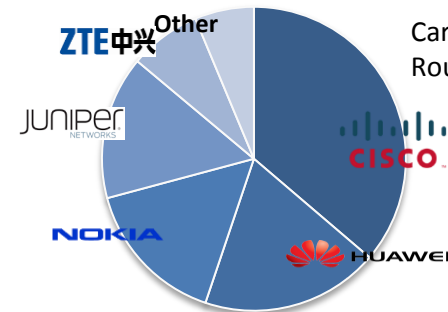
Dominant in Focus Markets



Wireless Backhaul Market Share¹



Carrier Ethernet and Routing Market Share³



Industry Creating New Opportunities in Focus Markets

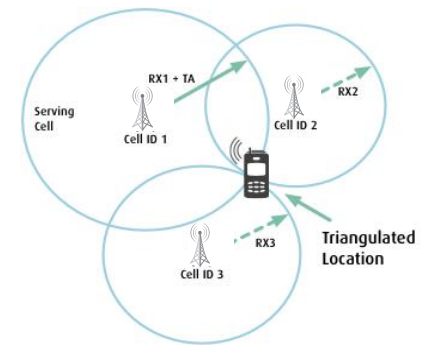
- 4G LTE-A Deployments

- Verizon's 4G LTE-A provides 50% faster speeds in 461 U.S. cities
- 4G LTE-A uses a number of new technologies to achieve these speeds
 - Carrier aggregation, MIMO and Tx diversity
- Underpinning these new technologies is the need for more precision time at the basestation
 - 3GPP defines BS transmitter alignments from 260ns down to 65ns



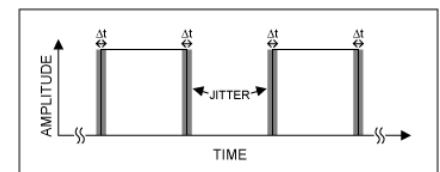
- Location Based Services in Wireless

- Observed Time Difference Of Arrival (OTDOA) - positioning introduced in LTE radio [rel9 E-UTRA]
 - Requiring 100 ns time alignment to provide 30-40 meter location accuracy [ITU G.8271]



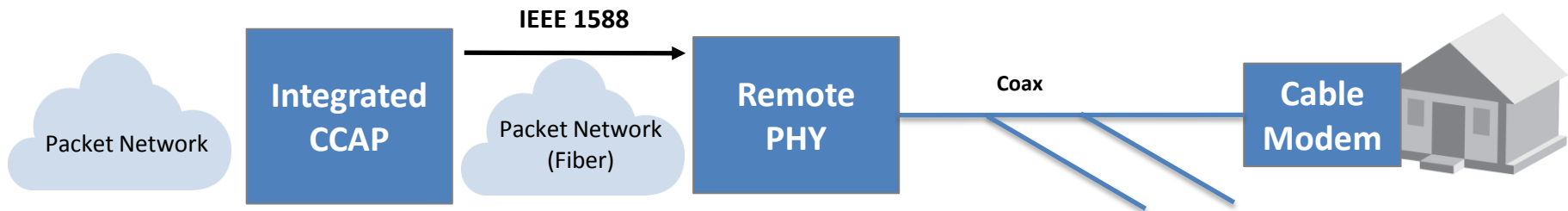
- 100G Deployments & 400G Designs

- Higher speed interfaces demand better clock accuracy (lower jitter)



Increasing Demands on Cable Industry Driving Precision Timing Opportunities

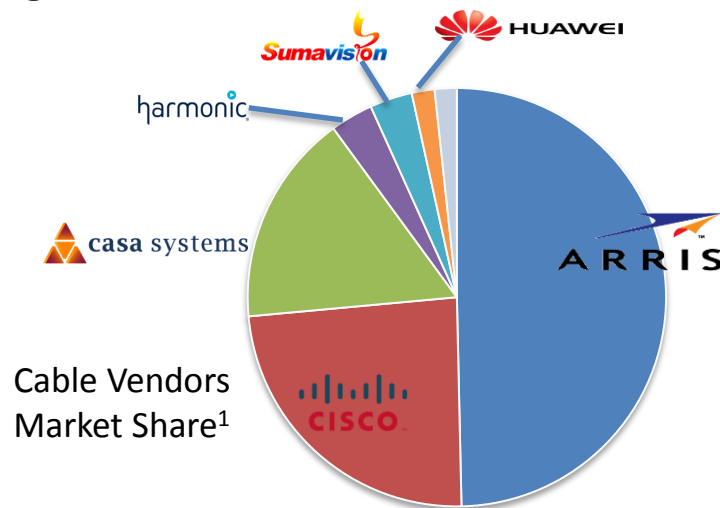
- Cable industry under pressure to increase data speeds for customers to keep up with competing technologies
 - Converged Cable Access Platform (CCAP) is the new architecture
 - Shortens coax plant which is used as the final access technology
 - Moves fiber access point closer to the customer (R-PHY)
 - New cable DOCSIS 3.1 uses IEEE1588 to distribute synchronization to the remote PHY



Precision Timing Opportunity in the Cable Market

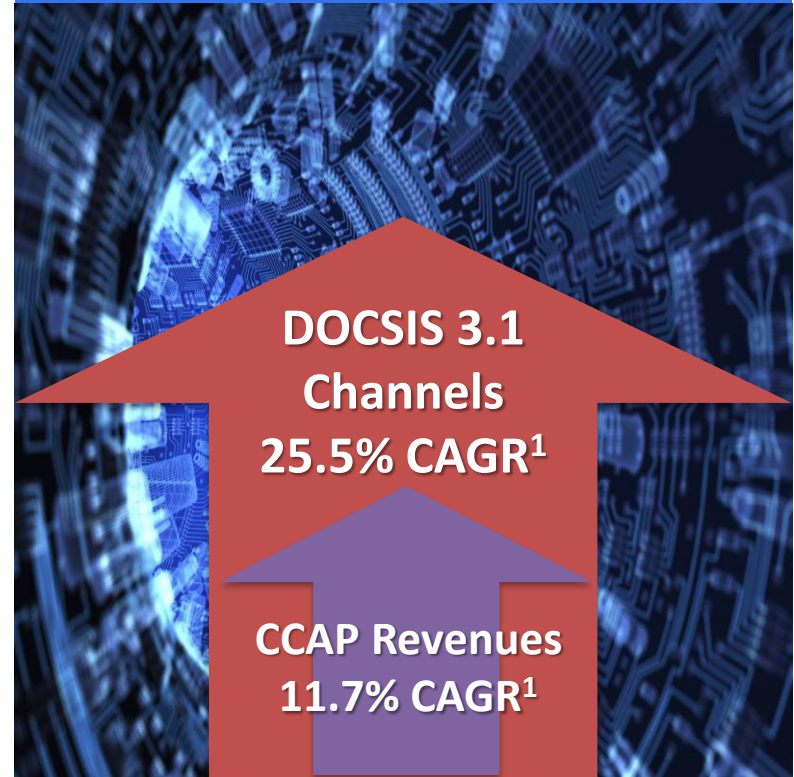
Microsemi Focusing on the Fastest Growing Segments

- Our leadership in IEEE1588 combined with the industry's evolution created a significant opportunity within the cable broadband market
- Microsemi precision timing is positioned in key CCAP equipment vendors and ASIC partners' reference designs



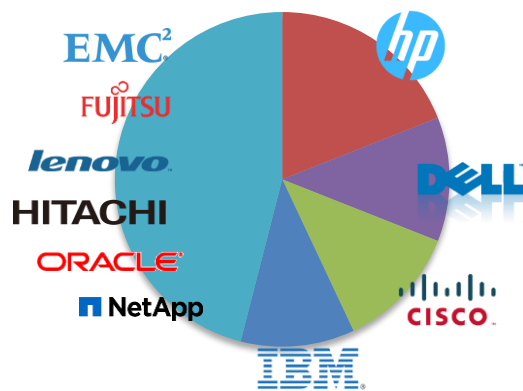
Converged Cable Access Platform

\$2.1B CY16¹



Expanding Timing Opportunity Into Data Center Market

- Microsemi leadership in data center market creates opportunities for timing
- A complete proven solution simplifies the design while adding customer value
- System expertise enables product innovation while resolving key customer challenges



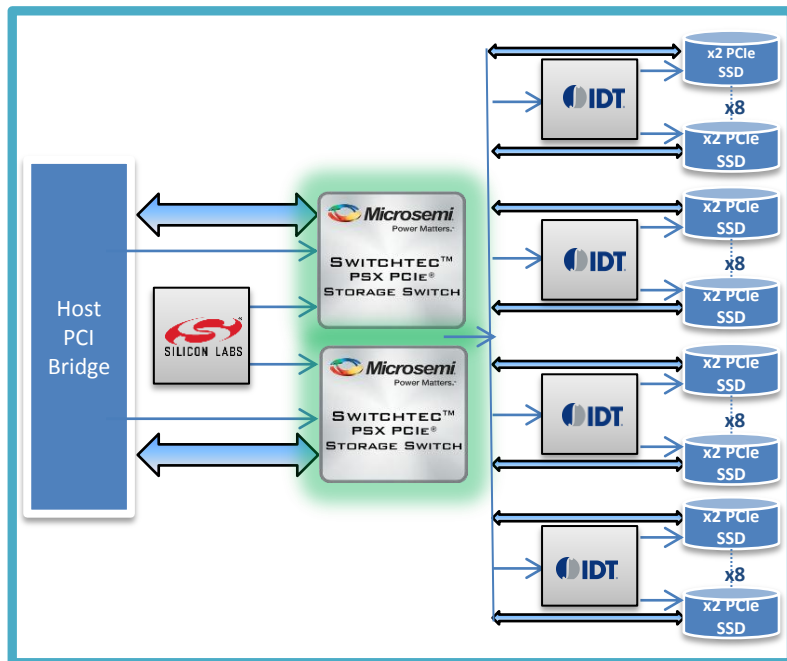
Data Center Infrastructure Market Share²



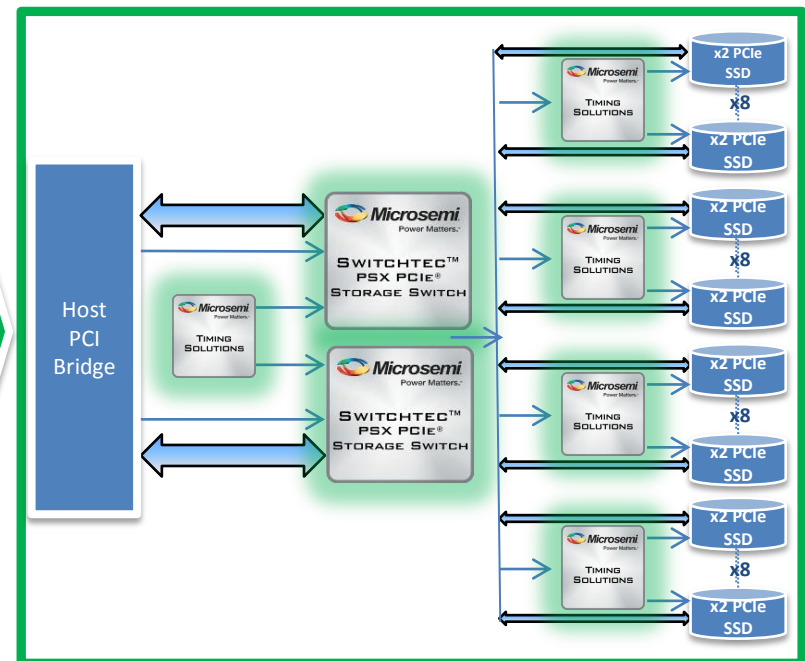
Data Center Timing: Barriers to Entry Eliminated

- New data center reference design utilizes an end-to-end Microsemi timing solution
 - Quick market entry while providing compelling timing solution in a reference design
 - Increased customer confidence with a turn key, proven solution, built and tested
- Easier access to market makers by pulling timing into data center market

Initial Reference Design



Revised Reference Design



World Leader in Timing Systems

Integrated GNSS



Carrier-Grade NTP & PTP
Grand Masters



Component Clocks



IEEE1588 deployed in 300+ networks worldwide

Broad portfolio with unified and centralized management

Meets scale and performance needs of 5G densification requirements

Well-Established Network Sync and IEEE-1588 ICs

IEEE 1588



SyncE



SONET / SDH

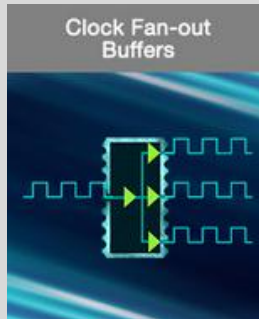
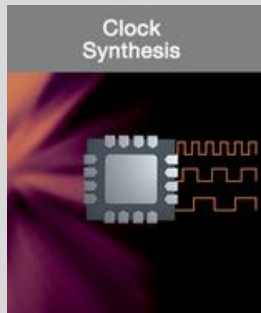


Complete portfolio of leading-edge solutions for network synchronization

Solutions deployed extensively for over 25 years

Driving network synchronization standards to meet the demands of target applications

Broad Portfolio of Clock Management Solutions



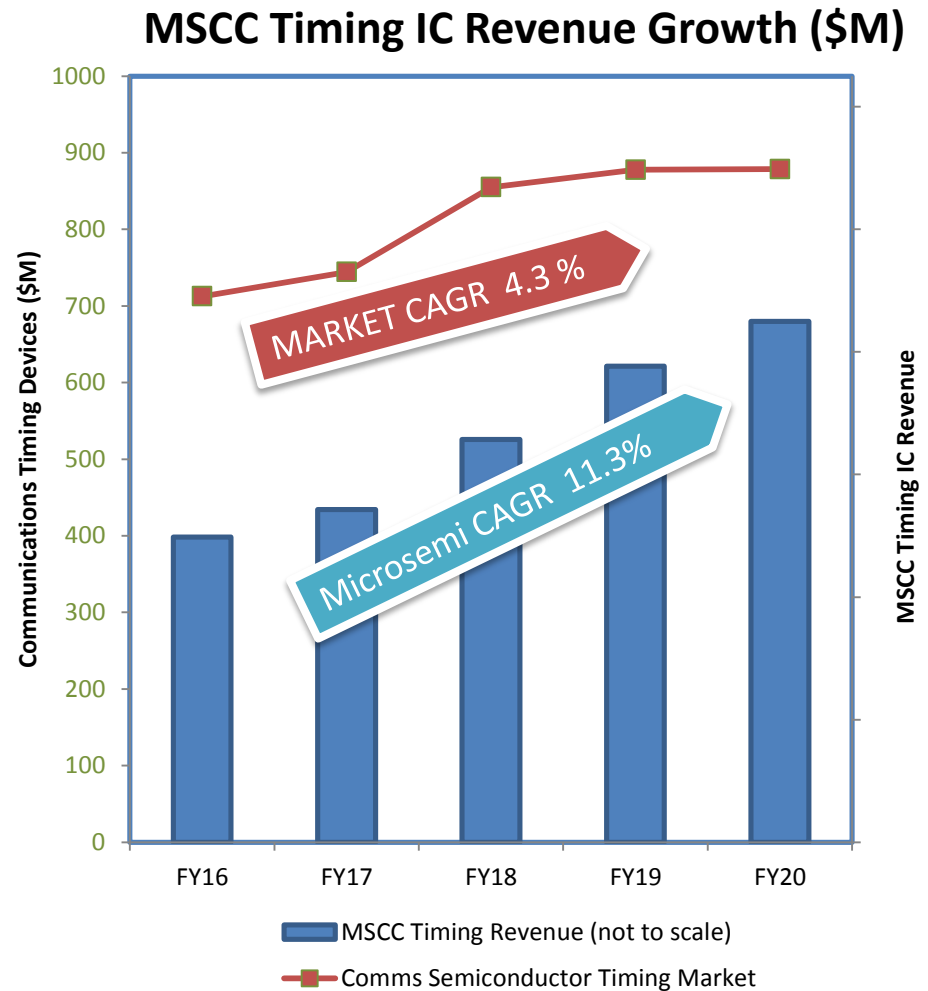
Clock synthesis, jitter attenuation and clock distribution supporting full clock tree solution

Ultra-low jitter and cost optimized synthesizers and clock buffers

Application specific with custom configuration

Microsemi Timing Growth Opportunity

- New industry trends and evolution of broadband cable deployment create significant opportunities
- Market leadership in storage and PCIe switching brings timing solutions to a large existing customer base in data center market
- Microsemi's incumbent position, with a large installed base of field proven solutions and reference designs providing customer value, is a competitive advantage



* TAM source: Databeans- Q4-2015 Timing Devices Market Tracker

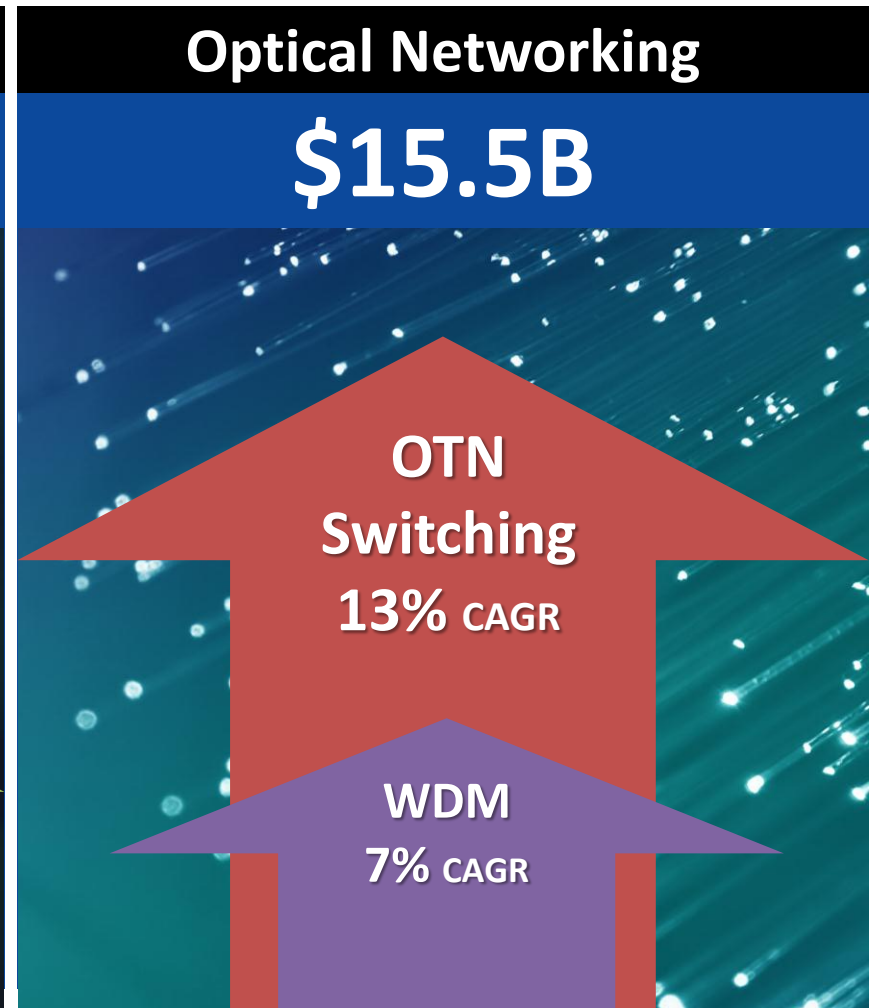
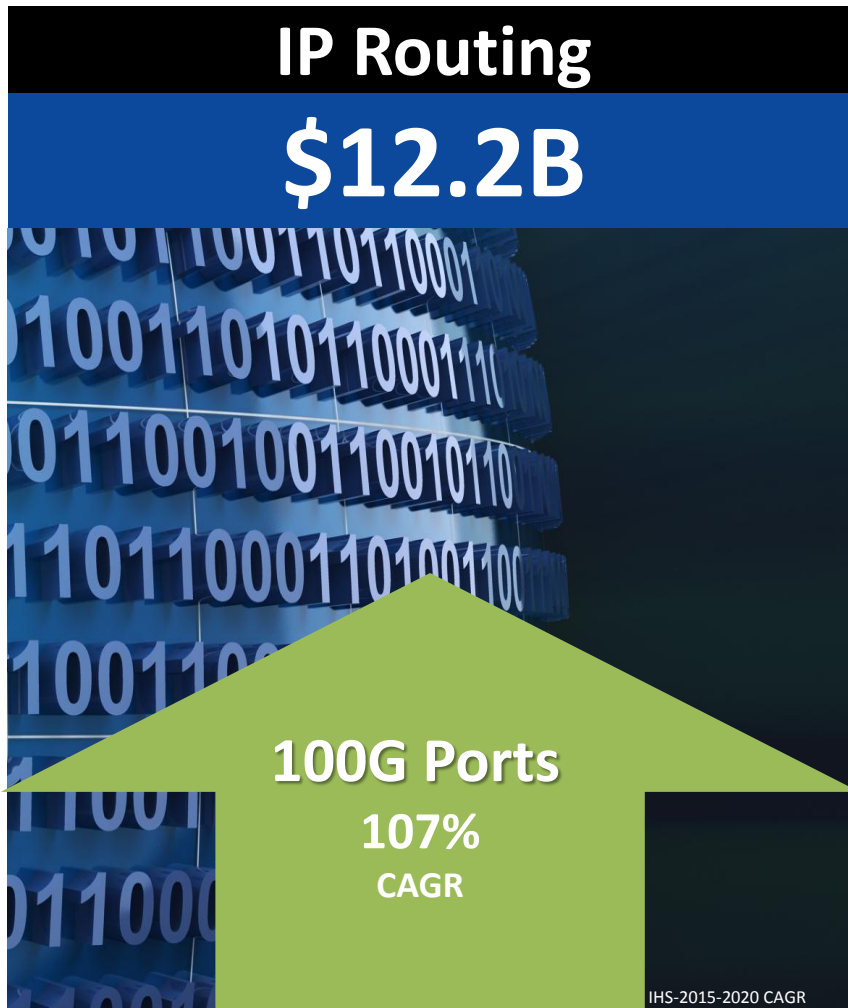
Optical Networking – OTN



Babak Samimi

Vice President & Business Unit Manager, OTN

Optical Networking Market: Focusing on the Fastest Growing Segments





**BIG
DATA**

 **Microsemi**
Power Matters.™

**BIG
CHALLENGES**

**BIG
OPPORTUNITIES**

Big Data Tsunami Driving Optical Build Out



500M
users¹

>10B hours watched per month,
over 83M subscribers in 2016²



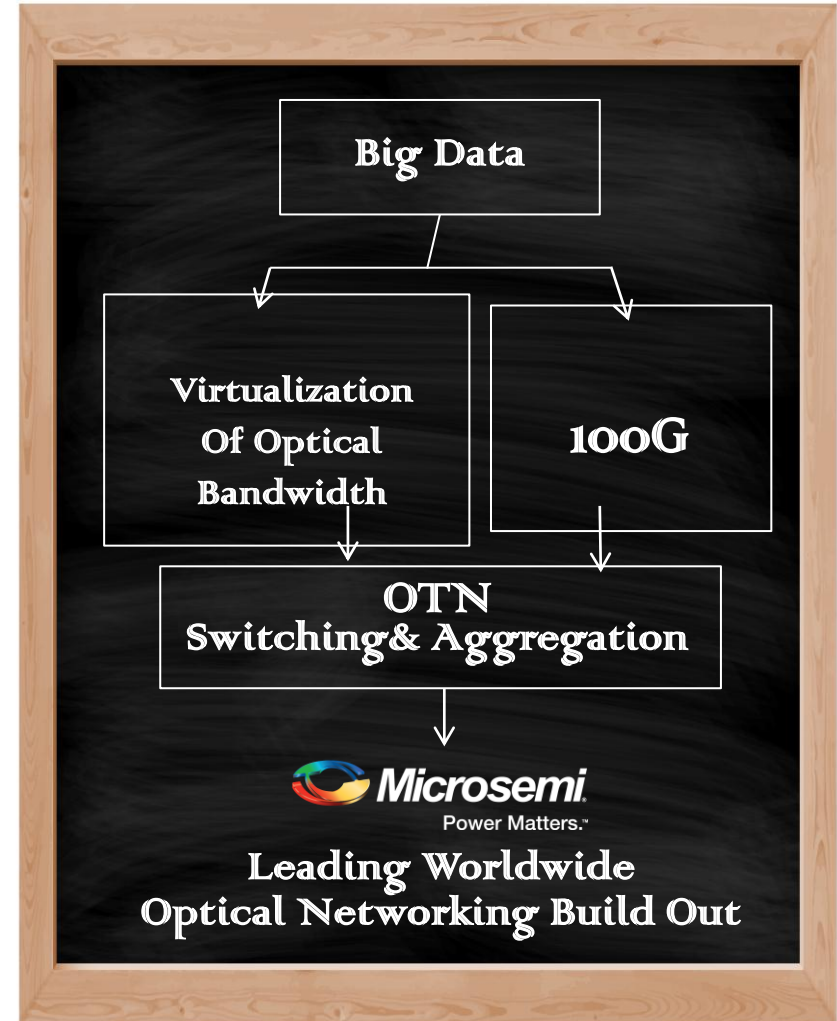
1.71B active users per month
with 1.57B mobile users³

300M
users⁴

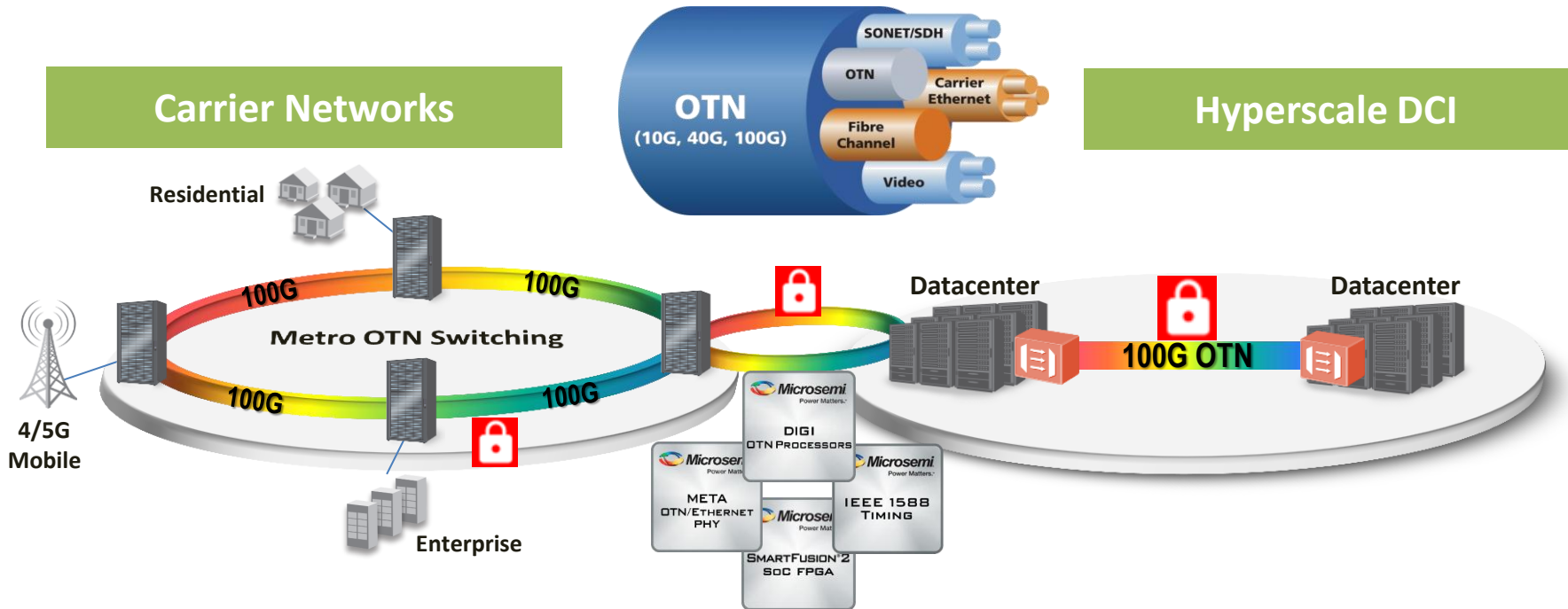


>900B unique visits per
month and over 4.95B
videos viewed per day⁵

1. <http://www.statista.com/statistics/253577/number-of-monthly-active-instagram-users/>
2. http://expandedramblings.com/index.php/netflix_statistics-facts/
3. <https://zephoria.com/top-15-valuable-facebook-statistics/>
4. <http://expandedramblings.com/index.php/how-many-people-use-chat-apps/2/>
5. <http://www.statisticbrain.com/youtube-statistics/>



OTN – Network Architecture of Choice



100G + OTN Switching + Security = Connectivity & Transport of Big Data

1. Packet Transport → 10GE, 100GE, 400GE, FlexE, etc
2. Scalability → 100Gb/slot today 1Tb tomorrow
3. OTN Switching → Virtualization of optical bandwidth + makes 100G cost effective
4. Security → Encryption for Cloud Connectivity
5. Timing → Timing Transparency per Service

Solving Complex Design & Deployment Challenges

- OTN Processors
 - Terabit scalable OTN switching
 - 50% power reduction per 100G
- Optical Laser Drivers
 - Complex coherent modulations schemes
 - Low power to enable optics port density
- Carrier-Grade OTN Switching SDK
 - Field harden software stack
- High Precision Timing
 - Clocking design and distribution
 - Any-service, any-rate, any-port
- Cloud-Connect Security
 - Encryption at wire speed
 - SDN controlled key management



Industry Leader in OTN Processors

Access



Metro



Routing/
CE Switching



Innovator and Pioneer in OTN Switching

- Created ecosystem for OTN switching on packet fabric
- Enabling multi-terabit switching per node

Portfolio of OTN Solutions to Address

- Metro edge to metro core/long haul
- Data center interconnect
- Mobile front haul

DIGI-G4

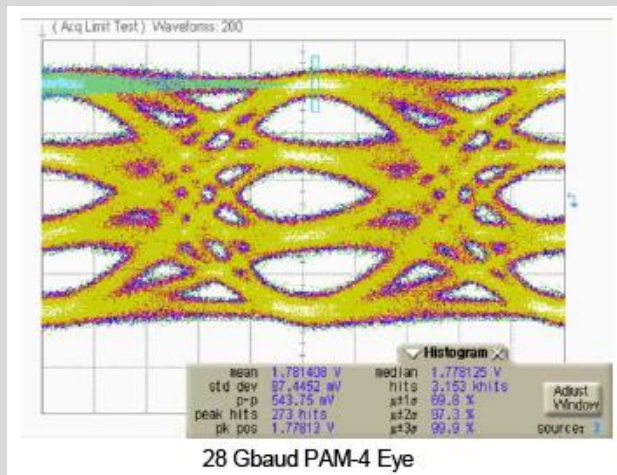
- Industry's 1st single-chip 400G OTN processor
- Delivering 50% less power per 100G port

High Performance Optical Laser Drivers



Coherent Mach-Zehnder Laser Drivers for

- Long-haul fiber reach
- Metro/regional fiber reach

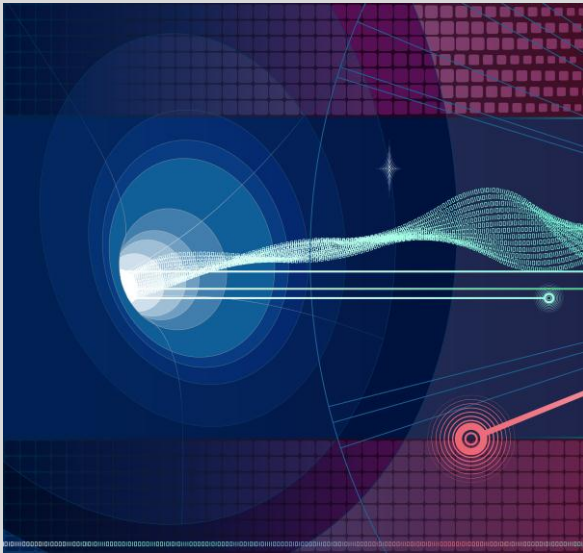


28 Gbaud PAM-4 Eye

Microsemi Technology Differentiation

- Low SNR = longer reach + low BER
- Great linearity = complex coherent modulation
- Low power = Small form factor 100G optics modules

Programmable Clocking Platform for OTN



“Single-Chip” clock component for the whole card

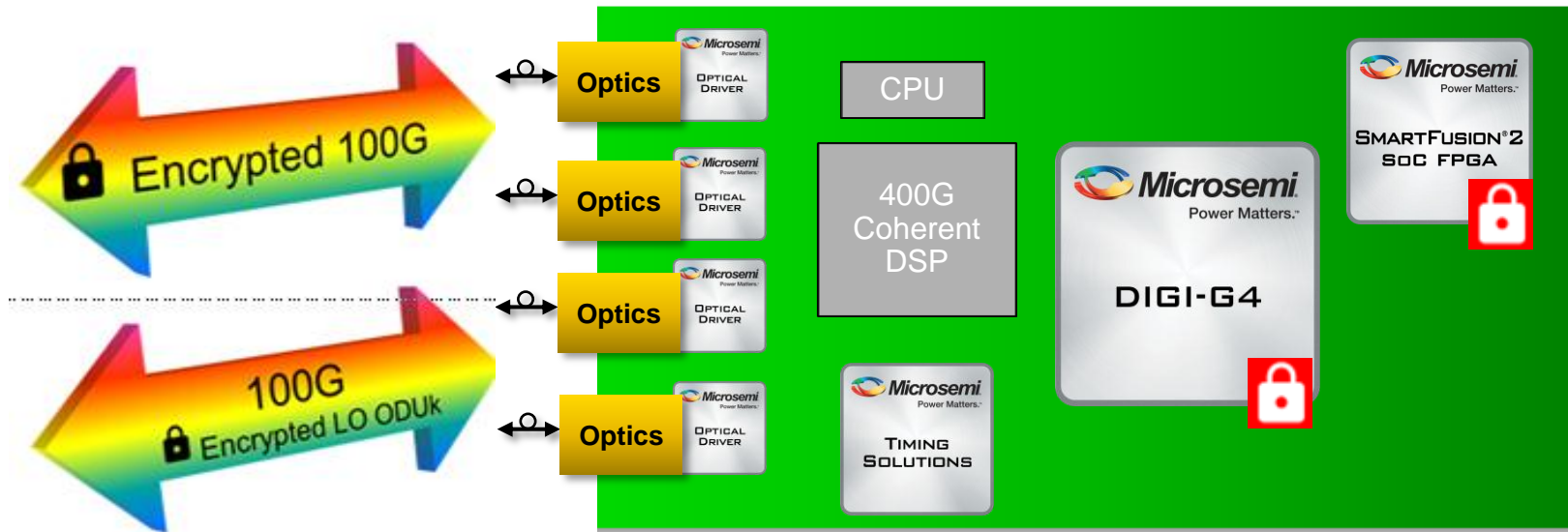
- Multiport: Clock source to multiple components
- Per port programmability: any-port, any-rate
- Wide output frequency range with ultra-low jitter

Field Proven Performance in Carrier Networks Microsemi 400G OTN Reference Design

- DIGI-G4 + timing solutions



Microsemi's 400G OTN Architecture



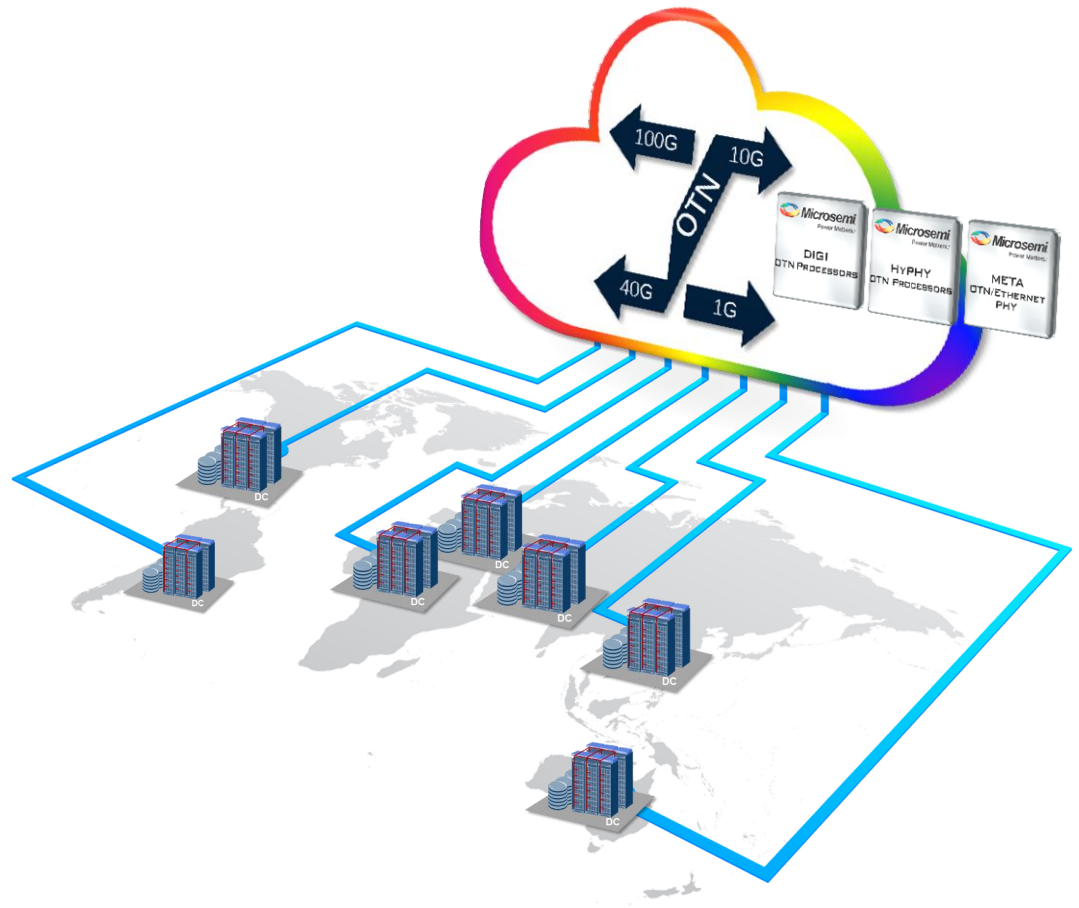
Powered by
Field-proven OTN Switching SDK

Premier Supplier in OTN Networking

Optical Equipment OEMs
8 out of 9
using Microsemi's OTN
processors

Telecom Service Providers
Top 5 Worldwide
deploying 100G OTN
using DIGI family

Cloud Service Providers
Top 3 Hyperscale DC
deploying DIGI for 100G
DCI connectivity



Microsemi Growth Opportunity in OTN Networking

Multiyear Optical Buildout Underway

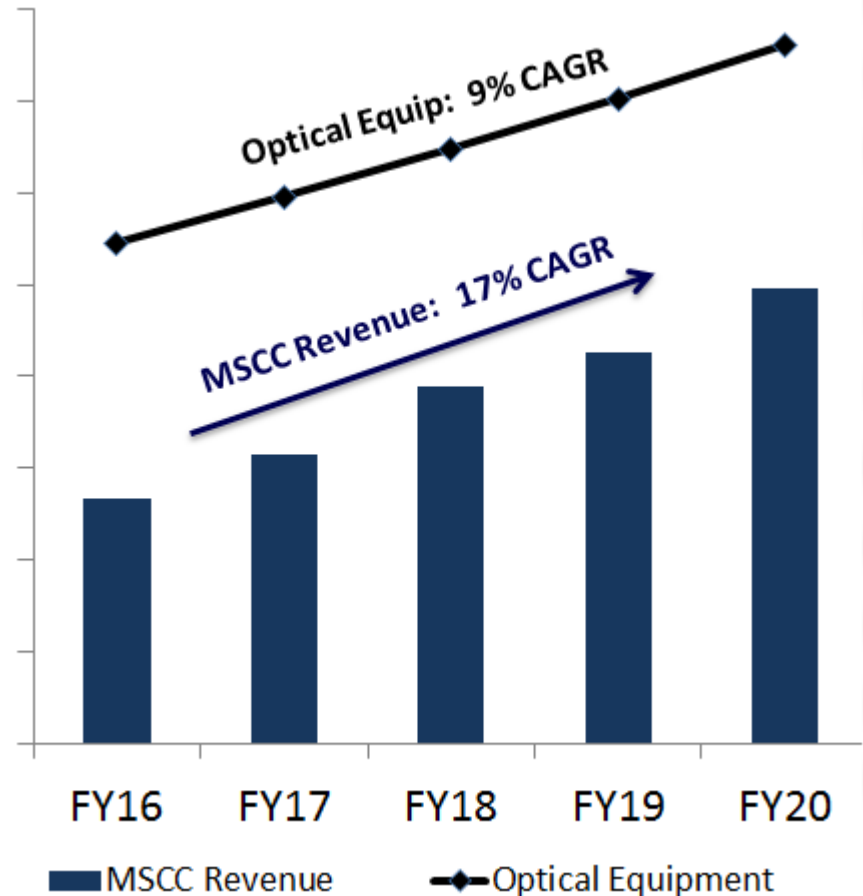
- China leading with 100G deployments
- NAm. & EMEA ramp metro 100G in 2017

Market Momentum Playing Into Our Strengths

- 100G adoption above expectations
- OTN switching is the model of choice worldwide

MSCC is Category Leader in OTN

- #1 in OTN switching with DIGI processors
- Carrier-grade OTN software SDK
- Content win in top OEMs supplying carrier and hyperscale markets



Break

10:30-10:40 a.m.



Aerospace

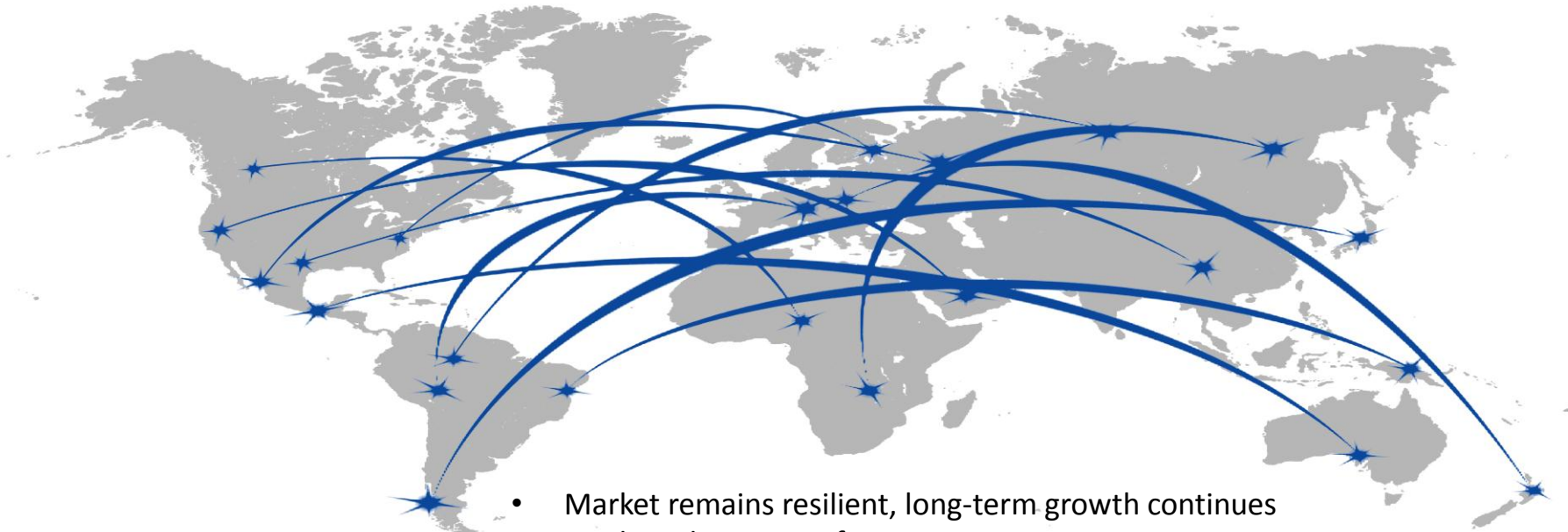


Siobhan Dolan

Vice President & General Manager, Discretes

Commercial Aviation Market Outlook

2016-2035	Airbus	Boeing
New Aircraft Deliveries	33,070	39,600
Market Value	\$5.2 trillion	\$5.9 trillion
Annual Traffic Growth	4.5%	4.8%

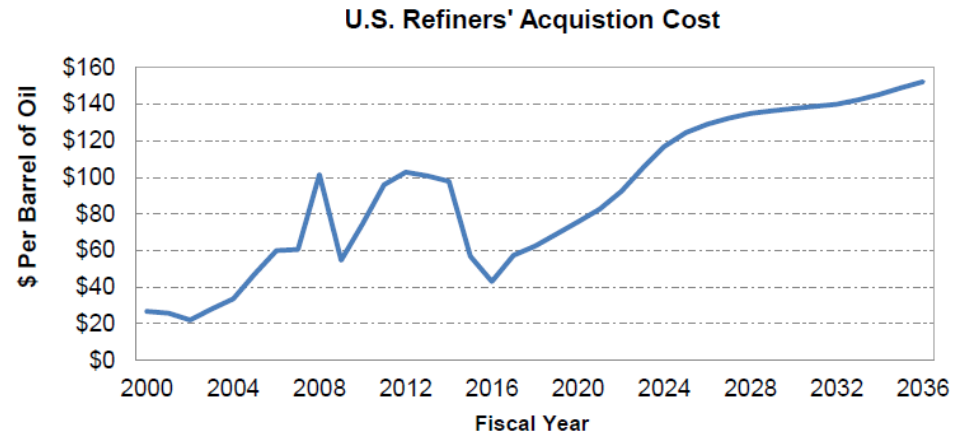
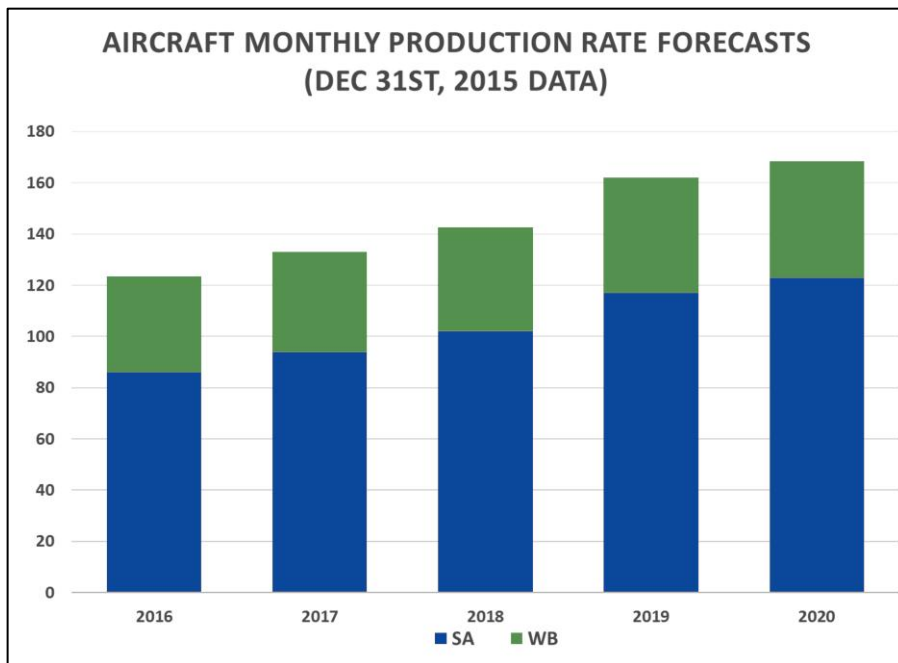


- Market remains resilient, long-term growth continues
- Single-aisle remains fastest growing segment
- Fuel efficiency still driving profitability

Headwinds or Tailwinds for Market Demand

Single-aisle production increasing by 43%

Oil prices to increase to \$100 per barrel by 2023



Source: IHS Global Insight

Sources:

FAA Aerospace Forecast Fiscal years 2016-2036

Leeham News & Comment Annual Production Forecast (Dec 2015)

IHS Global Insights

Airbus A320neo Launch



Improvements for the A320neo family result in a per-seat fuel burn savings of 20% compared to current engine option jetliners by 2020, along with additional range, reduced engine noise and lower emissions.

Boeing 737 MAX Launch



“The new 737 MAX will deliver 20% lower fuel use than the first next generation 737s and the lowest operating costs.”

-Boeing

Technology Drivers for More Electric Aircraft



More Electric Aircraft Challenges

“MEA faces ... challenges that are opportunities for Aircraft electrical power system architecture optimization ... WBG Power electronics advancement...”

- Dr. Hao Huang, Chief Technologist, GE Aviation – Electrical Power

“Solving the size, weight and power equation is the key challenge of this business — and that's what drives us forward every day...”

- Pascal Thalin, Technical Director, Thales Aerospace

“Power electronics is the enabling technology for the more electric aircraft. However MEA advantages are marginal with current technology and advancements in the areas of reliability, power density, wide band gap semiconductor materials and thermal management are essential to achieve its full potential.”

- Prof. Pat Wheeler, Head of Electrical and Electronics Dept., University of Nottingham

Challenges Facing More Electric Power Conversion

- Economic
 - Cost effectiveness
 - Design to cost
 - Standardization
- Reliability
 - Heritage
 - Maturity
- Technology
 - Optimized for weight
 - State-of-the-art technology



Electrical Power Conversion System Evolution and PDE SAM Expansion

SAM \$25K per Aircraft

Conventional Plane

- **Power Generation**

- Fixed Frequency, 400 Hz

- **Power Distribution**

- 115V AC
- 28V DC

- **Actuation**

- Hydraulic Systems

- **APU**

- Classic Bleed system

From 1990's

SAM \$138K per Aircraft

MEA "Story So Far"

- **Power Generation**

- Variable Frequency 300-800Hz

- **Power Distribution**

- 115V AC & 230V AC
- +/- 270V DC
- 28V DC

- **Actuation**

- Hydraulic Systems
- Electric Back-up

- **APU**

- Bleedless System
- Bi-Directional system

From mid 2000's

SAM \$1.3M per Aircraft

MEA "Next Steps"

- **Power Generation**

- Higher density, full electric

- **Power Distribution**

- Intelligent management systems
- Increased density

- **Actuation**

- Full Electric

- **APU**

- Increased density

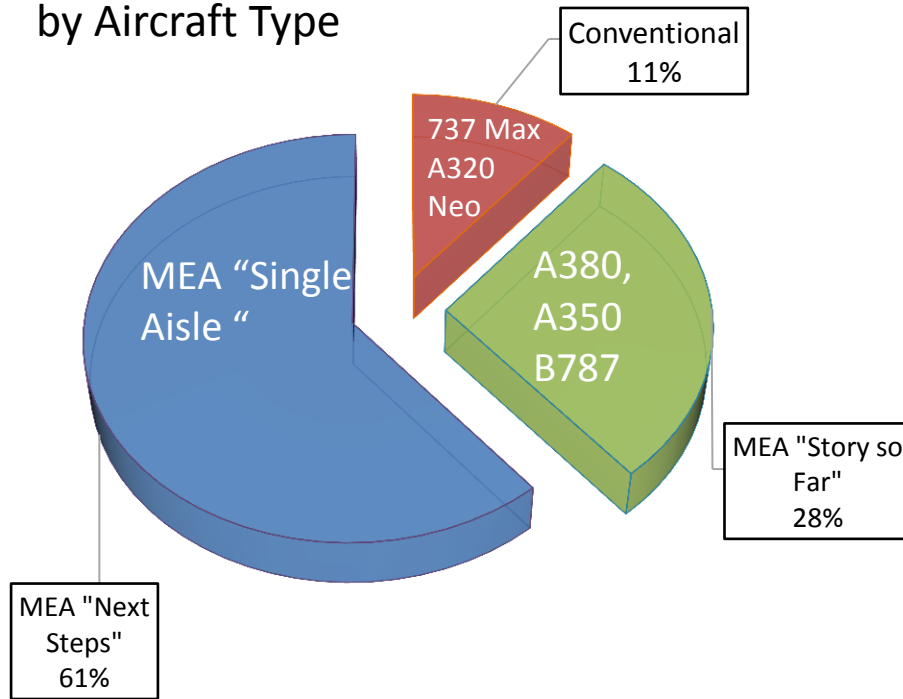
From 2020 E

Production Ramp



Electrical Power Conversion: Power Drive Electronics TAM Growth by 2020

PDE TAM \$1.2B
by Aircraft Type



5 Year PDE CAGR
2016 – 2020

PDE TAM 27%

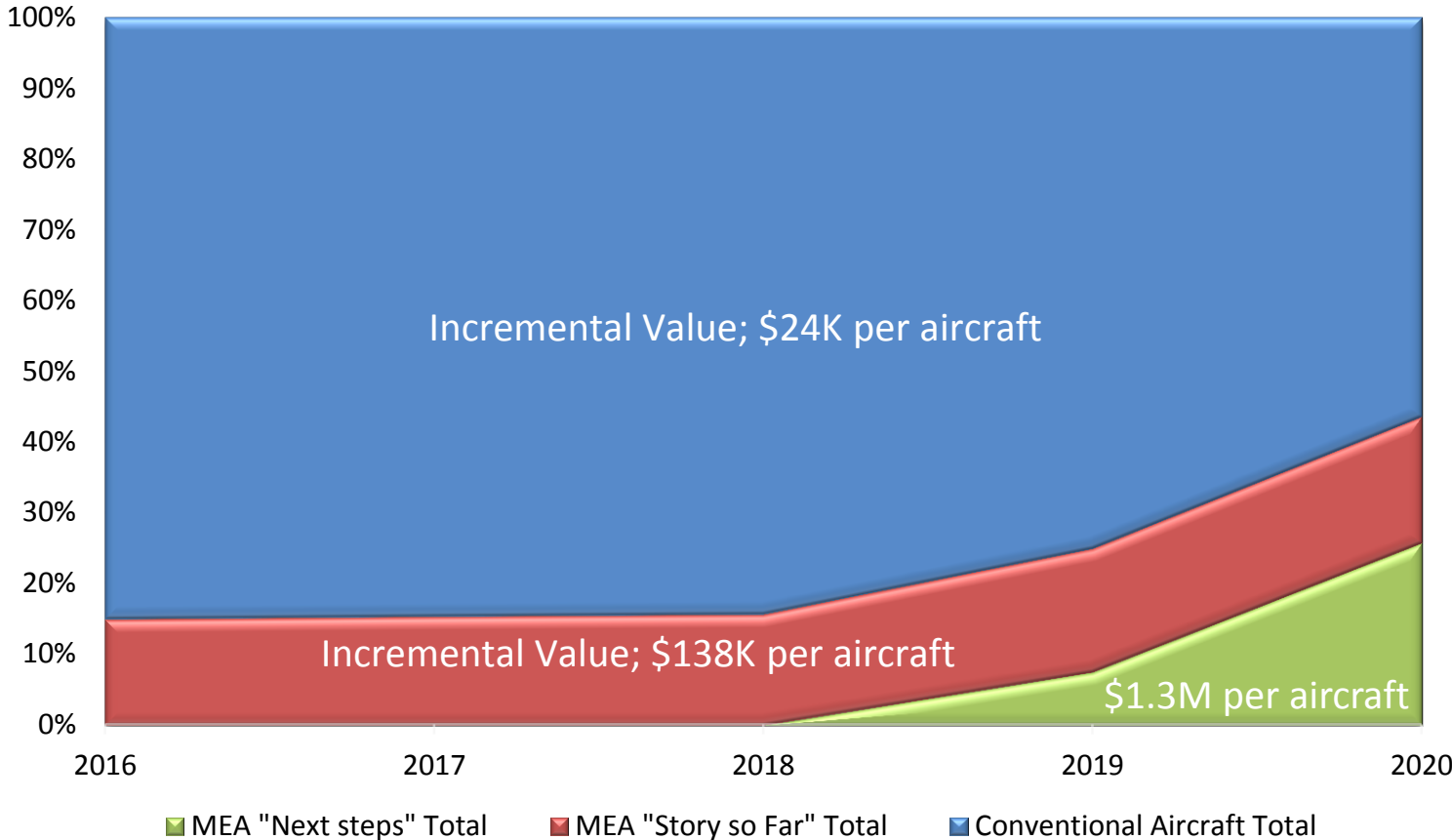
PDE SAM >63%

Aircraft production; increasing
by >6% per annum

Source;
Leeham News & Comment Annual Production Forecast (Dec 2015)

Electrical Power Conversion Systems on MEA

Drives Microsemi SAM Growth 2016-2020



SAM value growing to \$1.3M per MEA aircraft by 2020

Microsemi Heritage in More Electric Aircraft

Building on 30 + Years Heritage on Aviation Flight-Critical Avionics Systems



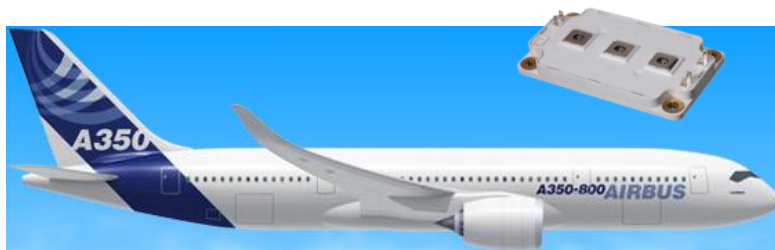
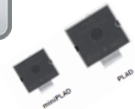
Airbus A380

- More than 1,000 FPGAs on each A380
- 5 million + field hours operation 30KVA power module
- Multiple TVSs protecting avionics systems



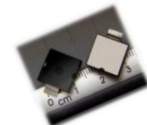
Boeing 787 Dreamliner

- APA, A3P, AX FPGAs
- More than 6,000 power modules shipped
- Multiple high power PLAD TVSs protecting avionics systems



Airbus A350 XWB *ProASIC 3*

- APA, A3P FPGAs
- More than 78 ruggedized power modules on primary and secondary electric actuation systems
- Multiple high power PLAD TVSs protecting avionics systems



Microsemi Value Proposition & Growth Drivers

Complete Power & RF Solutions Provider

Optimizing Power, Performance, Reliability & Cost

System Level
Engineering

Reliability &
Quality Expertise

Design & Test
Services

Innovative Packaging & Integration

Innovative
Discrete Packaging

Modules
MMICs

Intelligent Power
Conversion

Leading Semiconductor Technology Experts

Extensive Silicon
Technology &
Capability

Innovating with
Wideband Gap
SiC & GaN

Strong Fabrication &
Manufacturing
Model

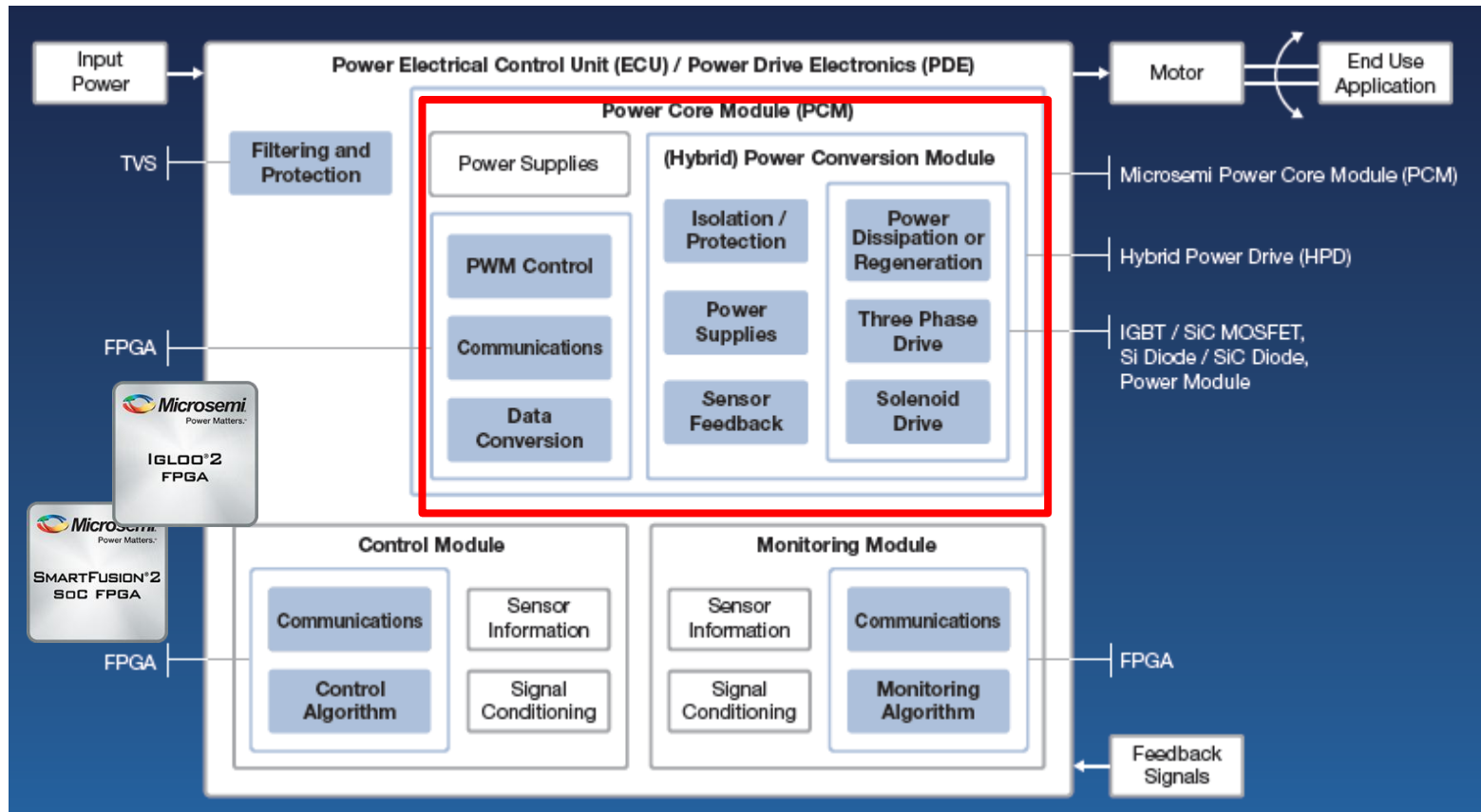
Aviation Centre of Excellence

- Vertical Integration
 - Microsemi moving up the supply chain to Tier 2
 - Building a full system engineering capability
 - Verification and validation of mission models
- Standard Modular Systems
 - Leveraging broad portfolio of power, digital, analog mixed signal technologies
 - Highest levels of integration, flexible, scalable solutions
 - Lowest cost of ownership for customers
- Extensive Reliability Programs
 - State of the art design and integration facility
 - Extensive product testing and accelerated product innovation, DO254 hardware certification
 - Extensive life test verification



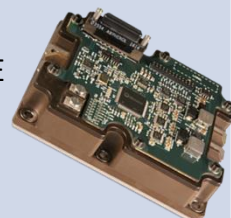



Intelligent Power Electrical Control System

Developing a Portfolio of “Standard” Intelligent Power Solutions (IPS)
Addressing Multiple Electrical Power Conversion Applications and Markets

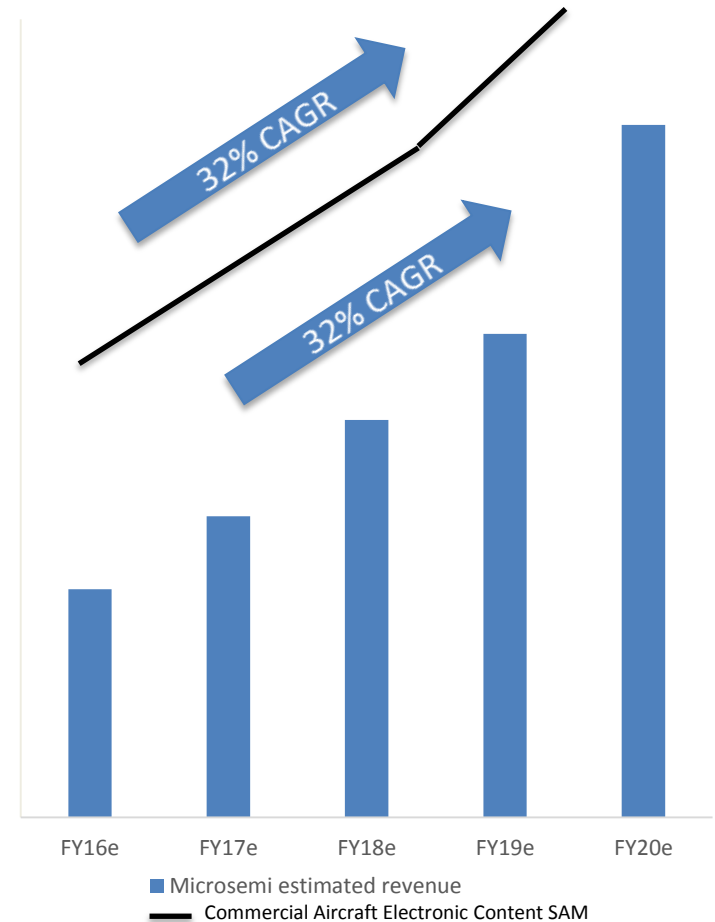


Technology Leadership Driving Content

Product Family	Target Application/ Sub-System	Key Differentiation
SiC: Schottky diodes and SiC FETs	<ul style="list-style-type: none"> Power conversion Inverter Actuator PDE 	<ul style="list-style-type: none"> Best in class RDS(ON) vs. temperature Longest short circuit withstand rating Lowest gate resistance Superior stability
Power Modules: High performance Silicon & SiC FETs, IGBTs, Rectifier modules Hybrid Power Drive (HPD)	<ul style="list-style-type: none"> Power conversion Inverter Actuator PDE 	<ul style="list-style-type: none"> Lowest size and weight, high integration Higher reliability Higher efficiency Superior thermal performance Temperature range of -60°C to +250°C
Intelligent Power Systems: Power Core Module (PCM)	<ul style="list-style-type: none"> Power conversion Inverter Actuator PDE 	<ul style="list-style-type: none"> Higher level of integration, lowest weight and size Higher level of reliability Standard solution designed to cost Power efficiency Superior thermal performance
FPGAs & SoCs	<ul style="list-style-type: none"> Motor control Health monitoring Data acquisition Sensing Communication 	<ul style="list-style-type: none"> High level of integration Accommodates complex algorithms Highest reliability, SEU immune Extended temperature support

Microsemi is a Premier Electronics Supplier in Commercial Aerospace

- Extensive Aviation Heritage
- Comprehensive High-Reliability Portfolio
- Continuous Innovation
- Solutions Capability



*Microsemi revenue and SAM not to scale

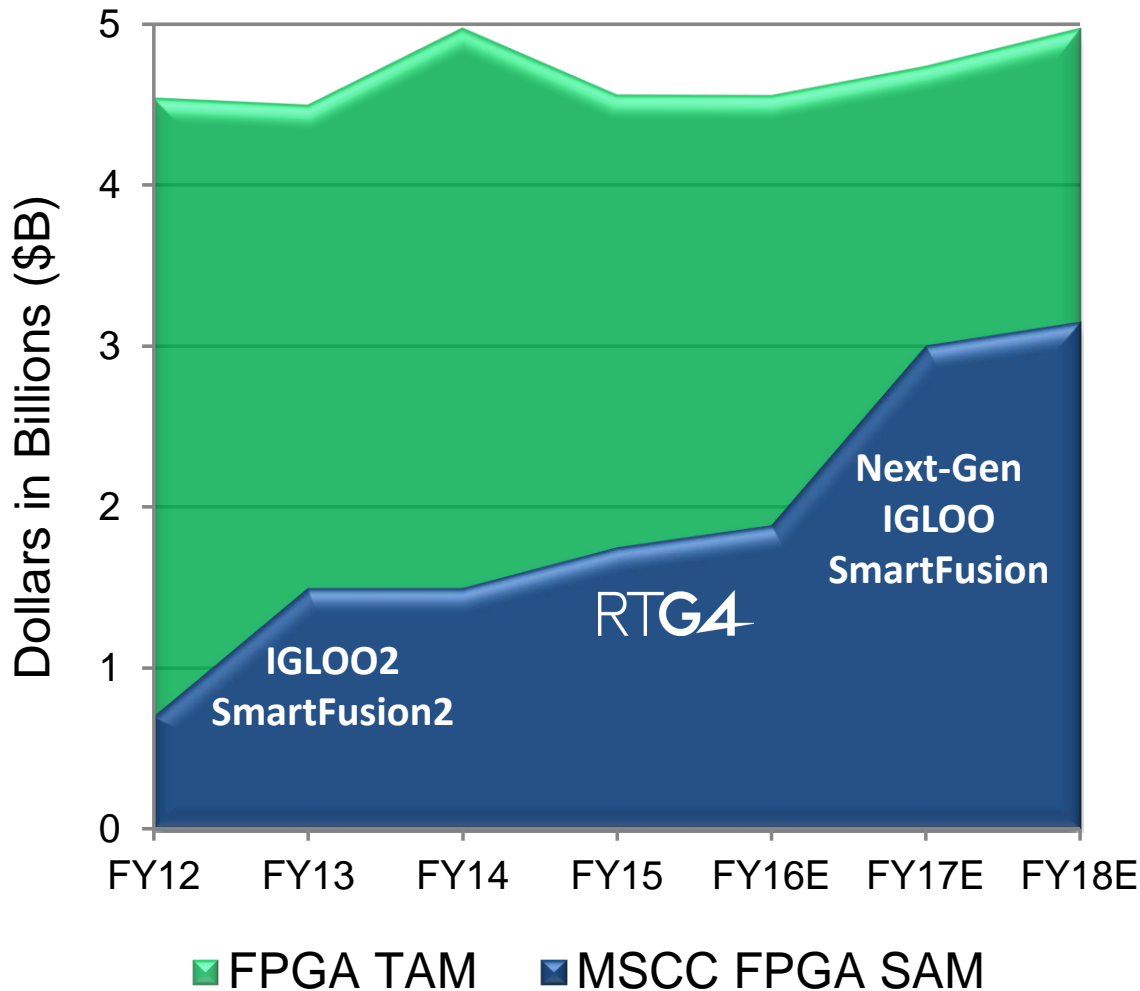
FPGAs



Esam Elashmawi

VP & General Manager, IC Solutions

Microsemi Growing FPGA SAM >\$3B



- FPGA SAM Growth Through Differentiation
 - Lowest Power
 - Security Integration
 - Reliability/SEU
 - Single-chip Flash
- Expanding Density and Performance Footprint
 - Further Reach Into Mainstream FPGA Designs
- Entering New Markets
 - Strong Expansion into Communications Market
 - Entry into Space Payload Applications

Differentiated Mainstream FPGAs



Low Power

- 1/10th static power
- Reduce total power by ~30–50%

Security and Reliability

- SEU immune FPGA configuration
- Highly secure (suitable for anti-cloning and authentication applications)
- Extended temperature support (125 °C Junction)

Lowest Total Cost of Ownership

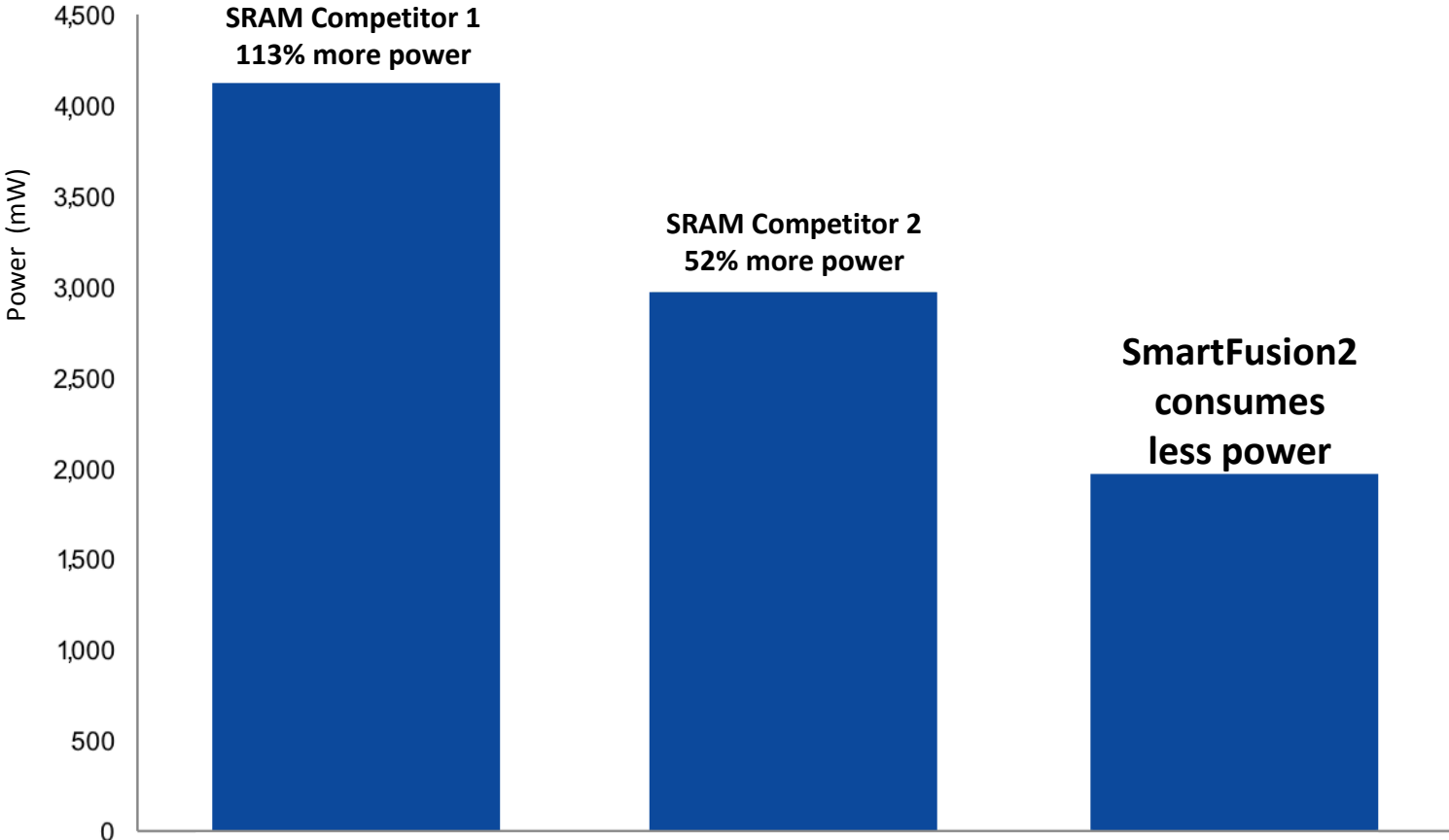
- System integration: 150K logic elements, transceivers, DSP, and ARM
- More resources on smaller devices
- Smallest form factors

System Solutions

- Communications: Secure boot, Ethernet, JESD204B
- Industrial: Motor control, industrial networking, IP surveillance
- Aero and Defense: MIL-STD1553, information assurance, secure boot

SmartFusion2: Consumes 34-53% Less Power

Total Power Consumption



Measured at $T_j = 100$ C, worst case conditions

Note: Flash*Freeze mode will yield larger differences

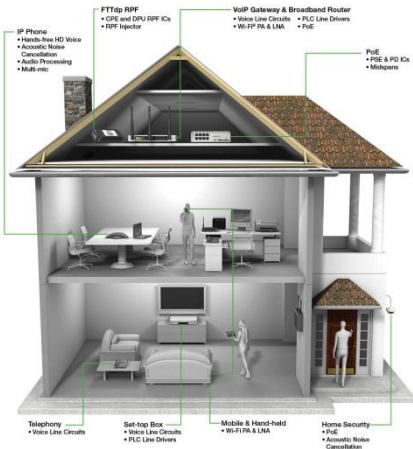
Wireless Connectivity: Are You Secure?

Advanced Driver Assist Systems (ADAS)



Vehicle-to-Vehicle Communications

Connected Home & Office



12.5 Billion

2010

1.84

Connected Devices

56 Billion

2020

6.58

Connected Devices/Person

Financial Investments



Personal Medical



Industry 4.0



Communications



You must be secure from:

– Trojan Horses

Stuxnet Worm

- Safety Risk

– Tampering/Phishing

- Stolen Passwords/Keys

– Hacking

Blackhat 2011

- Insulin Pumps

- Point-of-Sale Terminals

– Industrial Espionage

- IP Theft/Code-Lifting

- Cloning

Energetic Bear

– Persistent Access

- Routers and Hubs

- Automobiles

Target Breach

Communications Scalable Platform Win 1

Customer issue: How to prevent cloning and counterfeiting?



Microsemi unique value: anti cloning and anti tamper FPGA



North America Infrastructure Vendor



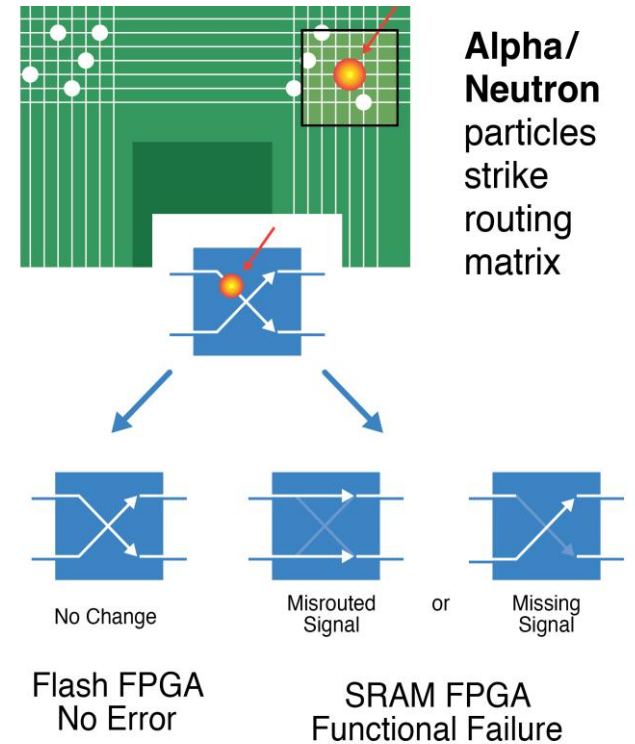
Enables integration of FPGA applications with security

Standardized security solution across all products



The Most Reliable FPGAs in the Industry

- Flash FPGA Fabric
 - SEU immune; zero FIT rate
- SRAM FPGA Fabric
 - An upset will occur; matter of time
 - Requires scrubbing and correction
 - Downtime for scrubbing = \$\$ lost



Reliability for safety-critical or mission-critical systems

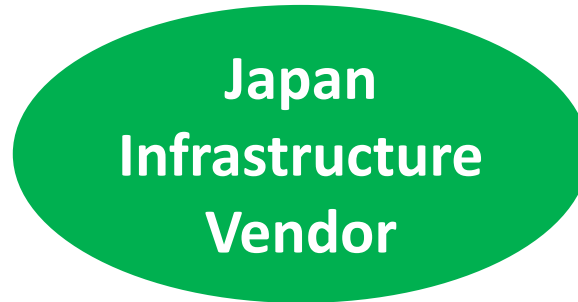
Communications Scalable Platform Win 2

Customer issue: reliability and system down time due to SEU



Microsemi unique value: SEU immune FPGA

\$



Enables integration of FPGA applications with reliability solutions

\$\$\$\$



Standardized reliability solution across all products

\$\$\$

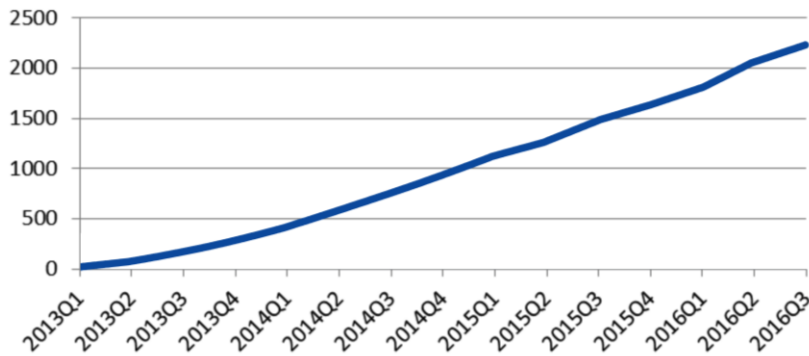


High Win Rate at New Customer Base

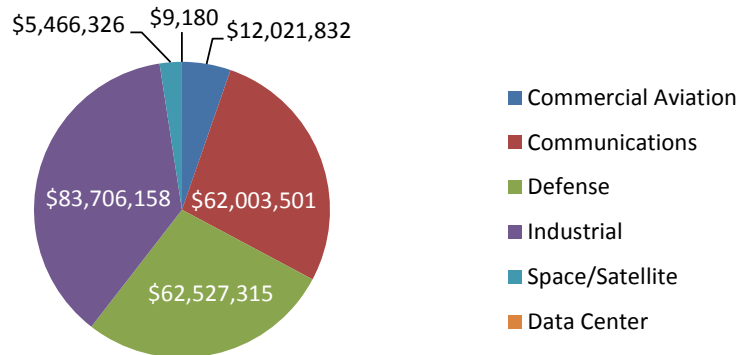
SmartFusion2/IGLOO2

FY12-FY16Q3 (\$)	Opportunities	Design Ins	Design Wins
Grand Total	\$ 488,775,728	\$ 141,566,480	\$ 84,167,832

Cumulative New Customers



Design In/Win Values by Market



- 49% of opportunities are with new customers
 - 4,611 total opportunities
 - 2,237 with new customers

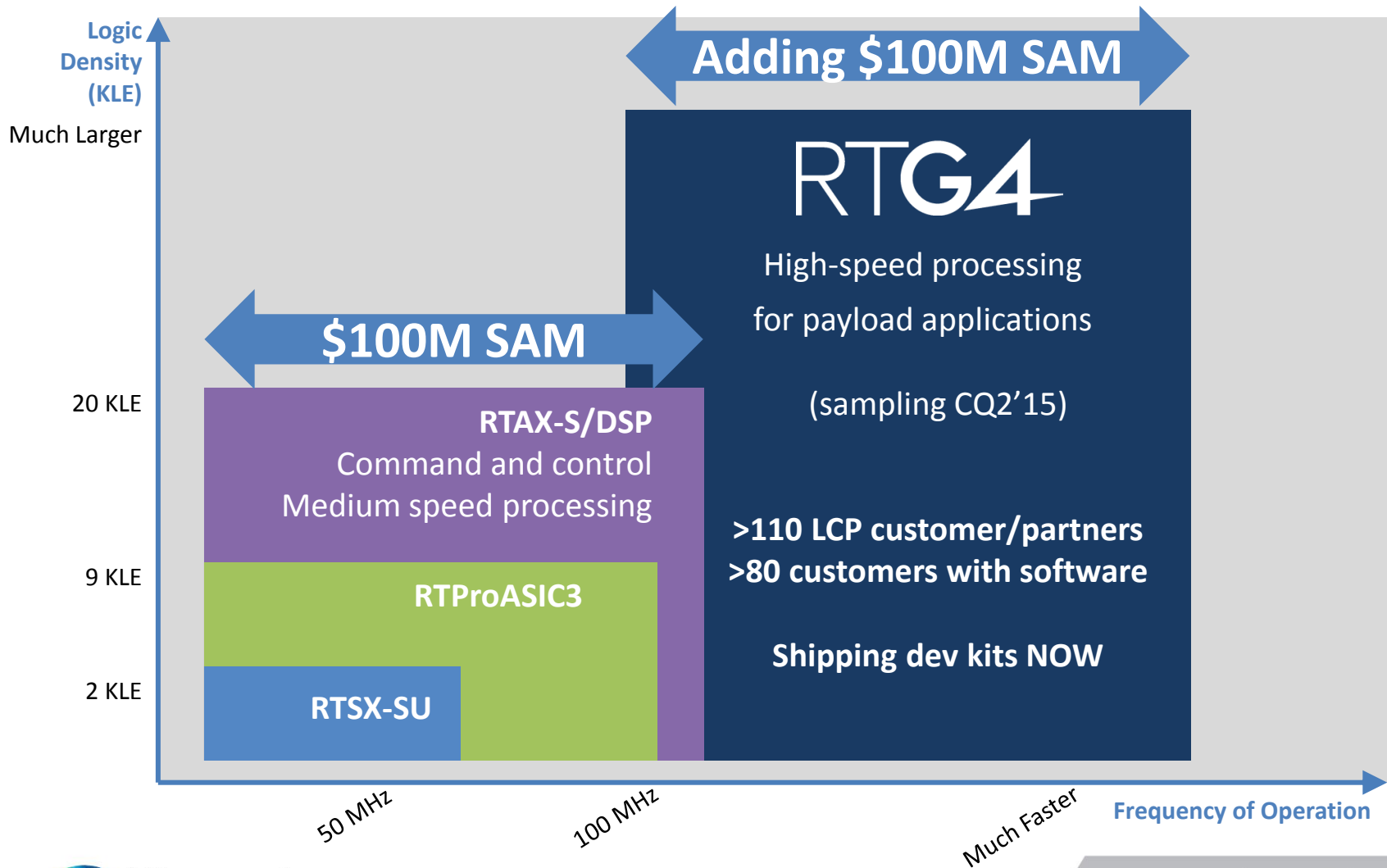
- 44% of customer designs choose Microsemi
 - 1,583 design in/design wins
 - 2,001 design losses

- 29% of design win values in communications

Many Reasons Why Customers Engage, Many Reasons Why We Win

Geography	Market Segment	Primary Reason for Engagement	Secondary Reasons for Win
Americas	Communications (router)	SEU	More PCIe; more I/O
Americas	Communications (secure router)	Security	Small parts with mainstream features; small footprint
Japan	Communications (metro data)	SEU	I/O FPGA with PCIe; always on
China	Communications (SFP)	SEU	Low power, small footprint
China	Communications (access)	NV FPGA with mainstream features	Integrated M3 processor
Americas	Automotive (ECM)	Reliability	SEU
China	Automotive (cloud-based control)	Security	Small parts with mainstream features
Americas	Defense (secure communications)	Low power	Small footprint, multi PCIe end points (090)
Europe	Defense (secure communications)	Low power	Security
China	Industrial	Security	Small parts with MCU and PCIe
Americas	Industrial (POS)	PCIe @ 10K LE	Lower cost than ASIC
Americas	Industrial (networking)	NV FPGA with PCIe	SEU
Americas	Consumer (mobile platform)	Security	Security
China	Consumer (gaming)	Small chip with transceiver	Security, small parts with MCU and XCVR, VQ package

Radiation Tolerant FPGAs: Extending our SAM to High-Speed Processing Applications



RTG4 Design Win Traction to Date

Cumulative Design Opportunities



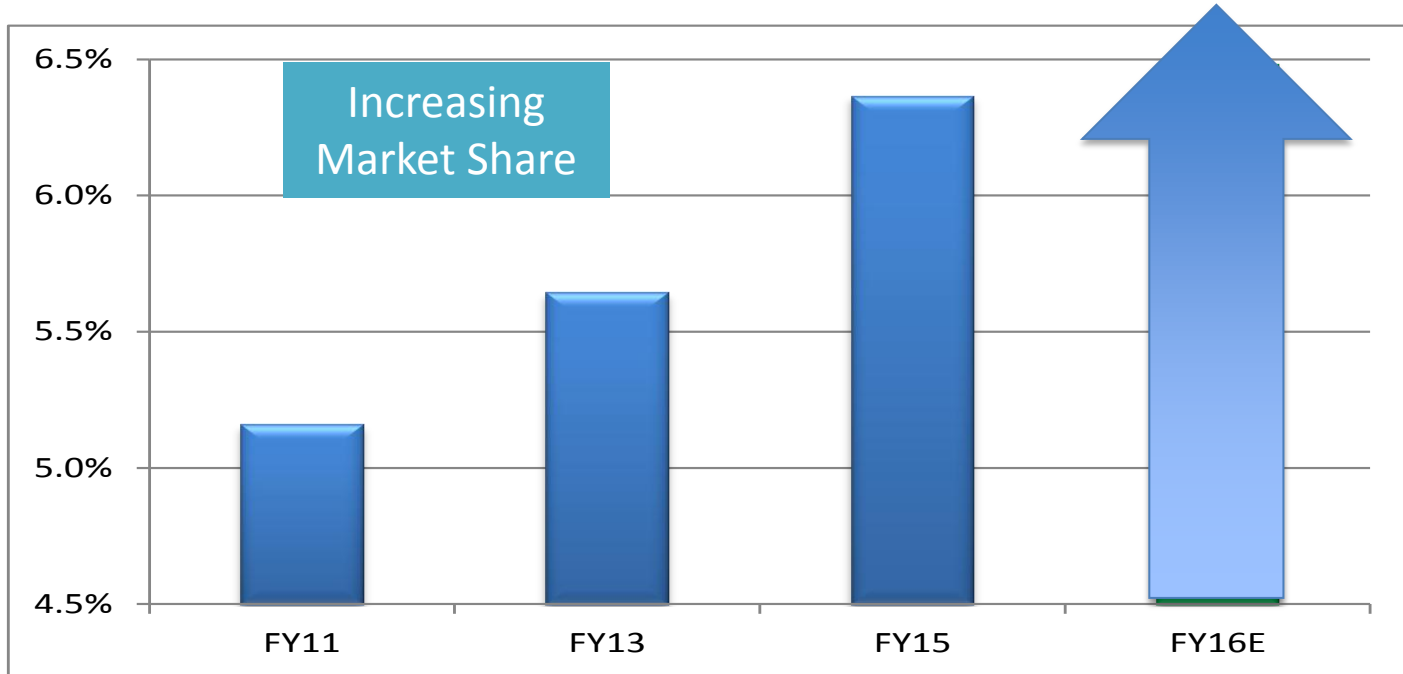
- Growing Opportunities
 - >244 count
- Record Design Ins
 - Customers have chosen Microsemi over competitors
- Record Design Wins
 - Customers have purchased >\$1K silicon
- Production Qualification Q4 2016

The Microsemi Advantage



Low Power	Quarter Circle	Quarter Circle	Full Circle
Security	Quarter Circle	Quarter Circle	Full Circle
Reliability	Quarter Circle	Quarter Circle	Full Circle
Low-Density	Full Circle	Full Circle	Full Circle
Mid-Range	Full Circle	Full Circle	Half Circle
High-Density	Full Circle	Full Circle	Empty Circle
Rad-Tolerant	Quarter Circle	Empty Circle	Full Circle
SoCs	Full Circle	Full Circle	Full Circle

SoC Market Share: Strong Growth!



Key Differentiators Driving Share

- Lowest power
- Highest security
- Most reliable
- Most product features per density

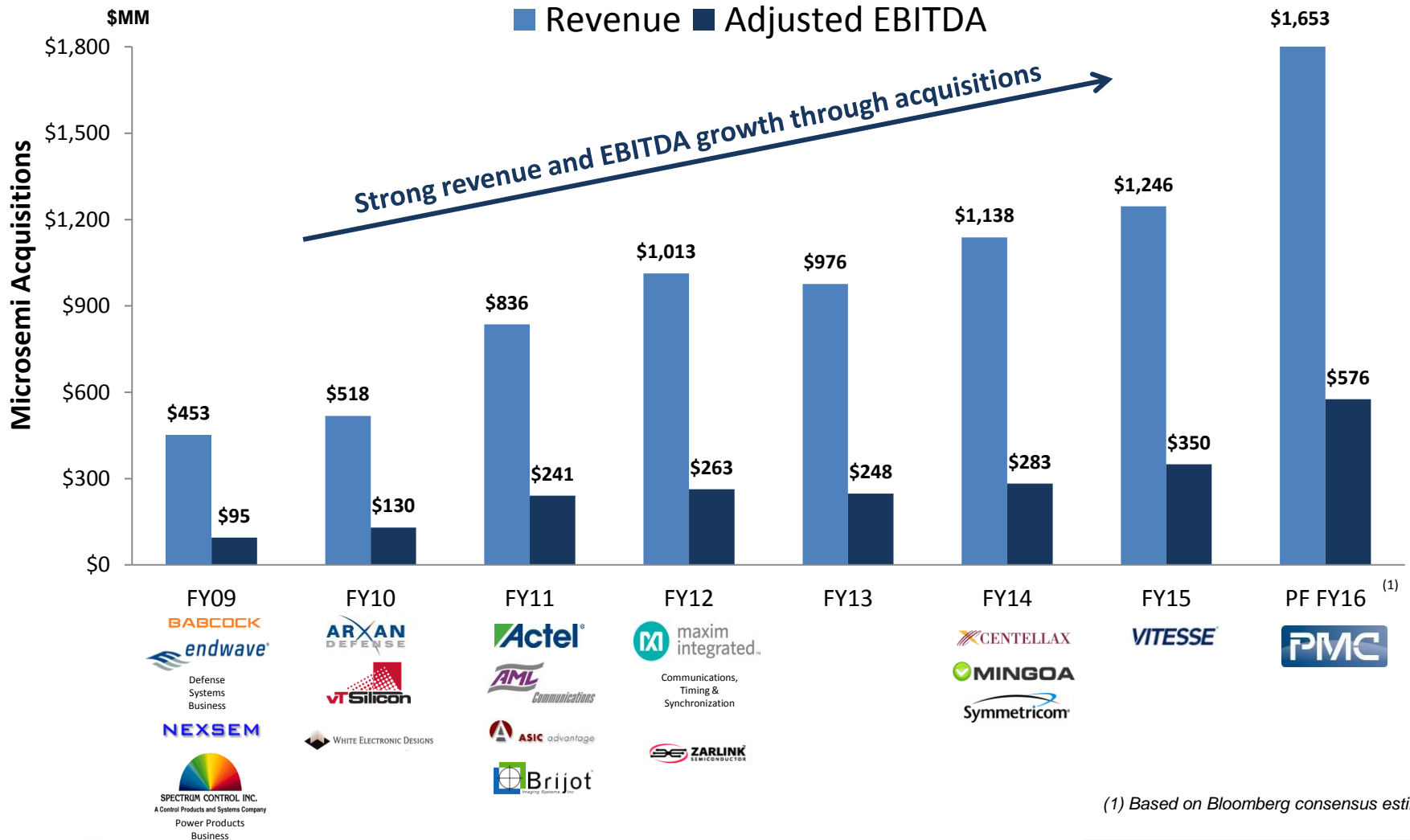
Financial Performance



John Hohener

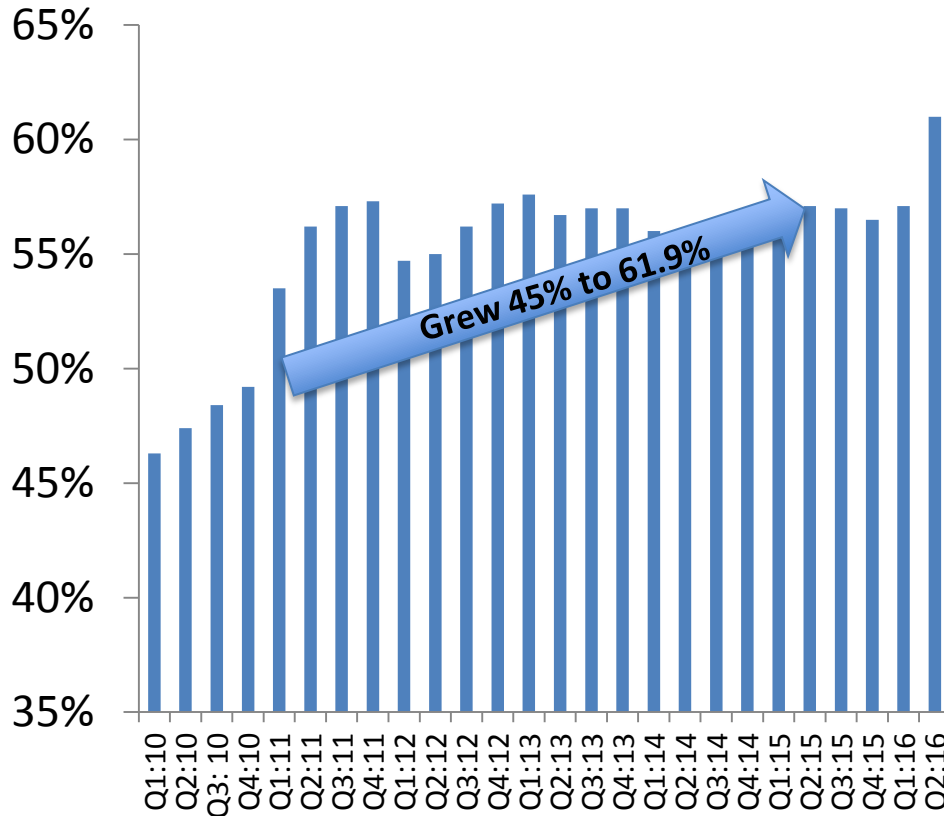
Executive Vice President & Chief Financial Officer

Distinguished Record of Integrating Acquisitions



(1) Based on Bloomberg consensus estimates

Great Track Record of Driving Improved Gross Margins



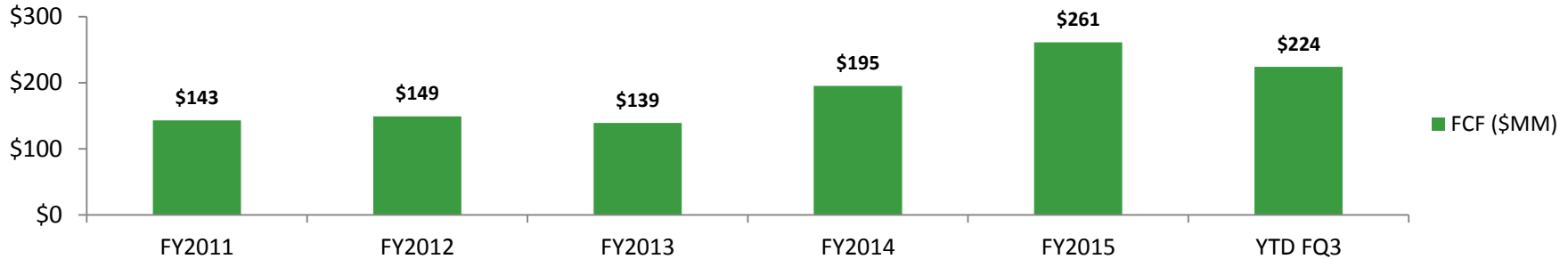
Q3 16 GM forecast: improve sequentially 10–70 bps

Expect Continued Growth:

- Operational efficiencies continue to drive GM improvements
- Increased scale brings leverage to overall model
- High value product portfolio driving increased GM%
- Mix continues to drive up GM% as new products deliver higher value proposition to customer
- Divested low GM products and added higher value products

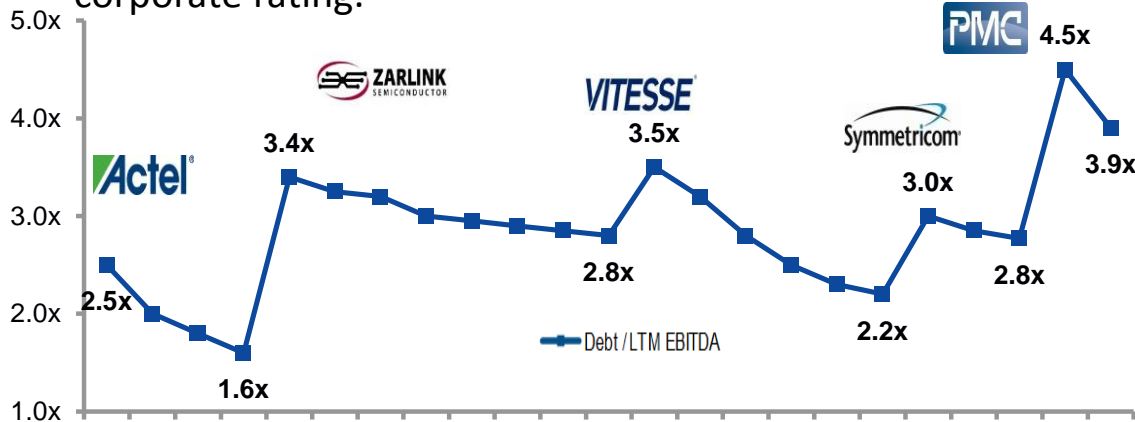
Strong Cash Flow With History of Repayment

Strong Cash Generation (Microsemi Standalone)⁽¹⁾



Historical Debt/LTM EBITDA (Microsemi Standalone)

- Microsemi is committed to continue to use free cash flow (FCF) for de-leveraging and maintaining a minimum of a “BB” corporate rating.



Significant Upside in Model:

- Leverage ratio comes down dramatically over next 12 months, lowering risk
- EPS ‘upside’ contribution through debt pay down will drive accelerated EPS growth
- Financing costs remain very modest allowing great returns

(1) Free cash flow defined as operating cash flow minus capital expenditures, adjusted for transaction and restructuring costs

Free Cash Flow

Mid Point of Guidance	\$448,000
EPS	\$0.90
<hr/>	
Corresponding Net Income	\$103,277
Add Back Depreciation	\$15,000
Less Guide for CAPEX	\$(15,000)
<hr/>	
Implied FCF	\$103,277

Business drives significant cash flow:

- Dramatically improved portfolio allows for tremendous value and much improved profitability
- Investment in capital is modest as fabless model with outsourced manufacturing
- Op. ex spend modest as scale improves and focused R&D spend in growth areas drives up profitability

- *Cash flow is best measured over a several quarter period and will, over time, equal the cash flow that the business has achieved operationally.*
- *Items that can affect reported cash flow in any given period: linearity of supply chain, payroll cycles (6 or 7), tax payments, debt service payments (30 days, 90 days), annual bonus and profit sharing, recurring design tools payments, and inventory build to support growth.*

Maximizing Profitability

Historical P&L, Q4 Guidance

	FY15		FY16			Fiscal Year 2016 Q4 Guidance	
	Q3	Q4	Q1	Q2	Q3		
Net Sales	\$317.1	\$328.8	\$329.2	\$444.3	\$431.4	Revenue	\$438-\$458
Gross Profit	180.7	185.8	187.9	270.8	266.9	Gross Margin	+10 to 70 bps
Gross Margin	57.0%	56.5%	57.1%	61.0%	61.9%	EPS	\$0.83-\$0.97
Operating Income	78.8	84.8	83.8	116.2	122.7	Updated Target Model	
Operating Margin	24.9%	25.8%	25.5%	26.1%	28.5%		
EBITDA	87.5	93.3	92.5	128.6	133.8	Revenue Growth	6%-8%
Net Income	65.3	70.3	69.3	74.7	84.0	Gross Margin	60+%
Diluted EPS	\$0.68	\$0.73	\$0.72	\$0.67	\$0.73	Op. Margin	35%

Note: Non-GAAP, amounts in millions except EPS.

Maximizing Profitability

- Continued GM improvements fall through to operating income
 - New products with high margins
 - Exit low-margin products (Mercury divestiture)
 - PMC acquisition \$500+ million of 70% + gross margin
 - Supply chain scale/Leverage from consolidations
- Targeted R&D efforts with superior ROI only
 - Focus groups: FPGA, timing, mixed-signal/RF
 - No outsized needs in R&D as mix and ROI drive modest dollar expectations
 - Much of the business has long tail revenues with minimal investment necessary
- Comfortable raising operating margin targets to 35%
 - Business outlook for 2017-19 sets up for solid revenue growth
 - Scale and operational efficiencies realized
 - SG&A ongoing streamlining with scale
 - In 2020 time frame with >\$2b in revenues, potential to drive \$5-6 of EPS with operating margins exceeding 35%, based on mix of product revenue

Acquisition Strategy



Steve Litchfield

Executive Vice President & Chief Strategy Officer

Acquisition Strategy

- Microsemi continues to focus on reducing debt in the near term as previously stated.
- Corporate strategy will continue to involve acquisitions to complement product portfolio and expand silicon content in target applications.
- Microsemi will maintain its disciplined approach to valuation as environment and scarcity value drives pricing.

Executive Summary



James J. Peterson

Chairman & CEO

Q&A

Management Luncheon

