

A Leading Provider of Microcontroller,  
Mixed-Signal, Analog & Flash-IP Solutions



**Investor & Analyst Day**  
**March 1, 2018**

**Steve Sanghi**  
**Chief Executive Officer**



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### **Forward Looking Statement Safe Harbor:**

During the course of this presentation, we will make projections or other forward-looking statements regarding the future financial performance of the company or future events, including our strategy, growth drivers, industry outlook, industry trends, market size and our financial model. We will also make projections or other forward-looking statements regarding our pending acquisition of Microsemi including deal timing, deal benefits, synergies, integration plans, plans to finance the transaction, deal accretion and pro-forma financial information for the transaction. We wish to caution you that such statements are just predictions and that actual events or results may differ materially. These statements are subject to a number of risks and uncertainties, including the actual timing of the closing of the Microsemi acquisition, the satisfaction of the conditions to closing in the Microsemi acquisition agreement, any termination of the Microsemi acquisition agreement, the effect of the acquisition on Microchip's and Microsemi's existing relationships with customers and vendors and their operating results and businesses; the costs and outcome of any litigation involving Microchip, Microsemi or the acquisition transaction, our ability to successfully integrate the operations and employees, retain key employees and customers and otherwise realize the expected synergies and benefits of our Microsemi acquisition; the impact of any future significant acquisitions that we may make; any economic uncertainty due to monetary policy, political or other issues in the U.S. or internationally, any unexpected fluctuations or weakness in the U.S. and global economies (including China), changes in demand or market acceptance of our products and the products of our customers; changes in U.S. corporate tax laws as a result of the Tax Cuts and Jobs Act of 2017 or other future legislation, foreign currency effects on our business; the mix of inventory we hold and our ability to satisfy short-term orders from our inventory; changes in utilization of our manufacturing capacity and our ability to effectively manage and expand our production levels; competitive developments including pricing pressures; the level of orders that are received and can be shipped in a quarter; the level of sell-through of our products through distribution; changes or fluctuations in customer order patterns and seasonality; our ability to obtain a sufficient supply of wafers from third party wafer foundries and the cost of such wafers, the costs and outcome of any current or future tax audit or any litigation or other matters involving intellectual property, customers, or other issues; disruptions in our business or the businesses of our customers or suppliers due to natural disasters (including any floods in Thailand), terrorist activity, armed conflict, war, worldwide oil prices and supply, public health concerns or disruptions in the transportation system; and general economic, industry or political conditions in the United States or internationally. Actual results may differ materially from the expected results. For a detailed discussion of these and other risk factors, please refer to Microchip's and Microsemi's filings on Forms 10-K, 10-Q and 8-K. You can obtain copies of Forms 10-K, 10-Q, 8-K and other relevant documents for free at Microchip's website ([www.microchip.com](http://www.microchip.com)), Microsemi's website ([www.microsemi.com](http://www.microsemi.com)) or the SEC's website ([www.sec.gov](http://www.sec.gov)) or from commercial document retrieval services. These documents contain and identify other important factors that could cause our actual results to differ materially from those contained in our projections or forward-looking statements. You are cautioned not to place undue reliance on our forward-looking statements, which speak only as of the date such statements are made. We do not undertake any obligation to publicly update any forward-looking statements to reflect events, circumstances or new information after this presentation or to reflect the occurrence of unanticipated events.

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Microchip, Microsemi and their directors and executive officers may be deemed to be participants in the solicitation of proxies from the stockholders of Microsemi in connection with the Merger. Information regarding the special interests of these directors and executive officers in the transaction will be included in the proxy statement described above. Additional information regarding the directors and executive officers of Microchip is also included in Microchip's proxy statement for its 2017 Annual Meeting of Stockholders, which was filed with the SEC on July 13, 2017. Additional information regarding the directors and executive officers of Microsemi is also included in Microsemi's proxy statement for its 2018 Annual Meeting of Stockholders, which was filed with the SEC on December 20, 2017. These documents are available free of charge at the SEC's web site at [www.sec.gov](http://www.sec.gov) and as described above.

# Agenda

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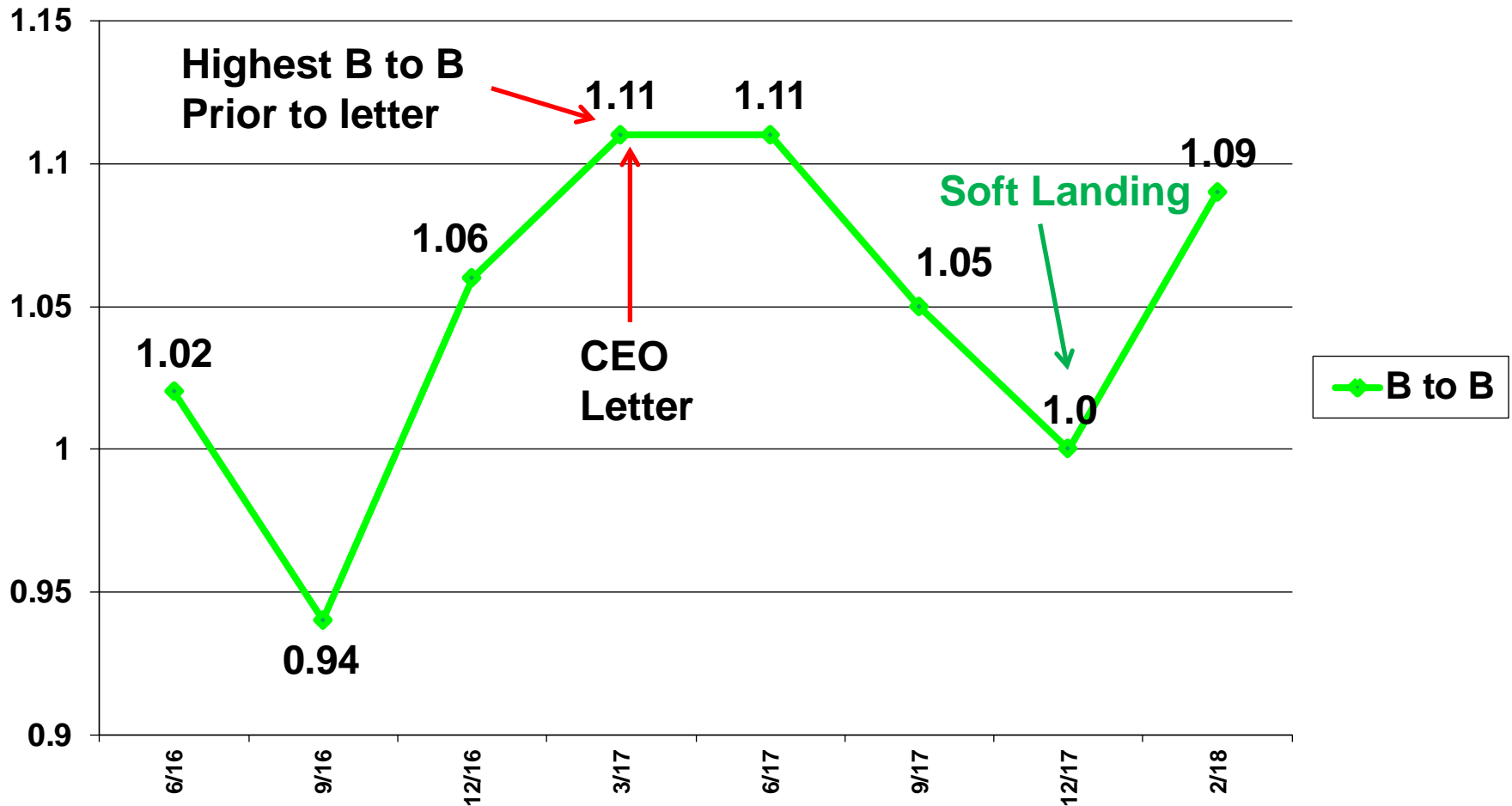
- **Overview & Value proposition** **Steve Sanghi**
- **Microsemi Acquisition** **Steve Sanghi**
- **Smart, Connected and Secure** **Ganesh Moorthy**
- **Total Systems Solution** **Rich Simoncic**
- **Financial Metrics** **Eric Bjornholt**

# Business Update

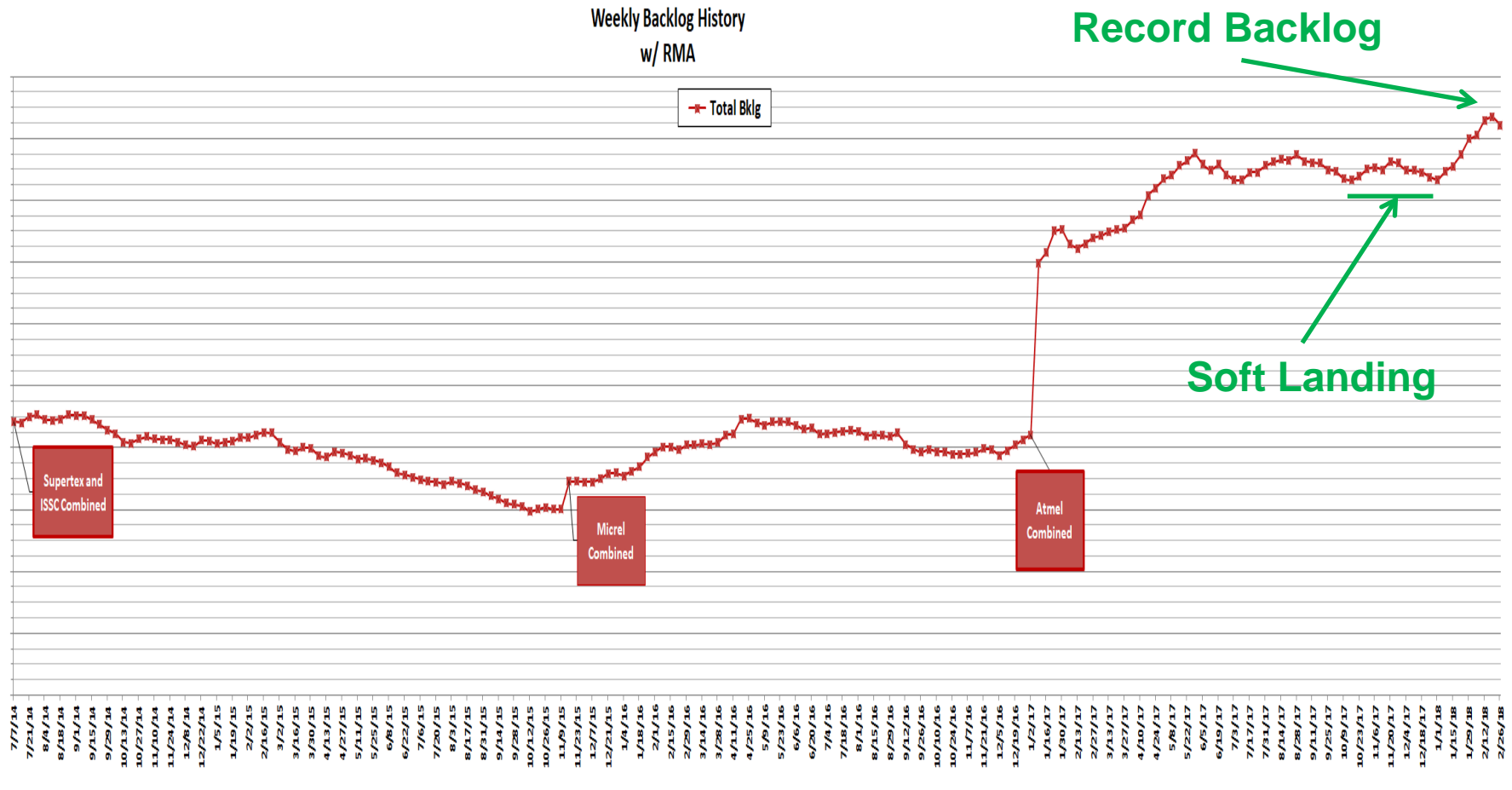
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- **March quarter is tracking according to the mid point of guidance.**
- **Narrowing March quarter Net sales guidance to be flat to -2%. (previous guidance -3% to +1%).**
- **March quarter guidance at mid point up 9% over year ago quarter.**
- **Expecting June quarter net sales to be up ~5% sequentially and ~6.3% over a year ago quarter (Soft landing).**
- **Bookings are very strong. 3 month book to bill ratio ending February 2018 at 1.09 compared to 1.0 ending December 2017.**
- **12 months backlog is at an all time record.**
- **June 2018 backlog well above March 2018 quarter backlog at end of November 2017.**
- **Latest market share data shows consistent market share gains.**
- **Canary has not died in the coal mine.**

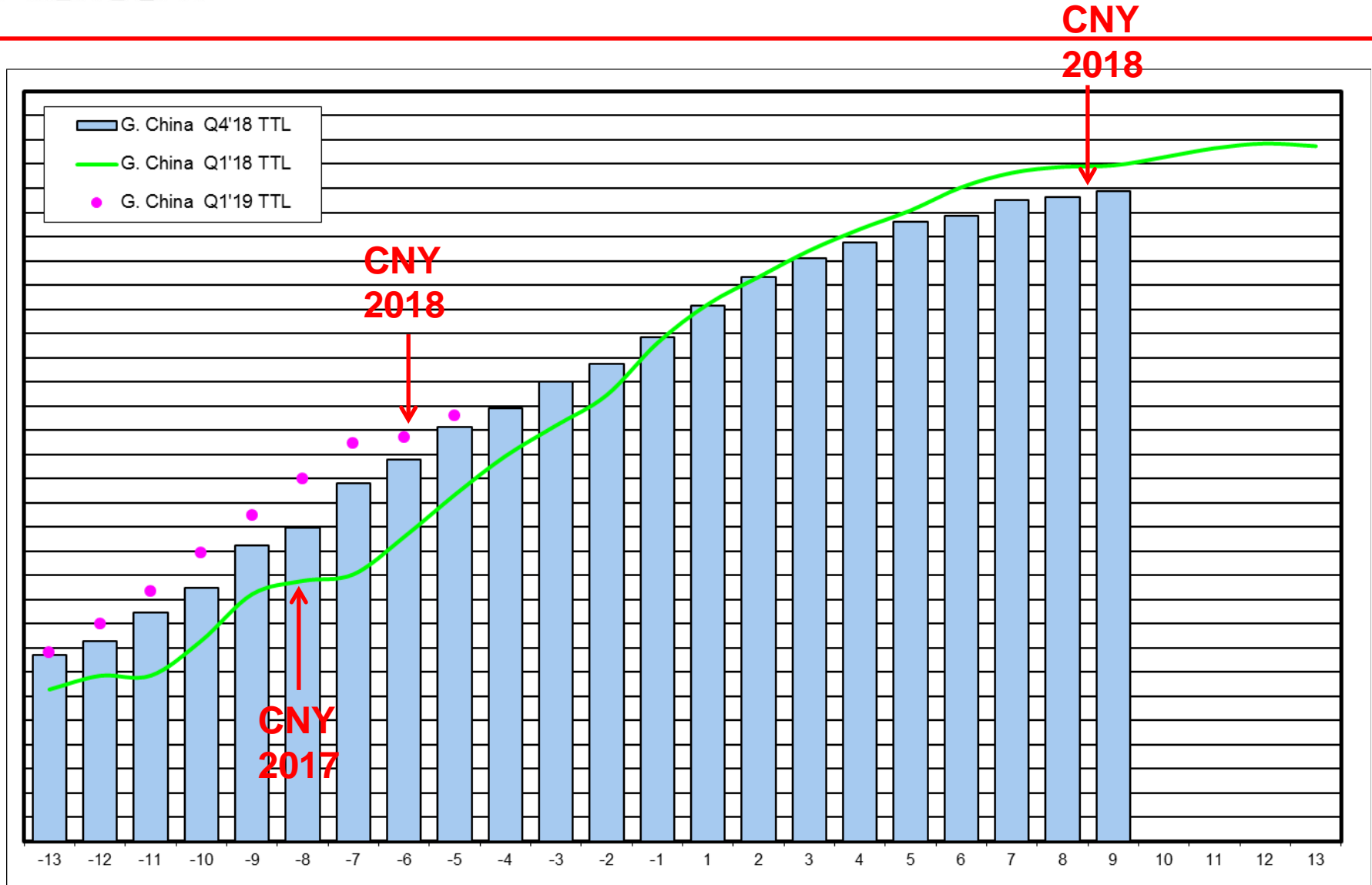
# Book to Bill Ratio



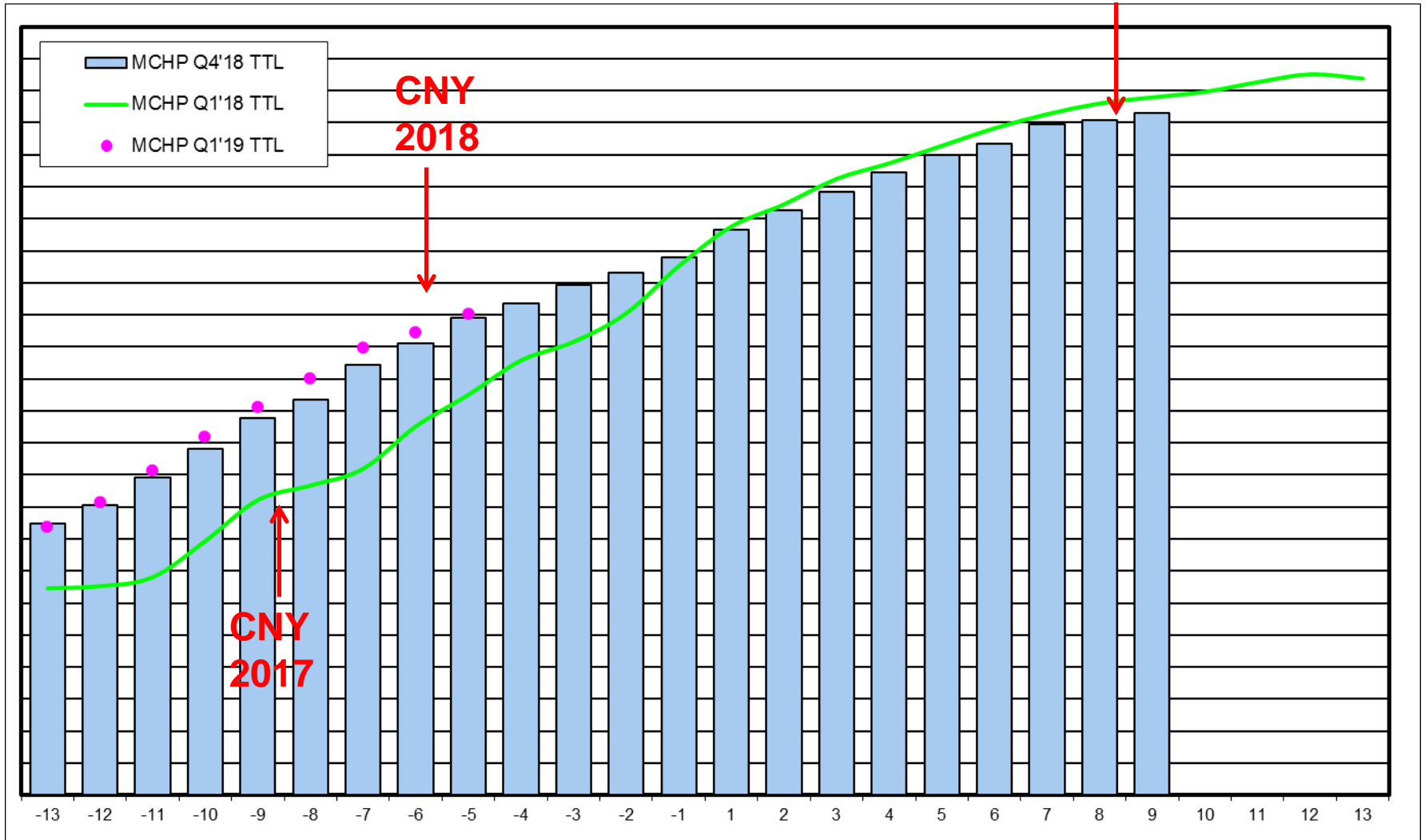
# Total Backlog History



# Greater China Total



# Microchip Total



**CNY  
2017**

**CNY  
2018**

**CNY  
2018**

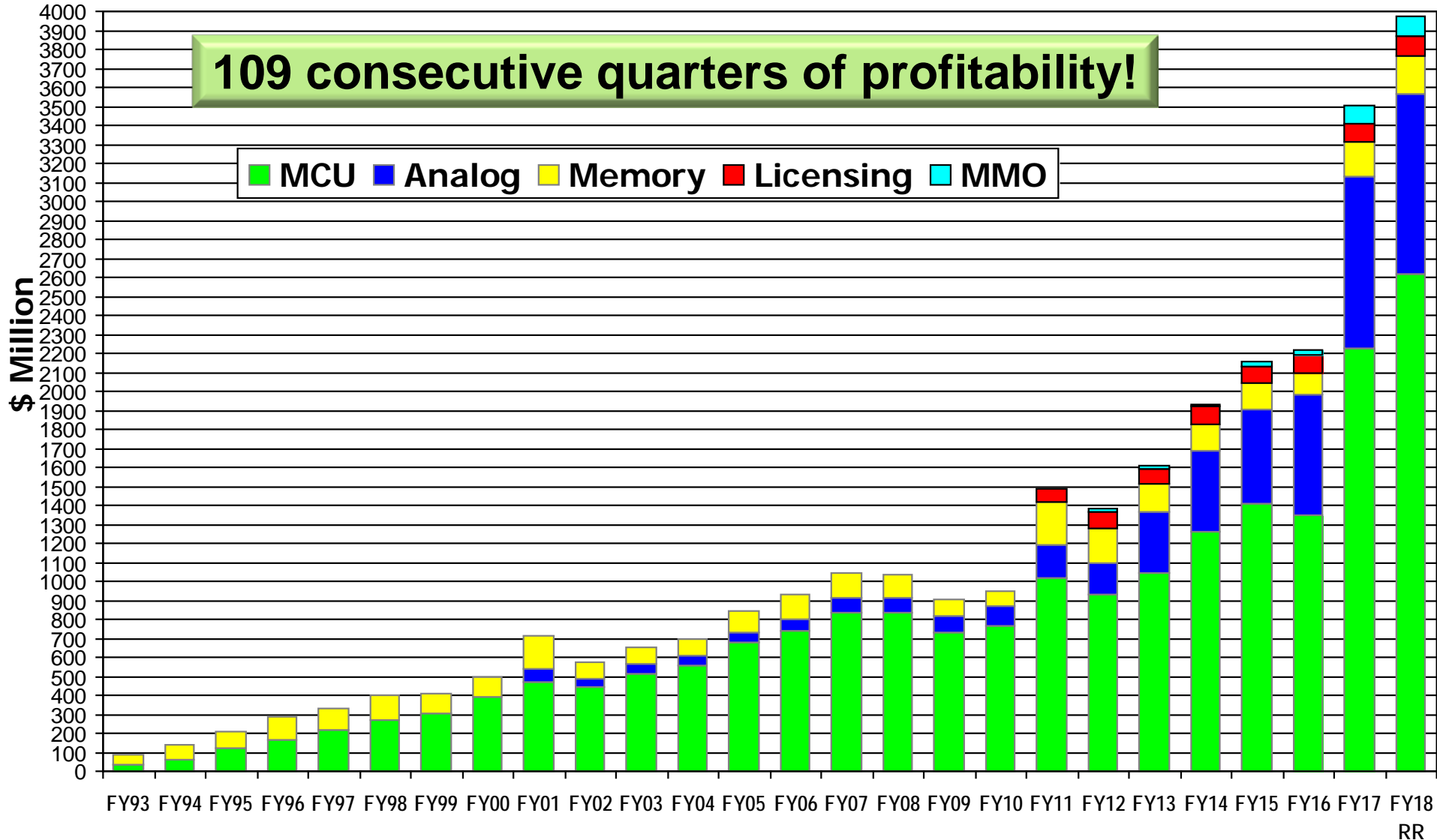


# Microchip 1.0

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- 1. Consistent growth**
- 2. Perennial market share gains**
- 3. High margin business model**
- 4. Shareholder friendly with consistently increasing dividends and free cash flow**
- 5. Successful M&A strategy**

# Annual Net Sales Growth

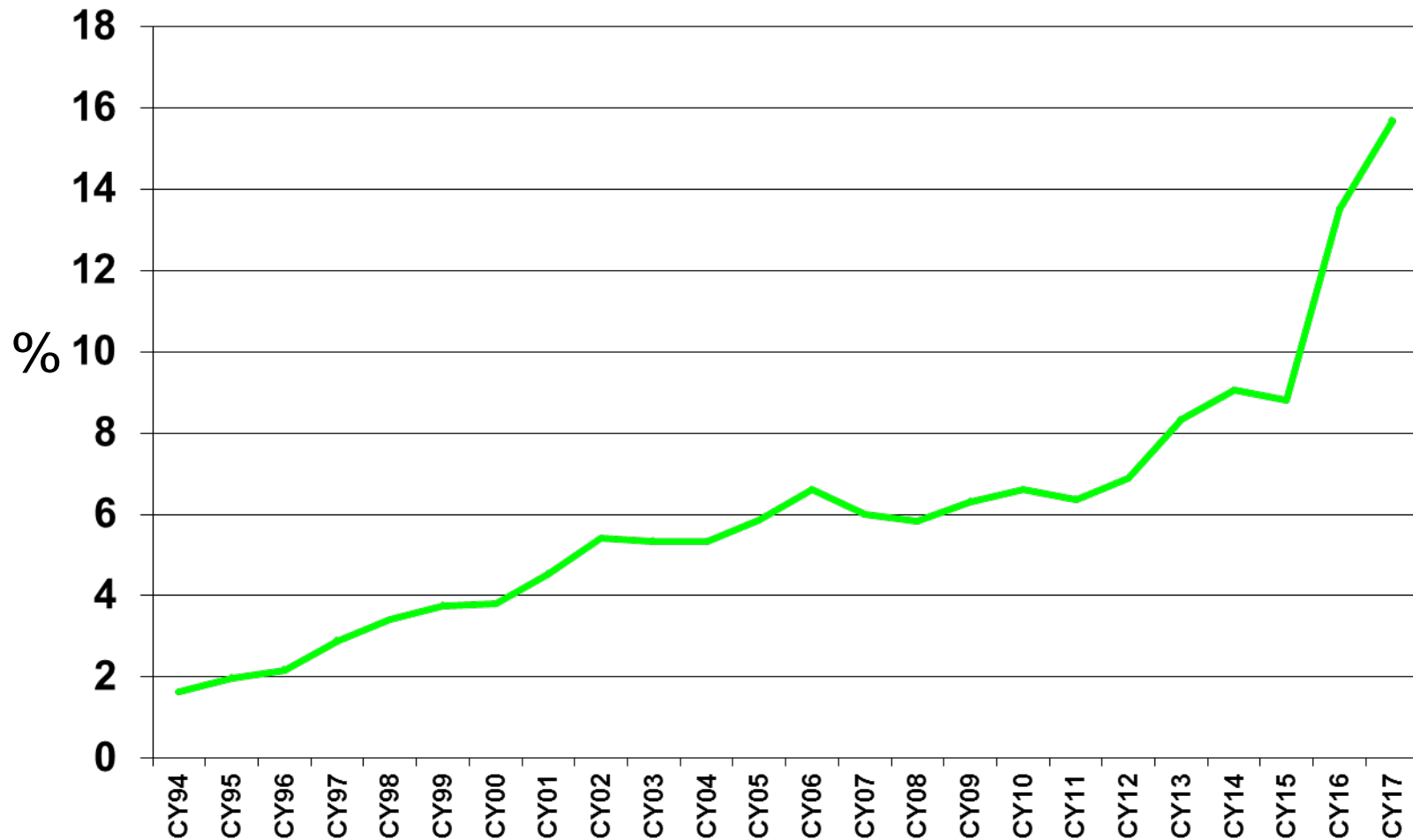


# Worldwide Microcontroller Market Share

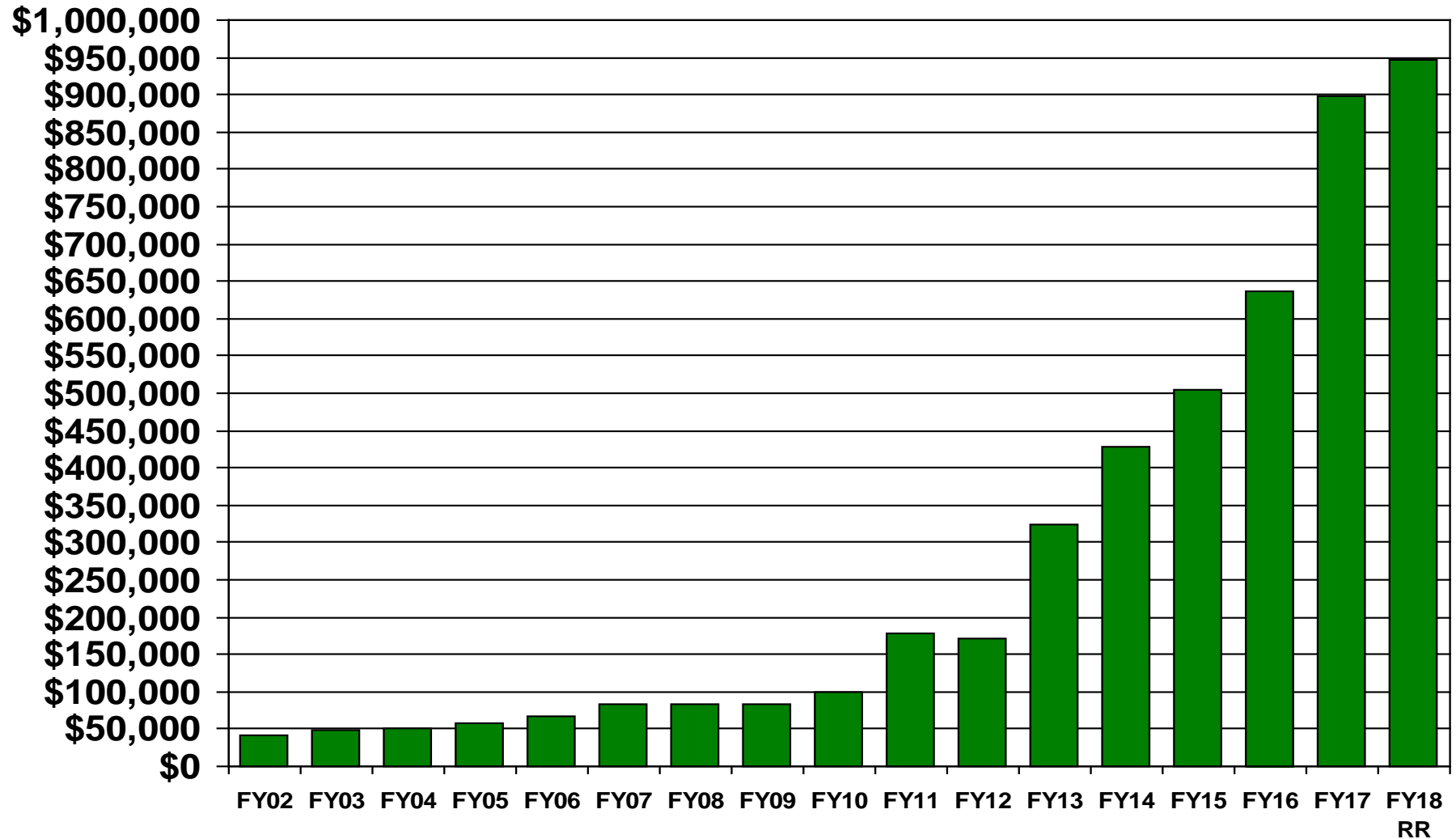
<u>No.</u>	<u>2003 Rank</u>	<u>2008 Rank</u>	<u>2009 Rank</u>	<u>2010 Rank</u>	<u>2012 Rank</u>	<u>2014 Rank</u>	<u>2015 Rank</u>	<u>2016 Rank</u>
1	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas	Renesas
2	Motorola	NEC	NEC	Freescale	Freescale	Freescale	NXP	NXP
3	NEC	Freescale	Freescale	Samsung	Infineon	ST-Micro	ST-Micro	Microchip
4	Matsushita	Infineon	Samsung	Microchip	Microchip	Microchip	Microchip	ST-Micro
5	Infineon	Samsung	Microchip	Atmel	ST-Micro	NXP	Infineon	TI
6	Fujitsu	Microchip	TI	TI	TI	TI	TI	Infineon
7	Toshiba	ST-Micro	Infineon	Infineon	Atmel	Infineon	Atmel	Cypress
8	Microchip	TI	ST-Micro	ST-Micro	NXP	Atmel	Cypress	Samsung
9	Samsung	Fujitsu	Fujitsu	Fujitsu	Fujitsu	Spansion	Samsung	CEC Huada
10	ST-Micro	NXP	NXP	NXP	Samsung	Samsung	CEC Huada	Toshiba

*Based on dollar shipment volume 2003-2016, Source: Gartner and Microchip*

# Total MCU (8/16/32) Market Share %

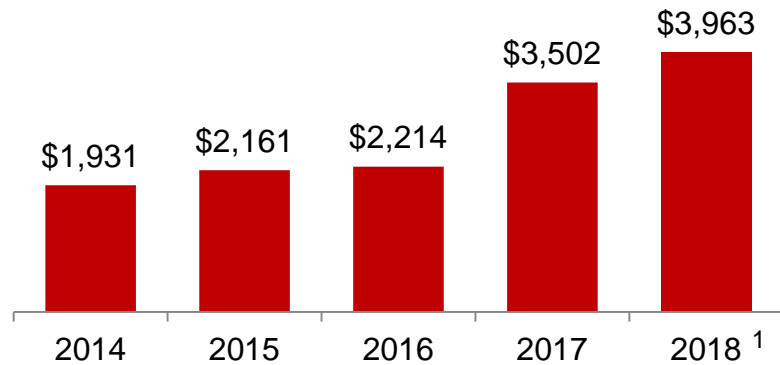


# Analog Yearly Revenue (k\$)

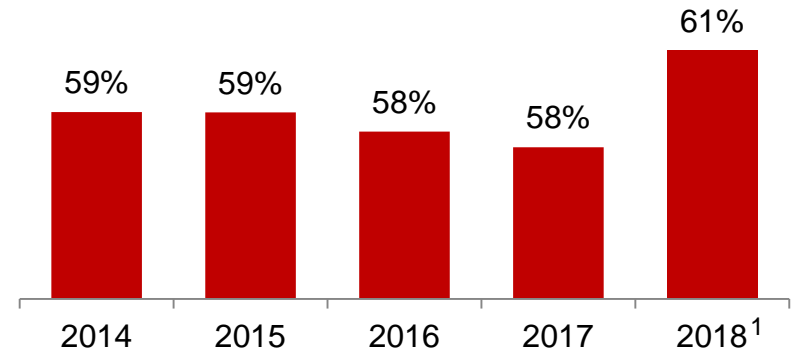


# Historical Financial Performance

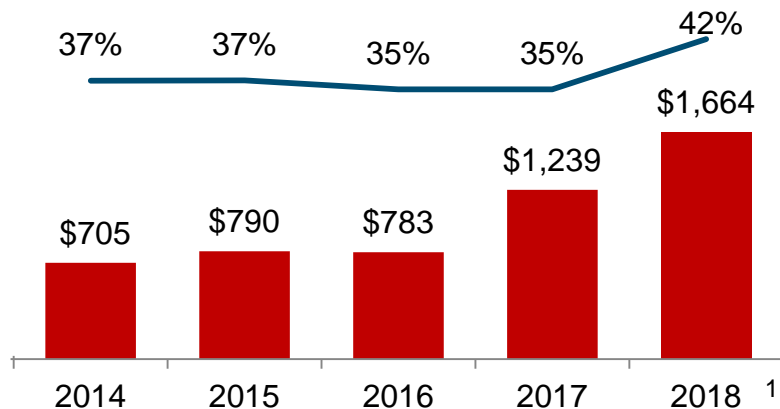
Revenue (\$mm)



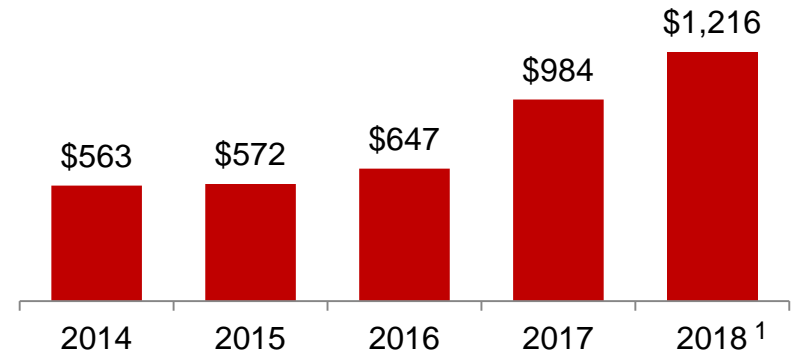
Gross margin (%)



EBITDA (\$mm) and margin (%)

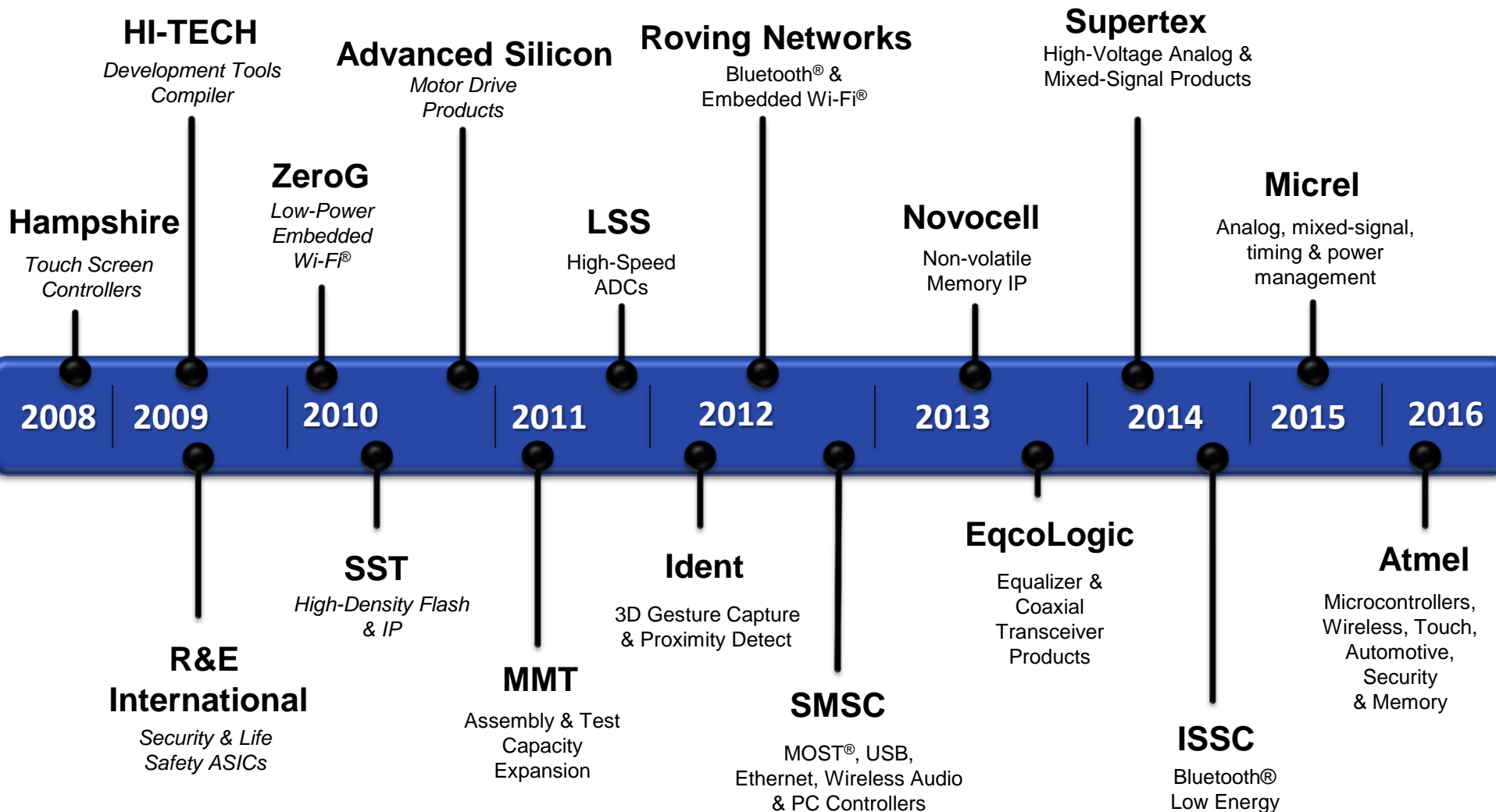


Free cash flow<sup>2</sup> (\$mm)



Note: Represents non-GAAP financials on a reported fiscal year end in March; <sup>1</sup>FY18 represents Q1 – Q3 FY18 actual results plus midpoint of Q4 guidance; <sup>2</sup>Calculated as Cash flow from operations less capital expenditures

# Expanding Our Solutions Through Acquisitions



# Microchip 2.0

***Be The Very Best Embedded  
Control Solutions Company Ever***



**SMART | CONNECTED | SECURE**

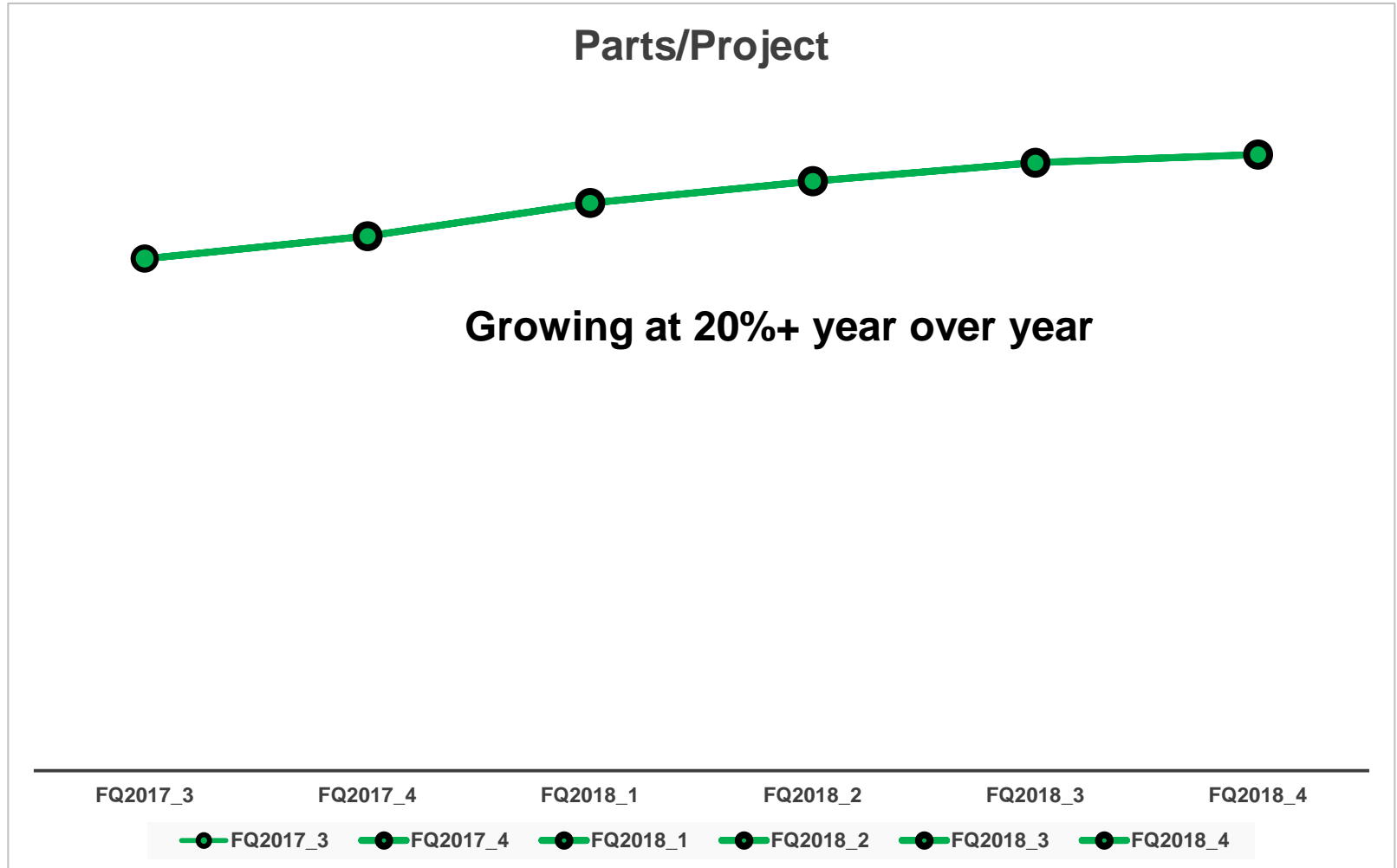


# Microchip 2.0

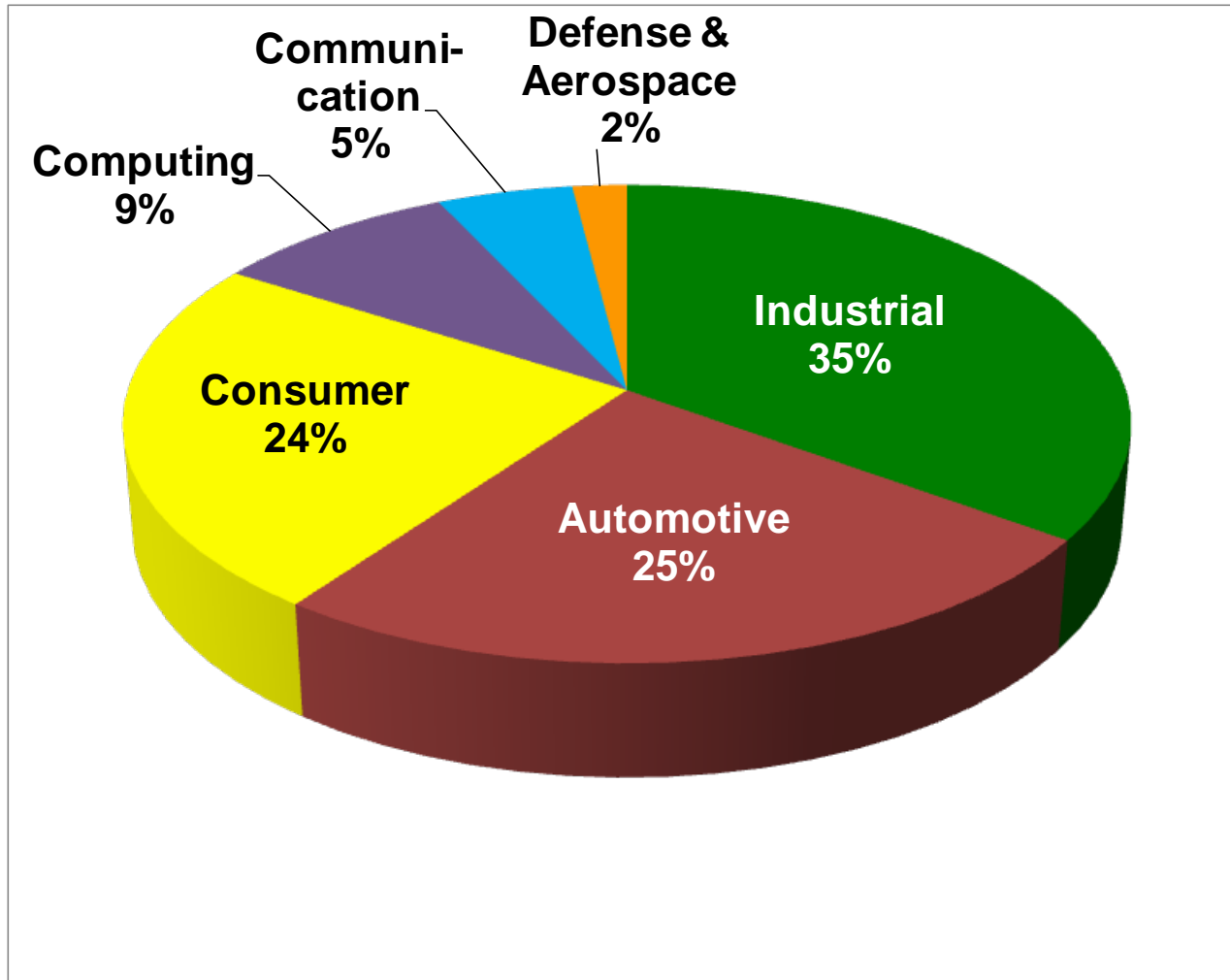
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- 1. Total System Solution in Embedded Control**
- 2. Leading customer preference to design with our MCUs**
- 3. Multiple growth drivers**
- 4. Record gross margin target with multiple drivers**
- 5. Record low opex**
- 6. End market mix skewed to Industrial and Automotive**
- 7. New LT model with industry leading operating profits**

# Total System Solution Results



# Revenue by End Market



# Summary

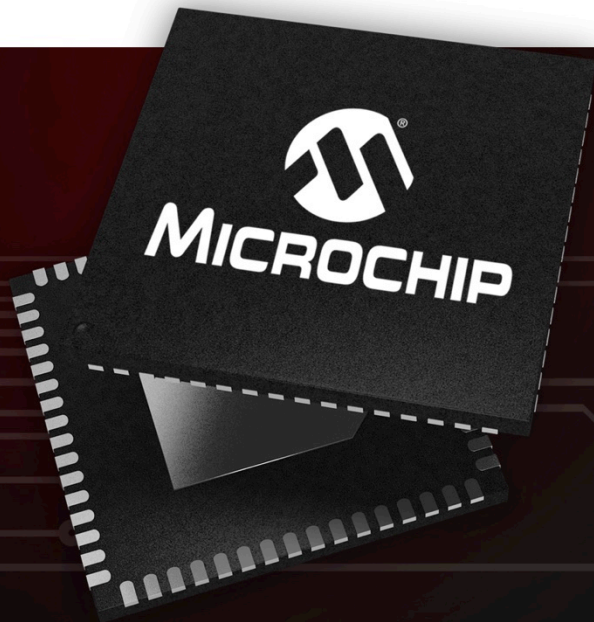
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- A consistent revenue grower and market share gainer with multiple growth drivers
- High margin business model and shareholder friendly
- Successfully managed soft landing with seasonal March quarter and strong expectation for June quarter with record backlog
- Premium long-term non-GAAP financial model to 62.5% gross margin, 22.5% operating expenses and 40% operating income
- Executing on Microchip 2.0- Total system solutions- Smart, Connected and Secure.
- State of the union at Microchip is very strong

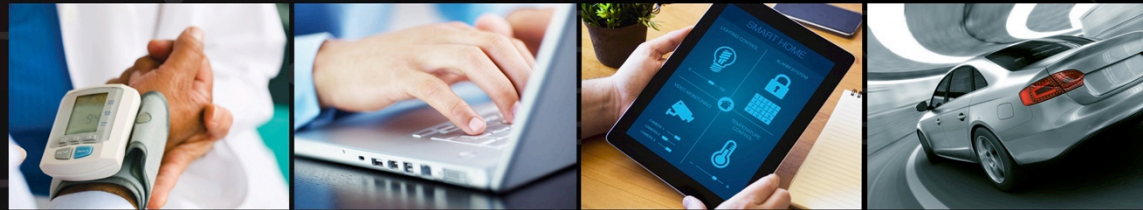


***Thank You!***





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## Microsemi Acquisition March 1, 2018

**Steve Sanghi**  
*Chief Executive Officer*



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# Microsemi Overview

- **Strong complementary portfolio of Specialized Ethernet, Storage and Optical Networking Microcontrollers, FPGA, Wireless, Timing, Analog and Mixed-Signal products**
- **Leadership in Defense, Aerospace, Data Center and Communication markets – ~ 80% of revenue**
  - Markets where Microchip has less penetration
- **FY2017 (9/30/2017) revenue of ~\$1.8B**
  - 64% non-GAAP gross margin; 31.9% non-GAAP operating margin
  - FQ1 (12/31/2017) revenue of \$468.7M; 63.2% non-GAAP gross margin and 32.2% non-GAAP operating profit
- **Diversified global customer base and channels**
  - ~64% of revenue from Asia and Europe
  - ~49% of revenue through distribution
- **Net debt of \$1.8B on the balance sheet at 12/31/2017**
- **Headquartered in Aliso Viejo, CA**
  - Approximately 4800 employees worldwide





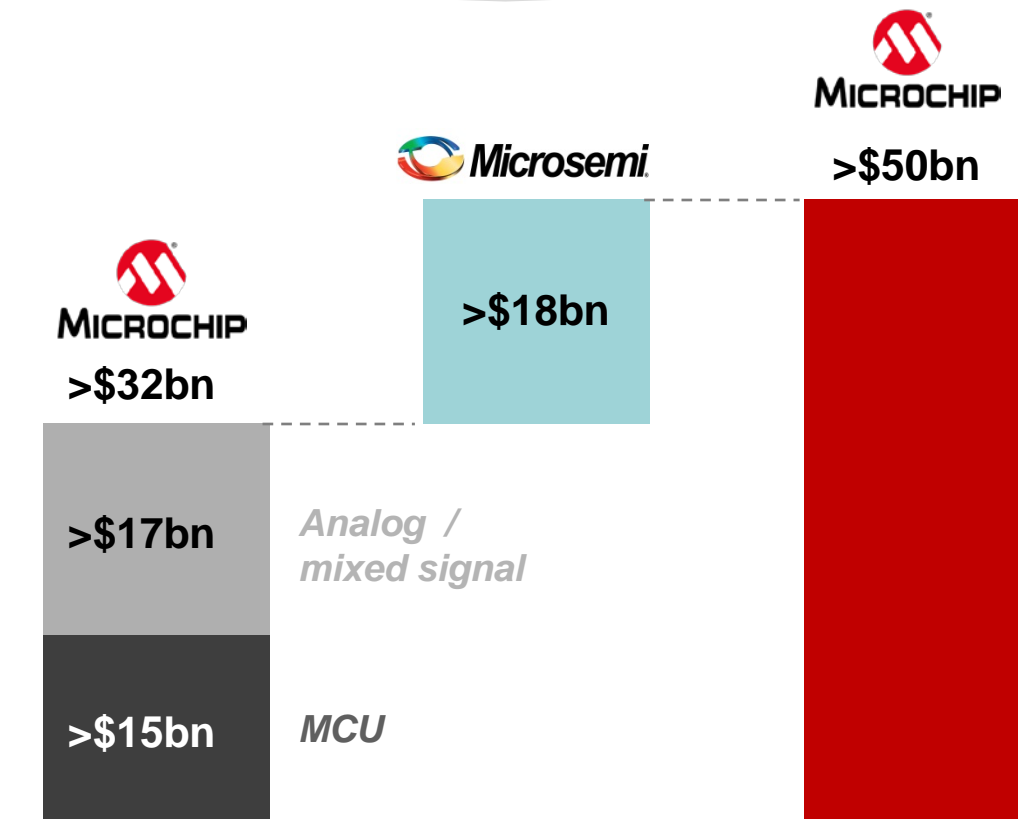
# Strategically and Financially Compelling Transaction

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- **Strengthens Microchip's presence in Defense, Aerospace, Data Center and Communications markets**
- **Expands our Ethernet portfolio to serve Industrial IoT, Enterprise and Carrier markets**
- **Adds specialized Microcontrollers to serve the Enterprise Storage and Optical Networking markets**
- **Extends Microchip's portfolio of Timing, Low Power Wireless, Analog Power and Mixed Signal solutions**
- **Adds Discrete and FPGA as new product capabilities to add to portfolio**
- **Drives further scale in manufacturing, customer reach and sales channels**
- **Adds a patent portfolio of over 1500 patents to Microchip's strong IP portfolio**
- **Significant EPS accretion through growth and synergy with estimated \$300 million in synergies in year 3 after close**

# Over \$18B SAM Expansion

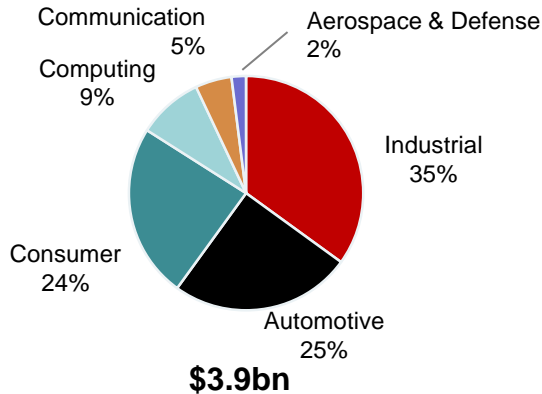
- ✓ Strengthened end market presence
- ✓ Expanded portfolio
- ✓ Specialized solutions



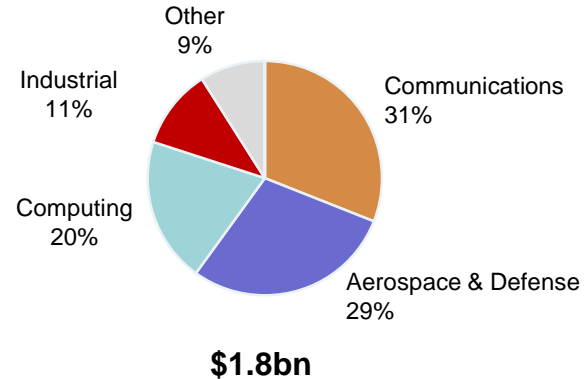
Source: Gartner/Dataquest reports and Microchip and Microsemi management estimates

# End-Market Diversification

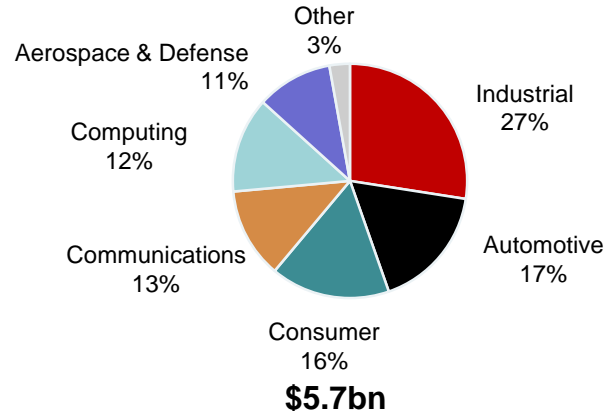
Microchip



Microsemi

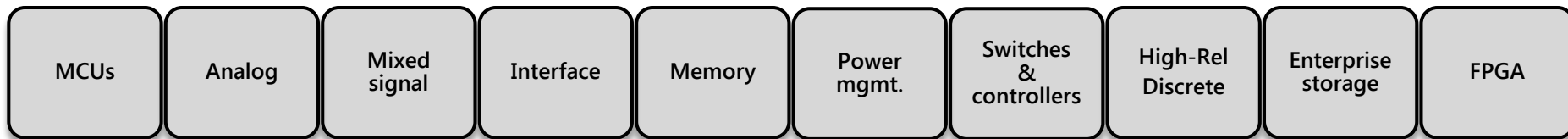


Combined



Note: Reflects non-GAAP financials and end market diversification is based on management estimates

# Extensive Combined Portfolio Across End Markets





# Highly Profitable Financial Model \*

	Microchip	Microsemi	Microchip + Microsemi	Long Term Model
Revenue (\$M)	\$3,977	\$1,875	\$5,852	
Gross Margin (%)	61.4%	63.2%	62.0%	63%
R&D (%)	12.1%	18.5%	14.2%	13%
SG&A (%)	9.9%	12.5%	10.7%	9.5%
Op Income (\$M)	\$1,567	\$603	\$2,170	
Op Income (%)	39.4%	32.2%	37.1%	40.5%

\* In millions, except percentages. All figures are non-GAAP and are based on results for the December 2017 quarter. Revenue and operating income dollars are based on December 2017 quarter results which were annualized by multiplying the December quarter numbers by four.

# Synergy and Accretion Expectations

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- Transaction is expected to be immediately accretive to our non GAAP earnings per share
- Short term: Targeting 18% growth in non-GAAP EPS from FY18 to FY19 with accretion from Microsemi (assumes June 2018 close)
  - Microsemi adds ~75 cents of non-GAAP EPS accretion annualized run rate in the first year after close
- Long term: 3<sup>rd</sup> year after close (FY2021), we expect:
  - \$300M in synergy from cost savings and revenue growth
  - Microsemi to contribute ~\$1.75 of non GAAP EPS
  - Targeting consolidated Microchip non GAAP EPS of ~\$8/share
- Represents non GAAP EPS growth of over 14% per year for Microchip from FY18 through FY21
- Extends Microchip's record of organic as well as acquisition driven revenue and non GAAP EPS growth



# Transaction Summary And Financing

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- **Transaction value of \$10.15B**
  - Includes assumption of net debt of Microsemi of \$1.8B as of 12/31/2017
- **\$68.78 per share in cash to Microsemi stockholders**
- **Transaction is being funded through a combination of:**
  - \$1.6B of cash from combined company balance sheets
  - \$0.6B of cash bridge loan that will build on the combined companies balance sheet from 12/31/17 through the close
  - \$3B from our existing line of credit
  - Approximately \$5B in new debt
  - A large portion of the new debt is expected to be pre-payable
- **Pro forma net Debt/EBITDA leverage at transaction close of 4.7x (assumes CQ2 2018 close)**
  - Plan rapid de-levering post transaction close through a combination of growth in free cash flow (used to paydown debt) and EBITDA expansion
- **Expect transaction to close in CQ2 2018, subject to customary closing conditions, and stockholder as well as regulatory approvals**

# Summary

- Microsemi adds strong complementary product lines which support the Microchip 2.0 strategy
- Microsemi's strength in Defense, Aerospace, Data Center and Communication markets complements Microchip's strength in Industrial, Automotive and Consumer markets
- Microsemi adds further operational and customer scale in a consolidating industry
- The transaction creates significant stockholder value from strong non GAAP EPS accretion
- Microsemi acquisition is the next step in Microchip's track record of successful M&A

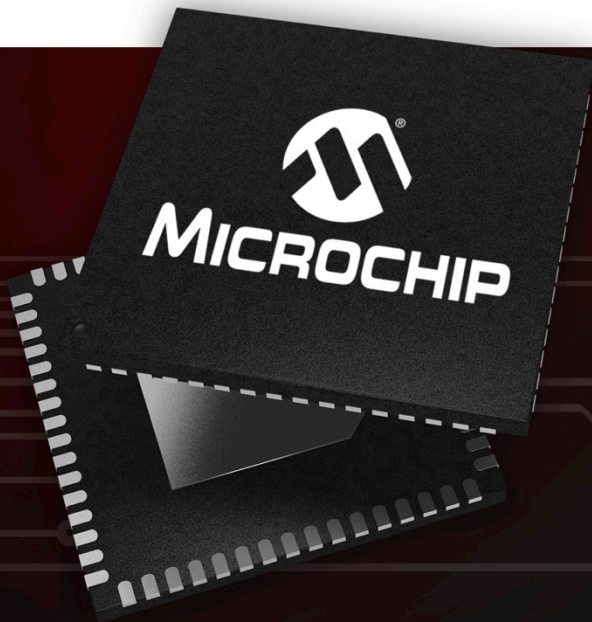
***Another Compelling Transaction!***





***Thank You!***





A Leading Provider of Microcontroller,  
Mixed-Signal, Analog & Flash-IP Solutions



**Smart, Connected and  
Secure Solutions**

***Ganesh Moorthy  
President and  
Chief Operating Officer***

# Our Vision

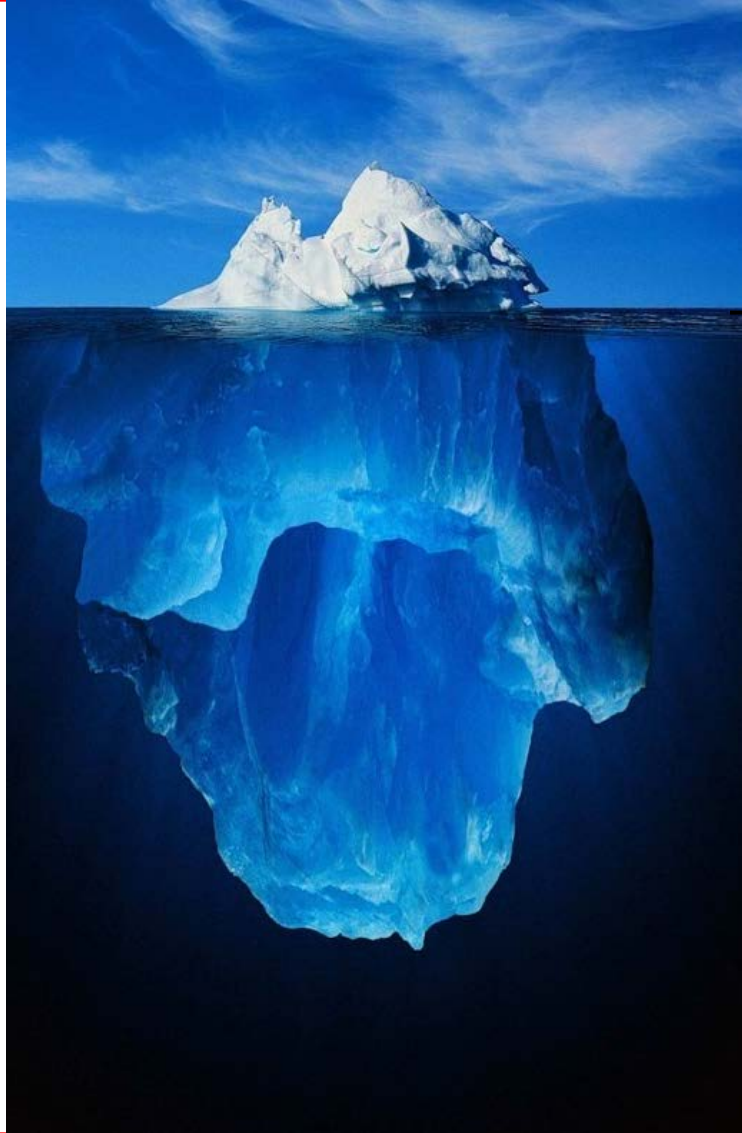
***Be The Very Best Embedded  
Control Solutions Company Ever***



**SMART | CONNECTED | SECURE**

# The Tip Of The Iceberg

## *The News Echo Chamber*



AI, VR, AR, Autonomous  
Driving, Big Data, Bitcoin  
Mining

# The Rest Of The Iceberg

## *The Real News*



AI, VR, AR, Autonomous  
Driving, Big Data, Bitcoin  
Mining



Tens of thousands of applications

*Industrial*

*Automotive*

*Computing*

*Consumer*

*Communication*

*Defense &  
Aerospace*

# Smart, Connected and Secure *Alarm System*





# Smart, Connected and Secure *Thermostat*



# Smart, Connected and Secure *Electric Meter*





# Smart, Connected and Secure *Car Door Lock*





# Microchip 1.0 → Microchip 2.0

## *Product Lines*

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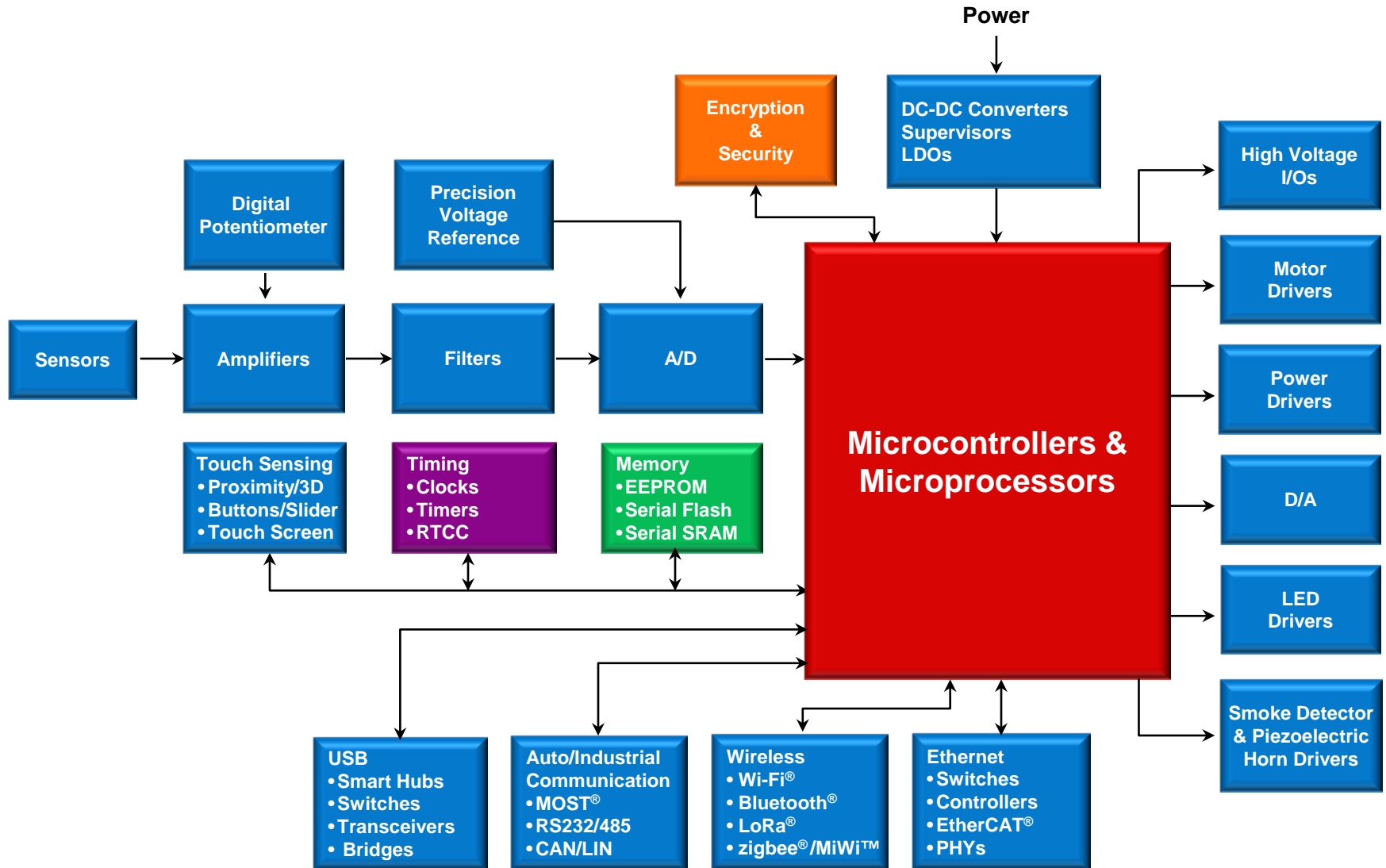
### Microchip 1.0

- Strong 8-bit and 16-bit MCU portfolio
- World class dev tools
- Emerging Analog portfolio
- Strong EEPROM portfolio
- SSO approach; embarking on “attach”
- Strong Channel partnerships
- Consistent growth and market share gains

### Microchip 2.0

- Strong 8/16/**32-bit MCU and 32-bit MPU** portfolio
- World class dev tools
- **Broad** Analog portfolio
- Strong EEPROM, **Flash & embedded memory** portfolio
- **Strong wired and wireless connectivity portfolio**
- **Strong security portfolio**
- **Total System Solutions (TSS)**
- Strong Channel partnerships
- Consistent growth and market share gains

# Providing Total System Solutions



*Long product life times – customer driven obsolescence*



# Microchip Is Thriving “Below The Waterline”

## Business Transformation

	<u>FY10*</u>		<u>Q3FY18 RR*</u>
Revenue	~\$1B		~\$4B
GM %	57.4%		61.4%
OM %	30.3%		39.4%

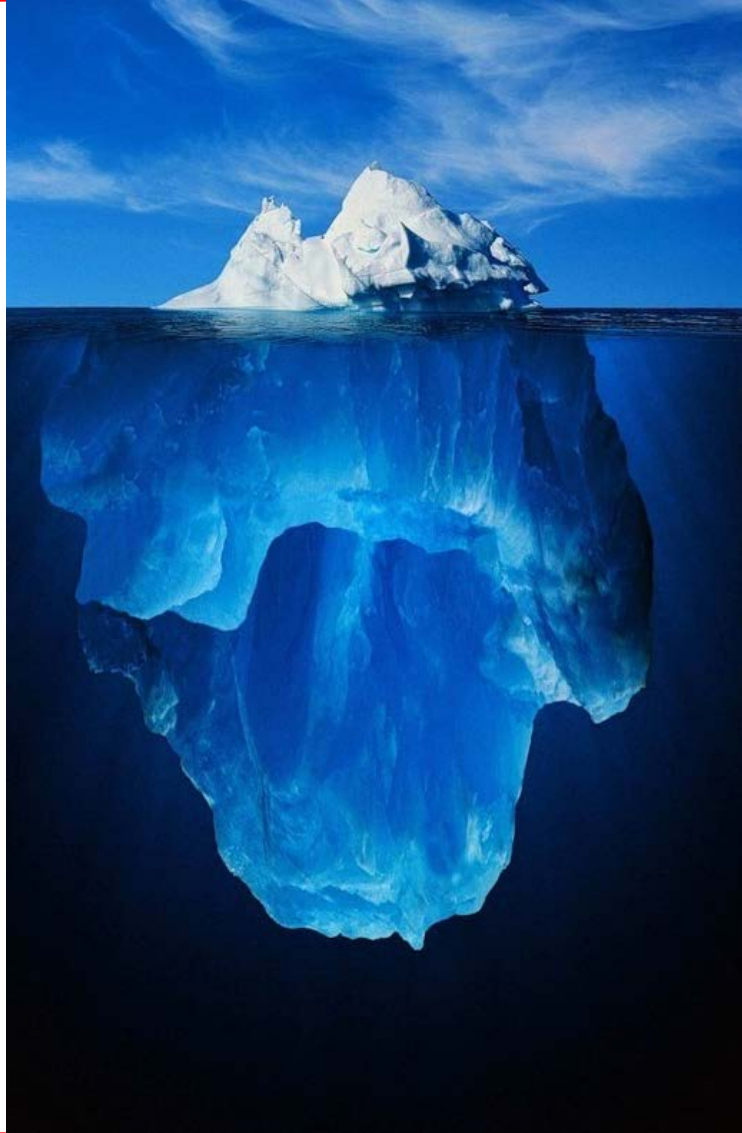
Since  
FY10

MCHP has grown revenue by ~ 300%  
Increased Gross Margin by ~ 400 bps  
Increased Operating Margin by > 900 bps

\* FY10 = non-GAAP financial results for the fiscal year ending March 31, 2010. Q3FY18RR = 12/31/2017 quarter non-GAAP results multiplied by four

# The Tip Of The Iceberg

*We play in this space too!*

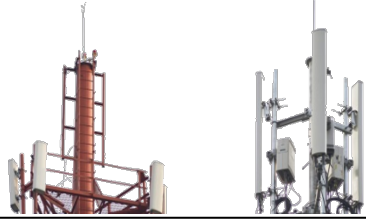


**AI, VR/AR, Autonomous  
Driving, Big Data, Bitcoin  
Mining**



- **Google “AIY” – do it yourself AI**
- **Neuromorphic memory technology to enable analog computing for AI**
- **USB hub for VR/AR**
- **Smart Sensors, Connectivity and Security for Autonomous Driving**
- **Data on-ramp for big data systems**
- **Smart power conversion for Bitcoin servers**

# Microsemi Expands Our Served Available Market



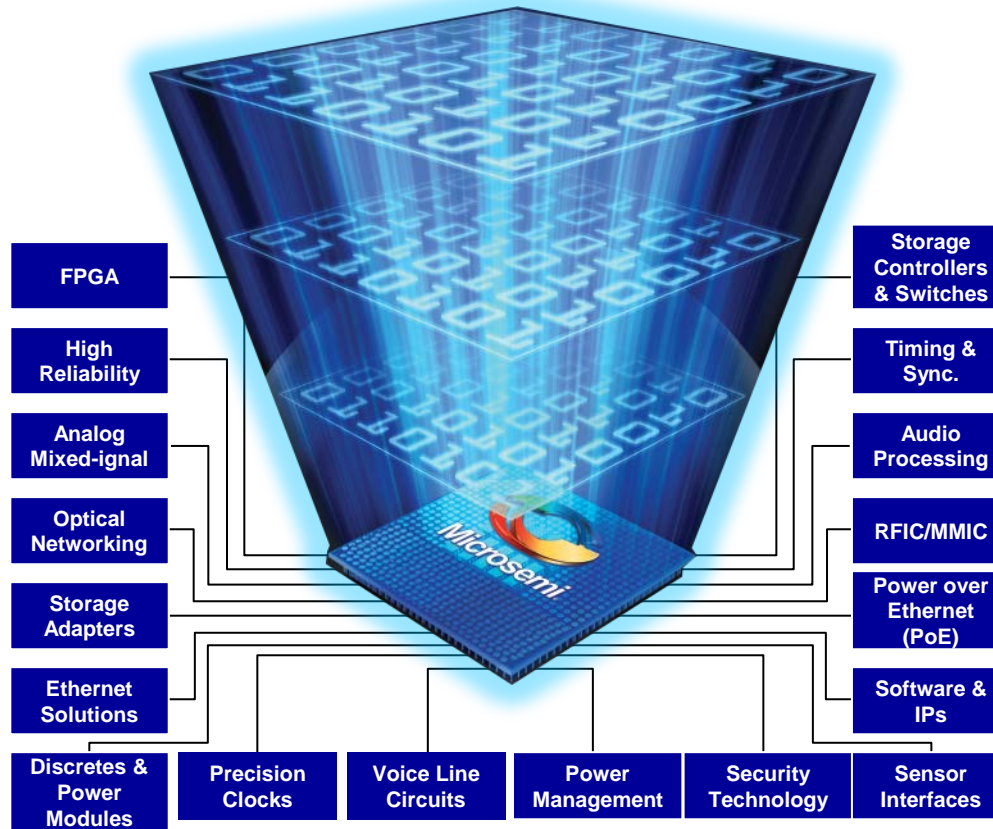
## COMMUNICATIONS

- Broadband Home / CPE
- Access Network
- Cellular Infrastructure
- Metro Network
- Optical Networking
- Wireless Backhaul
- Enterprise Infrastructure
- Data Center Interconnect



## DATA CENTER

- NVMe Storage Solutions
- Server Storage and Co-Processors
- Ethernet Networking
- Storage Systems
- Data Protection & Security
- Motherboard Components
- Rack Connectivity



**Leading Provider of Semiconductor Solutions**  
**Differentiated by Power, Security, Reliability and Performance**

 **Microsemi**  
 Power Matters.™



## AEROSPACE & DEFENSE

- Actuation & Power Management Systems
- Avionics, Engine Systems & Control
- Drone / UAV
- Electrical Power & Payload Systems
- Telemetry Tracking & Control
- Secure Communications
- Radar / Electronic Warfare
- Guidance & Control Computers



## INDUSTRIAL

- Industrial Ethernet Networking
- Automotive
- Motor Control
- HMI (Human Machine Interface)
- Smart Energy
- Medical
- IP Security Camera
- Programmable Logic Control



**MICROCHIP**

***Product Line Innovation***





# Embedded Market Trends

---

- **Relentless innovation**
- **Harsh and demanding environments**
- **Flexibility through development and manufacturing stages**
- **Distributed Intelligence – IoT**
- **Energy Efficiency**
- **Human Interface**
- **Intelligent Sensors**
- **Smaller, thinner, higher density packages**

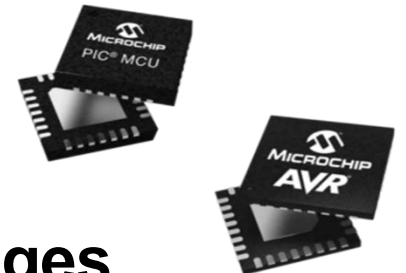


# 8-bit MCU Innovation

## *PIC<sup>®</sup> & AVR<sup>®</sup> MCUs*

### Flexibility and Easy to Use Products & Ecosystem

- **Deterministic hardware performance enabled by intuitive graphical tools that enable configurable on-chip Core Independent Peripherals (CIP)**
- **Internally connect multiple CIPs together along with on chip Analog peripherals to create application functions**
- **The Peripheral Pin Select (PPS) architecture enables customers to electronically configure board level pinouts. PPS also adds another migration flexibility feature to our portfolios of 1200+ 8-bit MCUs**
- **Best in class noise performance in harsh environments**
- **Lowest power with the widest operating ranges**



# 16-bit MCU Innovation



**Precision Motor Control**  
Complex Algorithms



**Robust Applications**  
Functional Safety,  
High Temp, Harsh Environment



**Digital Power Conversion**  
Dual Core Precision,  
Live Update



**General Purpose/Low Power**  
Core Independent Peripherals (CIP),  
eXtreme Low Power (XLP)



# 32-bit MCU & MPU Innovation

**Leading Graphics & Touch Solution in MCU & low-cost MPU class of products**



**Strong Industrial & Automotive focus**

5V devices  
High temp



**Best in Class Software and Hardware design support**

Complete Software Framework  
Mainline Linux support  
Easy to use SiP / SOM



**Leader in Secure MPU**  
PCI pre-certified for financial transaction (50Mu+ shipped in payment applications)



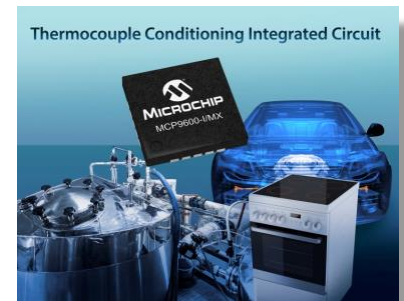
# Analog Power Innovation

- **Highly integrated Automotive power for in vehicle networking solutions and LED lighting - DEPA**
- **Intelligent USB Type-C™ Power**
- **High Voltage Technologies**
  - Enabling LIDAR for ADAS, enhancing Ultrasound imaging and Optical networking.
- **Advanced Motor drive front ends that match with our microcontrollers**



# Analog Linear and Mixed-Signal Innovation

- Broad family of ultra-low power analog
- High speed A/D converters
- Market leading smoke & CO detection
- AC & DC Power measurement
- Analog & Digital Temp Sensors
- Precision Voltage References





# Wired Connectivity Innovation

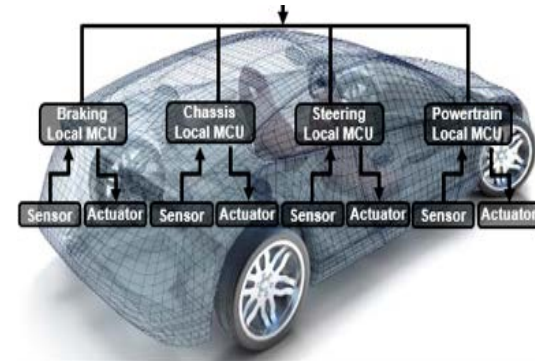
**Strong presence in embedded wired segments**



**Strong offering in factory  
Automation and Industrial Ethernet**



**Leader in Vehicle infotainment  
USB, MOST®, Ethernet**



**Rapid expansion across  
Automotive ADAS systems**



**Long history in Computing and Server  
Innovation in USB/Ethernet**

**Automotive  
Computing  
Industrial  
Communication**



**Leader in PLC  
in Smart Meters**



**Extensive Automotive  
Networks LIN, CAN, CAN FD,  
10/100 Base-T1**

# Wireless Connectivity Innovation

**Strong presence in embedded wireless segments**



**Battery management  
In Power Tools  
(Industrial grade BLE)**



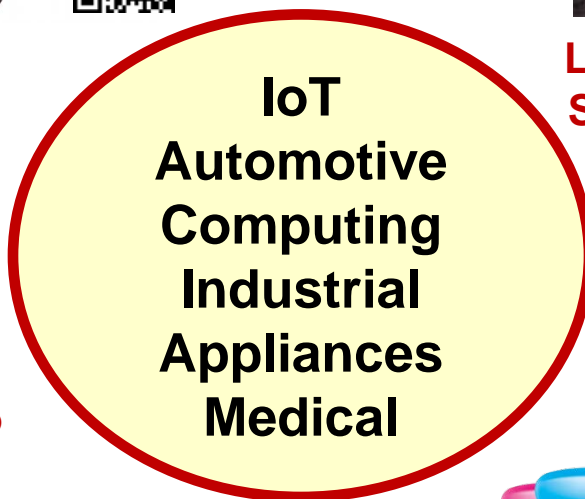
**Automation of  
Production &  
Shipment**



**Leader in Passive Entry, Passive  
Start solution for cars, with best  
in class Security**



**Smart Speakers  
(Bluetooth Audio  
Wi-Fi, BLE)**



**IoT  
Automotive  
Computing  
Industrial  
Appliances  
Medical**

**Leading brands of Smart  
Appliances using our  
industrial grade  
Wi-Fi® & BLE solutions**



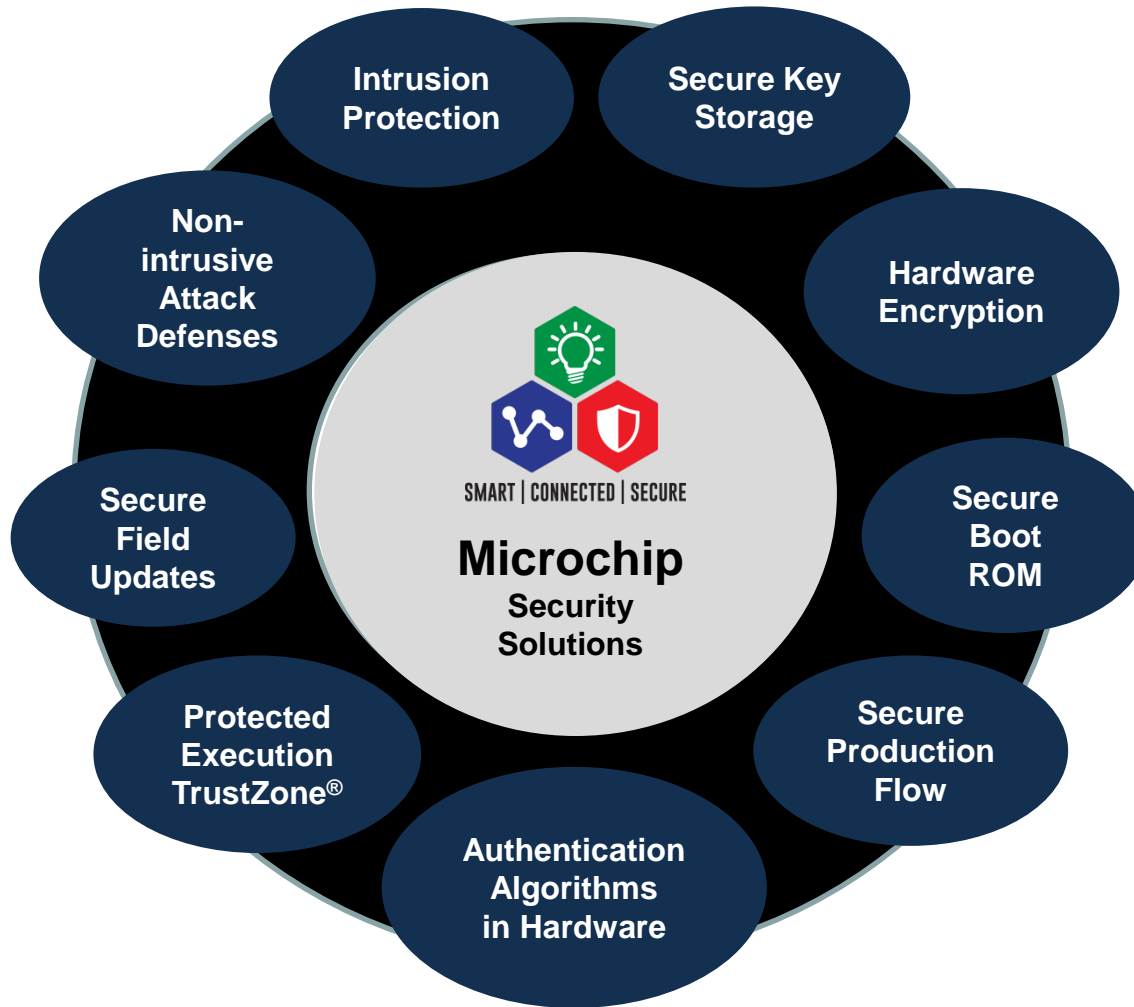
**Key supplier in the growing  
wireless electric, gas and  
water meter deployment  
(Proprietary RF, zigbee)**



**Leader in Connected  
Lighting with industry  
leading zigbee® stack**



# Security Innovation



20+ year track record  
with secure products

Scalable security  
solutions from  
CryptoAuthentication™  
secure elements to  
secure microprocessors  
for payment terminals

End-to-end/  
Total System Solutions  
(hardware & software)



# Security Innovation



## Enterprise Cloud, Gateways & POS

- POS terminals
- CC-Certified Trusted Platform Modules (TPM)
- Certified Root of Trust & authentication modules



## Cloud Authentication, IoT Nodes (Open Ecosystems)

- Strong authentication in large ecosystems
- Strong authentication in small/medium ecosystems
- Private deployments/pre-shared keys



Google Cloud Platform



## Consumables (Closed Ecosystems)

- Single-wire/I<sup>2</sup>C authentication
- RFID authentication, RF identification
- Unique ID, OTP

**Easy to Use  
Cost Effective**

**Flexible Solutions**

**Most Integrated Solution  
Secure Supply Chain**

## User Interface



mTouch® Technology  
QTouch® Technology

Proximity  
Buttons  
Sliders



maXTouch®  
Technology

Touch Pad  
Touchscreens



GestIC®  
Technology

Free-Space Gesture  
Control

**Microchip – sole solution provider for all dimensions**

# Clock and Timing Innovation

ONE STOP SHOP FOR TIMING NEEDS



Cloud Computing



Wireless LTE



Data Center



Networking



Smart Meters

**MEMS & Quartz-Based Solutions**



Healthcare



Automotive



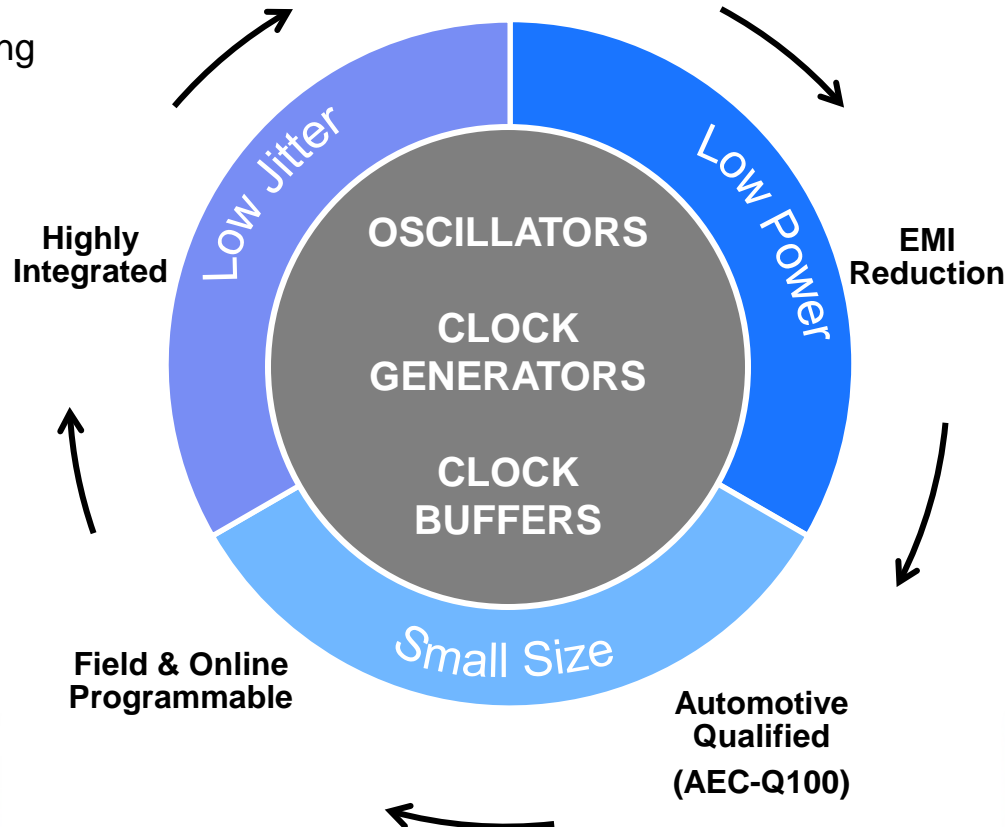
Smart Devices



Home Automation



Wearables

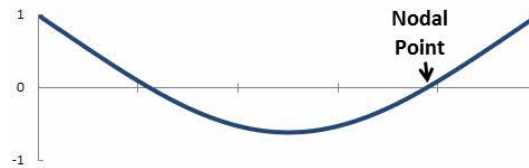


**Automotive Qualified (AEC-Q100)**

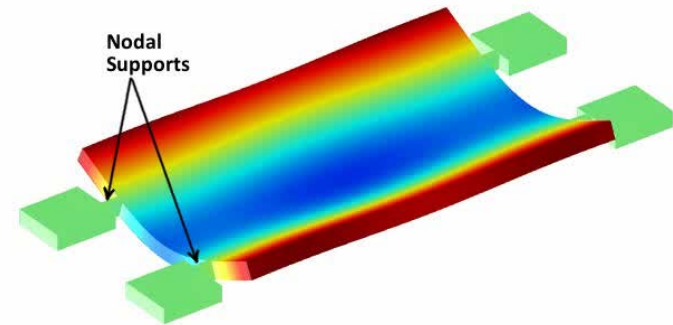
# MEMS Timing Innovation

## Industry's most complete MEMS-based timing solutions offering:

- High reliability (AEC-Q100 certified)
- Wide operating temperature range (-55°C to 125°C)
- Superb shock and vibration resistance
- High accuracy ( $\pm 10\text{ppm}$ )
- Ultra-small size (1.6mm x 1.2mm)



Fundamental / n=1 mode



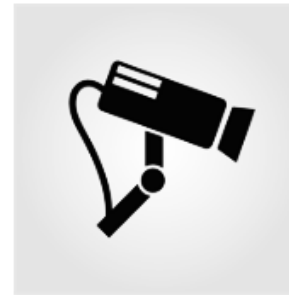
### Key Applications



Automotive



Consumer



Industrial



Cloud Computing

# Memory Innovation

---

## **EERAM**

Non-Volatile, Unlimited Endurance

## **Serial SRAM**

High Performance

## **Flash Memory**

Low Power, Fast Programming

## **EEPROM**

High Reliability, Outstanding Quality

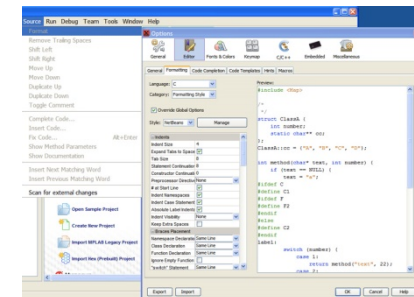
Reliable Products ➤ Definition

Reliable Support ➤ Design

Reliable Supply ➤ Production

# Ecosystem Innovation

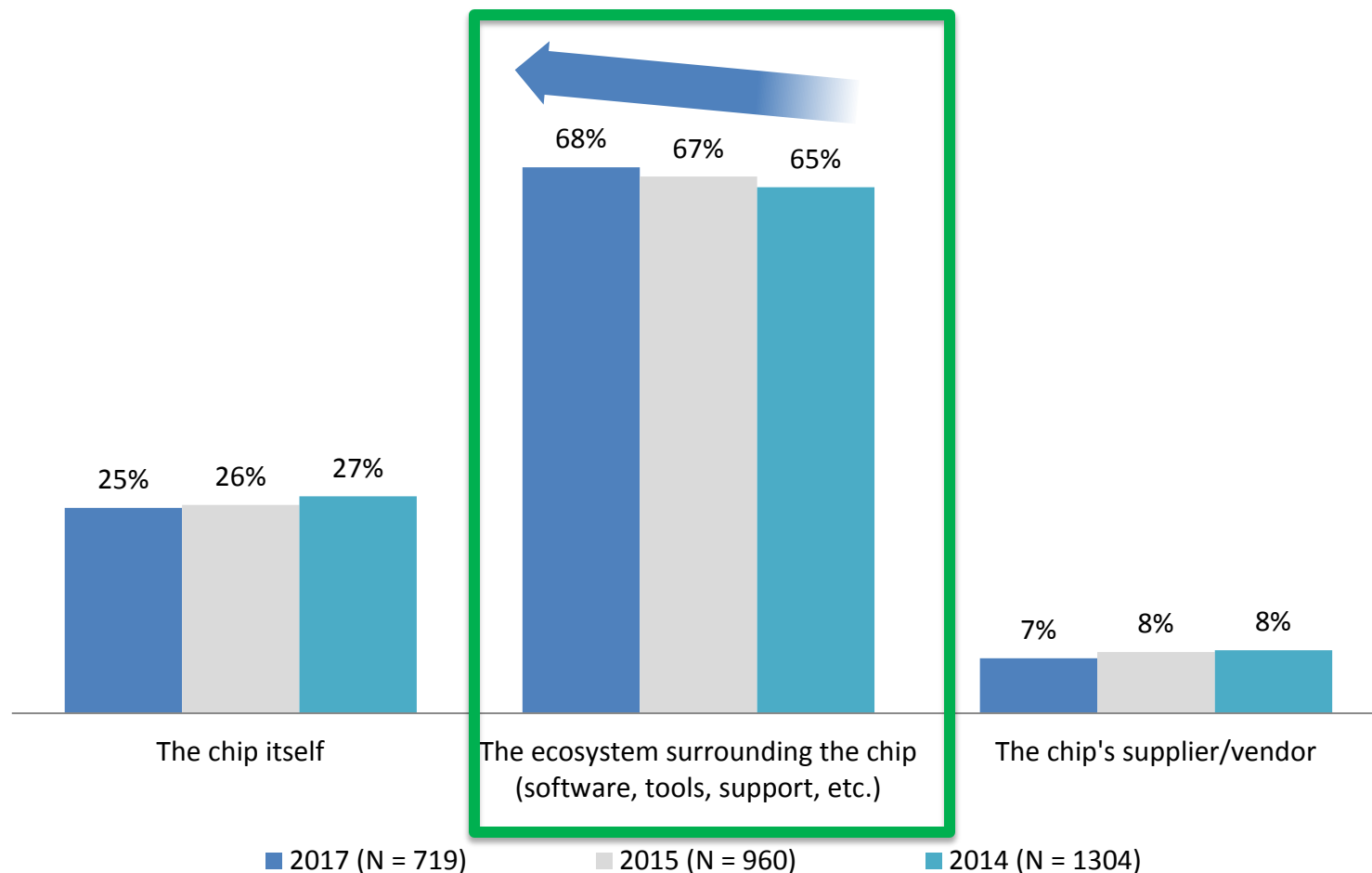
- MPLAB® X IDE and Studio design tools
- Extensive Software Libraries
- MCC & START
- Software framework
- Mainline Linux support
- 3rd Party Tools & SW
- WW technical support team
- Extensive Training programs
- MASTERS conference
- Reference designs
- Communities – AVR® Freaks, Arduino™, Maker Movement
- University programs





ASPENCORE

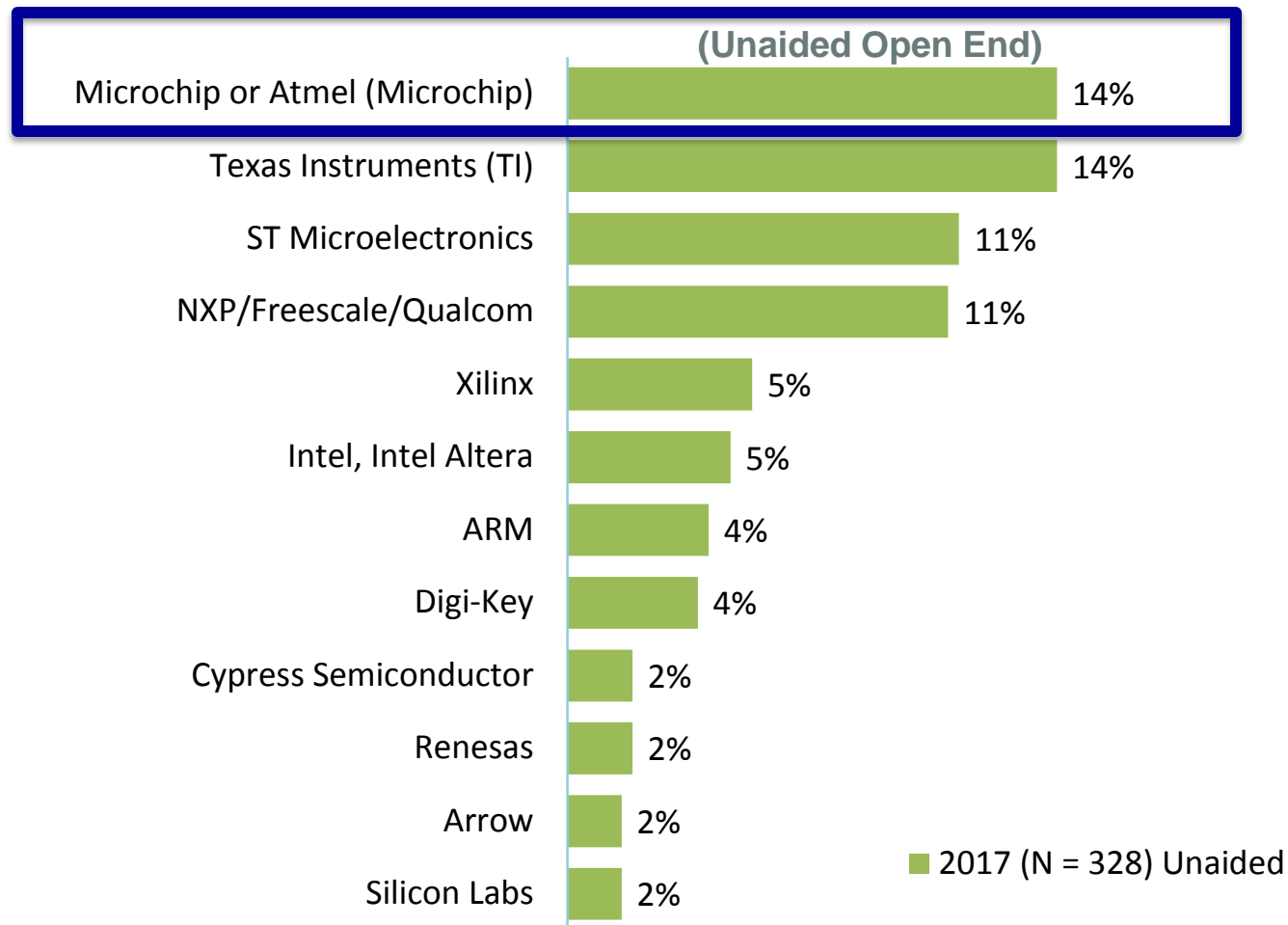
# What's most important when choosing a microprocessor?





ASPENCORE

## Which vendor has the best ecosystem for your needs?







***Microsemi Innovation***



# Strengthens Our Industrial Market Offering

## Key Industrial Products



**FPGA**



**Industrial Ethernet**



**Power & High-Reliability**



**RF Microwave**



**Clocks & Timing**



**PoE**

## Key Industrial Applications



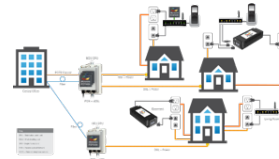
- Automation
- Motor Control
- IIoT



- Medical



- Smart Energy
- Oil & Gas



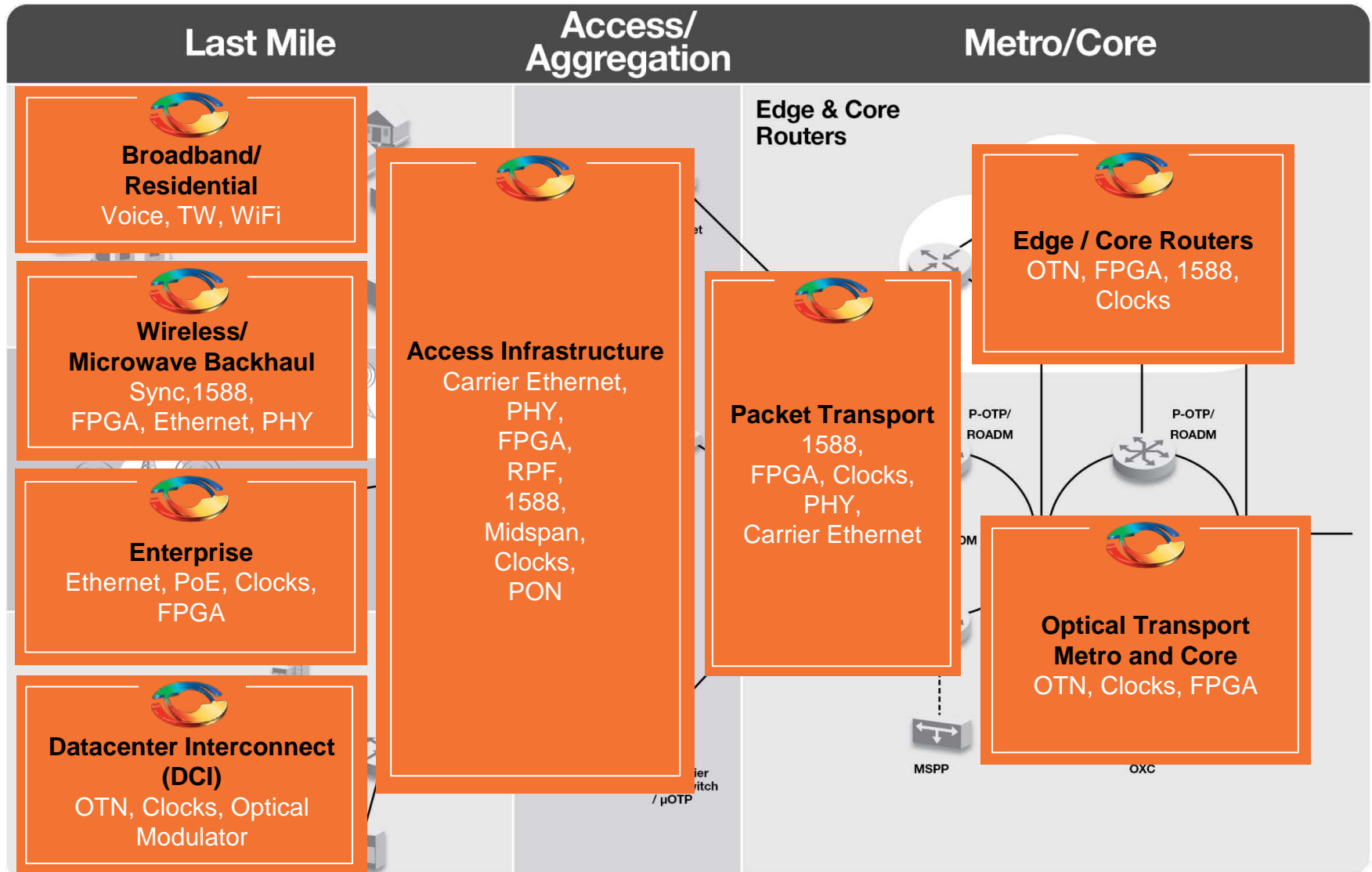
- Building Automation
- IP security cameras



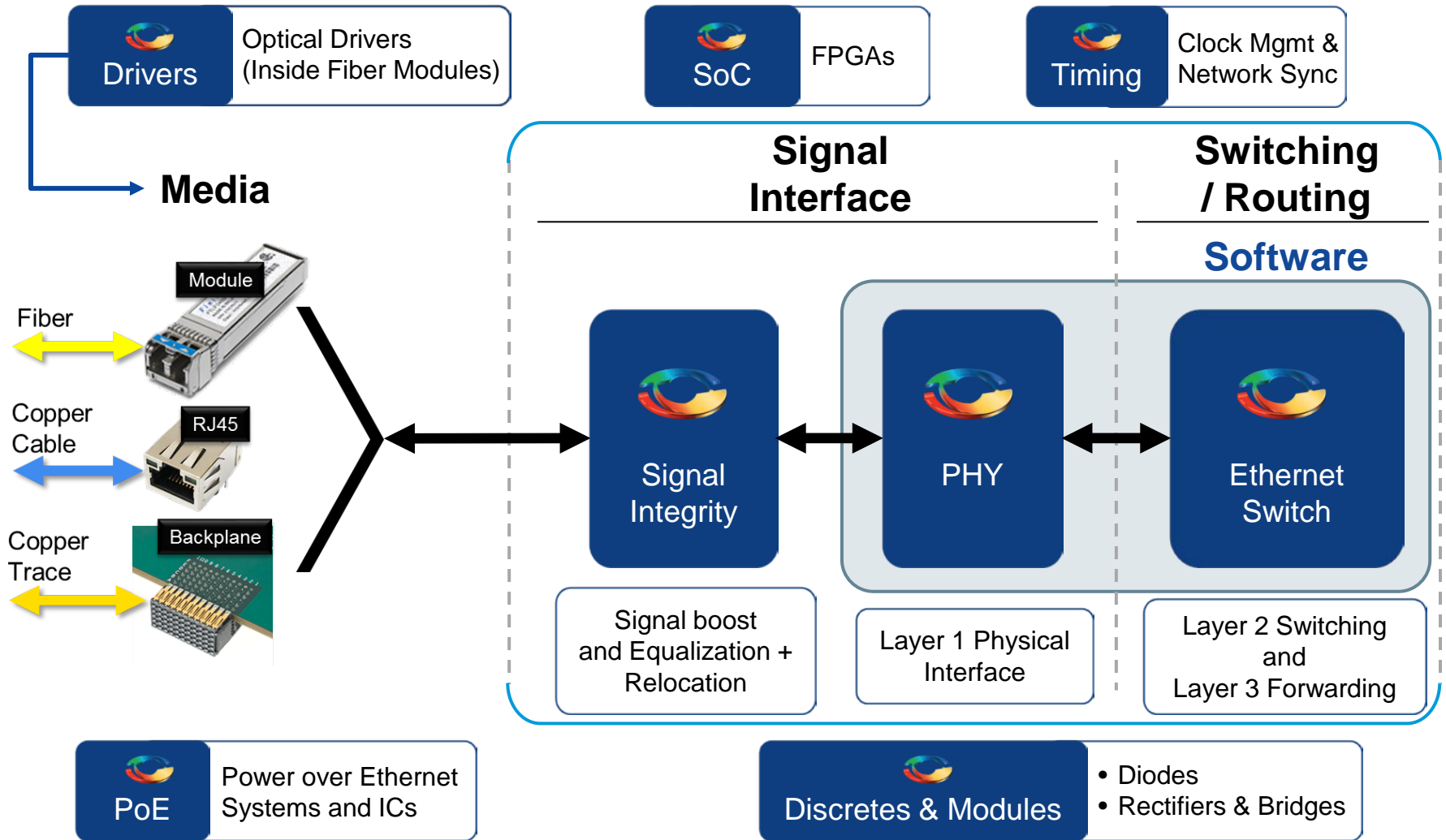
- Automotive
- Ethernet in the car



# Access Infrastructure from Core to Last Mile



# Ethernet as a Platform to Deliver a Comprehensive Solution



**Industry's Only Complete 1588 System Solution!**

# Comprehensive Data Center Portfolio for Key Applications

Storage Systems

Rack Scale Architecture

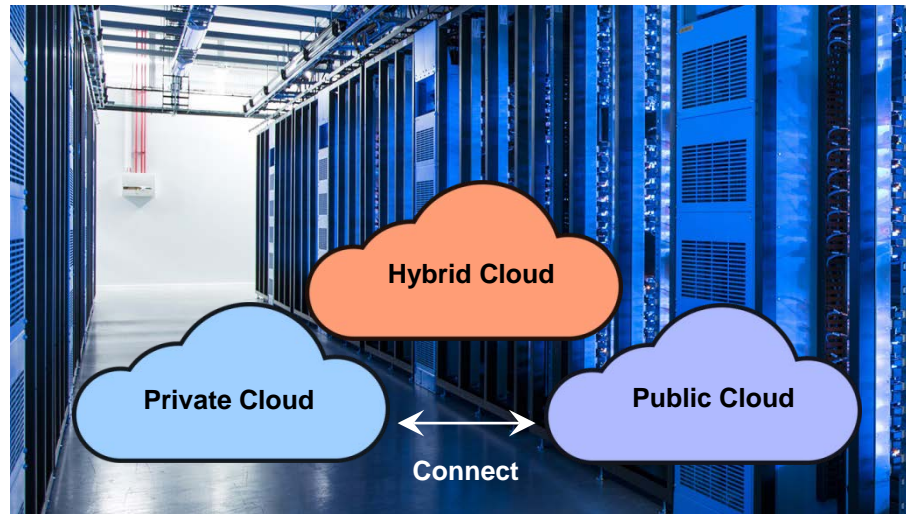
Servers

NVM Storage

Custom ASIC

Data Protection & Security

Data Center Power



Ethernet Switching

Data Center Interconnect

Network Timing

**Leading Data Center Applications use Microsemi Solutions**

# Storage Leadership Driving Greater Penetration of the Data Center

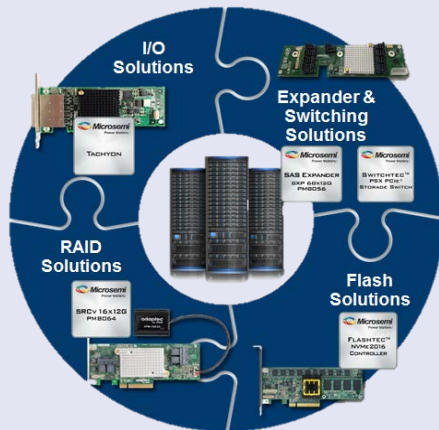
## Storage Leadership

### Market Adoption & Success

- #1 in SAS Ports Shipped
- #1 in Storage Systems
- #1 in Performance
- #1 in Density / Port Count
- #1 in **nvm** Flash Controllers

### Technology & Innovation

- 1st Controller Based Encryption
- 1st 24 Port SAS Controller
- 1st PCIe Gen 3 RAID Controller
- 1st NVMe Flash Controller
- 1st PCIe Storage Switch



**Adaptec™**  
Highest SAS/SATA  
port density and  
performance

**Flashtec™**  
Industry's highest  
performance NVMe  
controller

**Switchtec™**  
Industry's leading  
PCIe port count and  
signal integrity

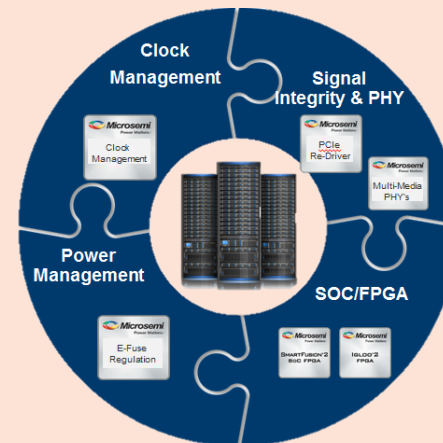
## Penetration of Motherboard & Rack Infrastructure

### Key Benefits and Focus

- Low Power & Footprints
- AES-256 FIPS-197
- Performance - Low Jitter, etc
- BOM Consolidation
- Platform Integration

### Technology & Innovation

- Secure Boot
- Ultra Low Jitter
- Hysteretic Control
- SEU Immunity
- Extreme Timing Accuracies



**Clock Tree**  
Synthesis,  
Rate  
Conversion,  
Attenuation, &  
Distribution

**DC Converters**  
Hysteretic  
Control, Energy  
Management,  
Hot Swap  
Support

**FPGA**  
Low Power,  
Reliable,  
System  
Solutions

**Re-Timers &  
Value add  
PHY's**  
1588, MACsec  
**SynchrOPHY**



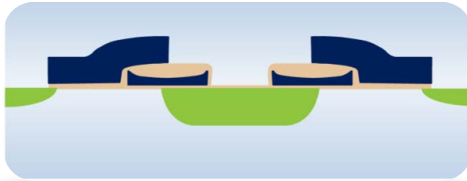
# ***Flash Technology Licensing***



# What do we License?

## SuperFlash® Cell Generations

ESF1



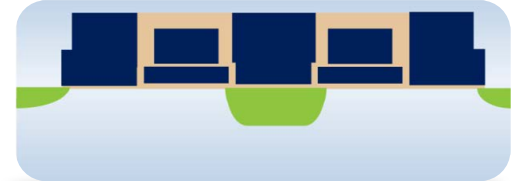
800-130nm

ESF2



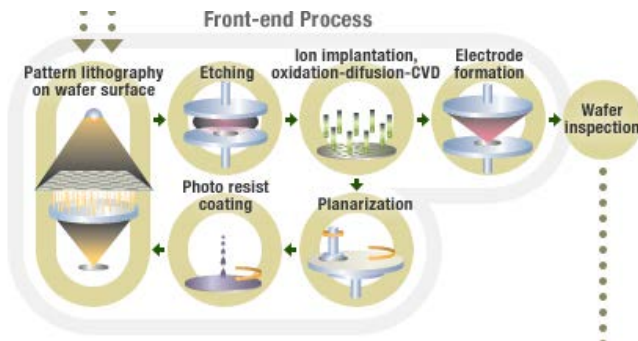
250 -110nm

ESF3

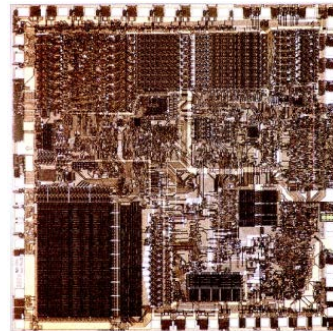


90nm and below

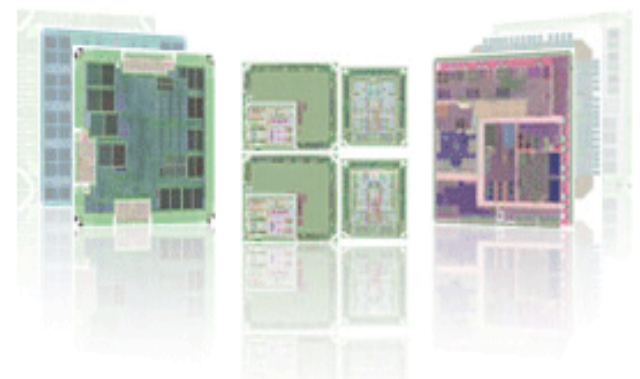
## Process License



## Design License



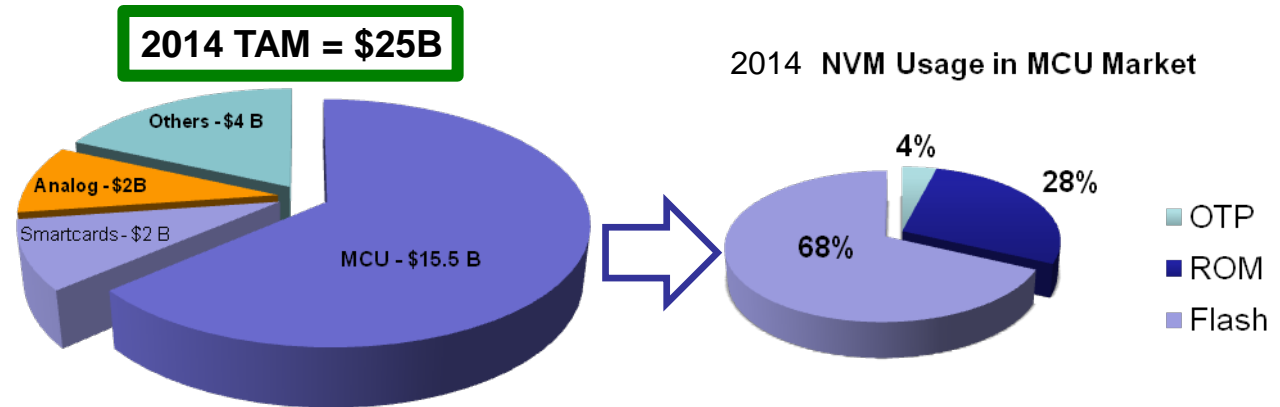
## Design Services





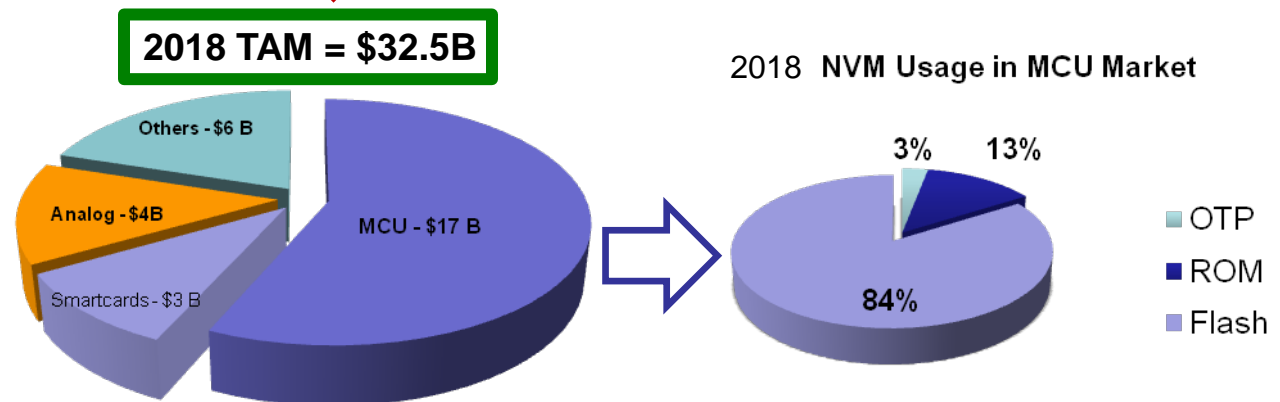
# Markets and Future for SuperFlash<sup>®</sup> Licensing

Market	2014 SuperFlash <sup>®</sup> Share
MCU	25%
Analog	15%
SmartCard	55%
Others	15%



**2014 Served Market = \$5B**

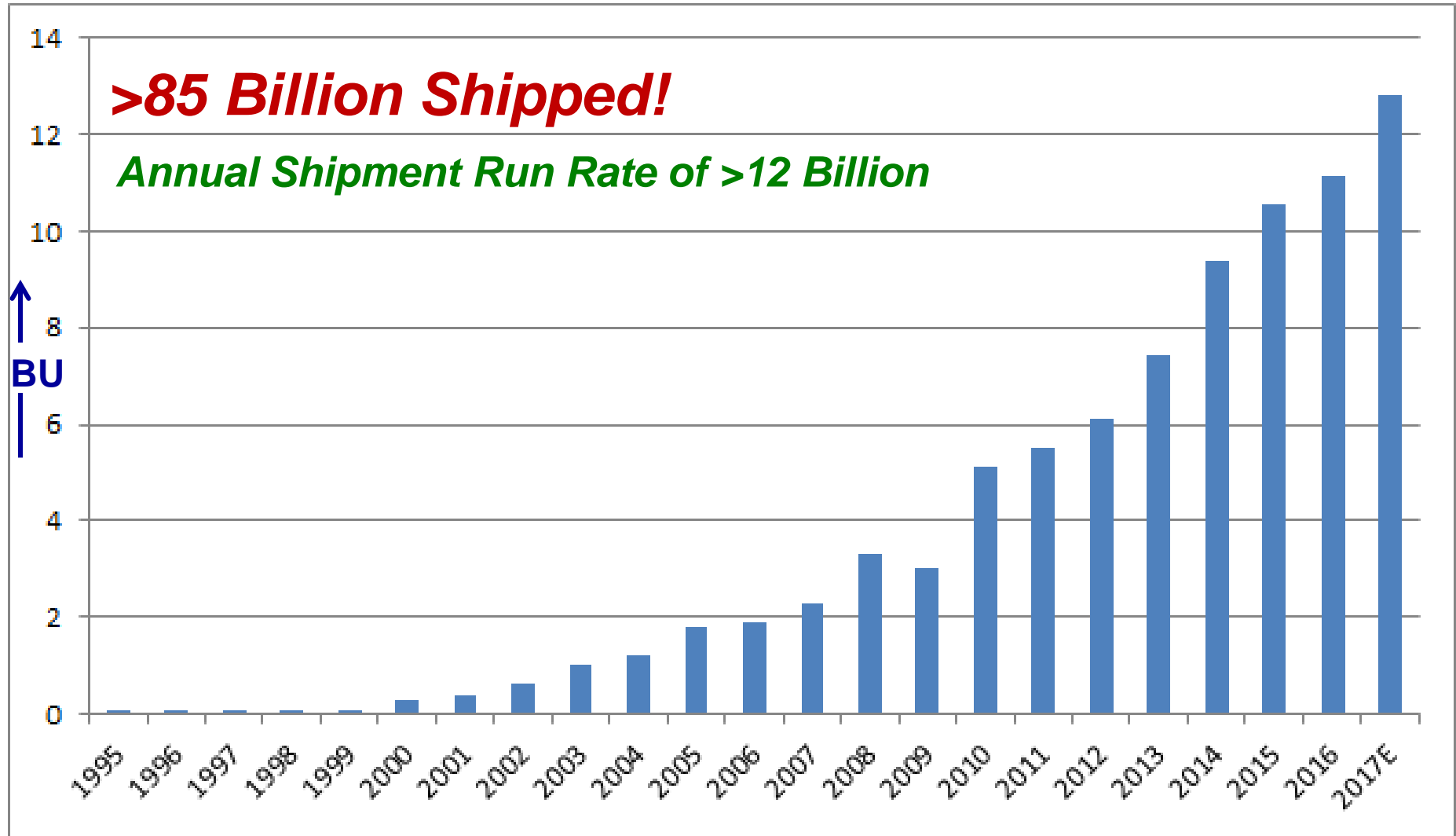
Market	2018 SuperFlash <sup>®</sup> Share
MCU	30%
Analog	20%
SmartCard	60%
Others	20%



**2018 Served Market = \$8.8B**



# SuperFlash® Enabled Devices



# SuperFlash® Technology Leads The Microcontroller Market

Company	Embedded Flash
Renesas Electronics	<b>MCHP</b> + Internal
NXP	<b>MCHP</b> + Internal
Microchip	<b>MCHP</b> + Internal
Infineon	<b>MCHP</b> + Internal
STM	<b>MCHP</b> + Internal
TI	<b>MCHP</b> + Internal
Cypress/Fujitsu	Internal
Toshiba	<b>MCHP</b> + Internal
Samsung	<b>MCHP</b> + Internal
Panasonic	Internal



Top 10 MCU Providers

***80% of Top 10 MCU providers rely on SuperFlash® Technology***

# Licensing Business Summary

---

- SuperFlash<sup>®</sup> technology is the embedded Flash market leader
  - Licensed to Foundries, Fabless Companies, Independent Device Makers (IDMs) & Design Partners
- Synergistic with our microcontroller technology needs, providing earlier access for our business units
- Revenue streams from upfront NRE, followed by royalties for a very long time
- On track for >\$100M revenue in FY18 at high margins



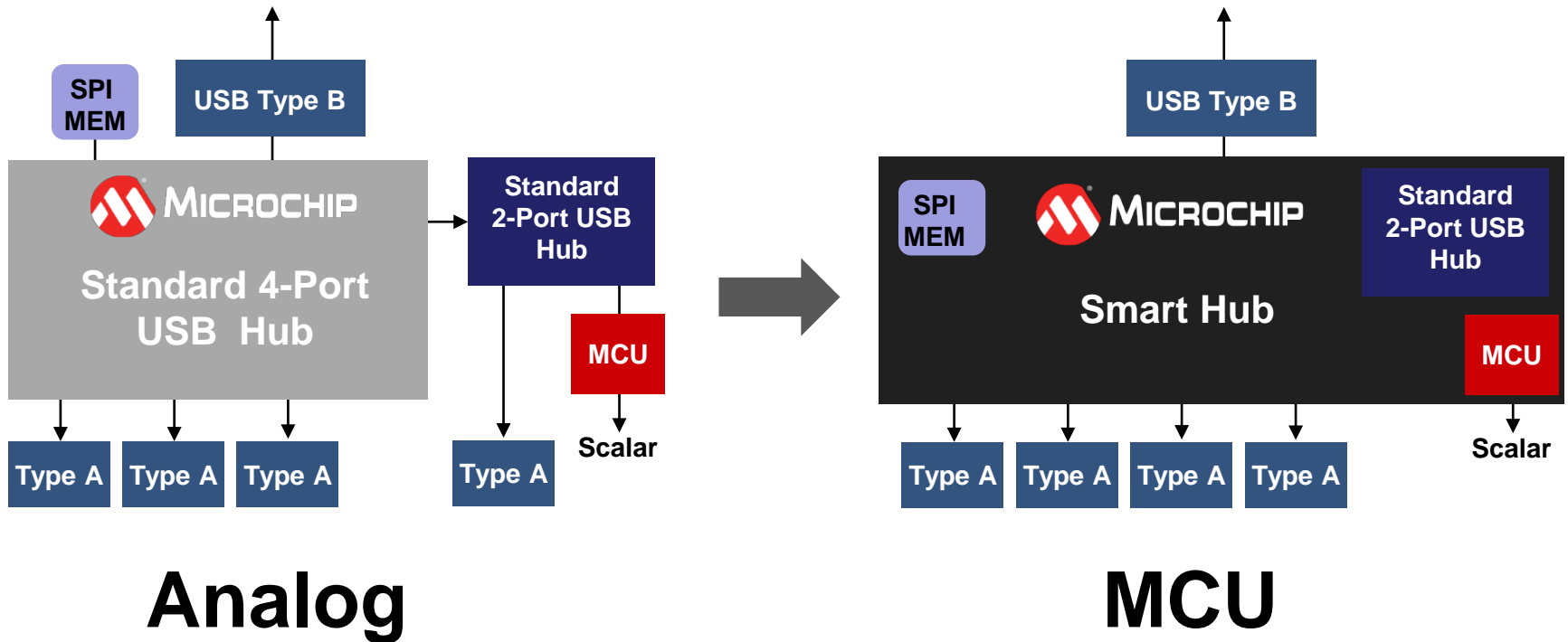
***Total System Solutions (TSS)***

# Power of TSS

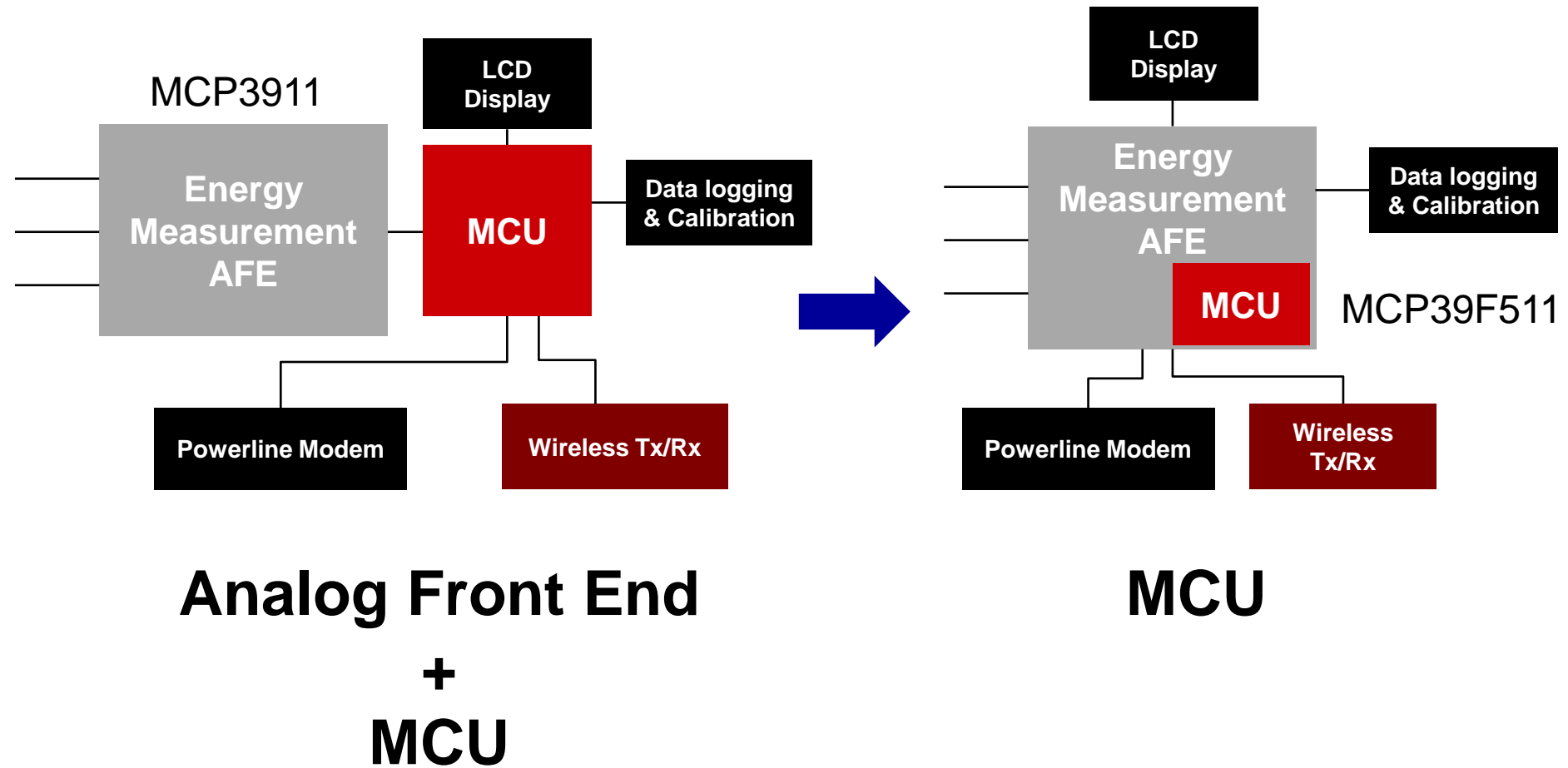
---

- **Our portfolio of products has quadrupled over the last 6 years creating a powerful platform for embedded system designers**
- **TSS approach creates tremendous attach opportunities for Analog, Memory & MCU**
- **TSS approach makes our whole solution greater than the sum of the parts**
- **TSS may shift revenue classification over time between Analog and Microcontrollers**

# MCU Integration



# MCU Integration







***Enduring Competitive  
Advantage***

# Culture – An Enduring Competitive Advantage

- Strong, practiced guiding values
- Teamwork trumps prima donnas
- Shared rewards & sacrifices
- Non-commissioned salesforce
- Substantial investment in training
- Leadership development and succession planning



***Culture Eats Strategy For Breakfast!!***

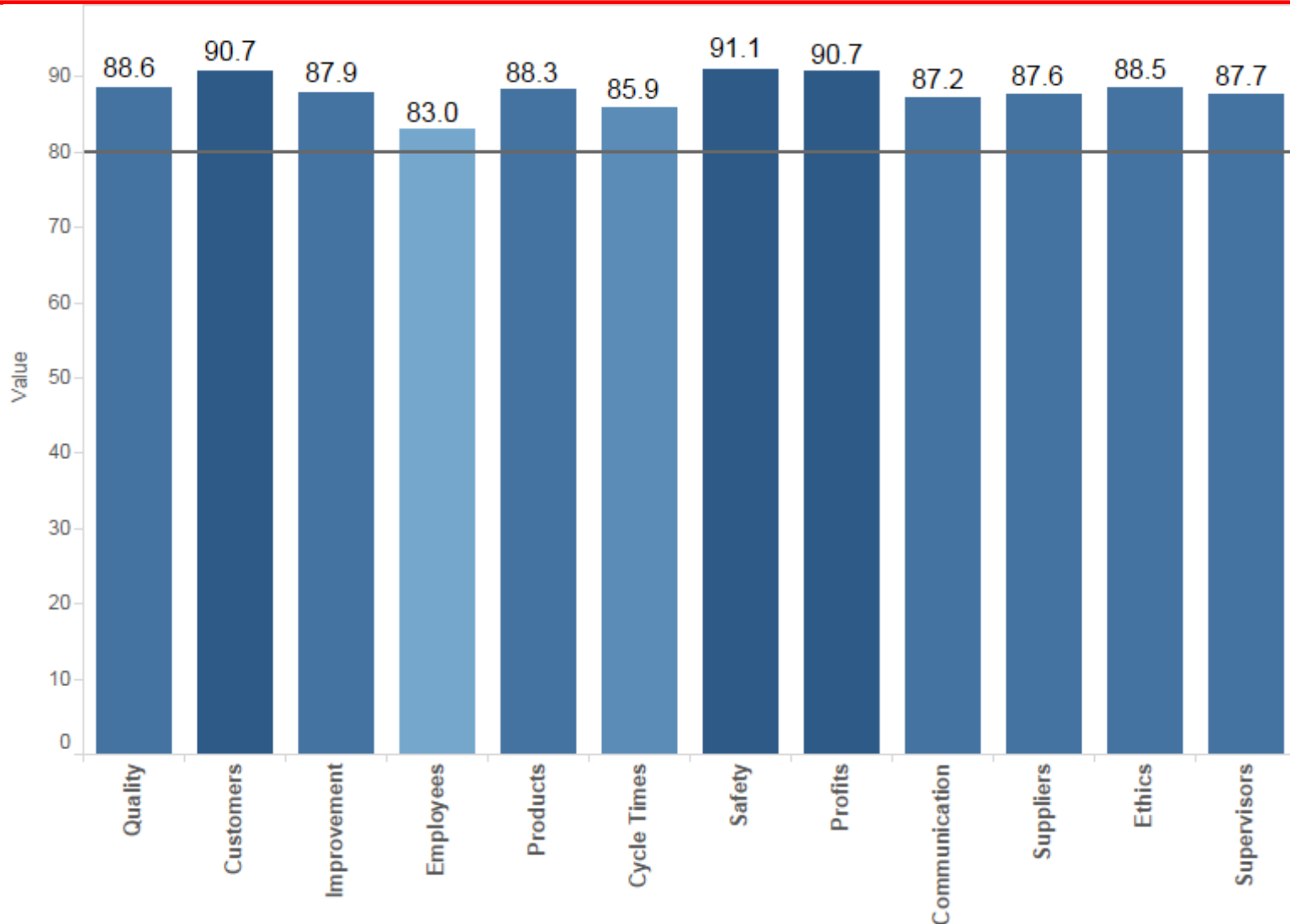
# Microchip's Guiding Values

---

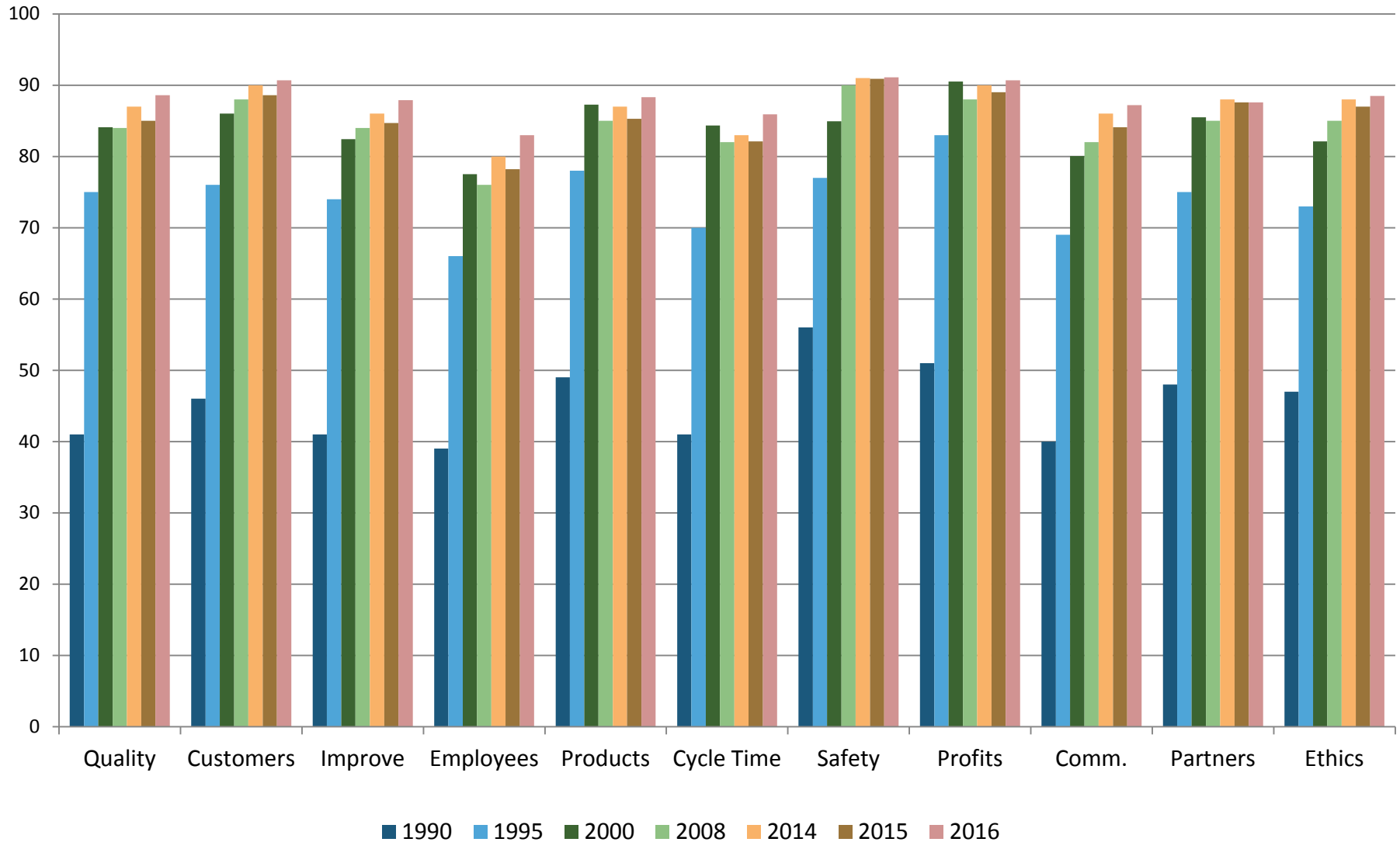
- *Quality comes first*
- *Customers are our focus*
- *Continuous improvement is essential*
- *Employees are our greatest strength*
- *Products and technology are our foundation*
- *Total cycle times are optimized*
- *Safety is never compromised*
- *Profits and growth provide for everything we do*
- *Communication is vital*
- *Suppliers, representatives and distributors are our partners*
- *Professional ethics are practiced*

**Values are not what we say – they are what we practice**

# Average % of Time MCHP Practices the Guiding Values



# Employee Responses Expressed in Mean Scores over time



# Summary

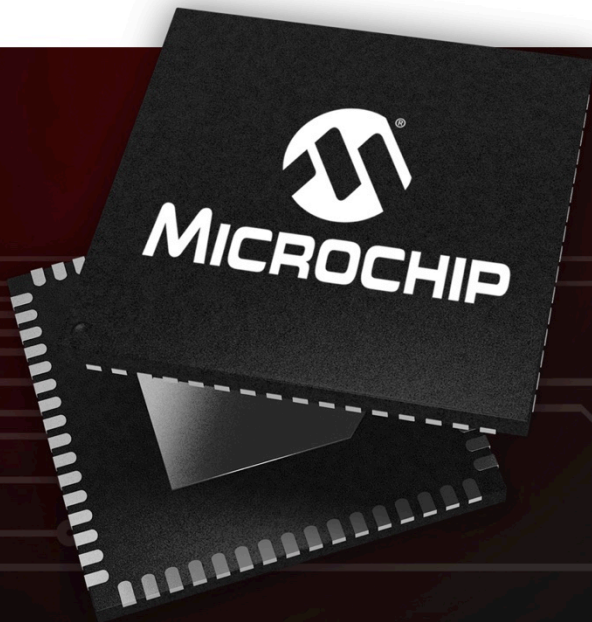
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- There is a growing and innovative embedded market that forms the “iceberg below the waterline”
- Most embedded systems are on a journey to become *Smart, Connected and Secure* – this is what IoT is!!
- Our innovation in Smart, Connected and Secure solutions is enabling our clients to create and drive their innovation
- Microsemi’s innovation adds complementary solutions and end market emphasis
- Microchip 2.0 and TSS have positioned Microchip well to capitalize on this growing opportunity
- We have several growth multipliers that we expect will drive organic growth and market share gains
- Our unique culture is a hidden but enduring competitive advantage



***Thank You!***





A Leading Provider of Microcontroller,  
Mixed-Signal, Analog & Flash-IP Solutions

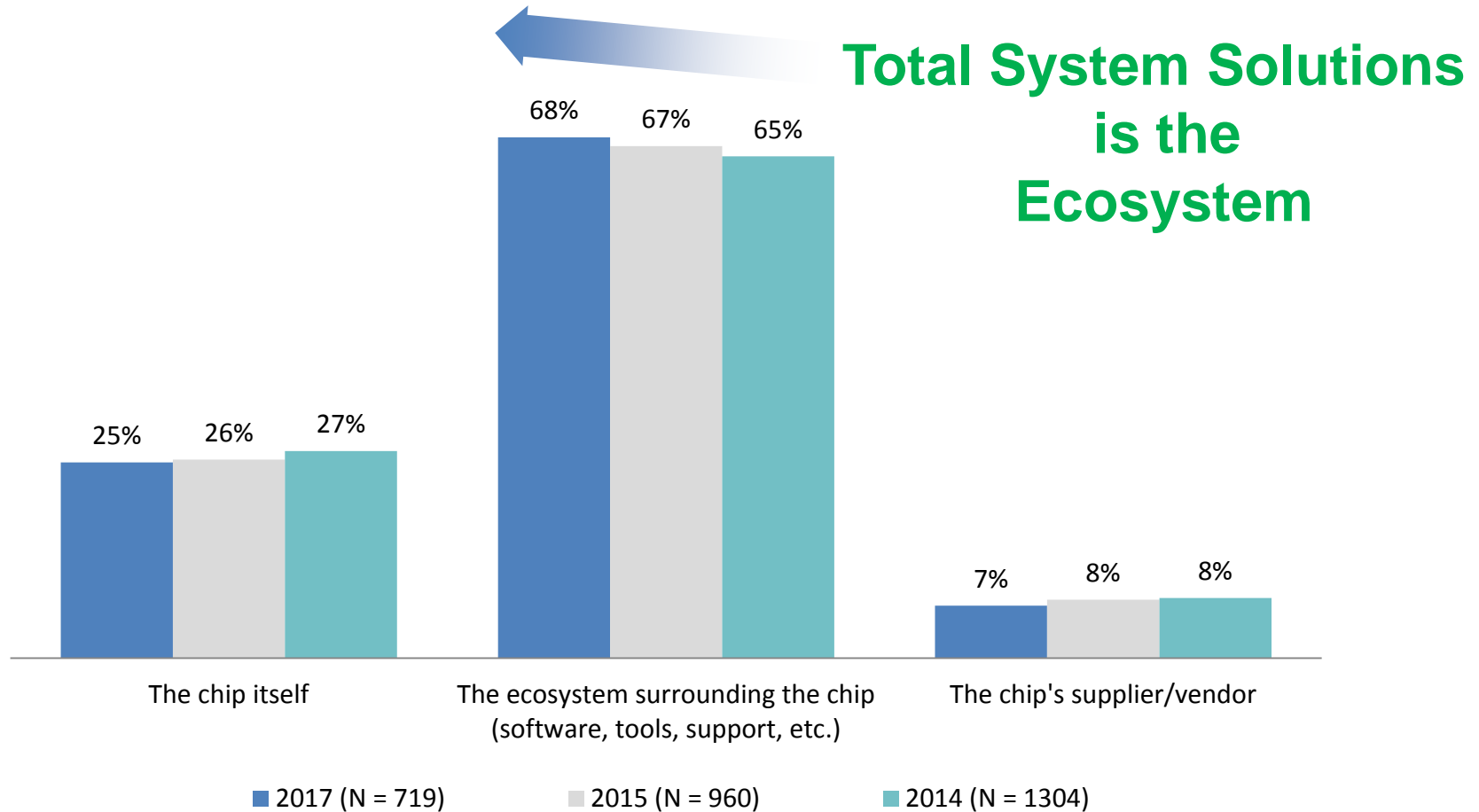


**Total System Solution**

*Rich Simoncic  
Vice President,  
Analog Power and Interface Division*



# What's most important when choosing a microprocessor? **Total System Solutions is important to clients.**

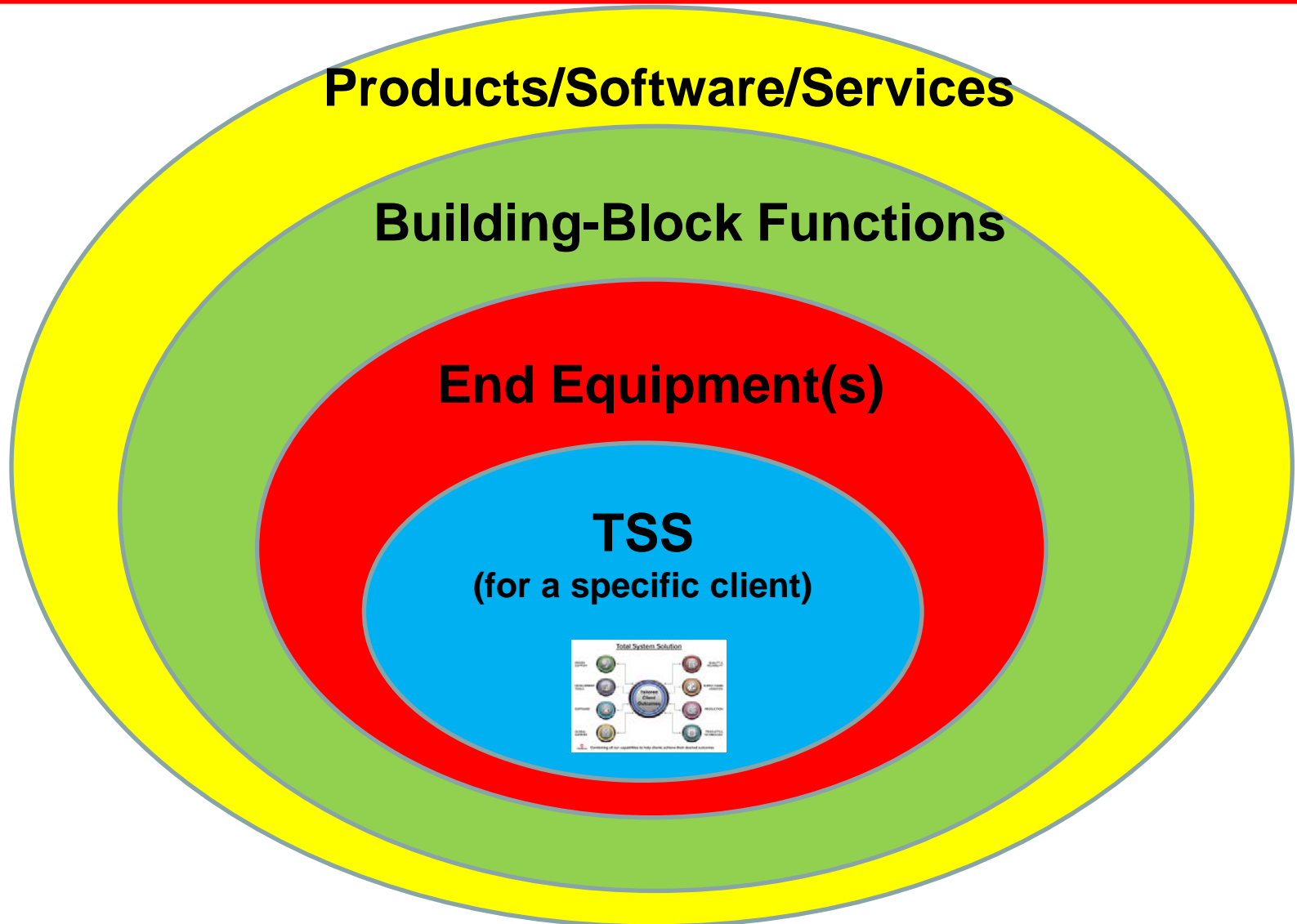


# Total System Solution



# Creating Value for our Clients

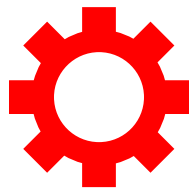
## The Product, Function, End Equipment Focus



# End Equipment and Function Focus

---

- **FUNCTIONs** - interacting elements (software, hardware, services) architected to achieve our clients **End Equipment** goals.



Embedded  
Software  
Integration



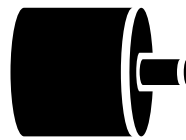
Wired  
Networking



Wireless  
Connectivity



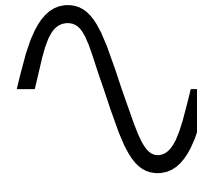
Touch and  
Gesture



Motor  
Control



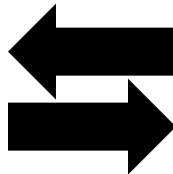
Power  
Conversion



Signal  
Chain and  
Timing



Authentication  
and  
Cryptography



Hardware-  
Firmware  
Optimization



**MICROCHIP**

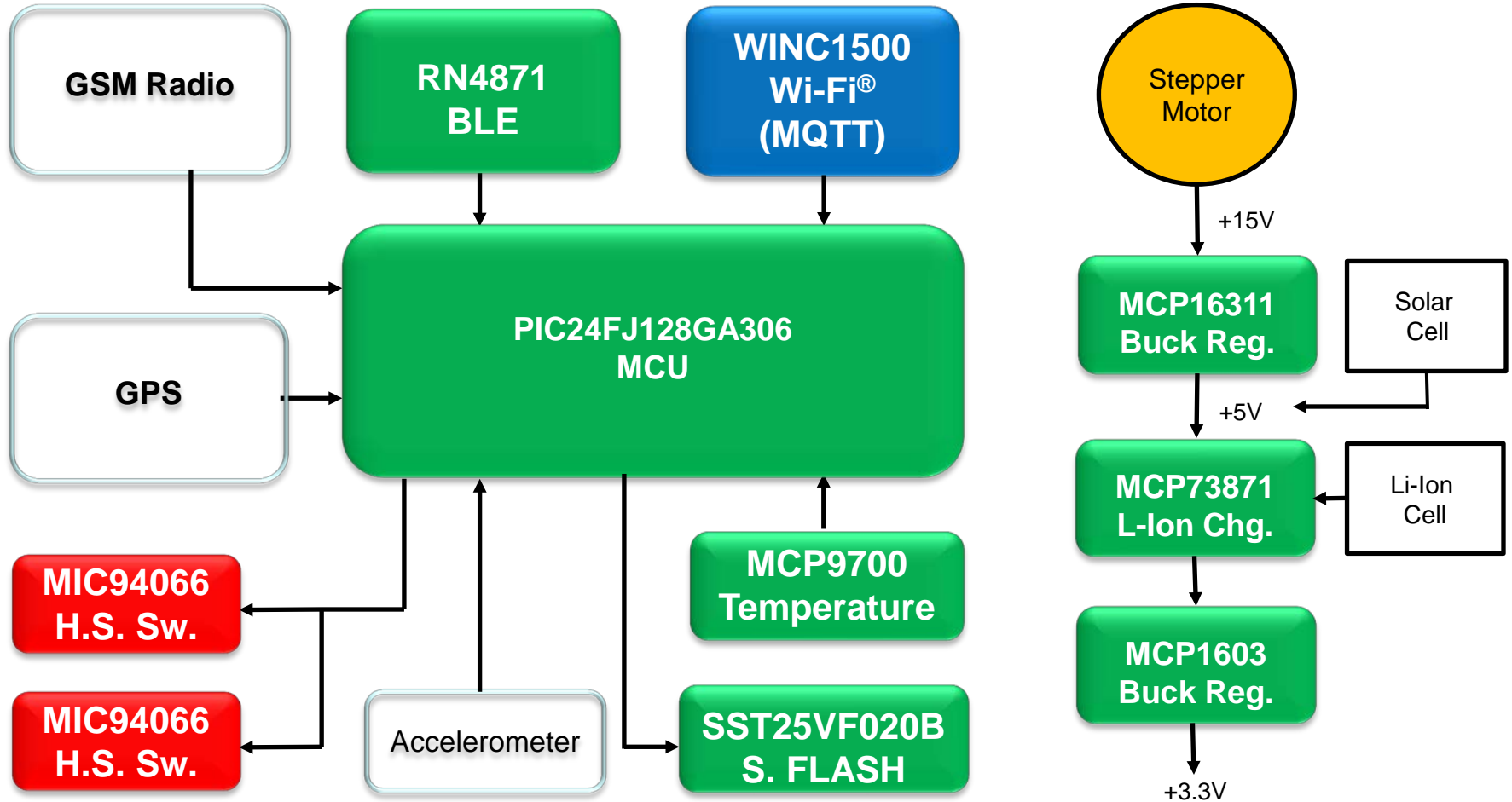
***Total System Solution***  
***Actual Examples***  
***Automotive***

# Tractor Trailer Tracking

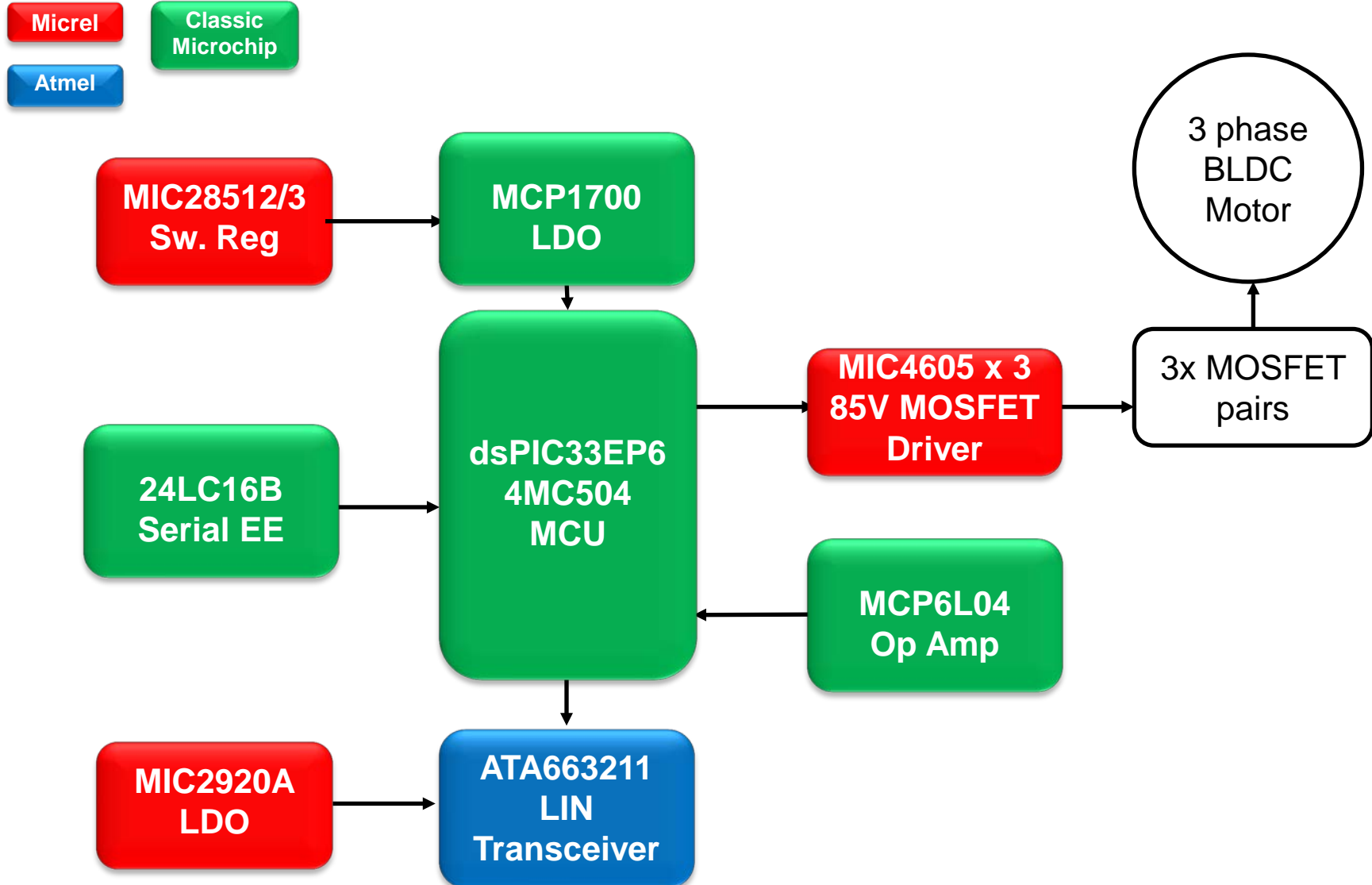
Micrel

Classic  
Microchip

Atmel



# Automotive Water Pump





**MICROCHIP**

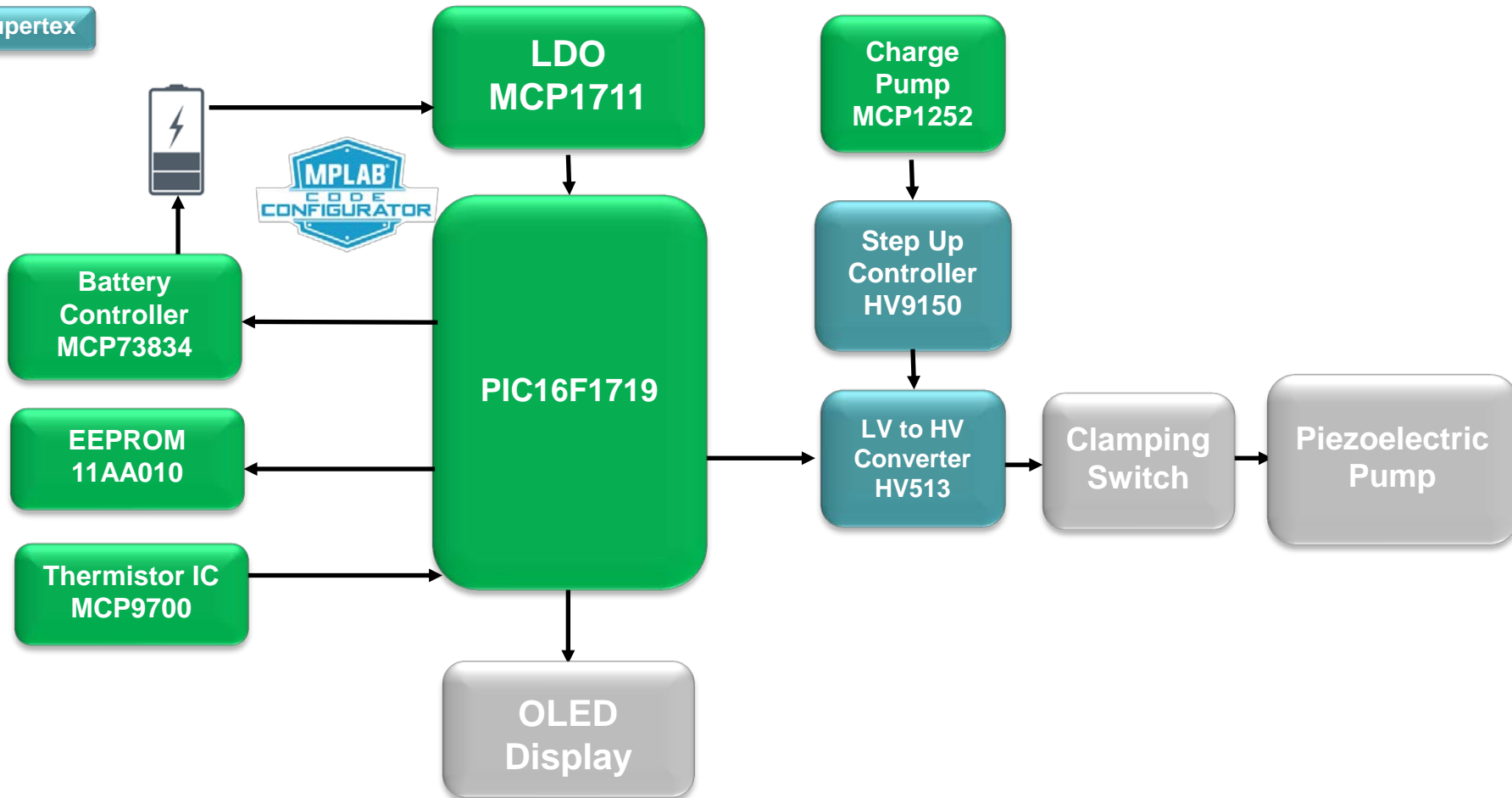
***Total System Solution***  
***Actual Examples***  
***Medical***



# Medical Micropump

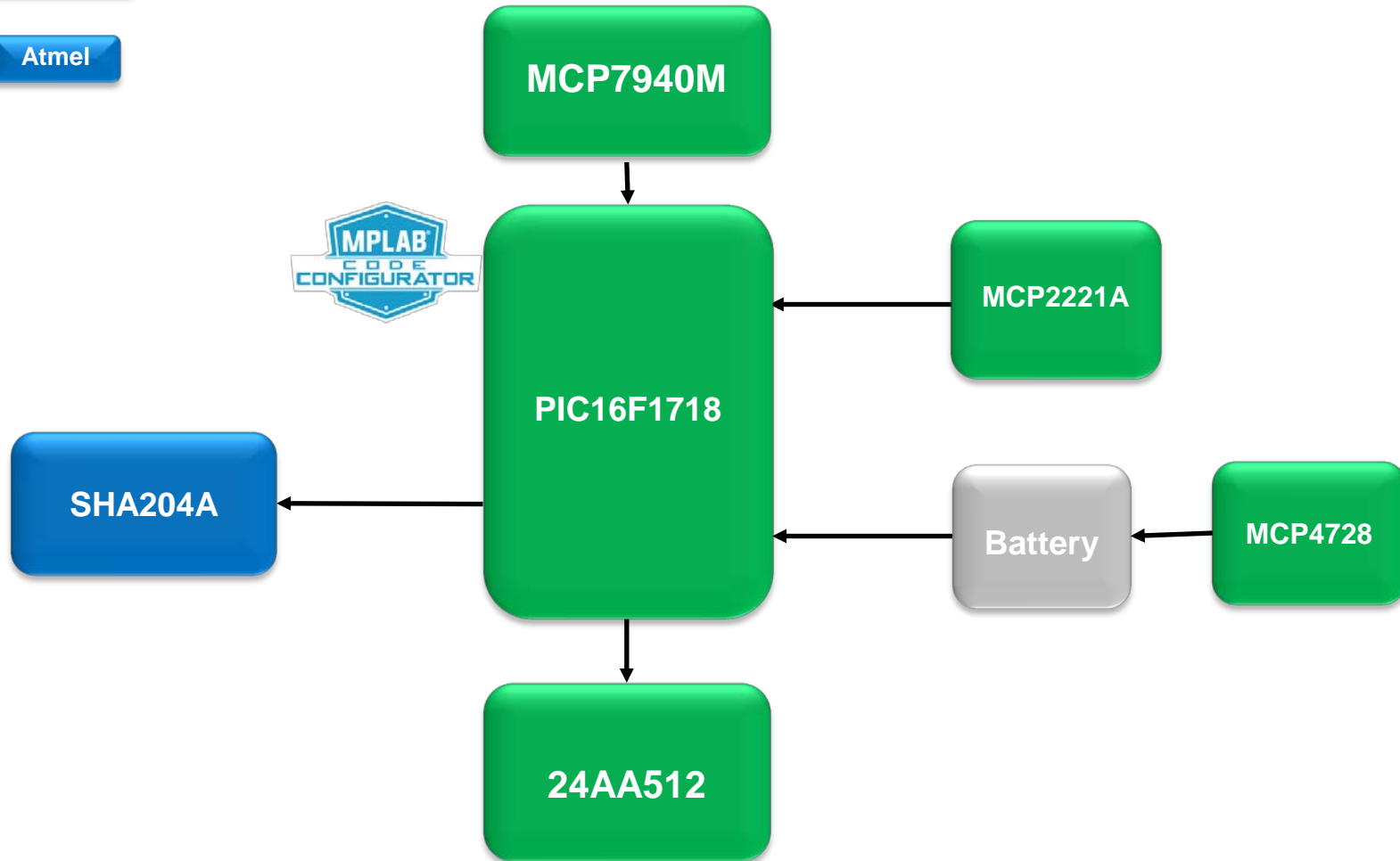
Classic  
Microchip

Supertex



Classic  
Microchip

Atmel





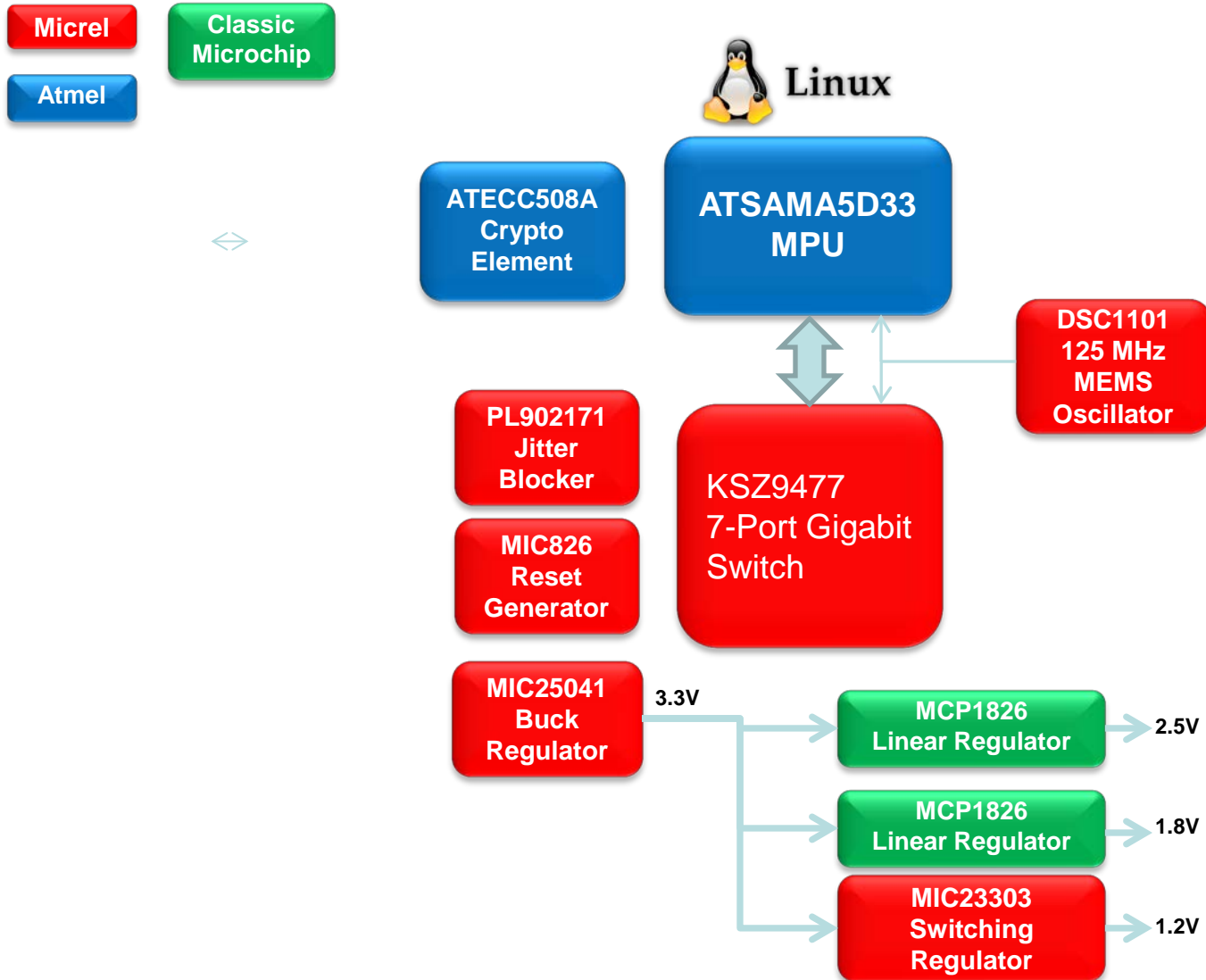
**MICROCHIP**

***Total System Solution***

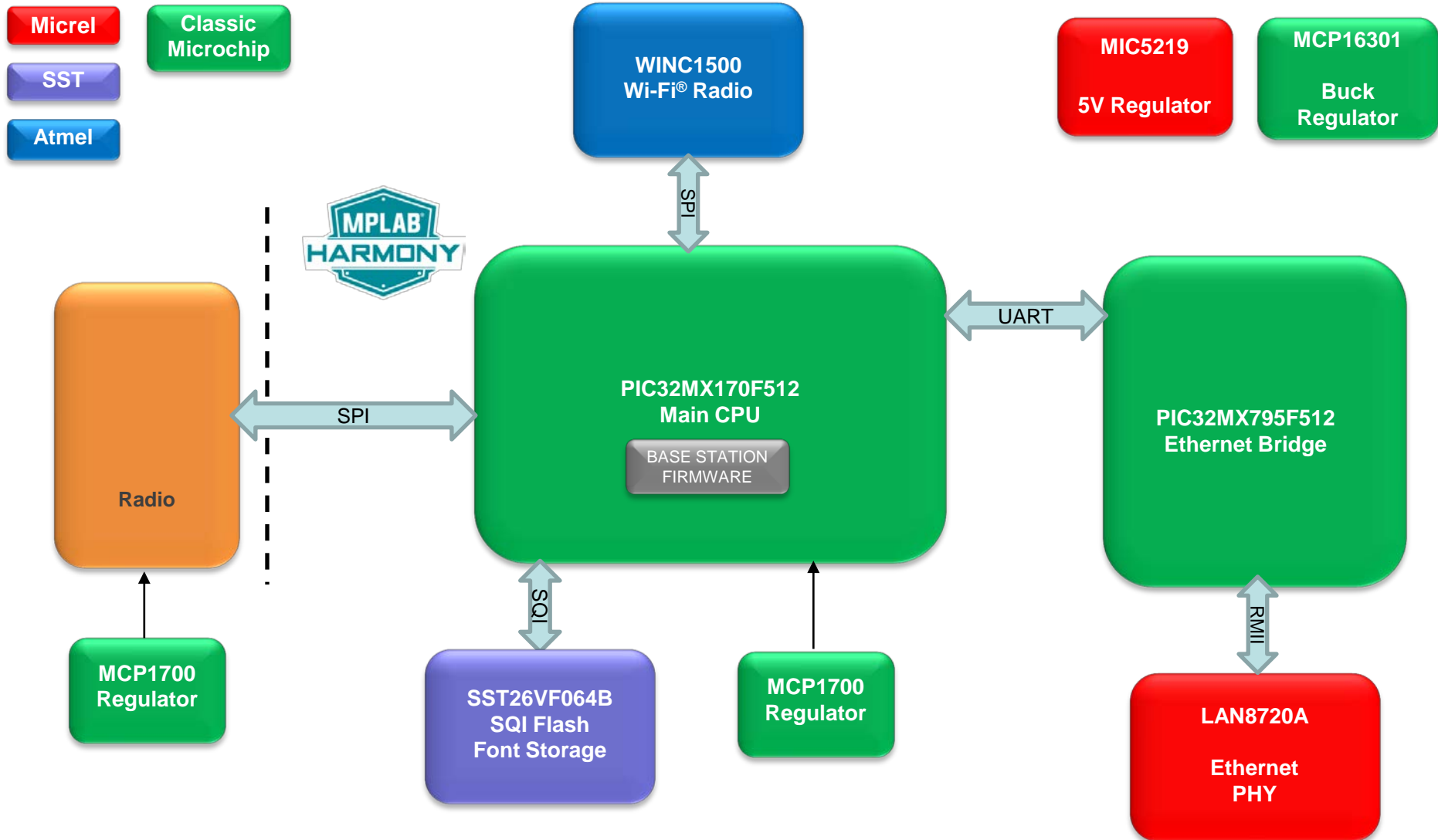
***Actual Examples***

***Computing/Data Communication***

# GigE Switch



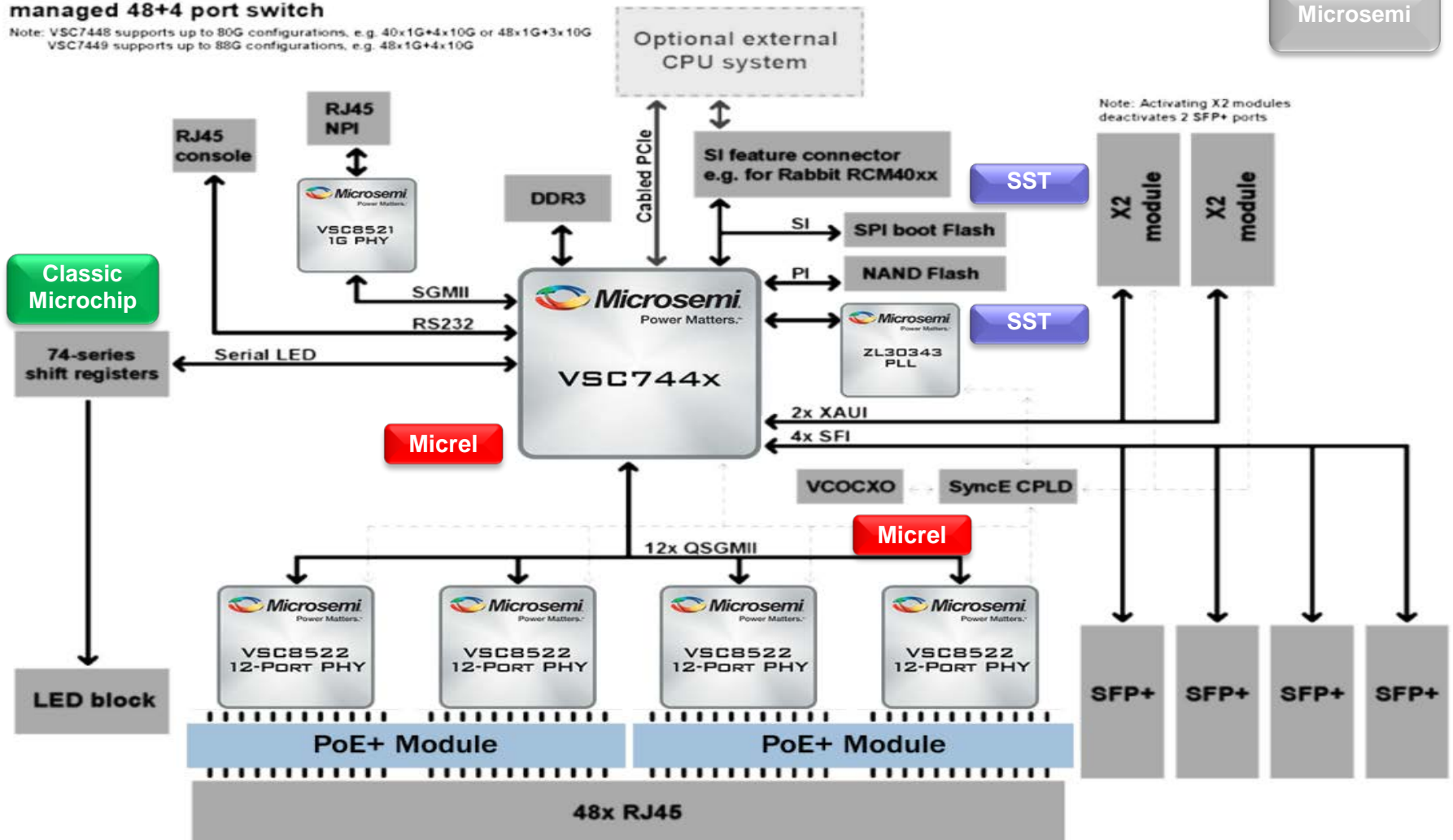
# Base Station



# Microsemi 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

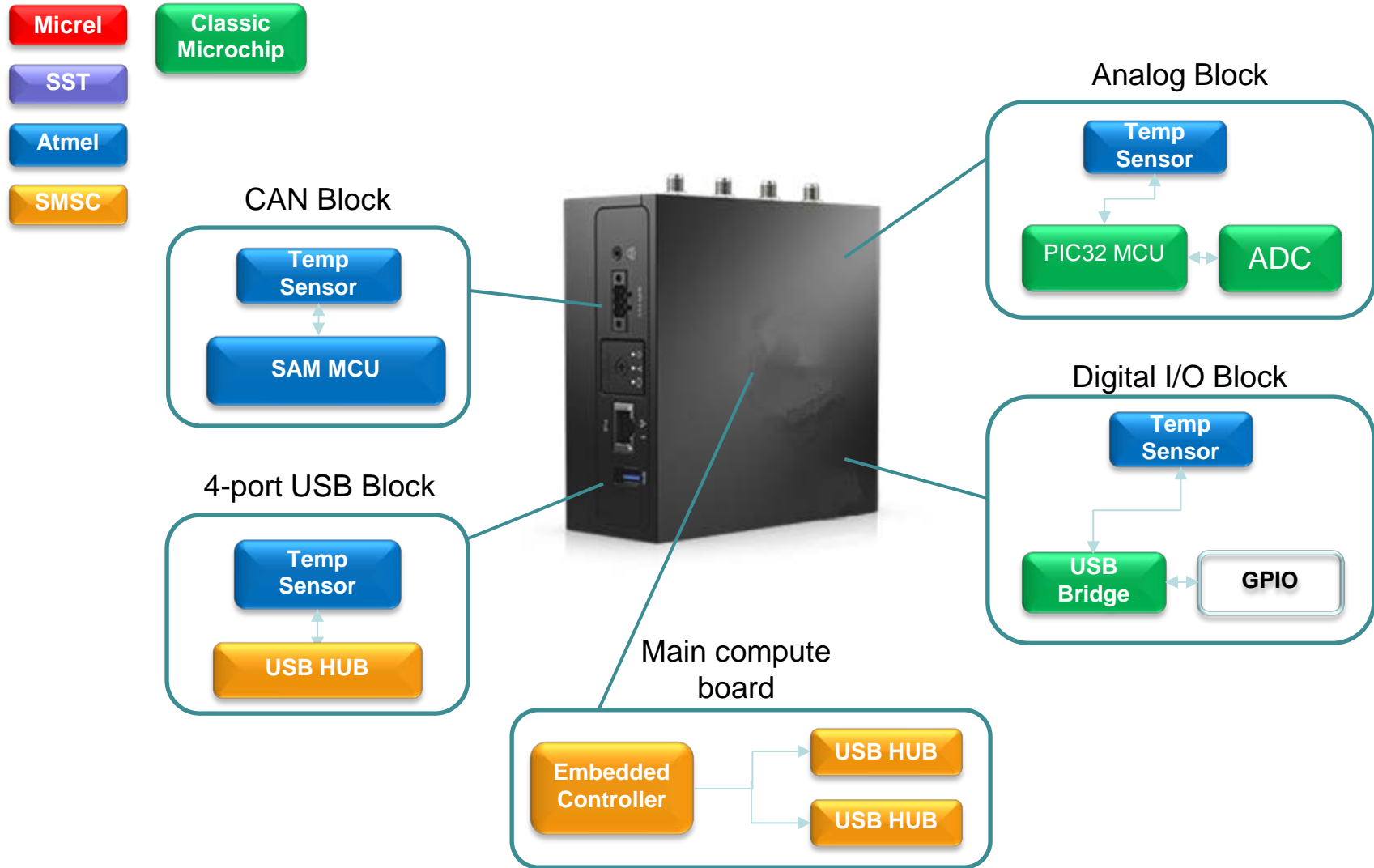




**MICROCHIP**

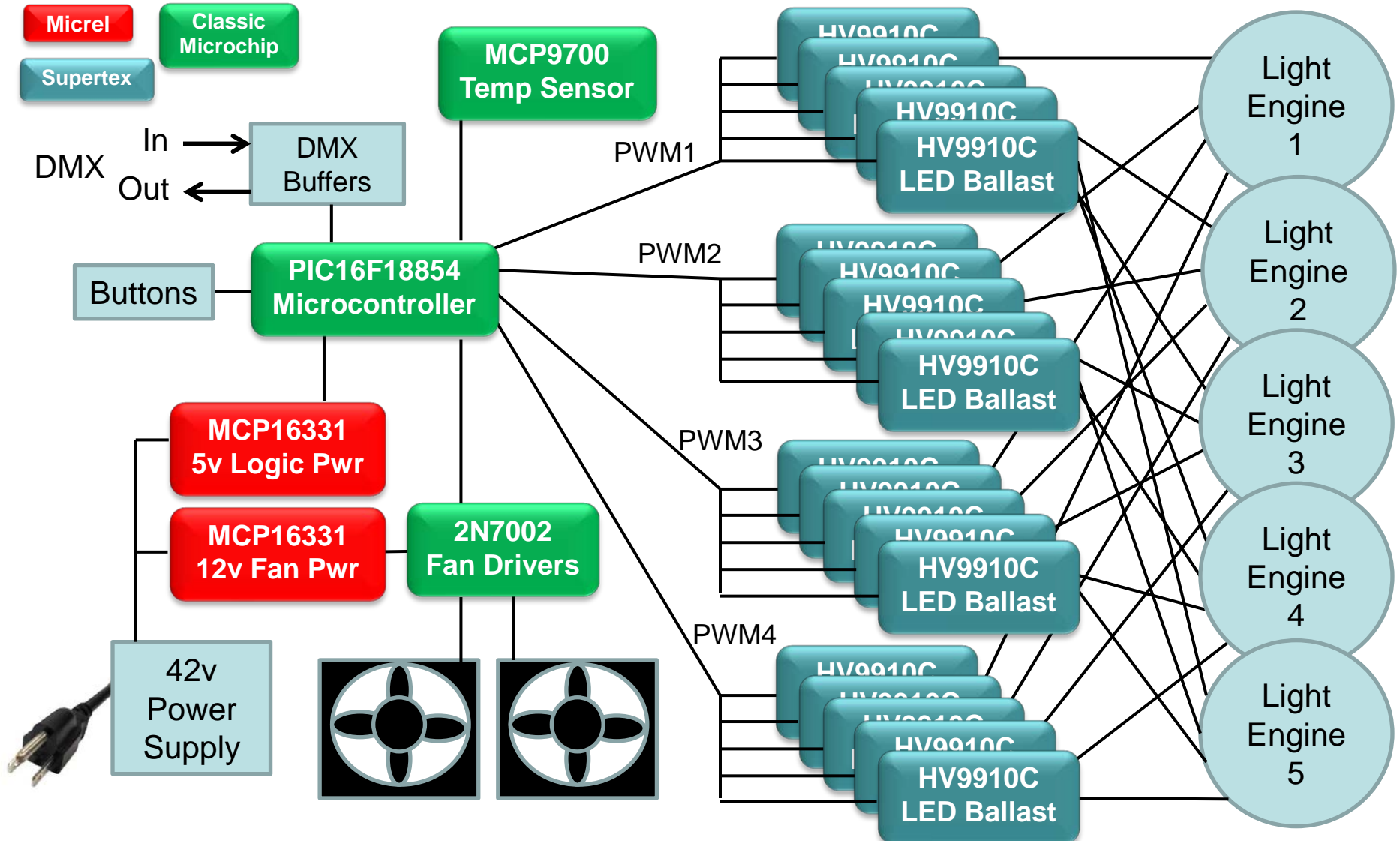
***Total System Solution***  
***Actual Examples***  
***Industrial***

# Industrial IOT Gateway





# LED Agricultural Light





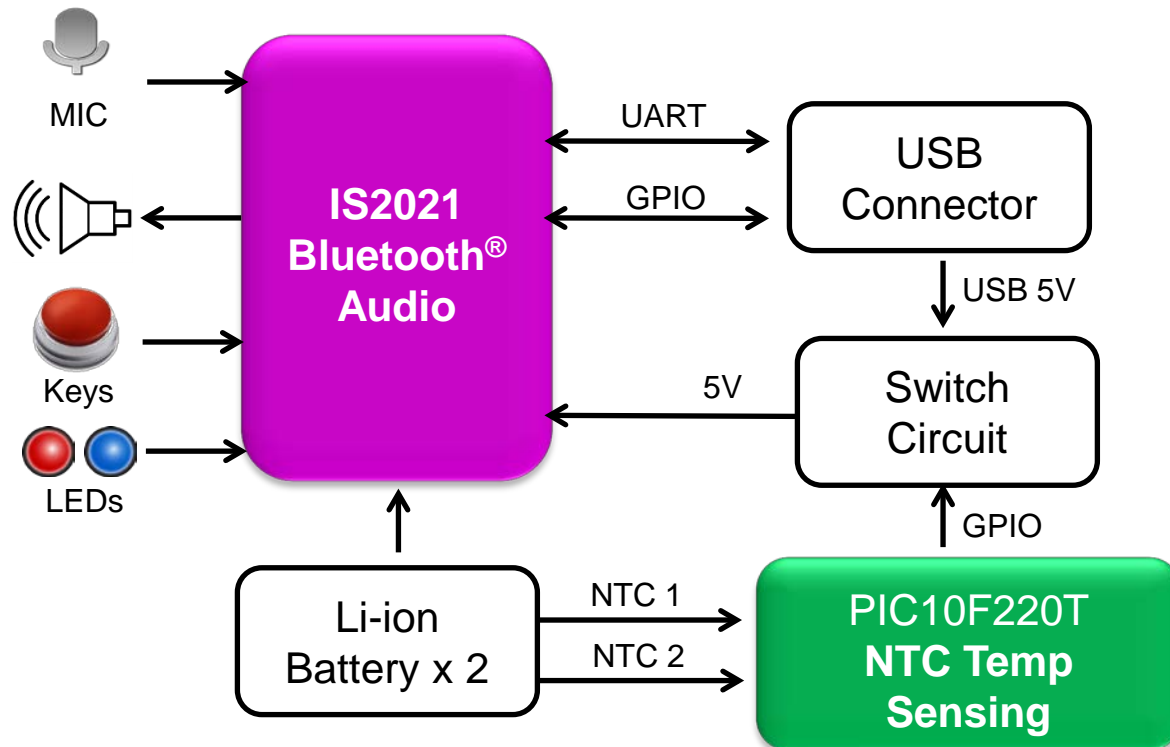
**MICROCHIP**

***Total System Solution***  
***Actual Examples***  
***Consumer***

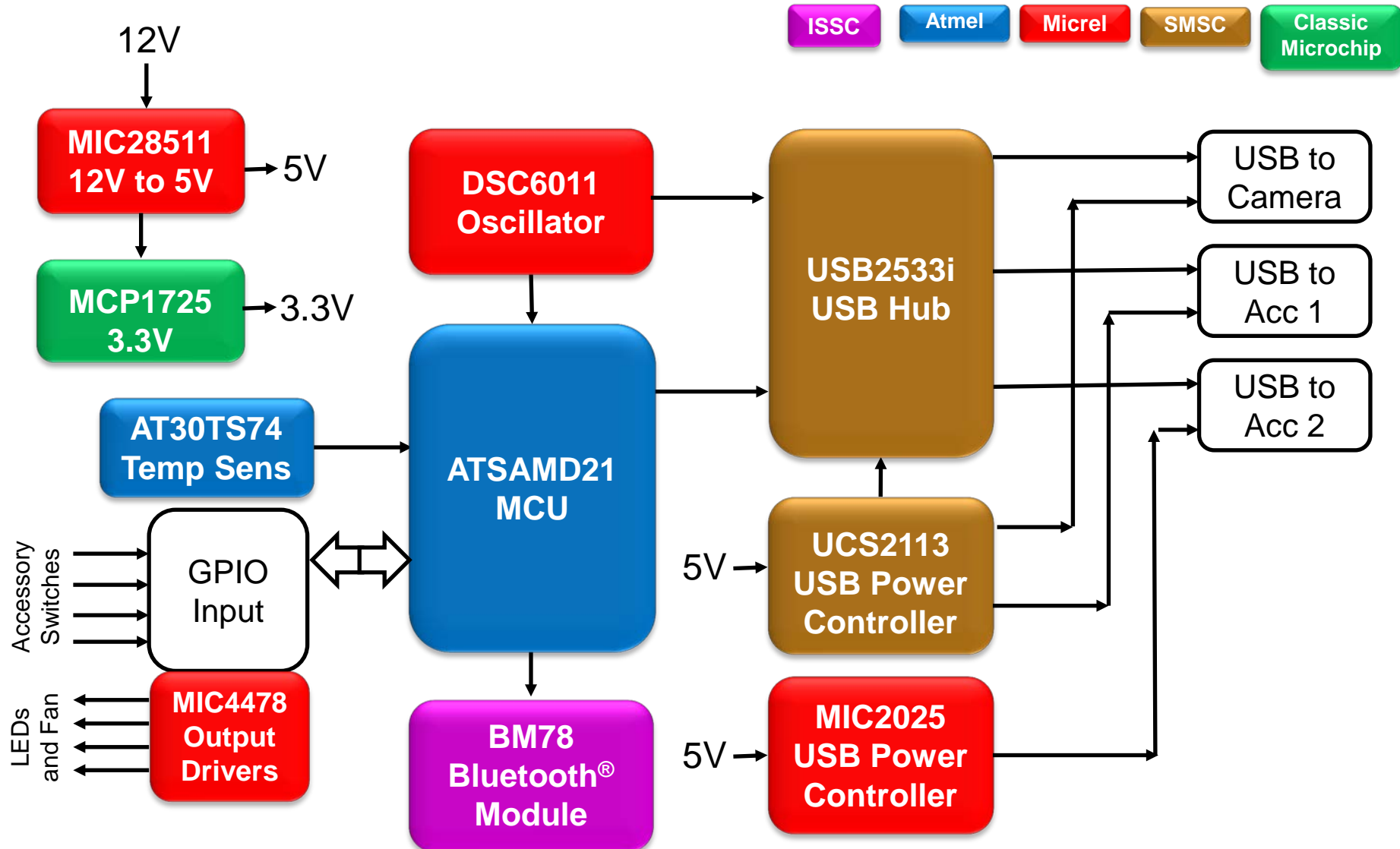
# Sport Headset

Classic  
Microchip

ISSC



# Camera Accessory Unit



# Audio System

Micrel

Classic  
Microchip

**MIC2104**  
Sw. Ctlr

**MIC23153**  
Sw. Reg

**MIC2875**  
Sw. Reg

**MIC2253**  
Sw. Reg

**PIC32MX110**  
F016B  
MCU

FPGA

**KSZ9031RNX**  
Gb Ethernet

**PIC24FJ256**  
MCU

Capacitive  
Buttons  
(Touch)

**dsPIC33FJ6**  
4GP206  
DSP

**TC4426**  
MOSFET Drv

Audio  
Speakers

**PIC12LF1572 MCU**  
(Housekeeping)

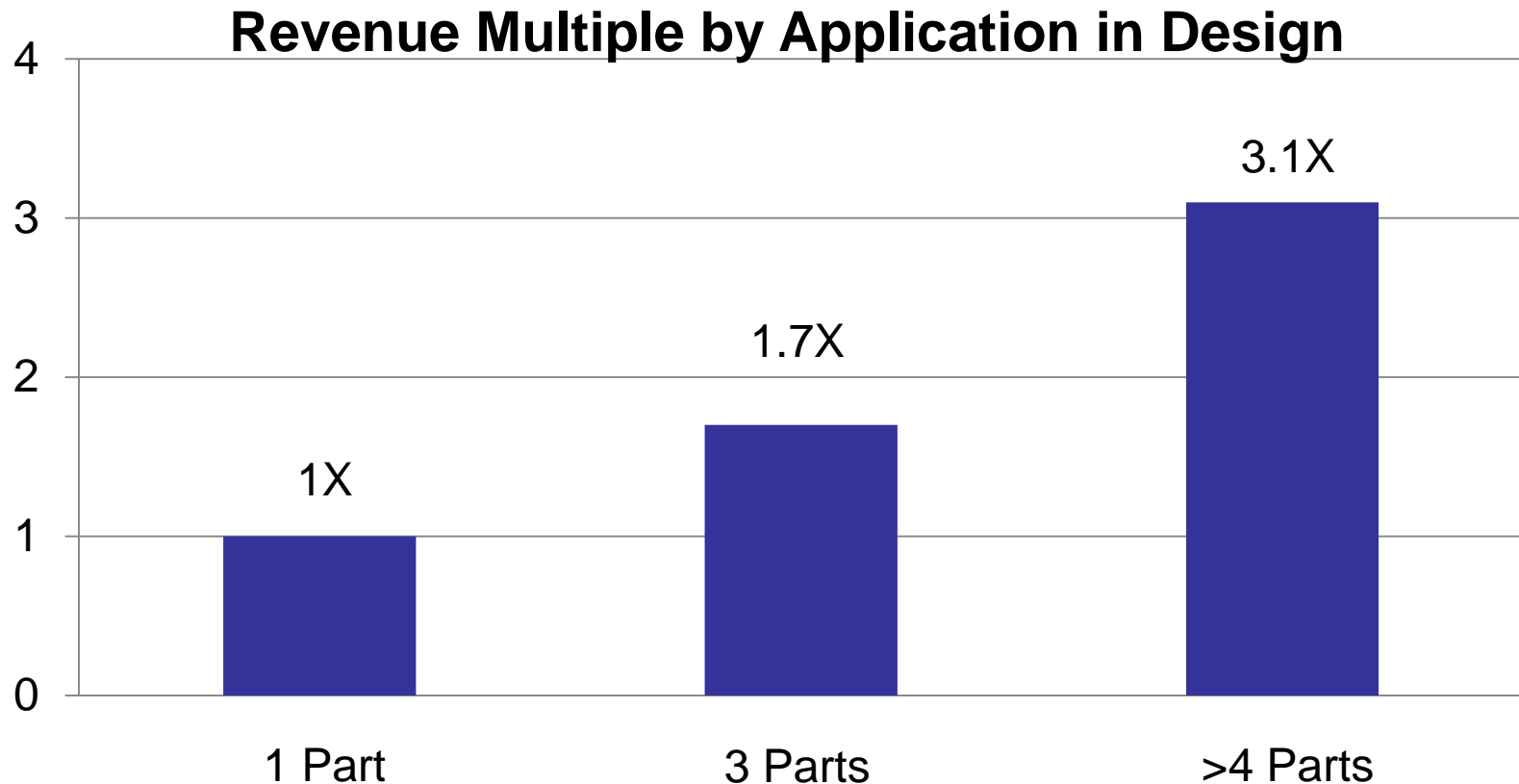
**MCP9700**  
Temp Sensor



**MICROCHIP**

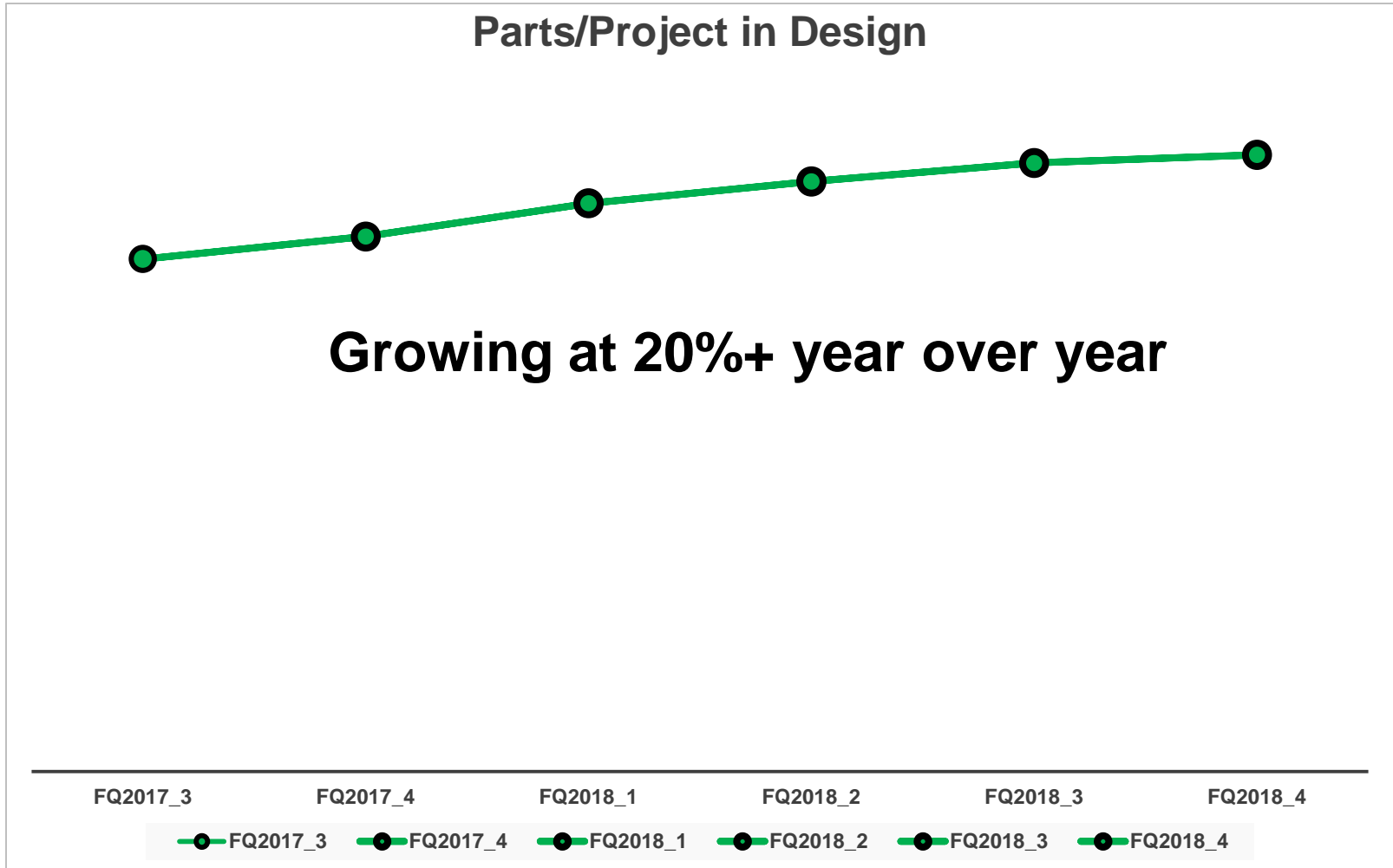
***Total System Solution  
Leading Indicators***

# Total System Solution Revenue Multiplier



**More Parts/Application = Higher Revenue and Profit**

# Total System Solution Results

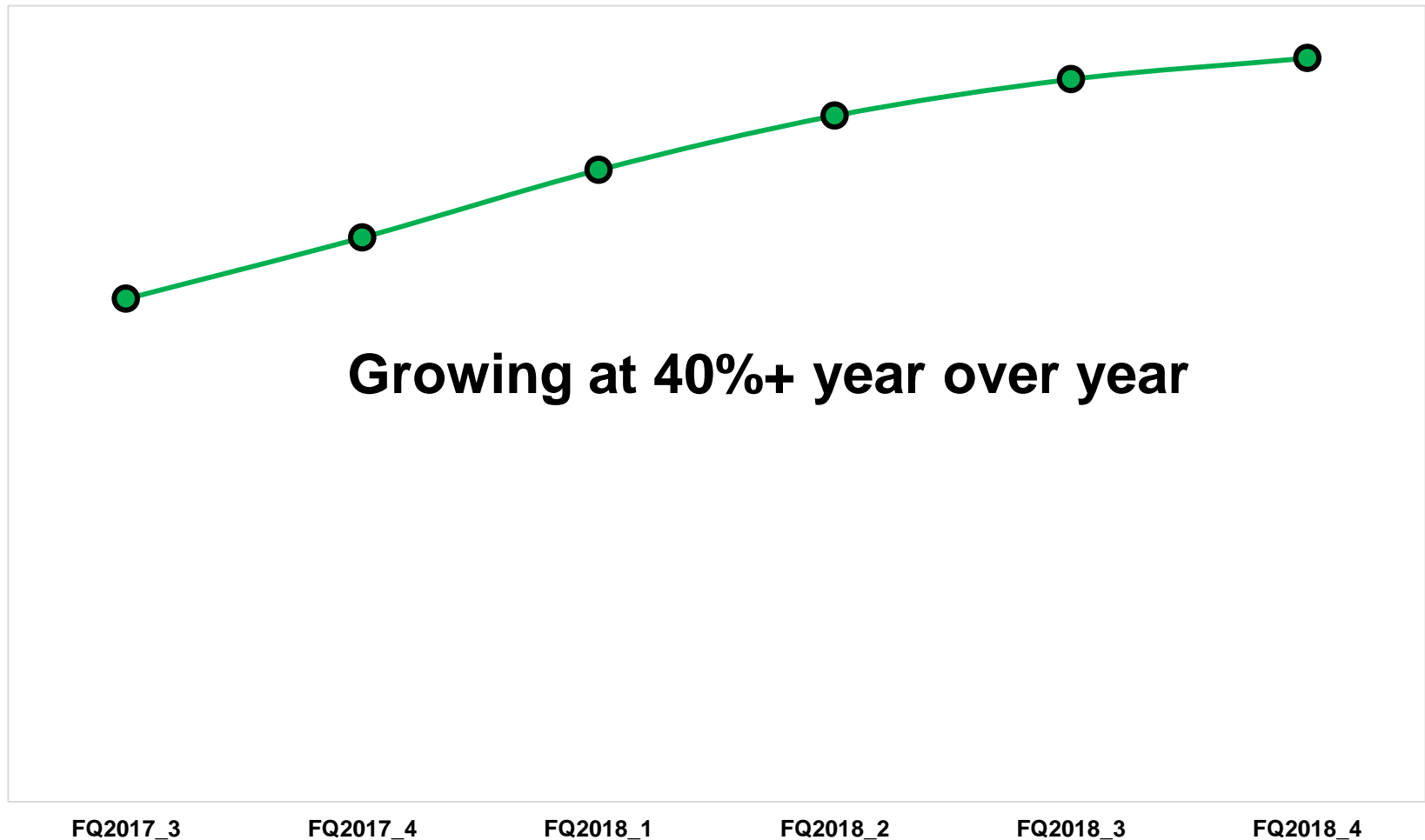






# Total System Solution Projects Greater Than One Product Family

% of Projects with more than 1 Product Family in Design



# Total System Solution

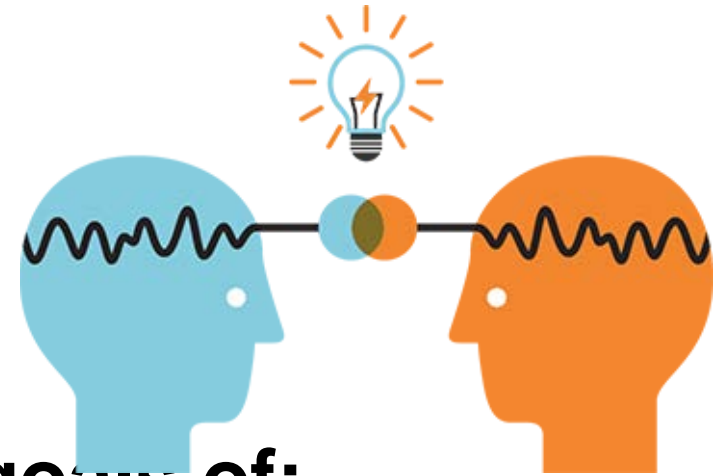
**Total System Solution is a co-created combination of:**

- Hardware
- Software
- Services

**That best meet the client's goals of:**

- Increasing *their* revenue
- Reducing *their* cost
- Managing *their* risk

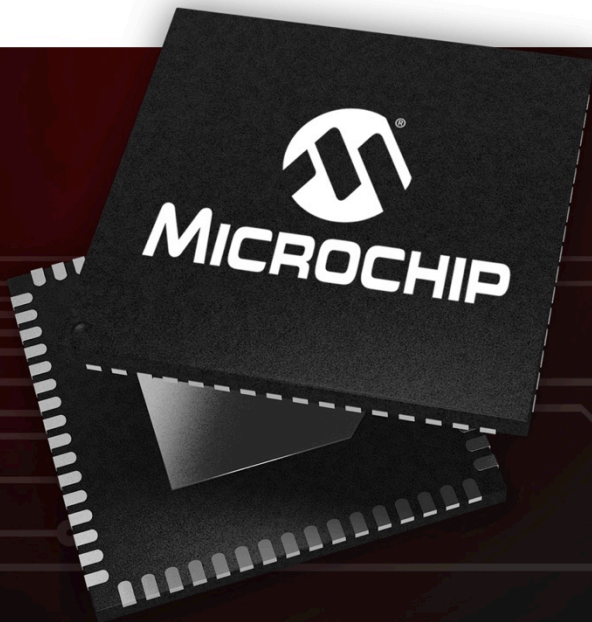
**Which results in accelerated revenue and earnings growth for Microchip**





***Thank You!***





A Leading Provider of Microcontroller,  
Mixed-Signal, Analog & Flash-IP Solutions



## Financials and Investor Value Proposition

*Eric Bjornholt*  
*Chief Financial Officer*



# Microchip Financial Attributes

---

- Microchip is a consistent revenue grower and market share gainer
- Strong track record of accretive acquisitions
- One of the premium business models in the semiconductor industry
  - Consistently high and improving gross margins
  - Disciplined management of operating expenses
  - Ability to drive 40% plus non-GAAP operating margins on a long-term basis
- Significant free-cash flow generation allowing for steady de-leveraging of the balance sheet
- ~\$5B returned to shareholders through our consistently growing dividend and executed share repurchases
- Inventory is appropriately managed and well positioned
- Low capital intensity



# Accomplishments and Targets

**17.9%**

9-yr CAGR  
Revenue\*

**18.6%**

9-yr CAGR  
Gross Margin\*

**21.1%**

9-yr CAGR  
Operating Income\*

**18.2%**

9-yr CAGR  
Adjusted EBITDA

**109**

Quarters of  
Consecutive  
Profitability\*

**62.5%**

Gross Margin\*  
Target

**22.5%**

Operating Expense\*  
Target

**40%**

Operating Income\*  
Target

**9%**

Long-term  
Cash tax rate

**~\$5B**

Capital returned  
to shareholders

**17**

Acquisitions  
Since 2008

**1200**<sub>bps</sub>

Op Inc\* Improvement  
since Q1 FY17

**\$0**

Drawn on  
\$3.1B Revolver

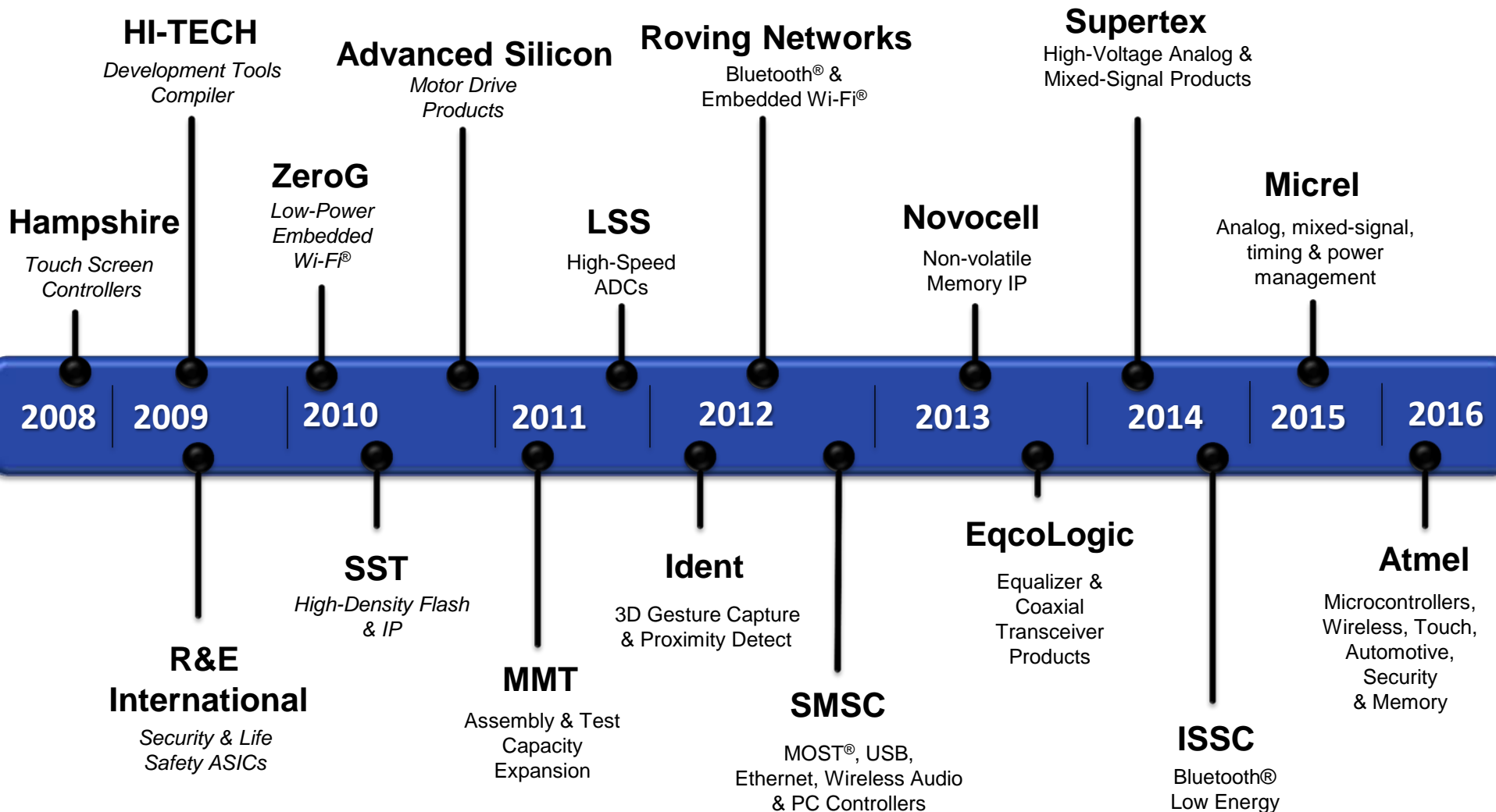
**115K**

Customers

\* References are to non-GAAP operating results. Refer to our website for reconciliations of GAAP to non-GAAP results.



# Expanding Our Solutions Through Acquisitions



# Microchip's Business Transformation

Business Transformation		<u>FY10*</u>		<u>Q3FY18 RR*</u>
	Revenue	~\$1B		~\$4B
	GM %	57.4%		61.4%
	OM %	30.3%		39.4%

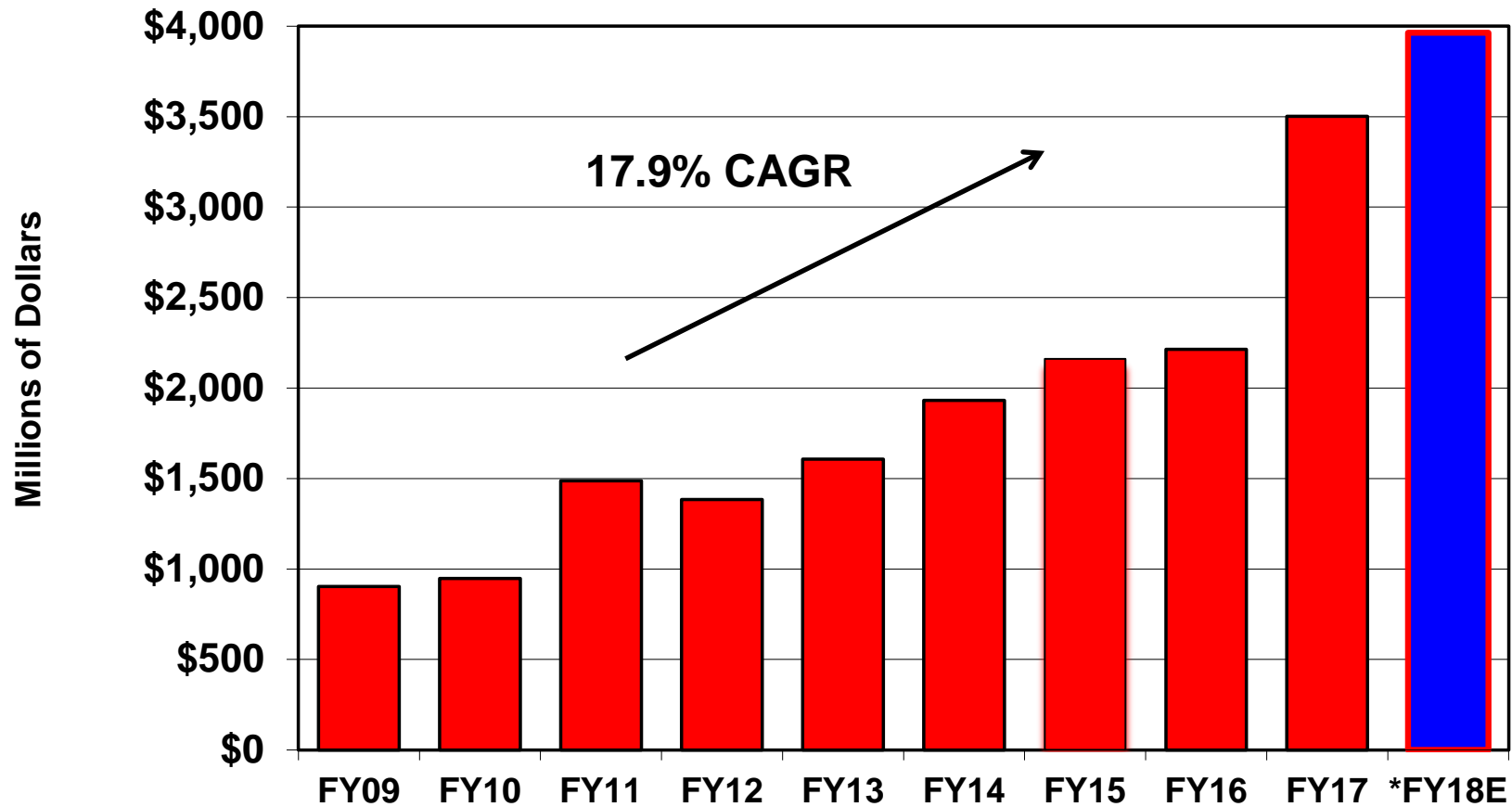
**Since  
FY10**

**MCHP has grown revenue by ~ 300%  
Increased Gross Margin by ~ 400 bps  
Increased Operating Margin by > 900 bps**

\* FY10 = non-GAAP financial results for the fiscal year ending March 31, 2010. Q3FY18RR = 12/31/2017 quarter non-GAAP results multiplied by four



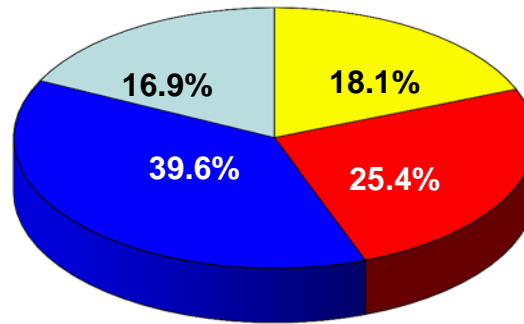
# Annual Non-GAAP Net Sales



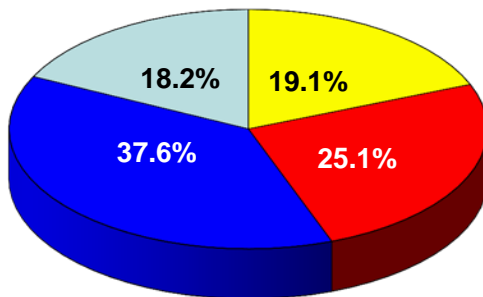
\* FY18 represents Q1 – Q3 FY18 actual results plus midpoint of Q4 guidance

# Revenue by Geography

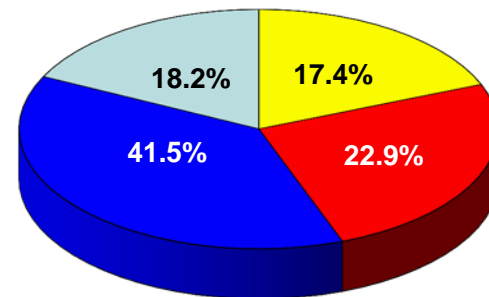
Q4FY18\*



Q4FY17



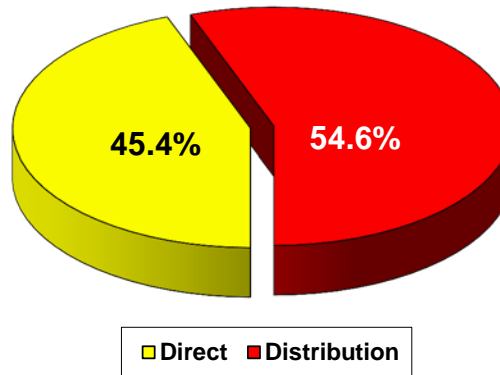
Q3FY18



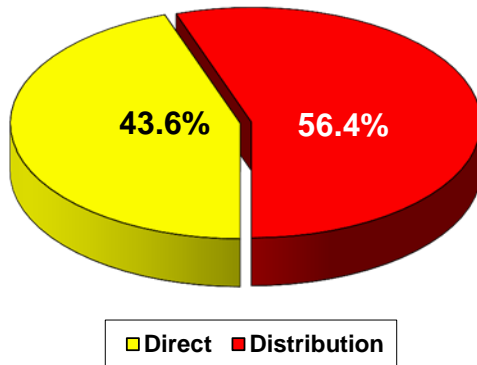
\*Forecast

# Split of Revenue – Direct and Distribution

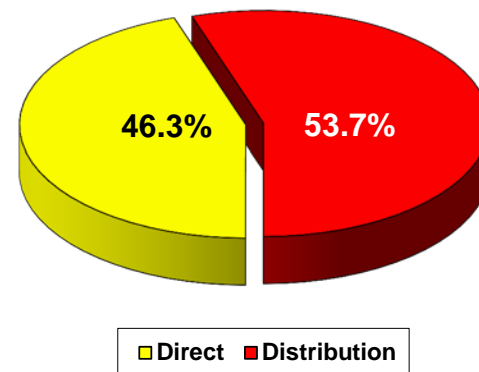
Q4FY18\*



Q4FY17

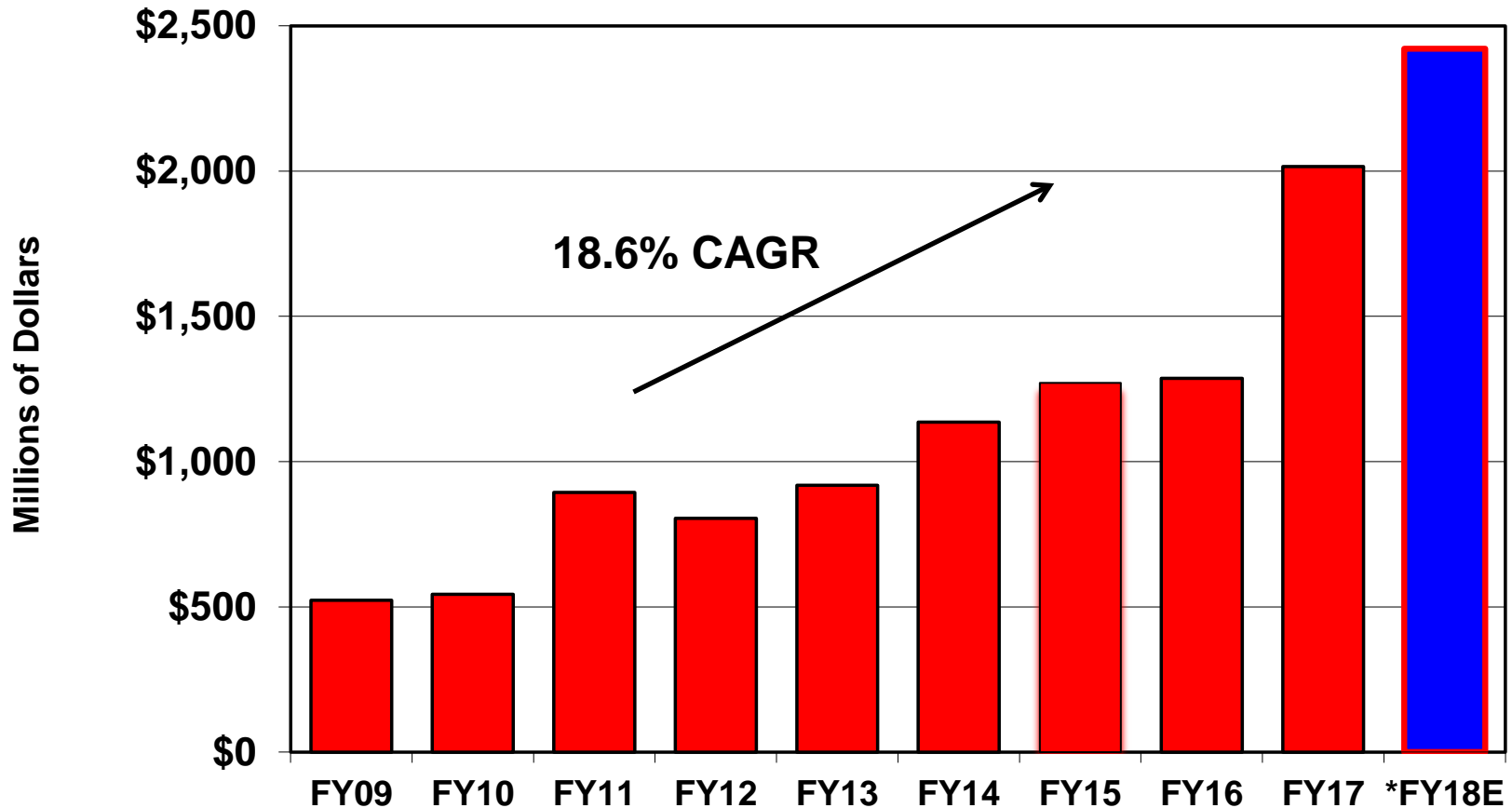


Q3FY18



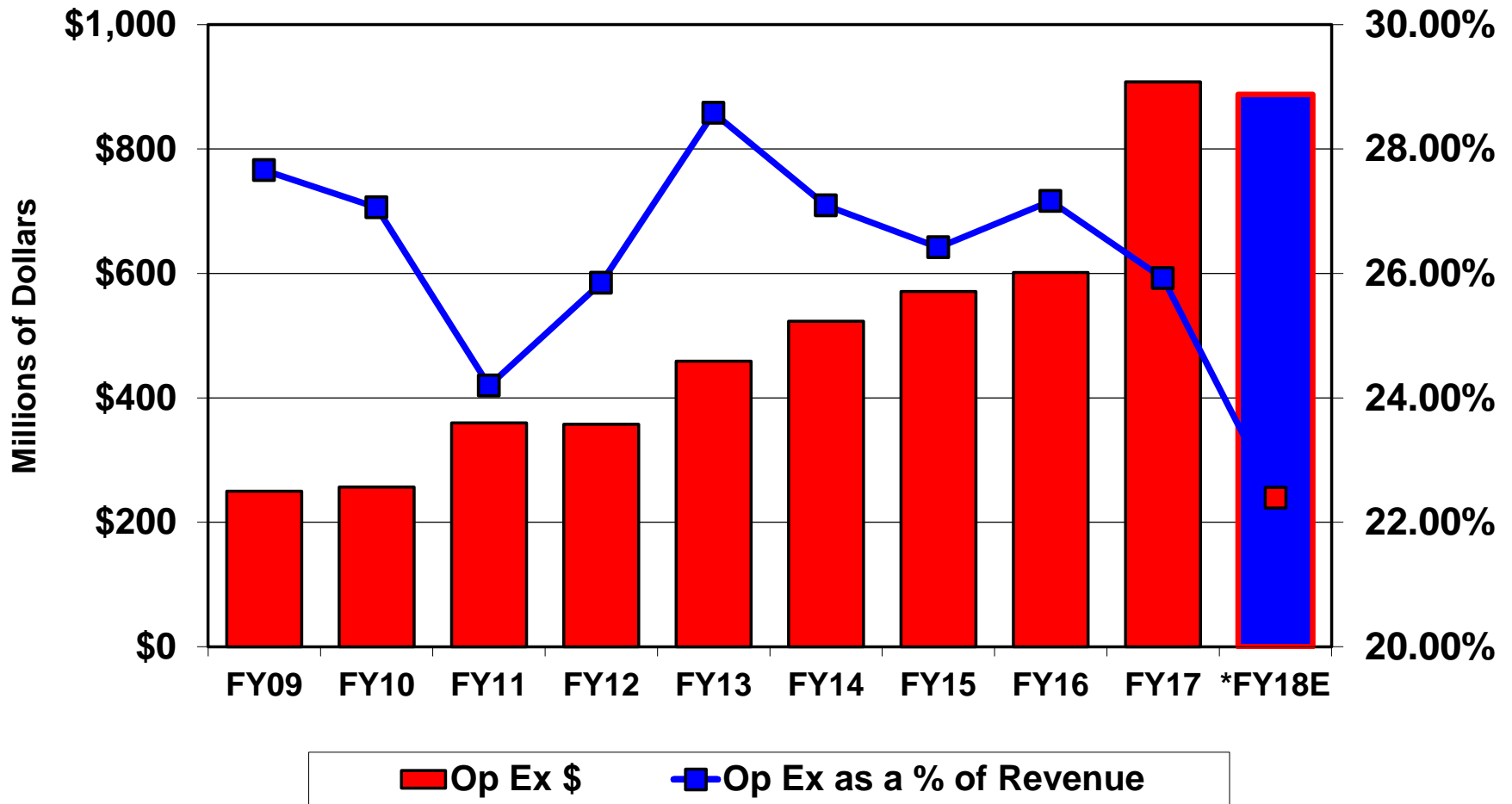
\*Forecast

# Annual Non-GAAP Gross Profit



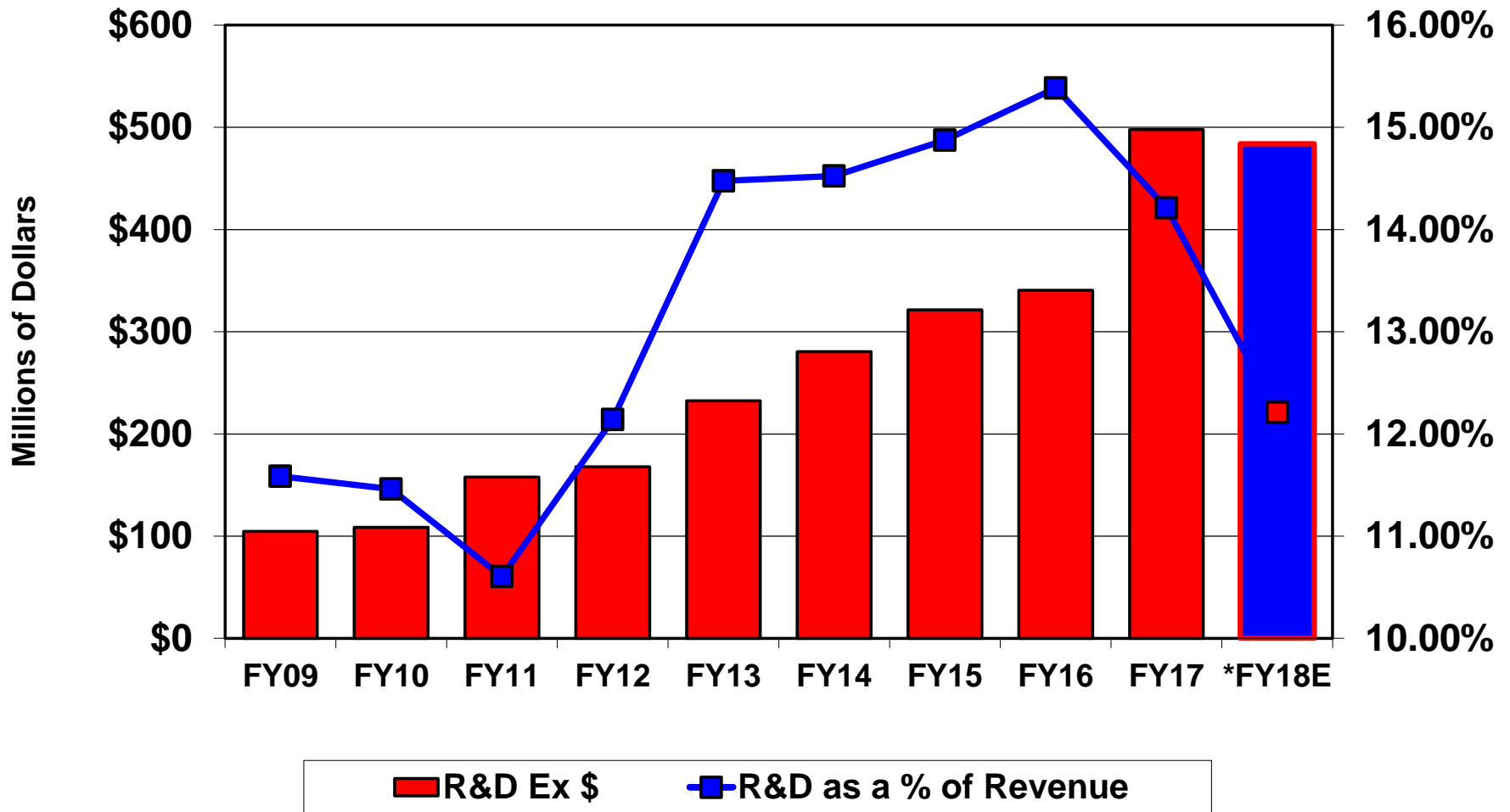
\* FY18 represents Q1 – Q3 FY18 actual results plus midpoint of Q4 guidance

# Operating Expenses



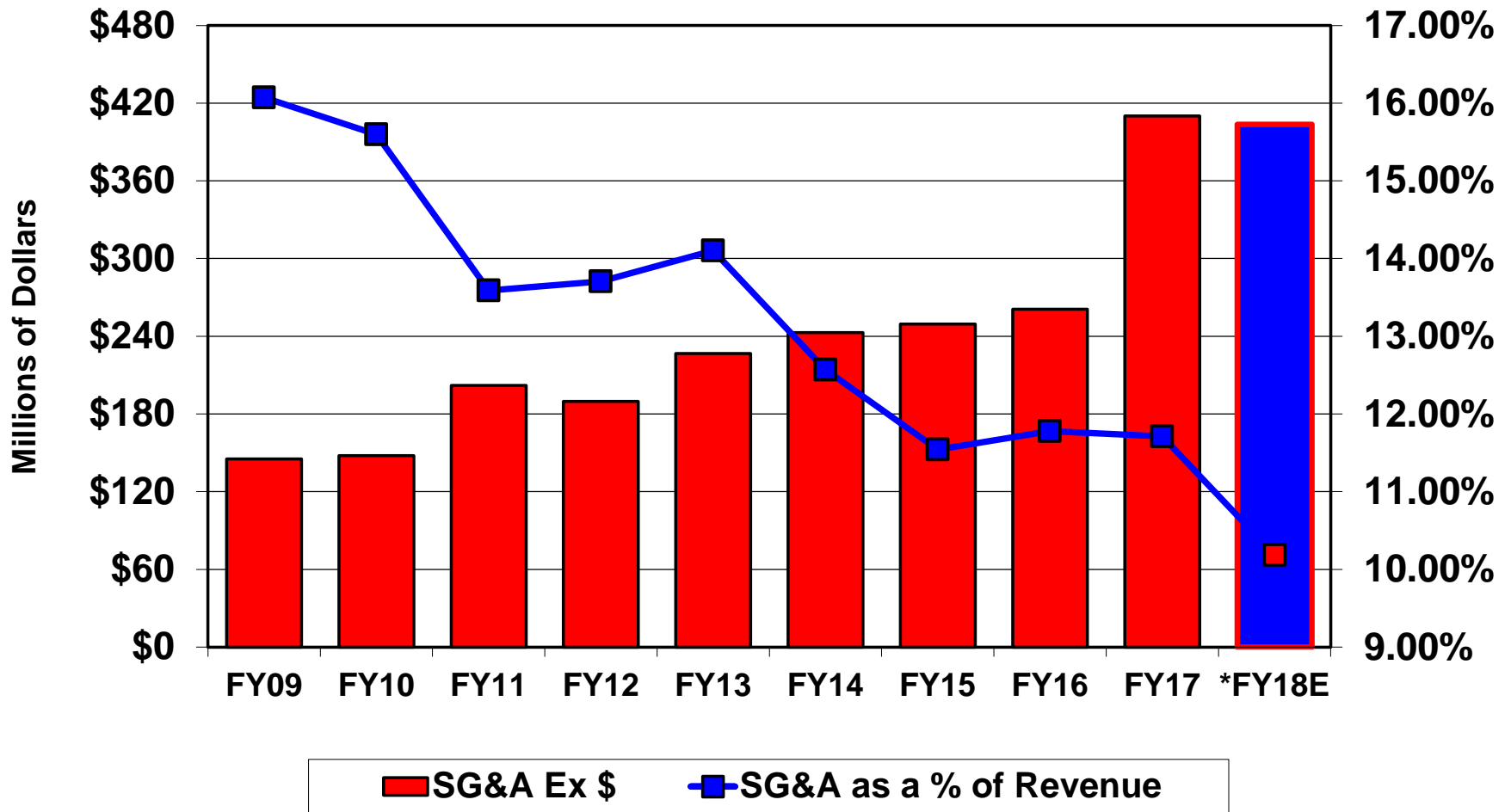
\* Based on the midpoint of Q4 FY18 guidance. Revenue used in the calculations is non-GAAP.

# R&D Expenses



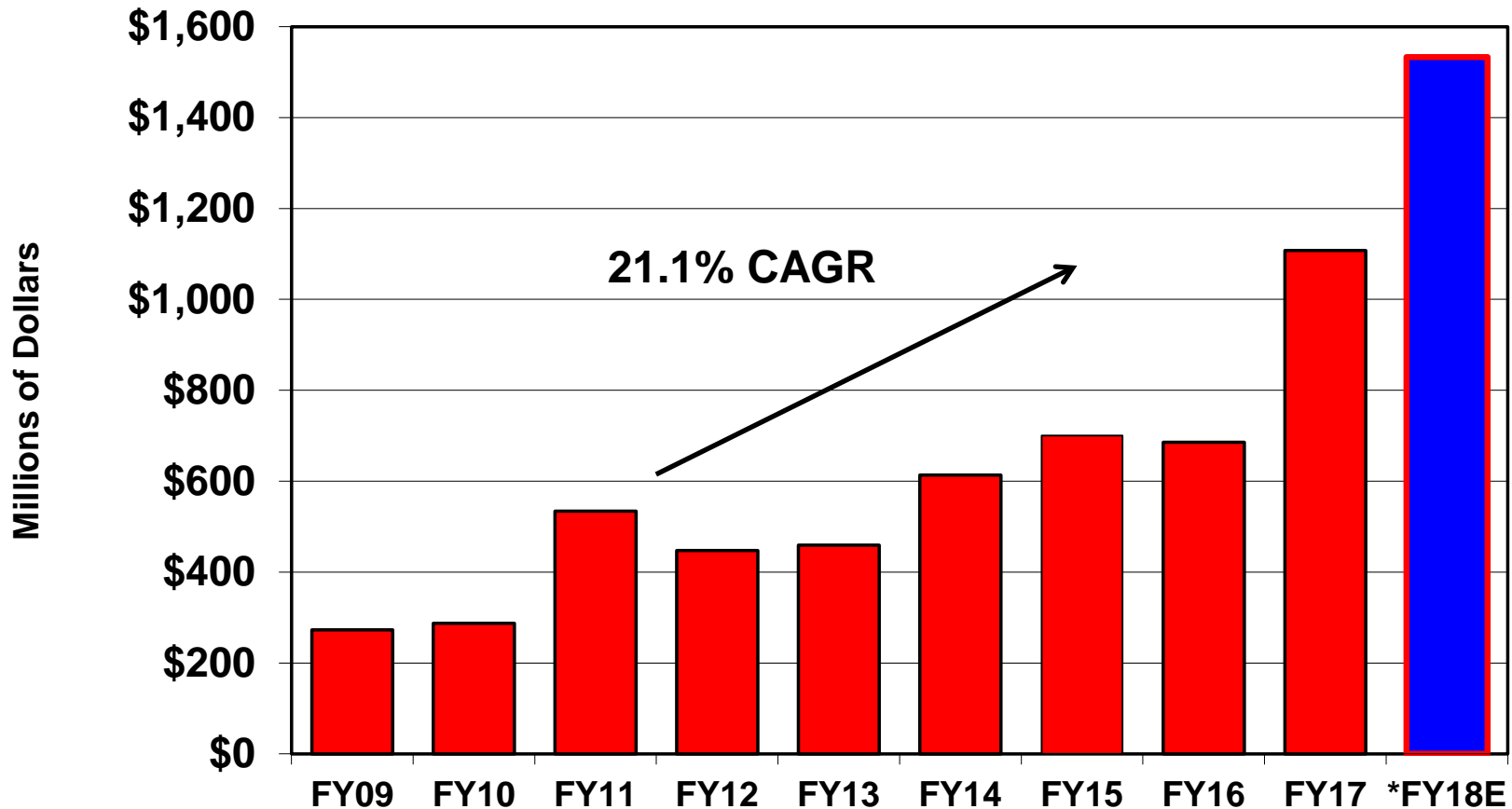
\* Based on the midpoint of Q4 FY18 guidance. Revenue used in the calculations is non-GAAP.

# Selling, General and Administrative Expenses



\* Based on the midpoint of Q4 FY18 guidance. Revenue used in the calculations is non-GAAP.

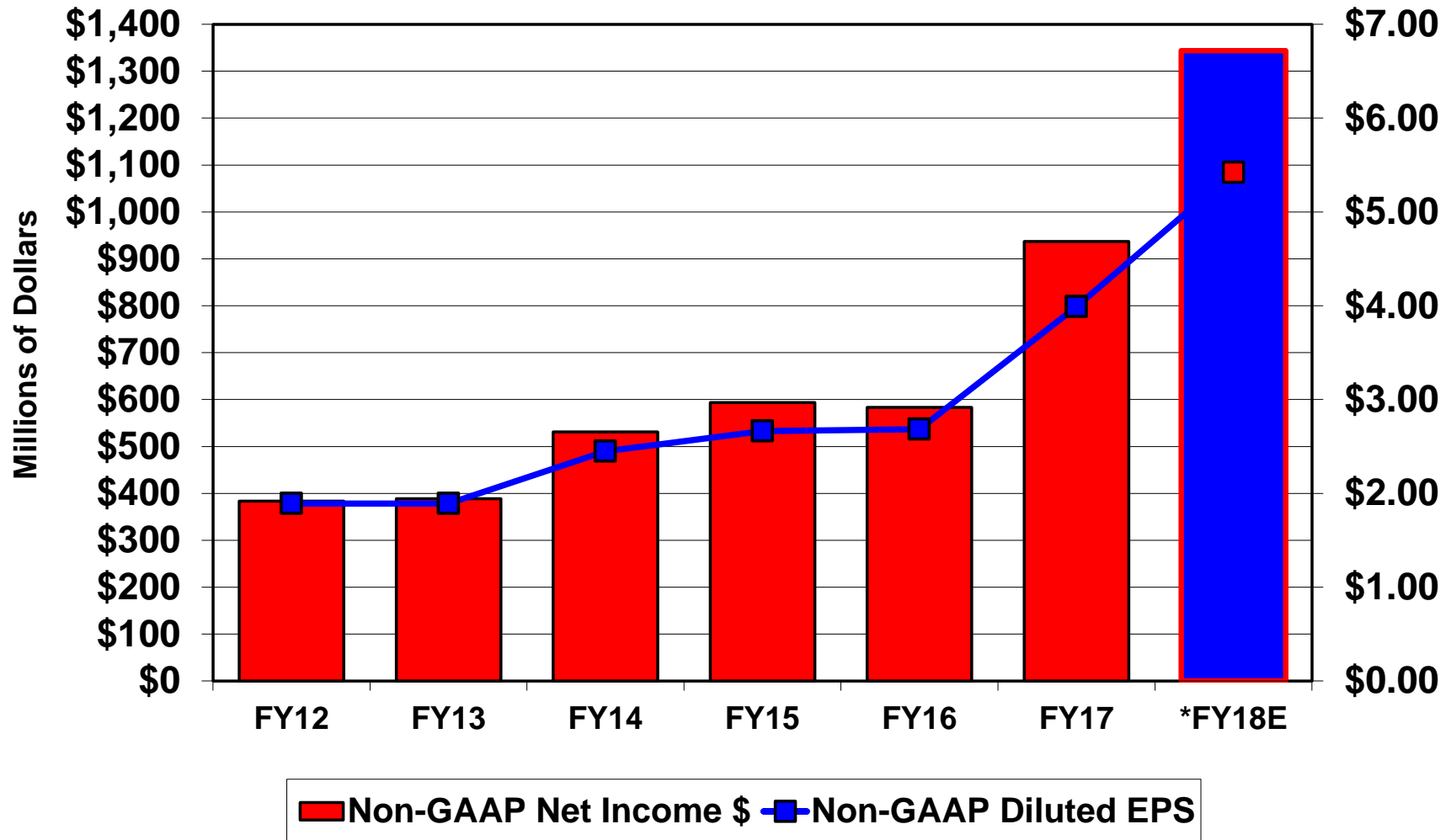
# Annual Non-GAAP Operating Income



\* FY18 represents Q1 – Q3 FY18 actual results plus midpoint of Q4 guidance

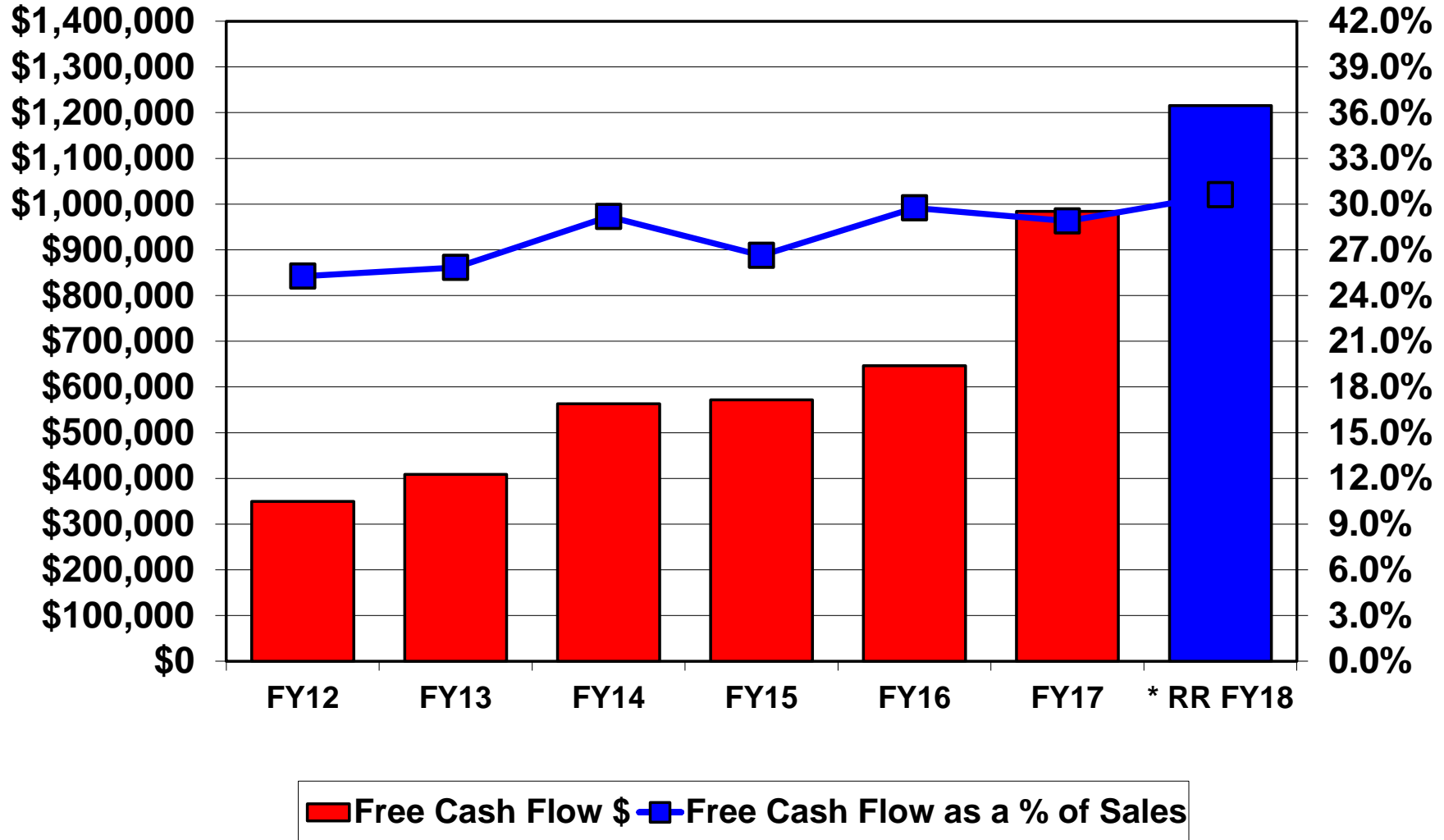


# Annual Non-GAAP Net Income and Diluted EPS Growth



\* FY18 represents Q1 – Q3 FY18 actual results plus midpoint of Q4 guidance

# Free Cash Flow as a % of Revenue



\* FY18 run rate is first three quarter of FY18 divided by 3 and multiplied by 4. Free cash flow = operating cash flow minus capital expenditures.



# Financial Results, Guidance and Long-Term Model

	Actual Results						
	Q1 FY17	Q2 FY17	Q3 FY17	Q4 FY17	Q1 FY18	Q2 FY18	Q3 FY18
<b>Net Sales</b>	\$844.0	\$873.8	\$881.2	\$902.7	\$972.1	\$1,012.1	\$994.2
<b>Gross Profit</b>	\$471.1	\$499.9	\$509.7	\$534.7	\$587.2	\$617.8	\$610.6
<b>Gross Margin</b>	55.8%	57.2%	57.8%	59.2%	60.4%	61.0%	61.4%
<b>Operating Expenses</b>	\$240.0	\$233.6	\$220.6	\$213.6	\$222.9	\$227.3	\$218.9
<b>Operating Income</b>	\$231.1	\$266.3	\$289.1	\$321.2	\$364.3	\$390.5	\$391.7
<b>Operating Margin</b>	<b>27.4%</b>	<b>30.5%</b>	<b>32.8%</b>	<b>35.6%</b>	<b>37.5%</b>	<b>38.6%</b>	<b>39.4%</b>
<b>Net Income</b>	\$194.0	\$219.6	\$246.5	\$276.9	\$319.1	\$344.1	\$341.2
<b>Diluted EPS</b>	\$0.84	\$0.94	\$1.05	\$1.16	\$1.31	\$1.41	\$1.36
<b>EBITDA</b>	\$264.1	\$298.8	\$321.3	\$356.5	\$395.6	\$422.5	\$425.9

Q4 FY18 Guidance	
<b>Net Sales</b>	\$964.4 - \$1,004.1
<b>Gross Margin %</b>	61.3% - 61.7%
<b>Operating Expense %</b>	22.0% to 22.4%
<b>Operating Margin</b>	38.9% to 39.7%
<b>Diluted EPS</b>	\$1.30 - \$1.39

Long Term Model	
<b>Revenue Growth</b>	7% - 9%
<b>Gross Margin</b>	62.5%
<b>Operating Expenses</b>	22.5%
<b>Operating Margin</b>	40.0%

Microchip does not utilize a GAAP long-term model. All figures in long-term model are non-GAAP. Excludes share-based compensation, acquisition related charges, non-recurring items. A reconciliation of our GAAP to non-GAAP results is available at [www.microchip.com](http://www.microchip.com).

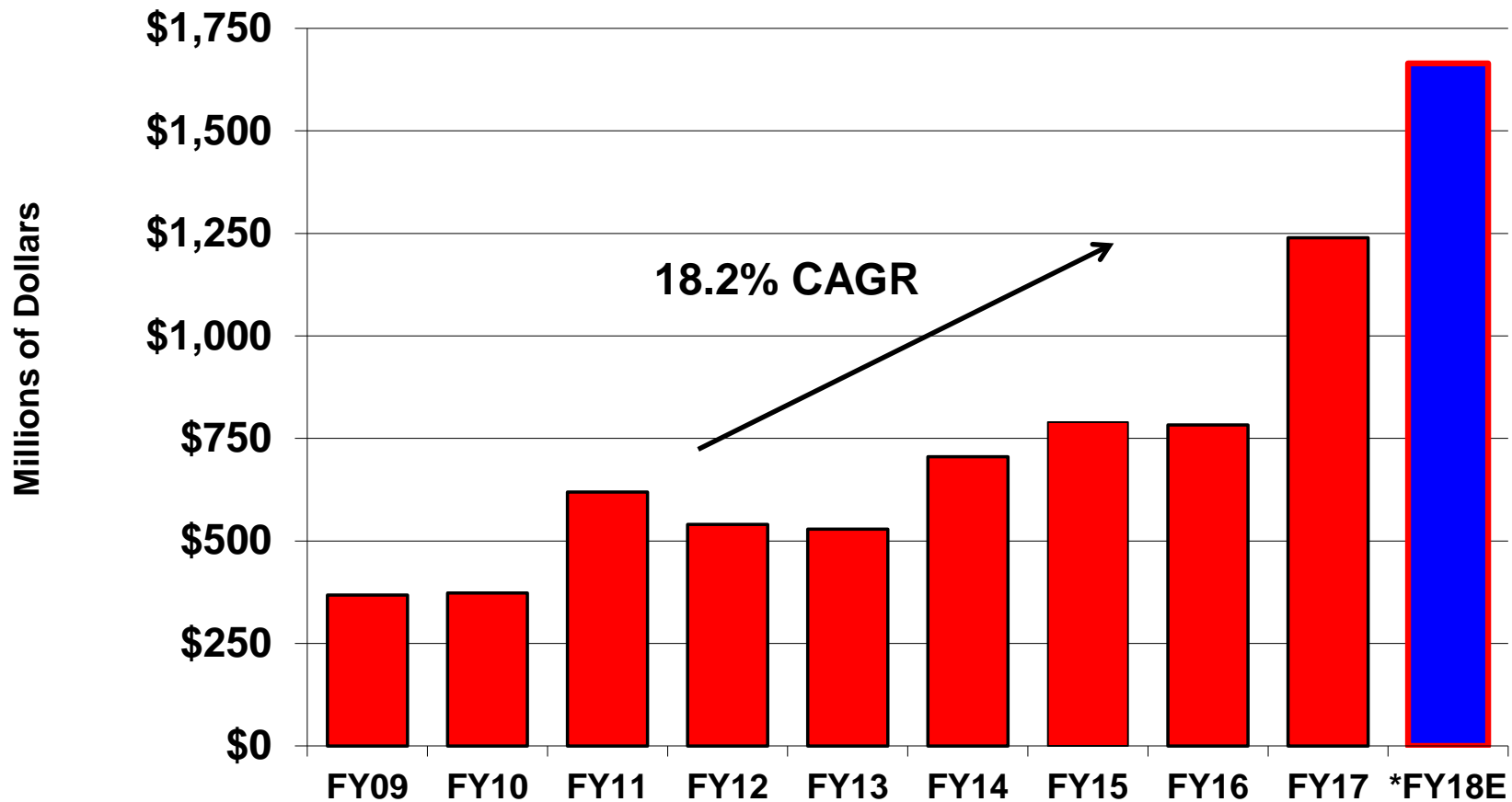


# Highly Profitable Financial Model \*

	Microchip	Microsemi	Microchip + Microsemi	Long Term Model
Revenue (\$M)	\$3,977	\$1,875	\$5,852	
Gross Margin (%)	61.4%	63.2%	62.0%	63%
R&D (%)	12.1%	18.5%	14.2%	13%
SG&A (%)	9.9%	12.5%	10.7%	9.5%
Op Income (\$M)	\$1,567	\$603	\$2,170	
Op Income (%)	39.4%	32.2%	37.1%	40.5%

\* In millions, except percentages. All figures are non-GAAP and are based on results for the December 2017 quarter. Revenue and operating income dollars are based on December 2017 quarter results which were annualized by multiplying the December quarter numbers by four.

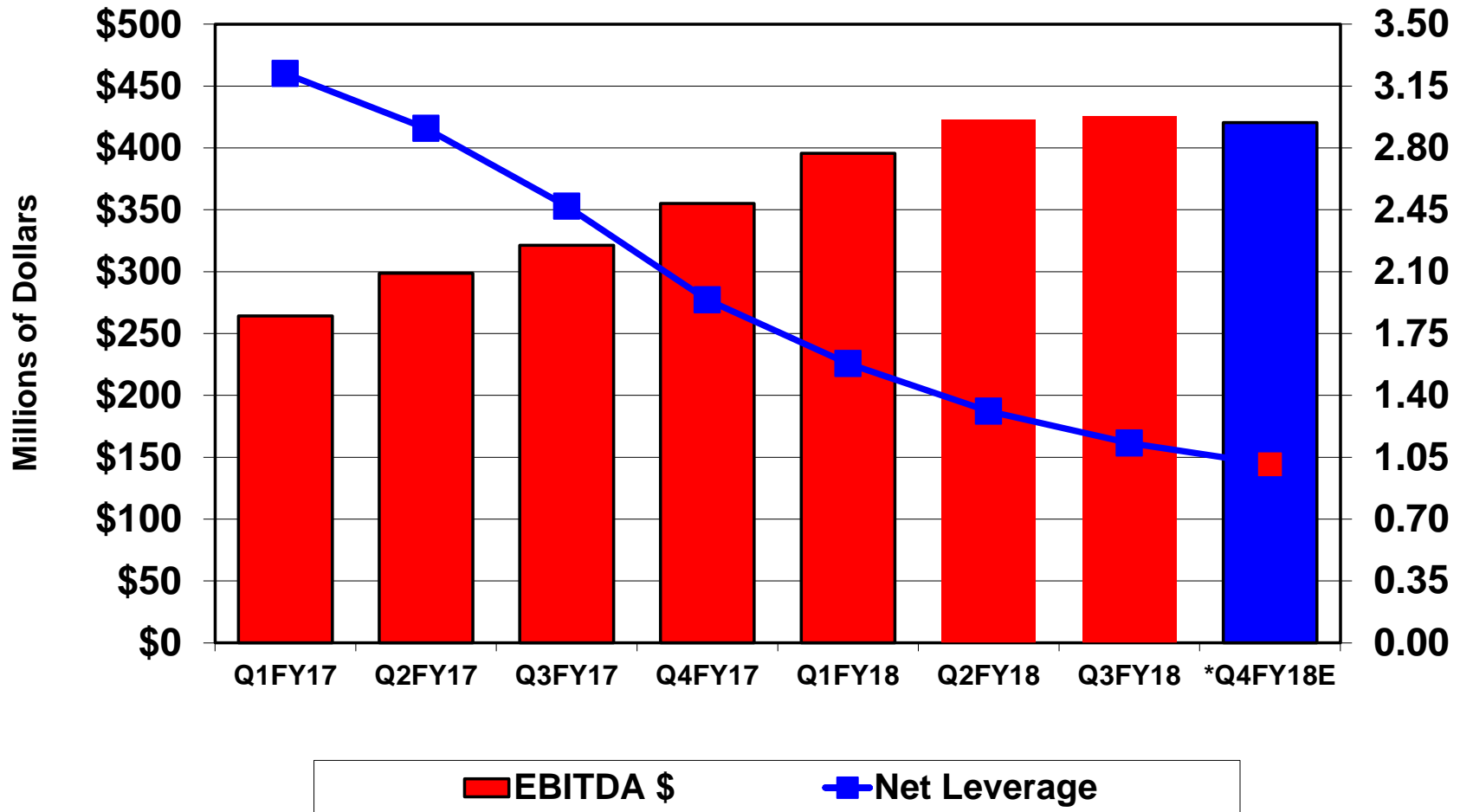
# EBITDA



\* FY18 represents Q1 – Q3 FY18 actual results plus Q4 estimate based on midpoint of financial guidance

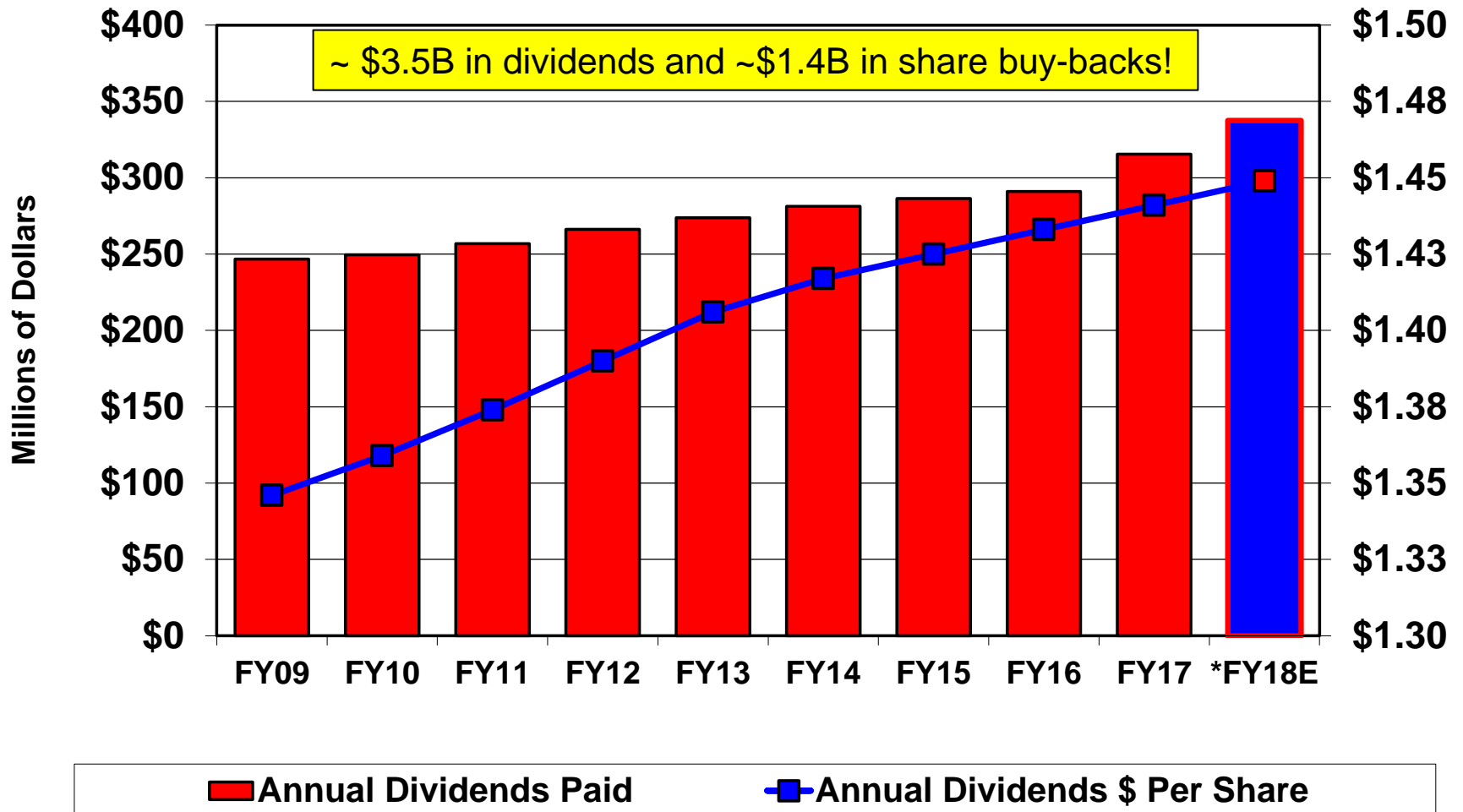


# EBITDA and Net Leverage – Atmel Acquisition through the Current Quarter



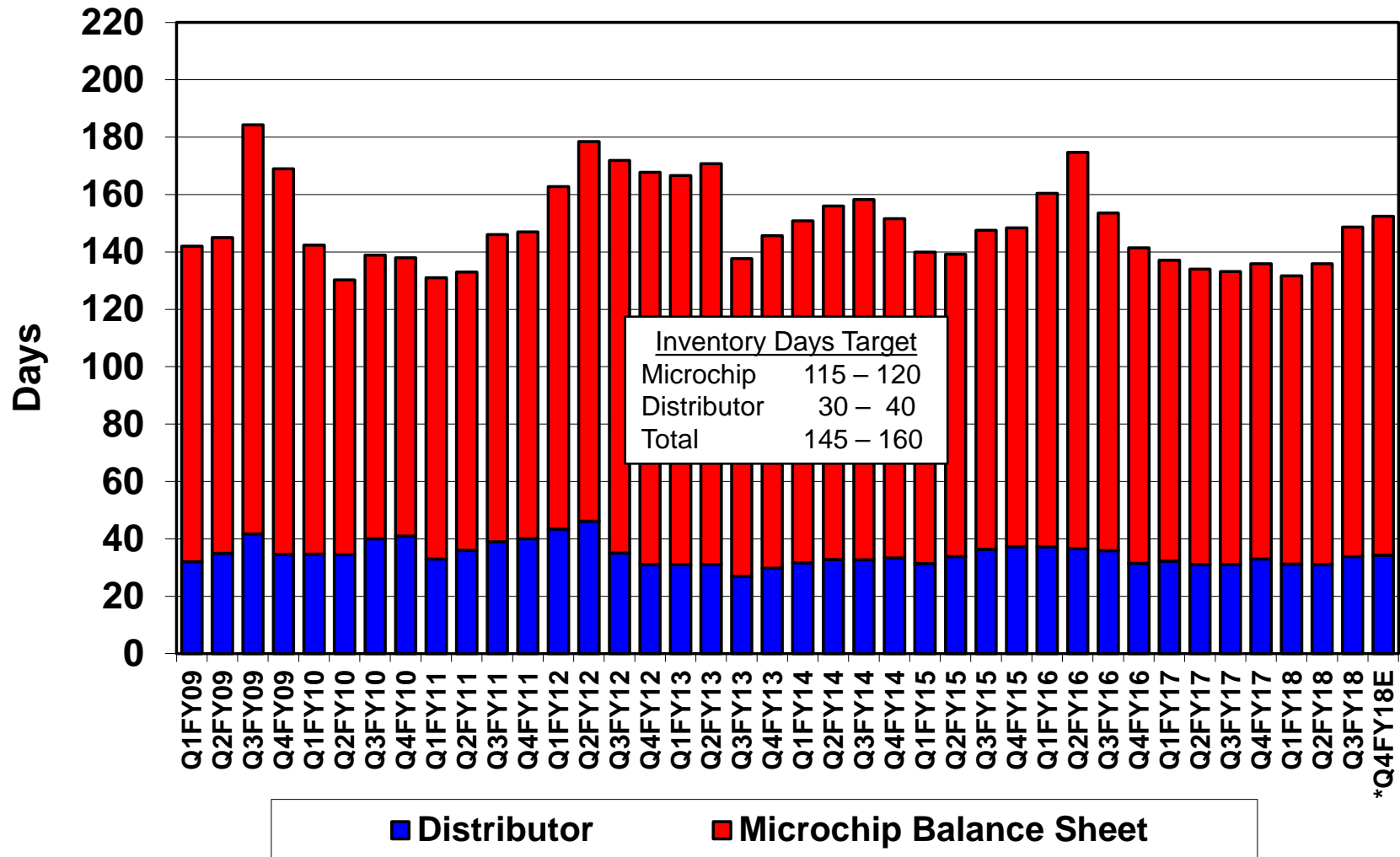
\* EBITDA as calculated in accordance with Microchip's Credit Facility. Net leverage excludes 2037 convertible debt, consistent with Credit Facility

# ~\$5B Billion Returned to Shareholders



\* FY18 includes estimated amount to be paid to shareholders on March 6, 2018

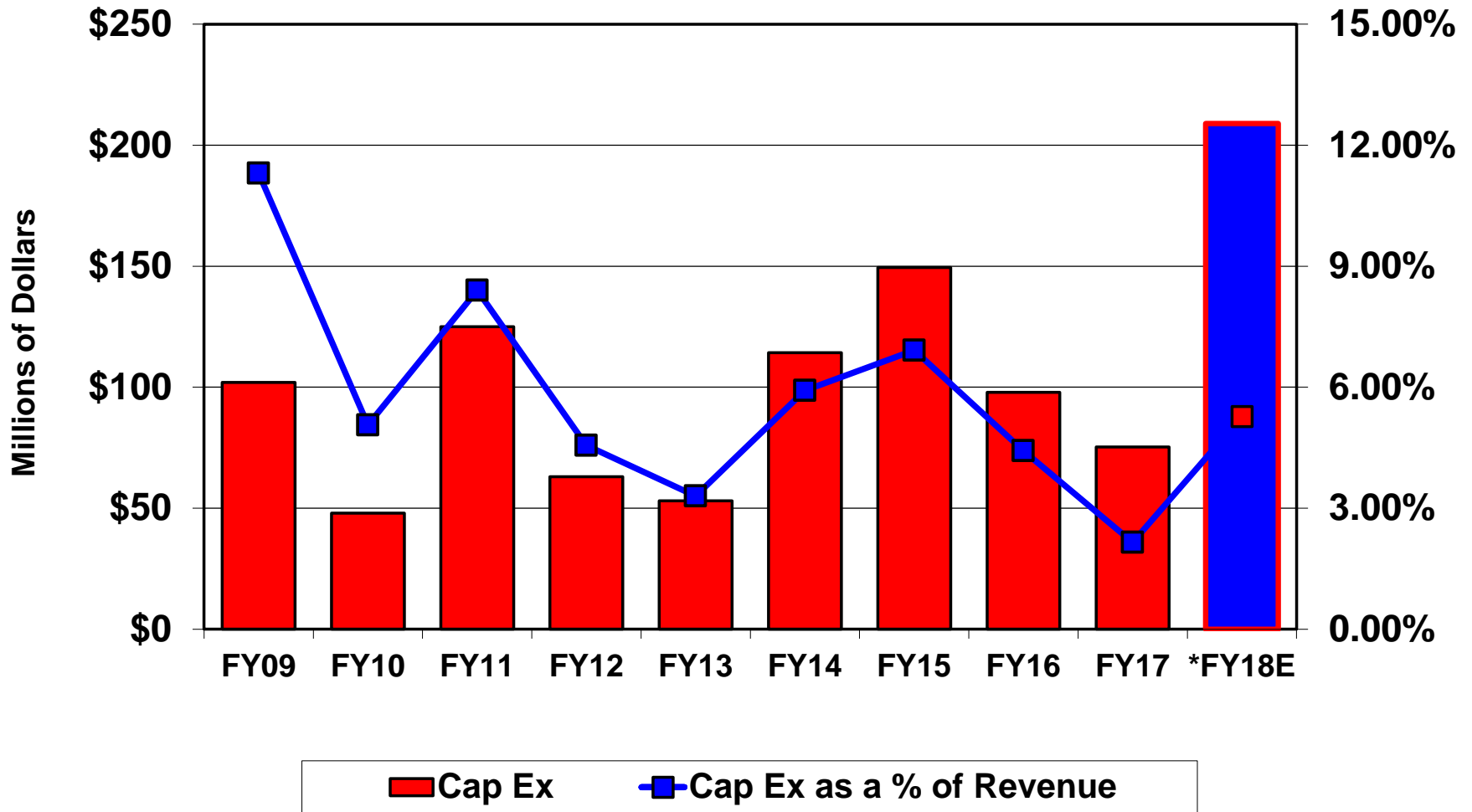
# Total Inventory\* (Distributor and Microchip)



\* Reflects Non-GAAP inventory balances which exclude GAAP purchase accounting mark-up from acquisitions to allow period-to-period comparability.



# Capital Expenditures



\* Based on the midpoint of Q4 FY18 guidance. Revenue used in the calculations is non-GAAP.

# Financial Summary

---

- Microchip is a consistent revenue grower and market share gainer
- Long-term business outlook is very positive driven by Microchip 2.0
- One of the premium business models in the semiconductor industry
  - Consistently high and improving gross margins
  - Disciplined management of operating expenses
  - Ability to drive 40% plus non-GAAP operating margins on a long-term basis
- Strong track record of accretive acquisitions where business models of acquired companies have been transformed over a short period of time
- Significant free-cash flow generation allowing for steady de-leveraging of the balance sheet
- Inventory within Microchip's target range and positioned well leading into our strongest two quarters of the year (June and September)



***Thank You!***

