



# Microsemi Corporation

February 2014

# Disclaimer

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- 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.

# About Microsemi Corporation (Nasdaq: MSCC)

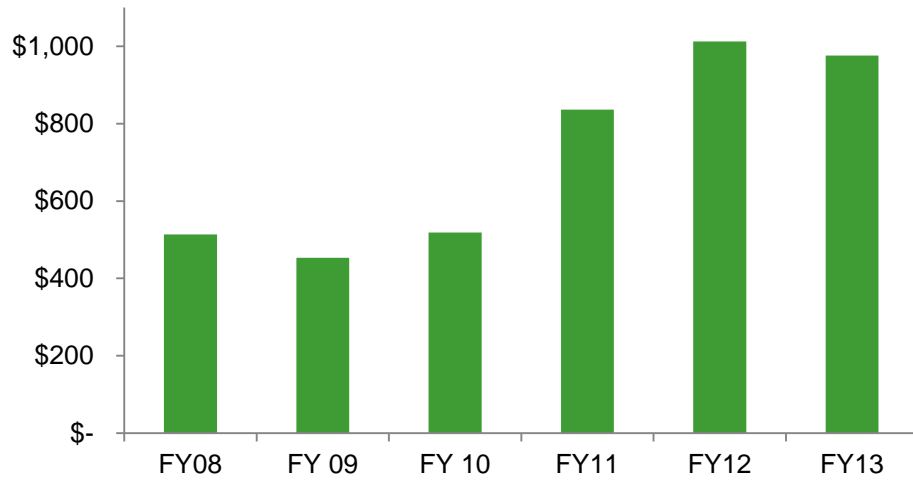
- Global provider of semiconductor solutions for applications focused on delivering power, reliability, security and performance.
- High-value, high barrier-entry markets:
  - Communications
  - Defense & Security
  - Aerospace
  - Industrial
- FY 2013 Revenue: \$976 million



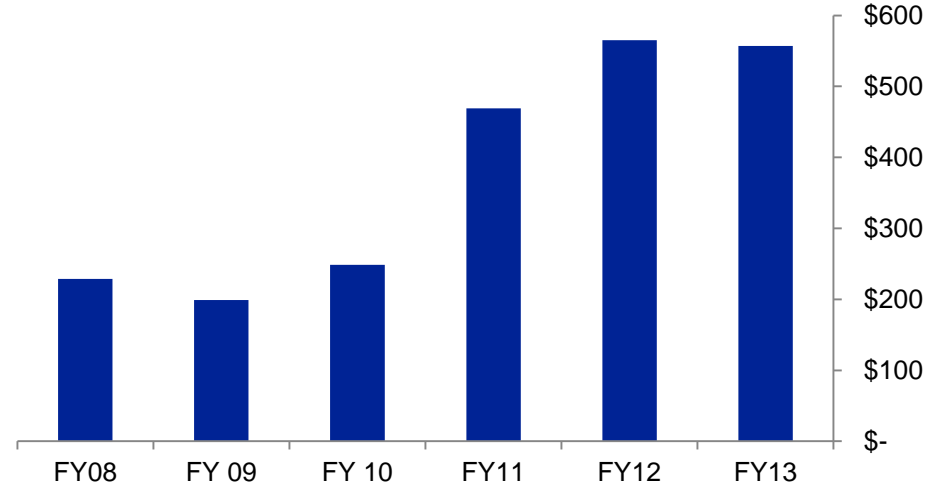
*Corporate headquarters in Aliso Viejo, CA*

# Strengthening Financial Results

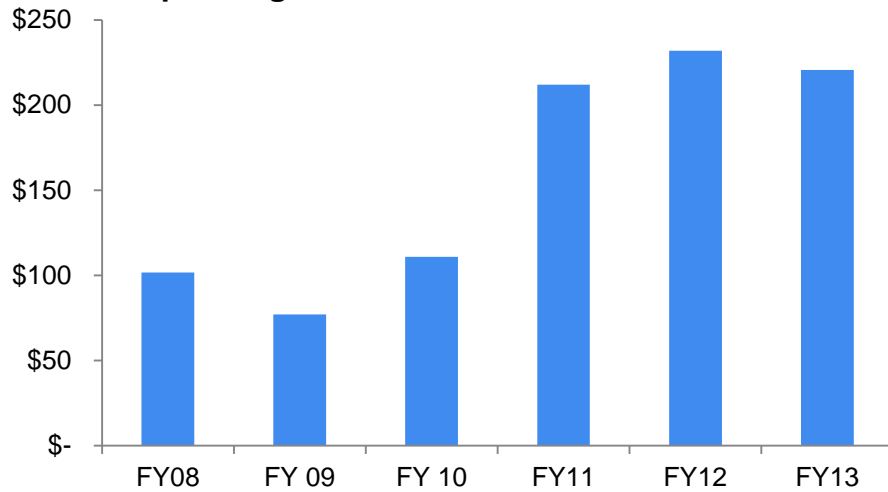
**Net Sales**



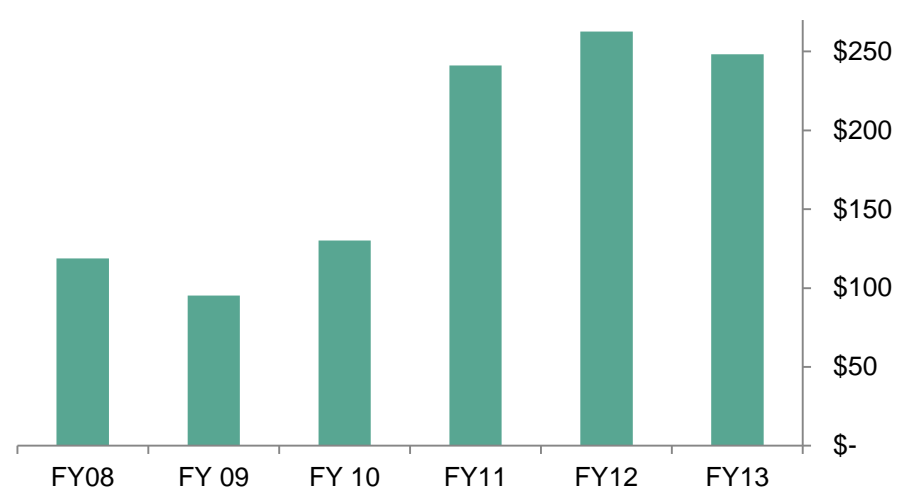
**Gross Profit**



**Operating Income**



**EBITDA**



(Non-GAAP, \$MM)

# Macro Growth Drivers

4G Deployment  
Bi-directional Data  
High Definition Media  
The Cloud

**Bandwidth**

Information Assurance  
Counterfeiting  
Anti-tamper

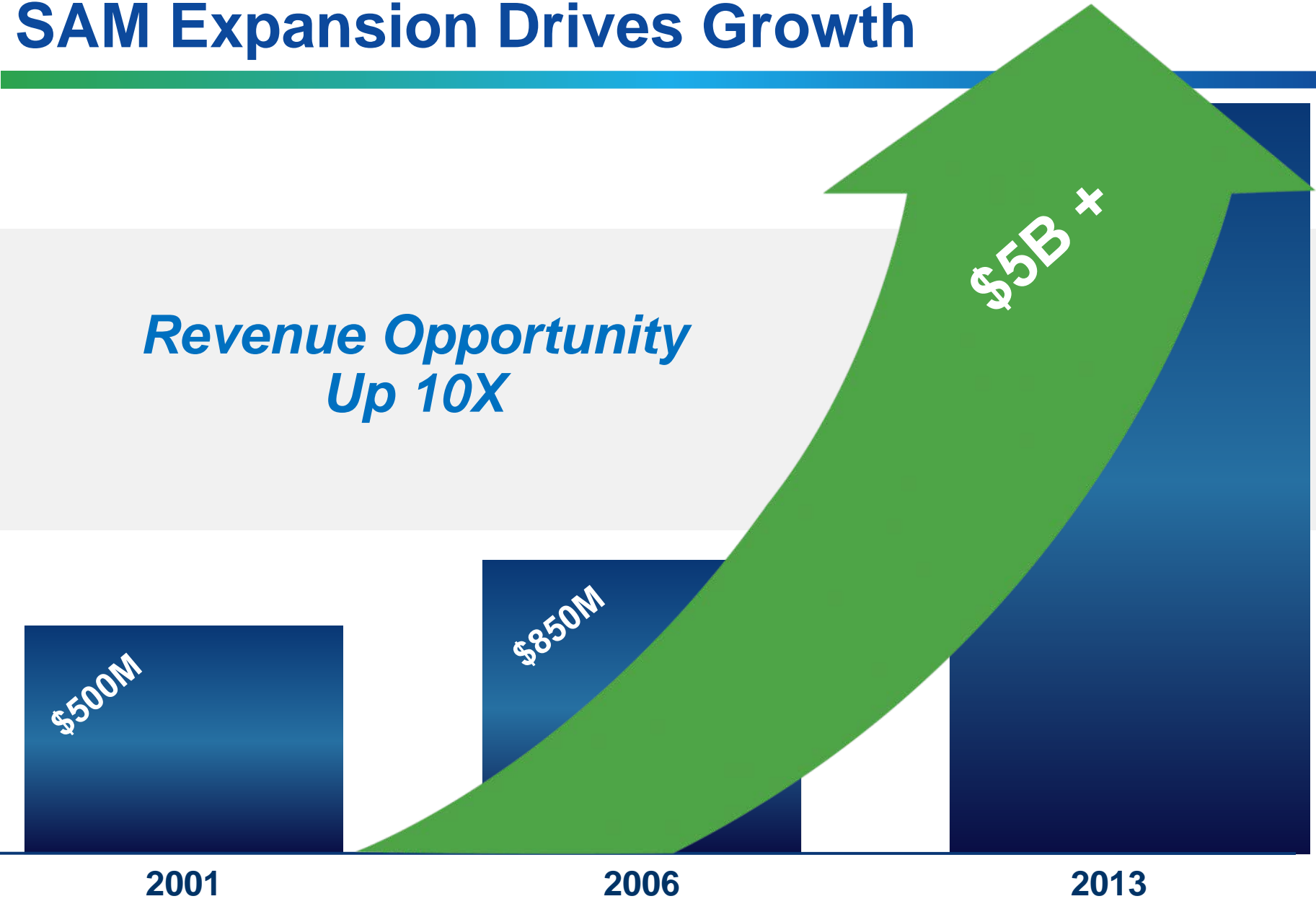
**Security**

Transportation  
Power Generation  
Energy Management

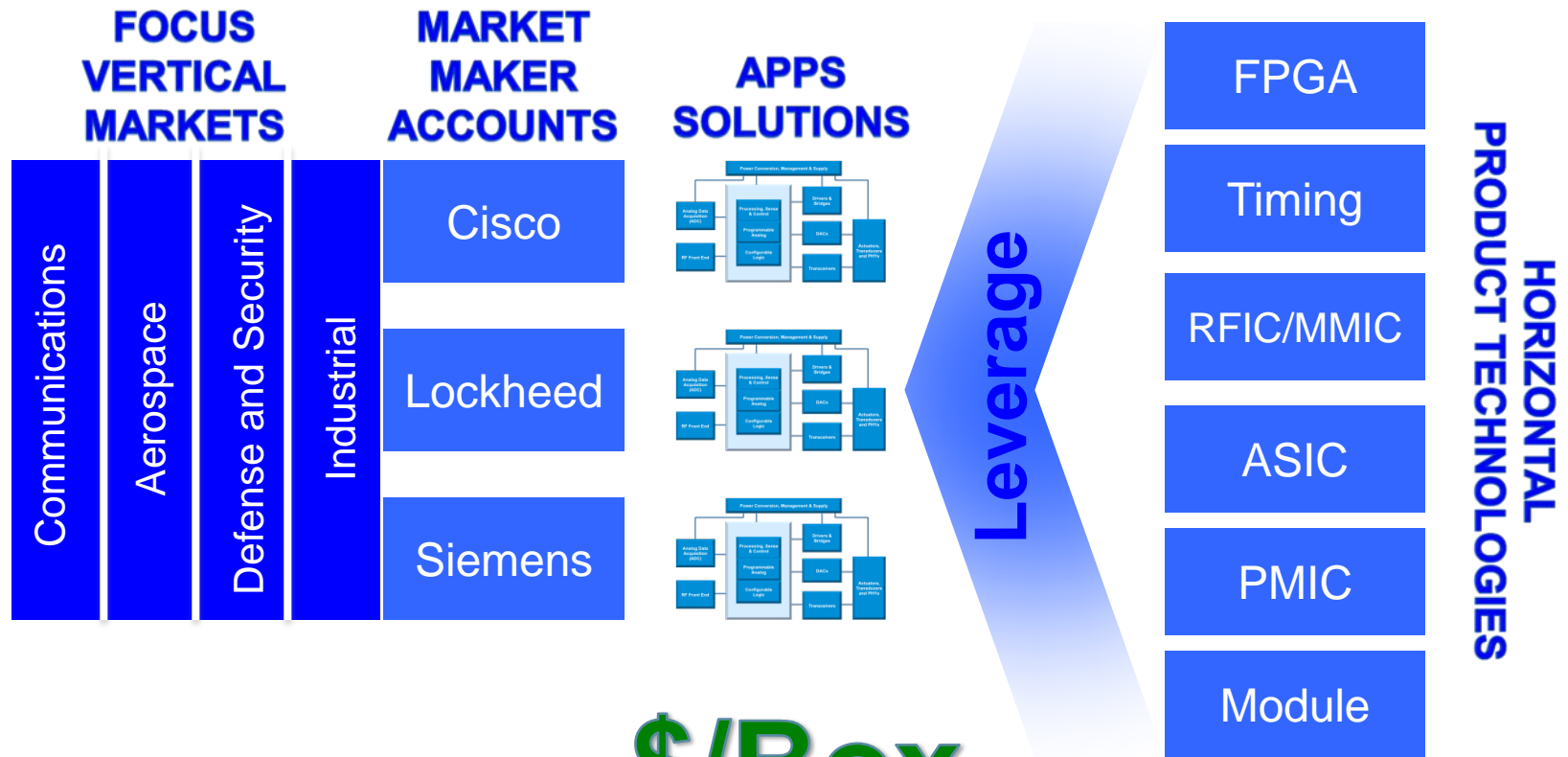
**Electrification**

# SAM Expansion Drives Growth

*Revenue Opportunity  
Up 10X*



# Going To Market – The Solution Engagement



**= \$/Box**

**Value Creation**

# Real Customers and Real Programs



Rolls-Royce®

**Engine Control and System Management**  
FPGA, HV MOSFET, Analog ASIC, Power Module, TVS



**Server System and Power Management**  
Customizable SoC, DC-DC, HV MOSFET



**Basestation and Backhaul Systems**  
IEEE 1588/SyncE, PLL, FPGA



**Power Bus and System Management**  
FPGA, MOSFET, Analog ASIC, Power Module, TVS



**Implantable Medical Device Systems**  
Ultra Low-Power Radio, HV IGBT/MOS FET, FPGA

Schlumberger

**Hi-Temp Down-Hole Drilling Solutions**  
FPGA, HV FET & IGBT, HV Power Module



# Microsemi Market Focus

## Communications

38% of Revenue

Wireless Backhaul  
Base Station  
Routing & Switching  
Networking  
Access & CPE  
Wireless Terminal

## Defense & Security

25% of Revenue

Military  
Communication  
Military Aircraft  
Unmanned Vehicle  
Information Assurance  
Security Scanners  
Anti-Tamper

## Aerospace

15% of Revenue

Commercial Air  
Engine Control  
Avionics  
Actuation  
Space  
Power Delivery  
Payload Electronics  
Launch Systems

## Industrial

22% of Revenue

Industrial Control  
Medical Devices  
Alternative Energy  
Hybrid Vehicles  
SEMI Cap Equipment  
Machine to Machine



# Solidifying Microsemi's Market Leadership

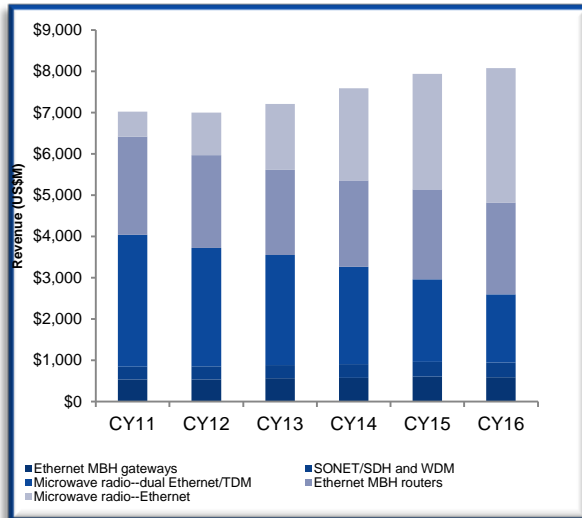


## Microsemi provides world class timing solutions

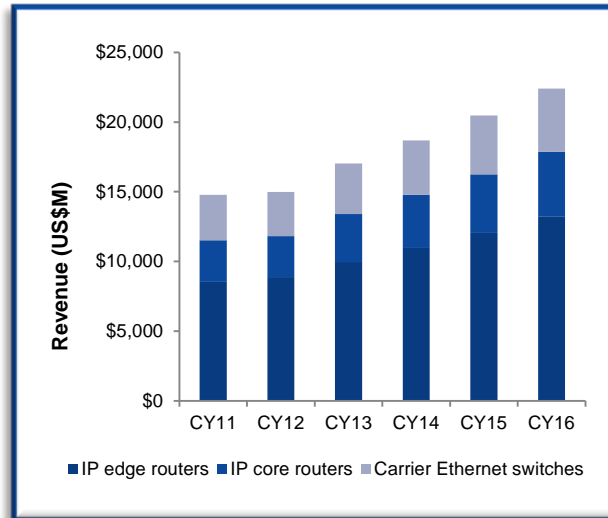
- **Leader in timing synchronization solutions**
  - Broad and complete communications equipment timing solution
  - Most flexible and highest monolithic density OTN timing solution
  - High performance and cost-efficient clock management solutions
  - System knowledge that solves customers' most sophisticated network, compliance or clock tree challenges
- **Field proven with Tier 1 wireline and wireless infrastructure suppliers**

# Addressing Higher Growth Communications Markets

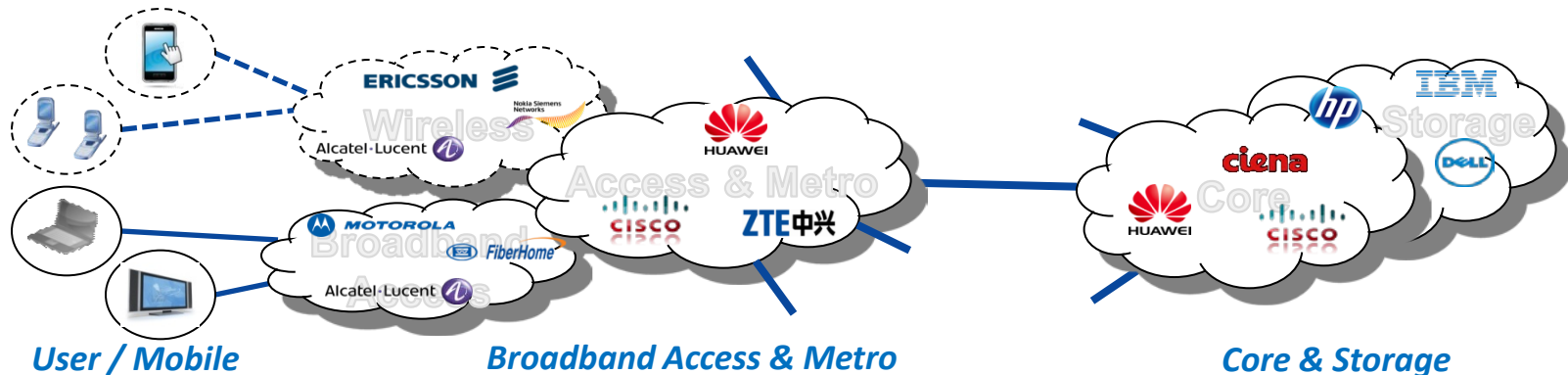
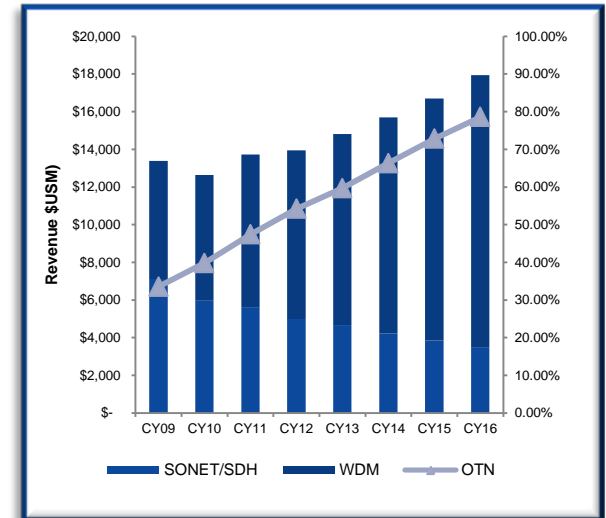
**14% CAGR Ethernet Mobile Backhaul [2012 – 2016]**



**11% CAGR Service Providers Routers & Switches [2012 – 2016]**



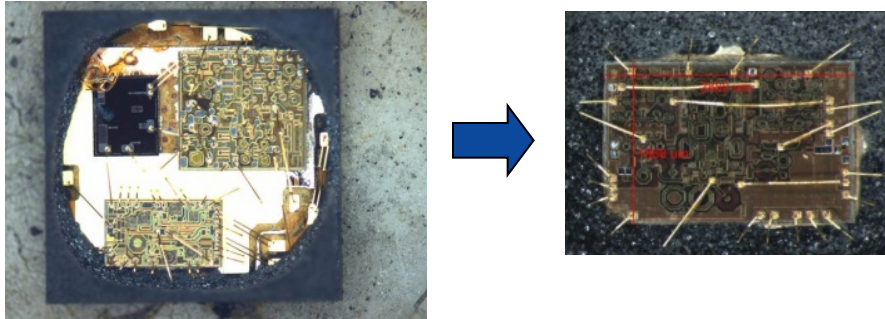
**17% CAGR OTN Infrastructure Equipments [2011-2016]**



# Integration Capability a Key Differentiator

802.11ac

WiFi Dual-Band FEM

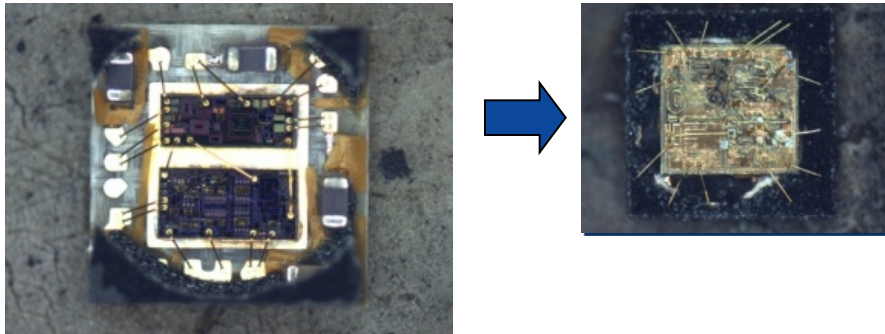


## ■ Monolithic SiGe FEM

- Highest level of integration
- Lowest BOM cost
- Lowest cost of ownership

802.11ac

WiFi 5GHz FEM



## ■ Technology advantages

- Digital tuning vs. board level tuning
- Optimized power management
- Multiple radio bands on one chip
- Faster time to production

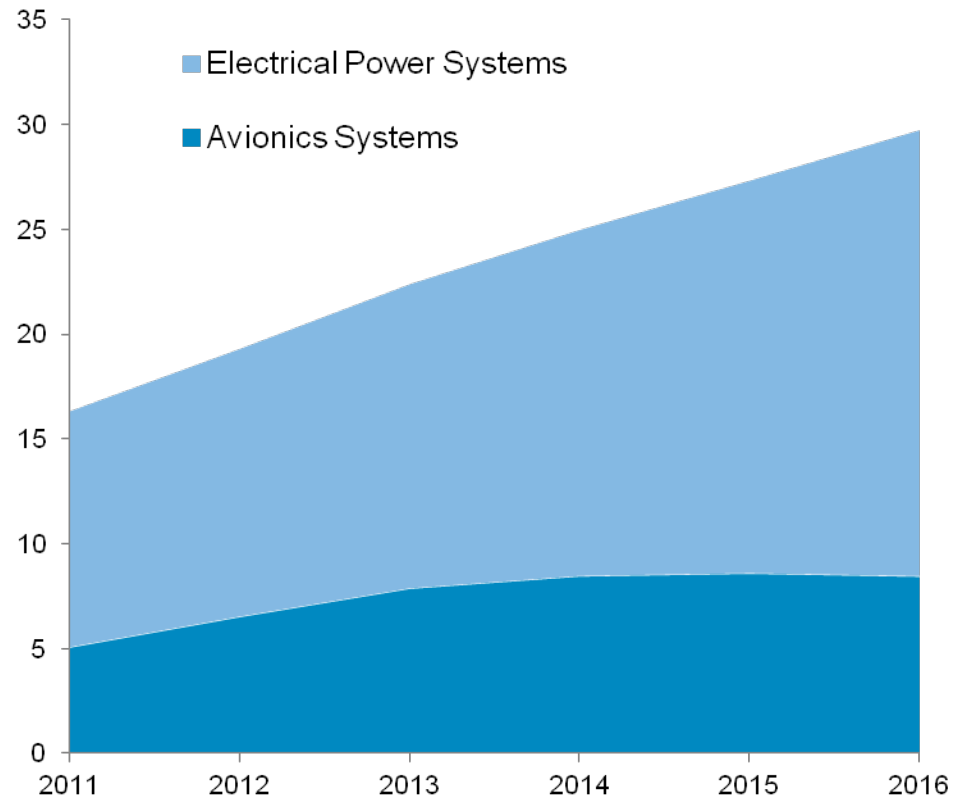
# Electrification Accelerating Growth Prospects

## Avionics

- 11% CAGR 2011-2016
- Higher speed, wider bandwidth
- Increased connectivity
- Size, weight, power
- Integration

## Electrical Power Systems

- 14% CAGR 2011-2016
- Power Optimization
- Reliability, Safety, Cost
- Power Quality & Thermal Control
- Eco friendly, Zero Emissions



Revenue in US\$, Billions

Source: Frost & Sullivan

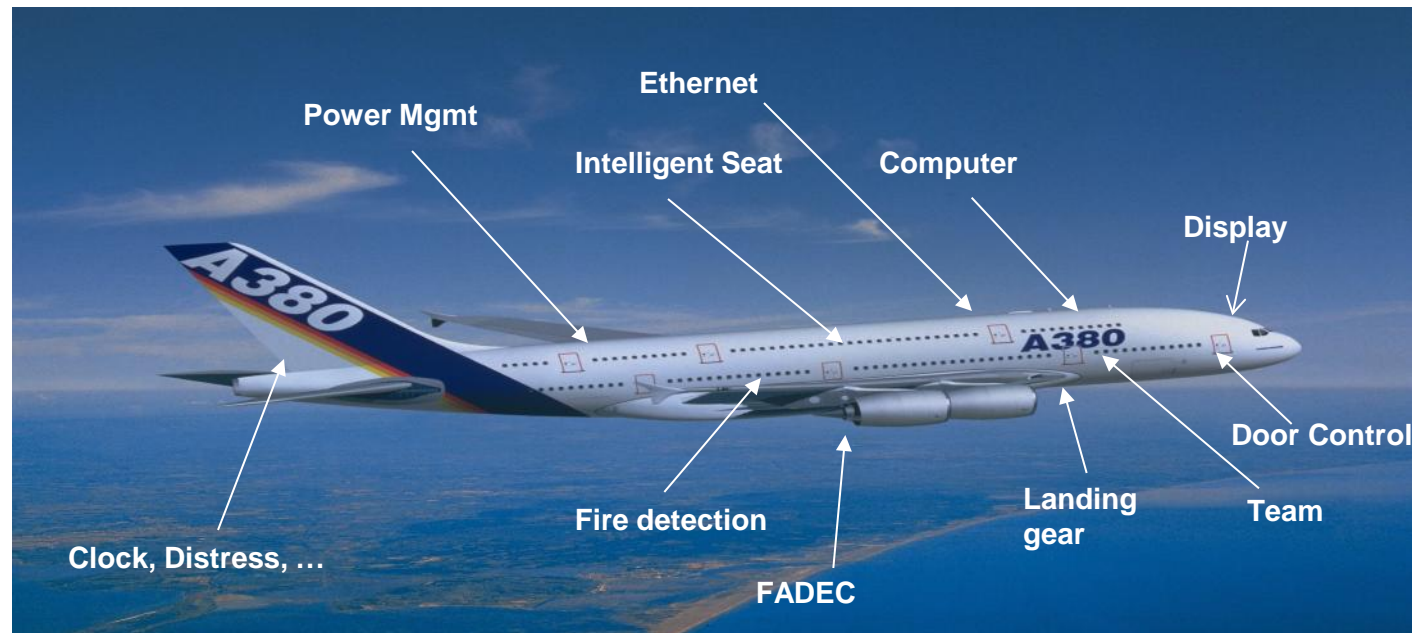
# Growing Content and Capabilities

## ■ >1000 Microsemi FPGAs on Board

- Flight computers
- Cockpit displays
- Engine control and monitoring
- Braking
- Cabin pressurization and AC
- Power control and distribution
- Safety warning systems

## ■ Additional Microsemi Content

- 30KVA actuation systems
  - 12 modules per aircraft
- 600V/300A TRENCH IGBT full bridge TVS
  - 2K-5K devices/plane
- Low profile SP6-P package with AISiC base plate
  - 10-15/plane



# Expanding Market Opportunity for Digital Logic



Microsemi leading position in **reliable commercial aviation**.  
If it flies, we fly with it.



Remote radio heads and small cells require **extended temperature and low power** for reduced TCO and increased reliability

Core communication infrastructure  
99.999% uptime required.

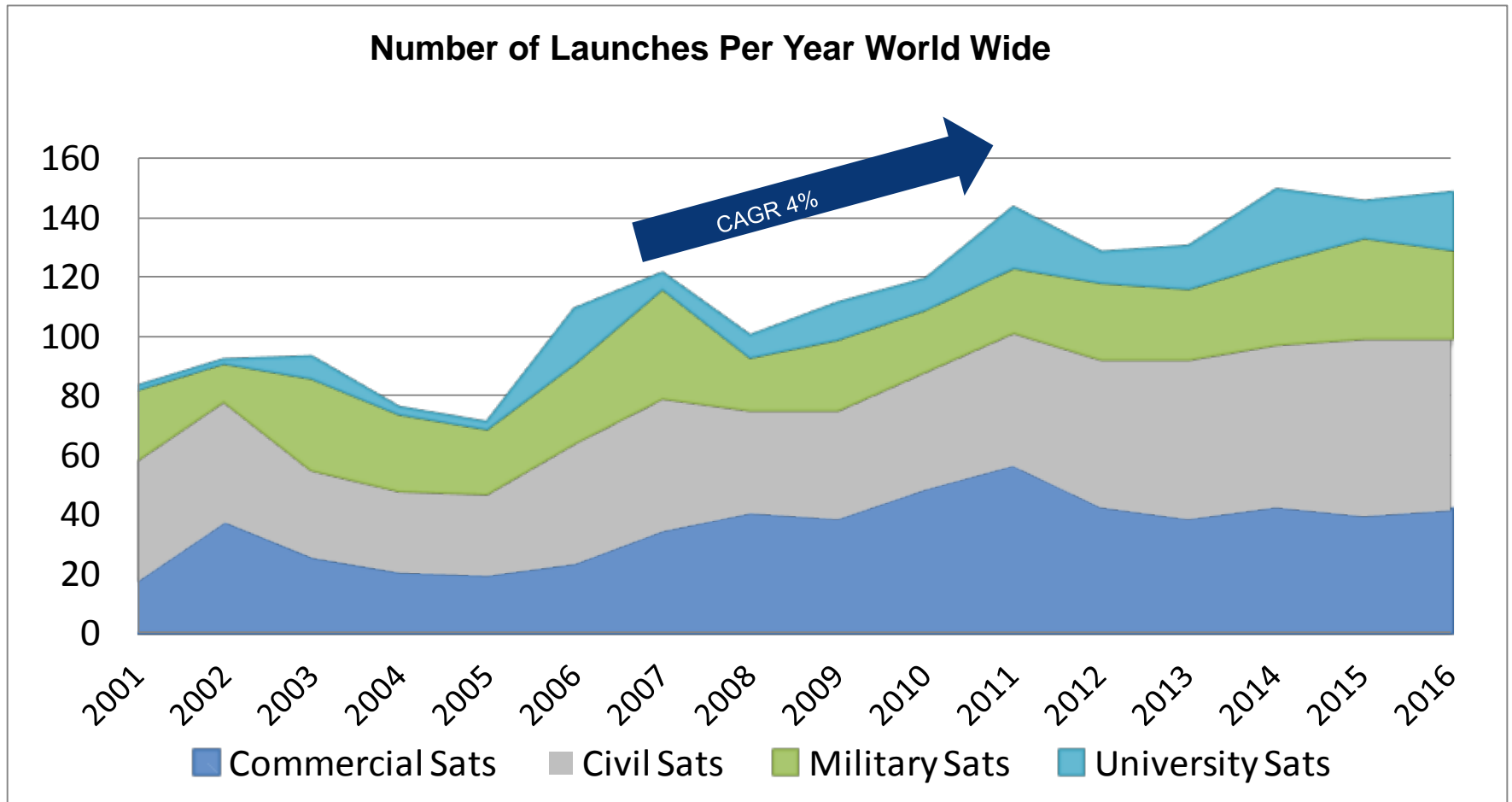
As geometries shrink **SEU immunity** awareness in control plane applications is growing daily



**Security** is a requirement for **functional safety** in Industrial automation, process control, and industrial networking

# Catering to a Growing Satellite Market

There will be more satellites for launch during the next 10 years than at any time during the past two decades.





# Capitalizing on Growth Drivers in Space

## Imaging

- Commercial imaging requirements
- Governments using merchant suppliers
- GEO communications platforms and buses supporting larger payloads and greater versatility



## Digital communications

- Iridium Next constellation
- Large geosynchronous digital communications payloads

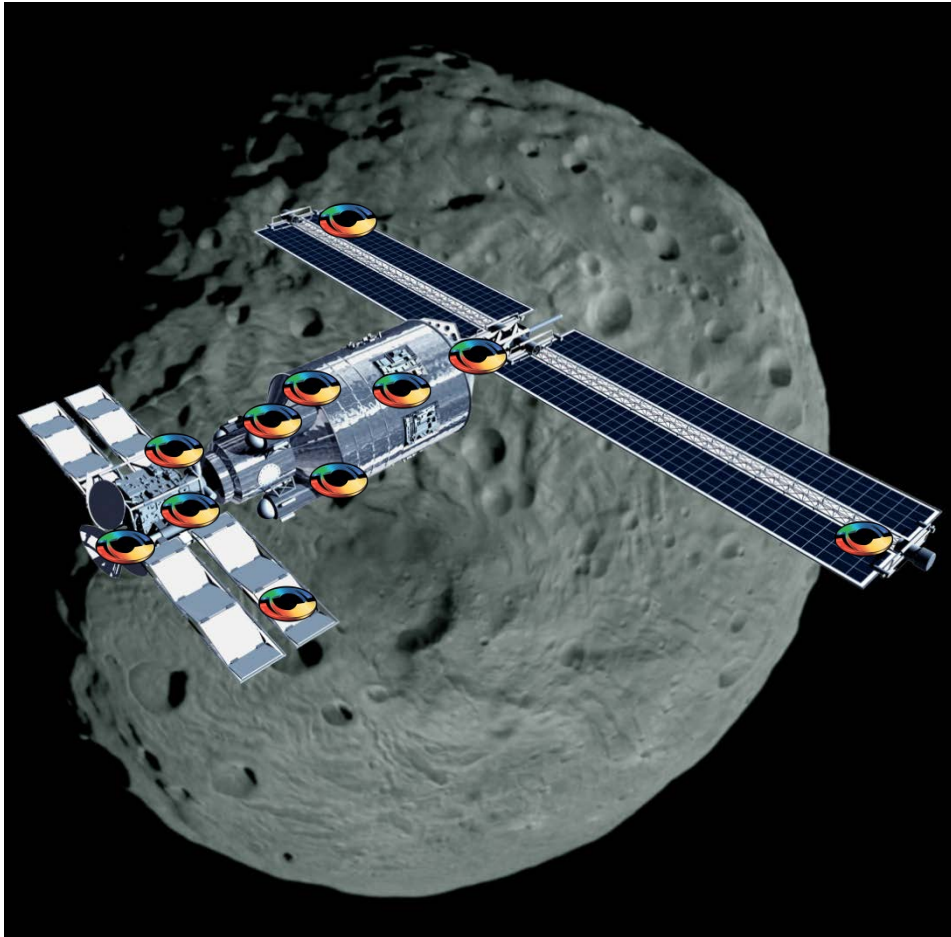
## Space exploration and science

- NASA budget offset by Russia, India
  - Europe and Japan flat
- Increasingly complex sensor data processing on board the spacecraft



# Satellite Content

## MSCC: Total Solution



Technology	Application	Product	\$ Content
Power	Power Supply, Distribution, Conditioning	Diodes	220,000
Power	Power Supply, Distribution, Conditioning	Transistors	80,000
Power	Power Supply, Distribution, Conditioning	RadHard Mosfets	120,000
Power	Power Supply, Distribution, Conditioning	Hybrids	100,000
Mixed-Signal	Bus Control	High Side Drivers	280,000
Mixed-Signal	Bus Control	Telemetry ASICs	325,000
Mixed-Signal	Bus Control	Digital Gate Arrays	100,000
SoC	AOC & TT&C	FPGAs	400,000
SoC	PIU	FPGAs	60,000
PMG	Power Supply, Control	DC/DC Converters	320,000
PMG	SSPA Power Supply	SSPAs	750,000
		<b>Total:</b>	<b>\$ 2,750,000</b>

Source: Company Data, Commercial GEO Telecom Satellite Electrical Power System

# Key Defense & Security Market Drivers

- Worldwide interconnection of critical data and systems of all types
  - DoD weapons and systems
  - Navigation and timing
  - Electric grid, transportation and refining
  - Banking, finance, medical
- Evolution of unmanned systems
  - Using robotics, sensors, machines and automation
- Technology of security threats not static—evolving quickly.
  - Demands flexible / programmable architectures
- Nation state actors with substantial motivation and resources to steal IP
  - Cyber, counterfeiting, and tampering
- Expanding U.S. foreign military sales. Risk of loss of critical technology.
  - UAE, Saudi, Turkey, Korea, more

# Security: Attacks



## Anti-tamper Threat

Iran says it is building a copy of downed US spy drone

*By msnbc.com and news services (4/22/2012)*



## Hacking Threat

Insulin Pumps Vulnerable,

*Says security researcher and diabetic Jay Radcliffe*



## Data Security Threat

Researchers Hack Voting Machine

*From the Argonne National Laboratory in Illinois*

Total Cost of Parts (Retail):  
\$10.50 (or \$26 with the optional remote control)

 **Microsemi**

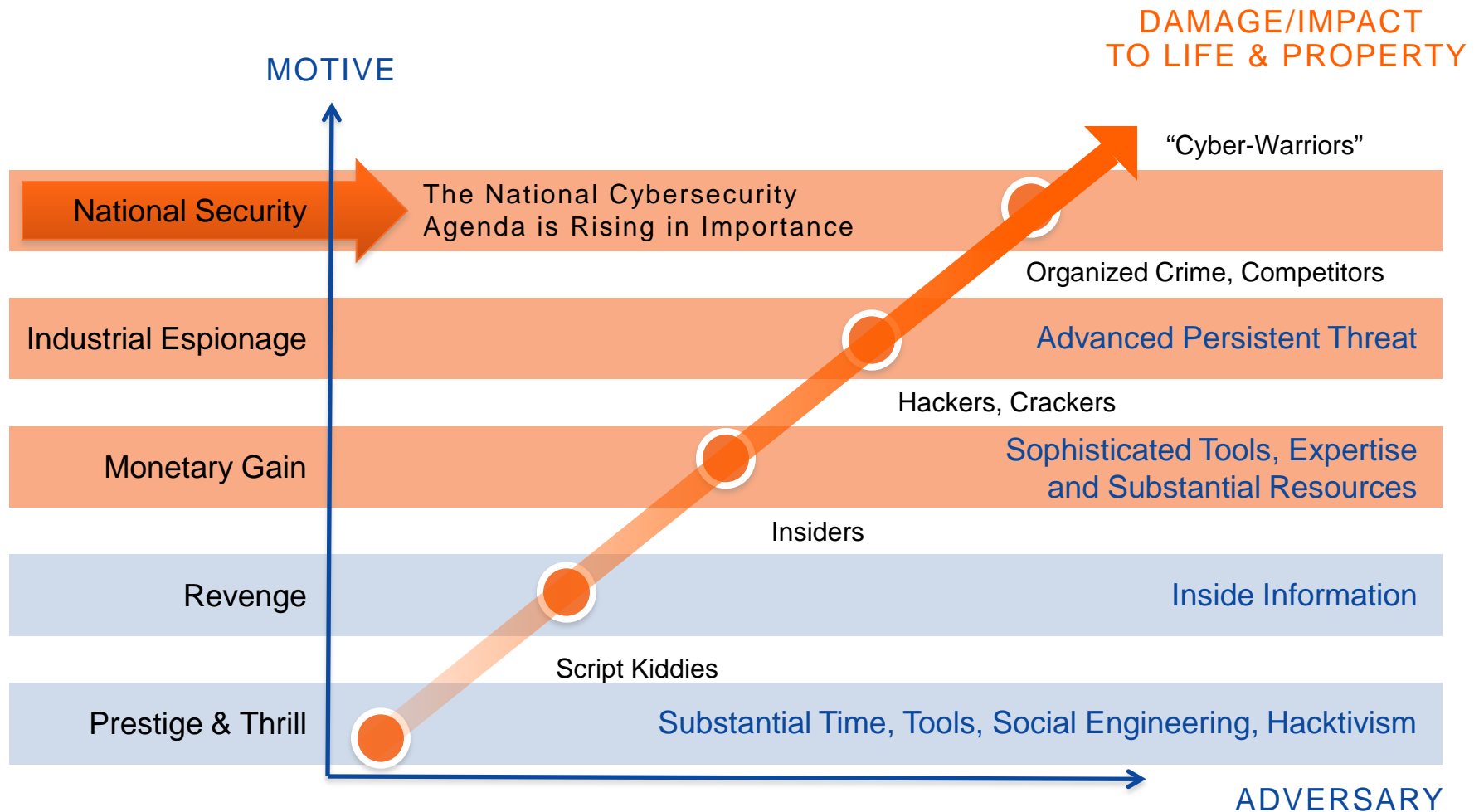


## Cyber Threat

Computer worm opens a new era of warfare.  
*60 Minutes on CBS News*

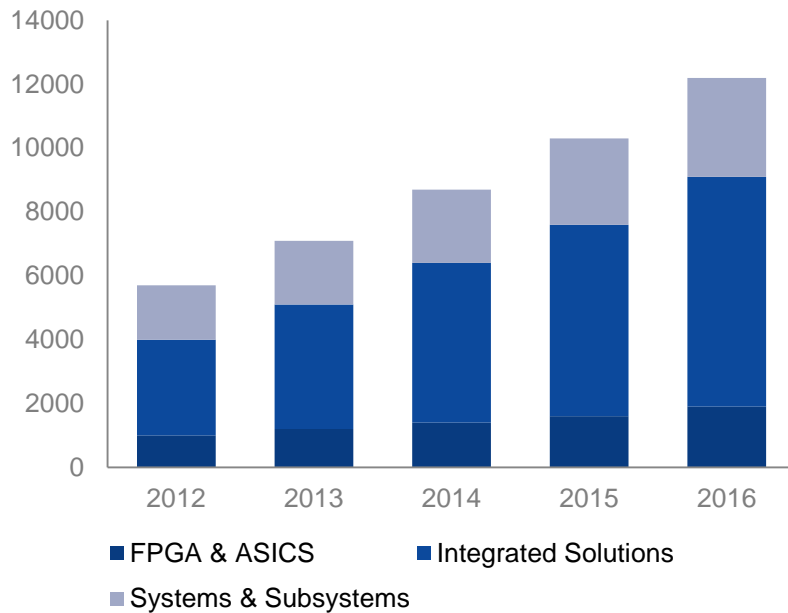
**Power Matters**

# Security & Interconnected World

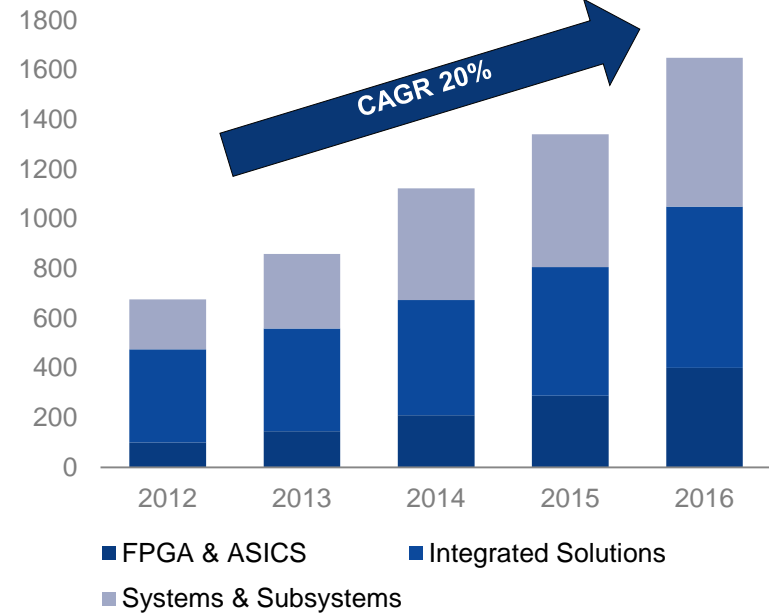


# Defense & Security Market TAM & SAM

## TAM



## SAM



Revenue in US\$, Millions  
Source: Company Estimates

# Industrial Trends Favor Microsemi Position

- Global economic conditions and competition forcing many into redesign for differentiation
- Increased international standards to ensure quality and high reliability
- Application areas such as functional safety on the rise to protect life and expensive operating costs
- Concerns over IP protection and malicious attacks driving embedded security measures



Market Sub-segment	2016 CAGR
Energy	13.7%
Factory Automation	11.1%
Building Automation	8.8%
Business Automation	3.6%
Test, Scientific, Measurement	3.6%

Source: IMS

# Deployment Examples at Industrial Leaders

## ■ Factory / Building Automation

- PLC controller
- Servo motor control
- Motor shaft wear sensor
- Elevator motor control
- Industrial laser
- Safety laser scanner controller
- Gas flow meter
- Utility power service controller

## ■ Business Automation

- Point of sale terminal
- Touch screen display controller
- Toll tag reader
- RFID reader

## ■ Test, Scientific and Medical

- Seismic data recorder
- Industrial network tester
- Blood analyzer
- Implant telemetry
- LCD monitor
- Purification system
- Mobile X-Ray
- Patient monitoring

## ■ Energy

- Inverters
  - PV, wind and automotive
- Battery chargers
- Battery cell tester
- Industrial LED lighting



SIEMENS

Rockwell  
Automation

HITACHI

HALLIBURTON



TOSHIBA

EMERSON

power-one  
Changing the Shape of Power

ADVANCED AE ENERGY

Schlumberger

Itronius  
SHIFTING THE LIMITS

DELPHI

PHILIPS  
sense and simplicity

Continental

OMRON

Honeywell

MITSUBISHI  
ELECTRIC

Microsemi

KACO  
new energy.

Power Matters





# Financials

# Financial Strength / Target Model

	FY13				FY14
	Q1	Q2	Q3	Q4	Q1
<b>Net Sales</b>	247.6	235.3	242.6	250.4	255.6
<b>Gross Profit</b>	142.6	133.5	138.3	142.8	143.1
<b>Gross Margin</b>	57.6%	56.7%	57.0%	57.0%	56.0%
<b>Operating Income</b>	56.7	50.0	54.8	59.2	54.1
<b>Operating Margin</b>	22.9%	21.2%	22.6%	23.6%	21.2%
<b>EBITDA</b>	63.7	56.5	61.7	66.3	61.1
<b>Net Income</b>	45.0	38.9	44.8	49.1	42.9
<b>Diluted EPS</b>	0.50	0.43	0.49	0.53	0.46

Target Model	
<b>Organic Revenue</b>	10%
<b>Gross Margin</b>	60%
<b>Operating Margin</b>	30%

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

# Balance Sheet & Cash Flow

	FY13				FY14
	Q1	Q2	Q3	Q4	Q1
<b>Cash &amp; Cash Equivalents</b>	\$ 203.3	\$ 206.9	\$ 220.9	\$ 256.4	\$ 218.1
<b>Accounts Receivable</b>	159.4	158.4	151.2	162.1	174.9
<b>Inventories</b>	158.9	162.7	166.6	162.0	216.3
<b>Total Assets</b>	\$ 1,918.0	\$ 1,903.5	\$ 1,894.8	\$ 1,912.7	\$ 2,137.1
<b>Current Liabilities</b>	\$ 140.4	\$ 136.9	\$ 129.0	\$ 133.2	\$ 179.2
<b>Long Term Debt</b>	751.0	726.0	699.0	676.0	824.5
<b>Stockholders' Equity</b>	954.8	968.9	996.1	1,032.1	1,045.8
<b>Total Liabilities &amp; Stockholders' Equity</b>	\$ 1,918.0	\$ 1,903.5	\$ 1,894.8	\$ 1,912.7	\$ 2,137.1
<b>Days Sales Outstanding</b>	58	62	58	57	59
<b>Days of Inventory</b>	138	144	144	136	140
<b>Operating Cash Flow</b>	\$ 28.1	\$ 31.9	\$ 52.6	\$ 52.4	\$ 62.5

Amounts in millions



Thank You