

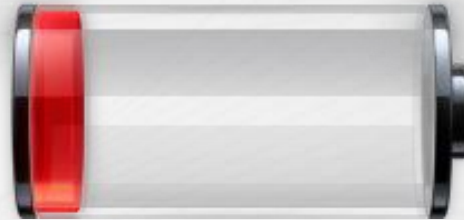
# QUICKLOGIC PRESENTATION FOR 18<sup>TH</sup> ANNUAL NEEDHAM GROWTH CONFERENCE

January 13, 2016

## Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

This presentation contains statements that are forward-looking including statements relating to the size of the total addressable market for our products and services, the compound annual growth rate for mobile market sectors, expectations relating to our new products, the time to market for various of our product innovations, expectations relating to our product innovations, our anticipated platform silicon roadmap and the expected timeline related to such roadmap, opportunities for our pipeline and our positioning for long-term, sustainable revenue growth, the benefits of our mobile-specific programmable logic to customers, the benefits of our solutions platforms, our plans with respect to new product revenue growth, our long-term target operating model, our projections related to our revenue, gross margin, expenses, operating income, net income and earnings per share. These forward-looking statements involve risks and uncertainties including but not limited to expectations relating to production targets for our New Products, revenue growth from our new products, our design activity and our ability to convert new design opportunities into customer activity, market acceptance of our customers' products and our expected results. In addition to U.S. GAAP financials, this presentation includes certain non-GAAP financial measures. These historical and forward-looking non-GAAP measures are in addition to, not a substitute for or superior to, measures of financial performance prepared in accordance with U.S. GAAP. QuickLogic's future results could differ materially from the results described in these forward-looking statements. These and other risk factors are detailed in QuickLogic's periodic reports and registration statements filed with the Securities and Exchange Commission. QuickLogic expressly disclaims any obligation to update or revise any forward-looking statements found herein to reflect any changes in Company expectations or results or any change in events.

# THE PROBLEM WE SOLVE



**80%** of respondents **chose battery life** as one of the **most important features** when deciding on their **smartphone** purchase.

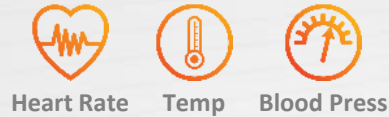
ChangeWave Research, a service of 451 Research Sept 2016

# PLETHORA OF EMERGING SENSORS

## Motion Sensors



## Biological Sensors



## Environmental Sensors



## Gesture Sensors



# NEW APPLICATIONS AND USE CASES DRIVING GROWTH

Today's sensor processing tasks are considered **FUNDAMENTAL**

OEMs will differentiate through more **IMMERSIVE** consumer experience



Pedometer and User Activity



User Transport



Sensor Calibration



Android Compliance



Motion-Compensated Heart Rate



Voice Trigger and Commands

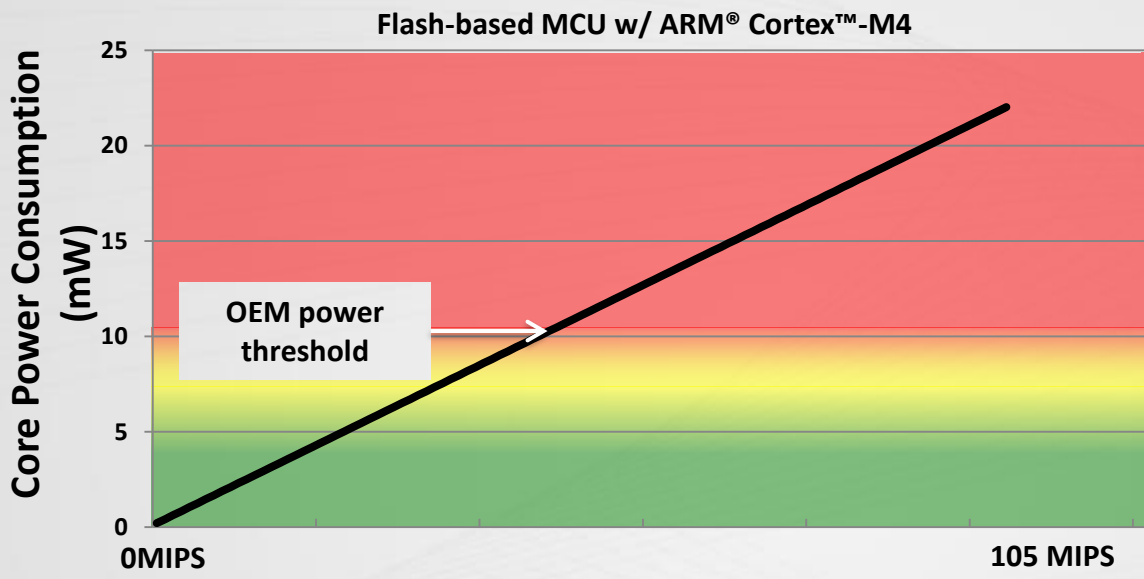


Indoor Navigation



Advanced Health and Wellness, Environmental Monitoring, new ideas and concepts....

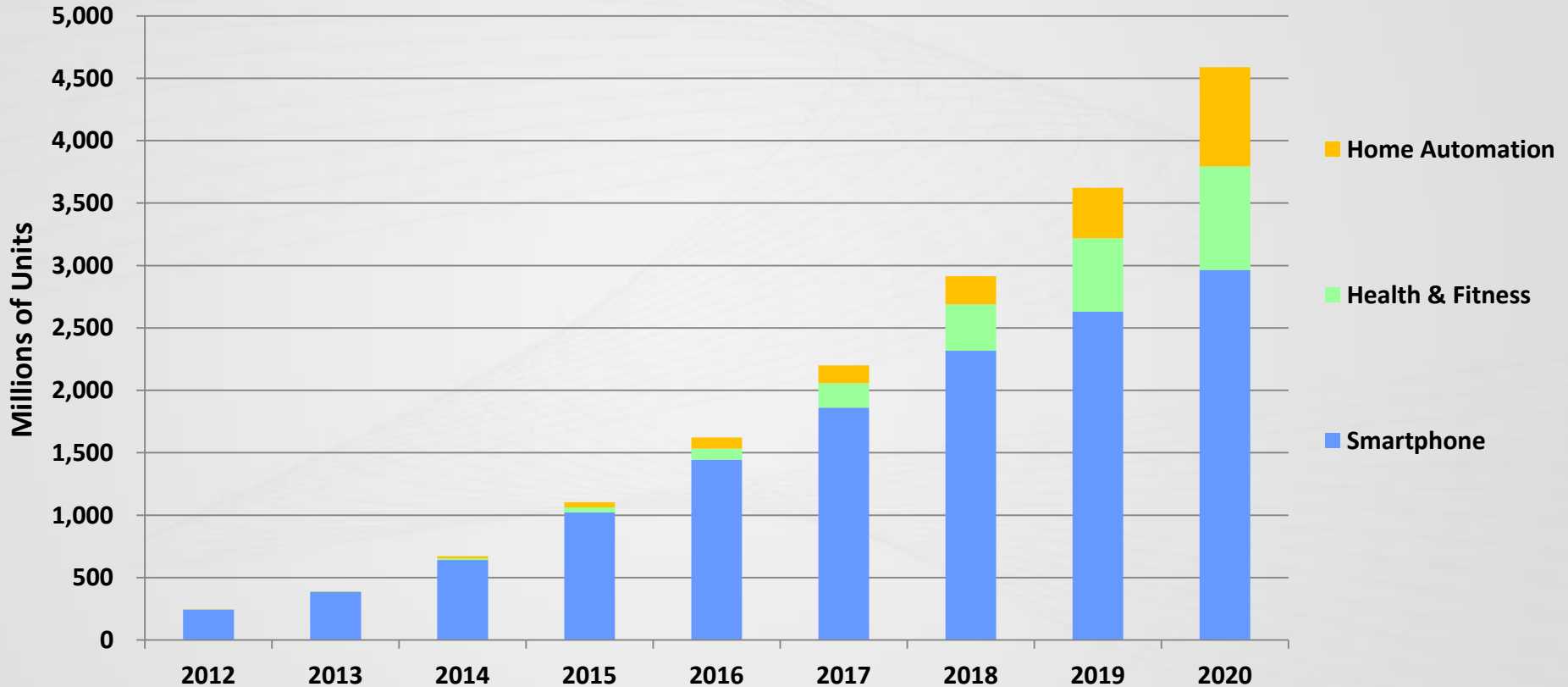
# IMMERSIVE EXPERIENCES CREATE POWER CHALLENGES





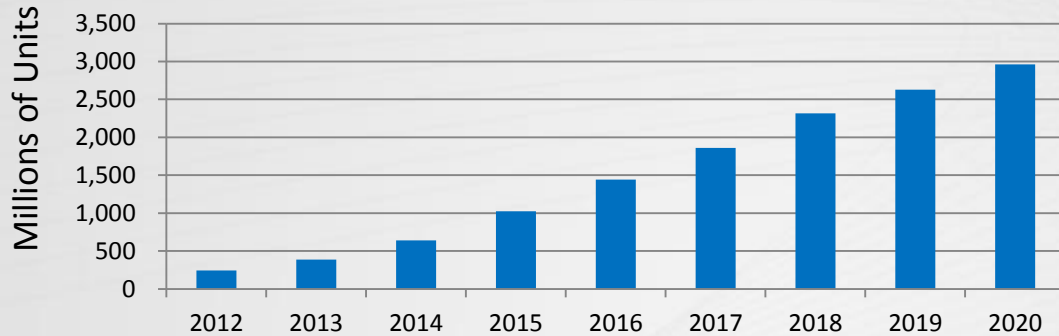
# MARKET OPPORTUNITY

# SENSOR HUB – HIGH GROWTH, HIGH VOLUME MARKETS



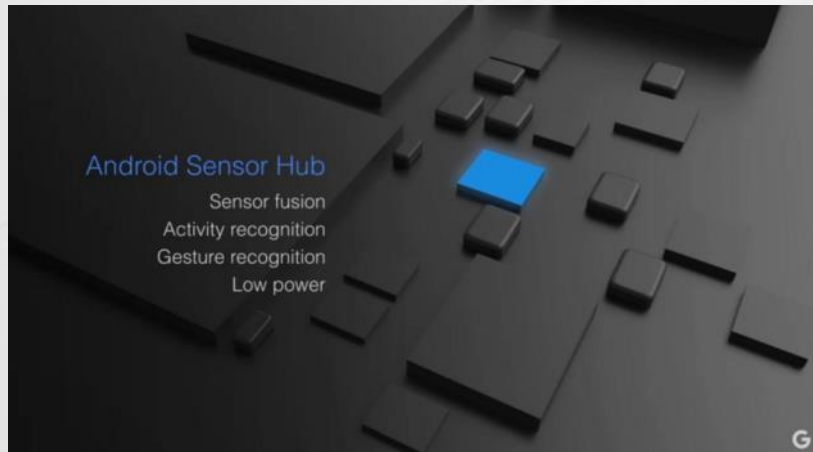


# SMARTPHONES – ~3B UNIT OPPORTUNITY



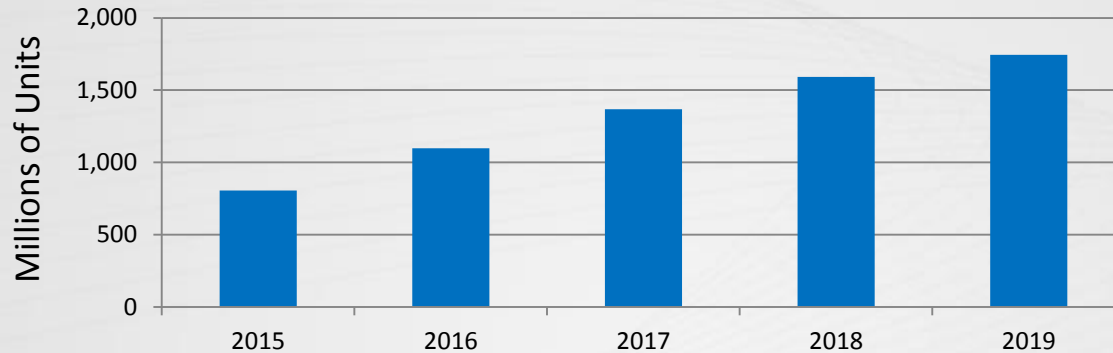
Nexus 5X

Nexus 6P



“With the launch of the new Nexus 6P and Nexus 5X, **Google is including a new "Sensor Hub" to enable the phones to be even more aware of their surroundings.**”

Engadget – Sept 29 2015 at Google Launch Event



High Growth Market for Sensor Processing



*“...**Power efficient sensor hubs**, such as **QuickLogic's EOS platform**, will be **THE enabling hardware** that allows device designers to quickly and easily incorporate multiple advanced features **without increasing power drain.**”*

**Tom Hackenberg, Principal Analyst @ IHS iSuppli – Sept, 2015**

# CASE STUDY: ENABLING 6 MONTHS OF BATTERY LIFE



*"By combining the classic elegance of a fashionable analog watch with our world class activity tracking and the **ultra-long battery life we get from using QuickLogic's unique products**, we believe the Runtastic Moment will be a disruptive force in wearable technology."*

**Florian Gschwandtner, CEO and co-founder of Runtastic**

# PRODUCT AND TECHNOLOGY DIFFERENTIATION



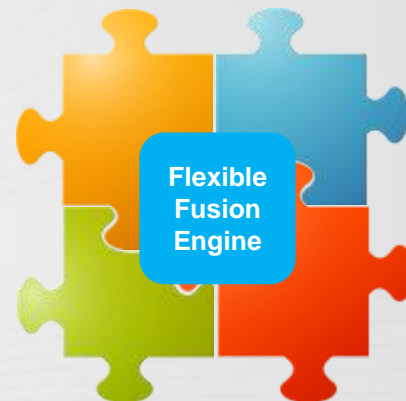
1. Patent-pending Sensor Processing Architecture
2. Patent-pending Sensor Fusion Algorithm Libraries
3. Patented Ultra-Low Power Programmable Logic

More than 50 patents granted across all technologies and IP

Portable across multiple semiconductor foundries and process nodes, making it highly scalable

## Flexible Fusion Engine

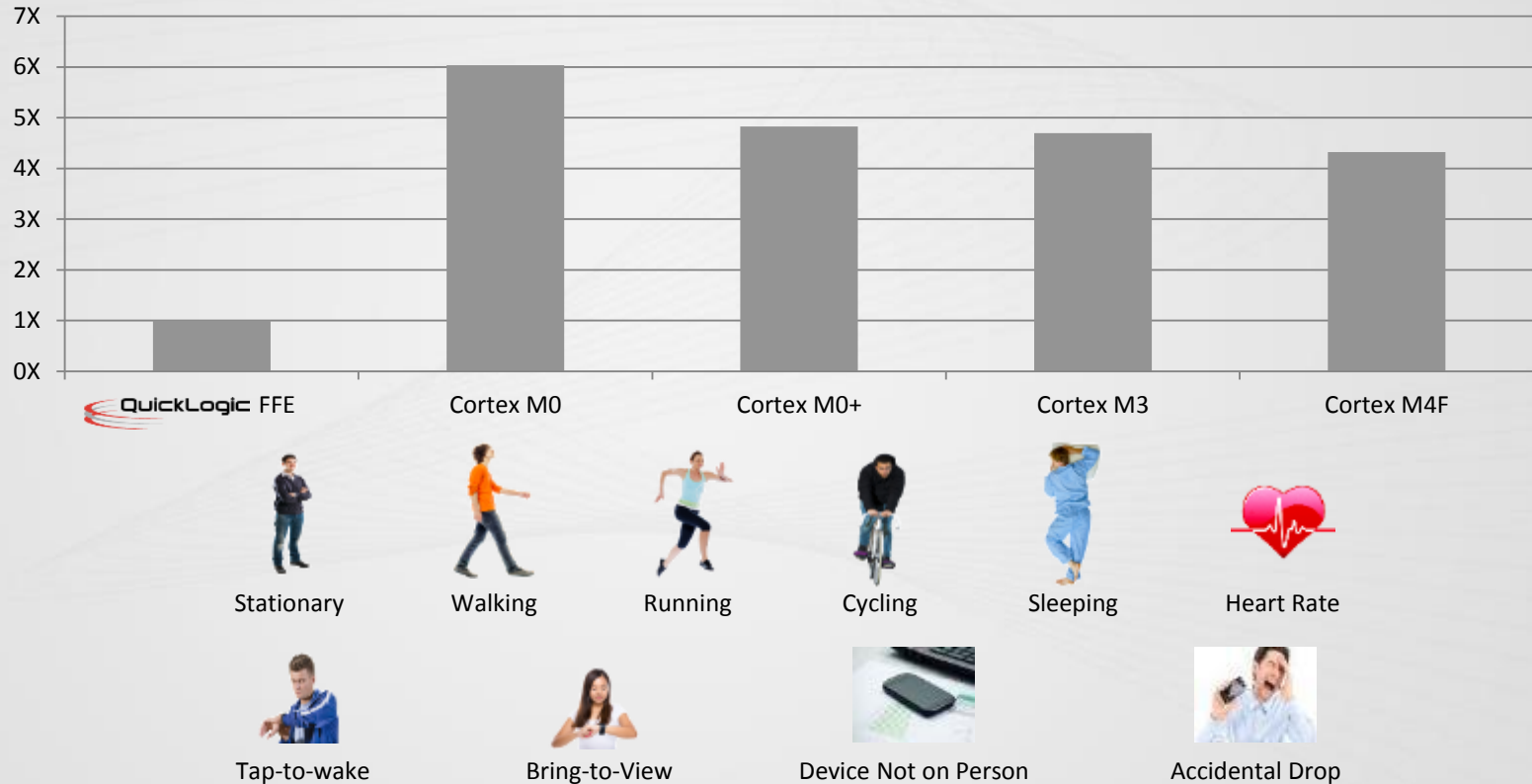
- Patent-Pending MicroDSP optimized for Always-On, Real-Time Sensor Processing
- Integrated into all of our sensor processing silicon devices
- 70% better power consumption than traditional microcontroller implementations





# ARCHITECTED FOR LOWEST POWER

## QuickLogic Flexible Fusion Engine Lower Power than ARM Cortex



## Silicon Platforms and Roadmap



ARTICLINK® 3 S1

ARTICLINK® 3 S2

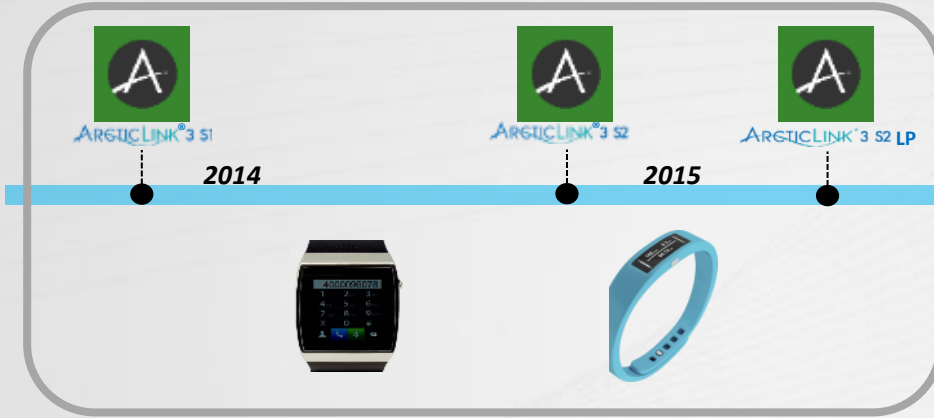
ARTICLINK® 3 S2 LP

EOS™ S3

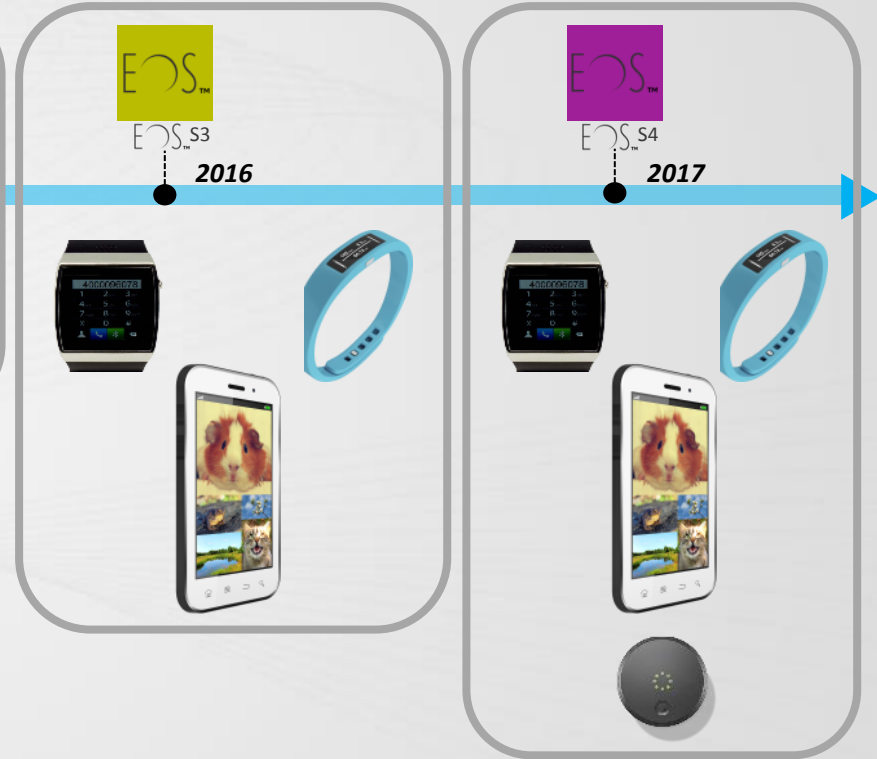


# GROWTH IN PROCESSING CAPABILITY = LARGER MARKET

## Programmable Discrete Sensor Hub



## Programmable Sensor Processing SoC



The Sensor Processor Market for Smartphones, Wearables, and IoT is ~\$1.5B

Production

Sampling

Development

Exploring

# 2<sup>ND</sup> CORNERSTONE OF SENSOR PROCESSING SYSTEM

## Silicon Platforms and Roadmap



ARTICLINK<sup>®</sup> 3 S1  
ARTICLINK<sup>®</sup> 3 S2  
ARTICLINK<sup>®</sup> 3 S2 LP  
EOS<sup>™</sup> S3

## SenseMe<sup>™</sup> Sensor Algorithms



Sensor Calibration  
& Fusion



Gesture  
Recognition



Context  
Classification



Activity  
Monitoring




# OUR ALGORITHM DESIGN PHILOSOPHY




➤ We achieve longer battery life through a system approach:

- Using the lowest power, and as few sensors, as possible
- Being frugal with our algorithm memory requirements
- Ensuring we minimize host processor computational requirements

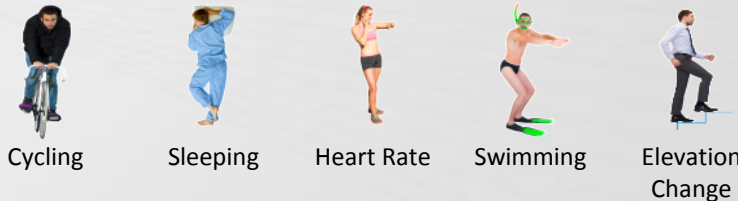
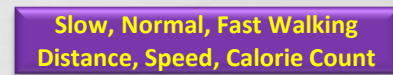
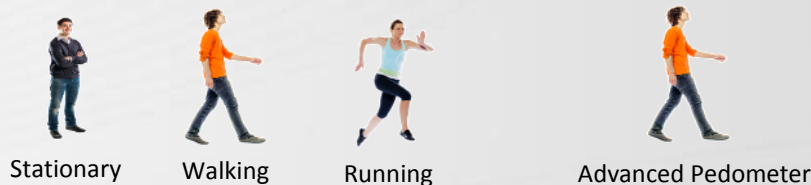
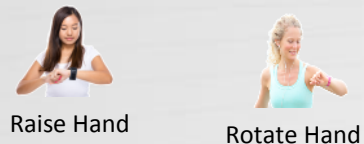


➤ We achieve best-in-class accuracy through real-world testing with extensive consumer use cases



➤ We enable ease-of-integration through a comprehensive software framework and tools

# SenseMe™ SENSOR ALGORITHMS



Low MIPS and Low Memory Requirement  
Resulting in Low Power



# BEST-IN-CLASS PEDOMETER ACCURACY



97% Accuracy



Leading  
Fitness  
Band

95% Accuracy



Leading  
Fitness  
Smartwatch

87% Accuracy

## Test Results

- Test data produced by leading smartphone OEM, verified by QuickLogic

## QuickLogic's Comprehensive Testing

- Includes multiple conditions; several device locations, cadence, gender, age, and height

# 3<sup>RD</sup> CORNERSTONE OF SENSOR HUB STRATEGY

## Silicon Platforms and Roadmap



## Sensor Algorithms



Sensor Calibration  
& Fusion



Gesture  
Recognition



Context  
Classification



Activity  
Monitoring

Flexible  
Fusion  
Engine

## Reference Designs



# REFERENCE DESIGNS TO ACCELERATE TIME-TO-MARKET

Smartphone  
Evaluation Kits



Wearable  
Reference Designs



# 4<sup>TH</sup> CORNERSTONE OF SENSOR HUB STRATEGY

## Silicon Platforms and Roadmap



## Sensor Algorithms



Flexible Fusion Engine

## Reference Platforms



## Qualified Vendor List



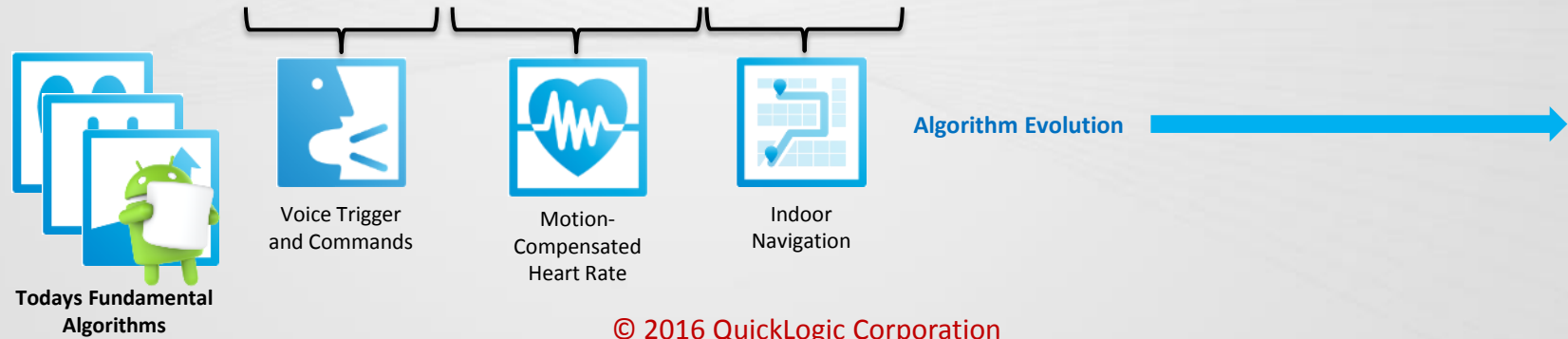
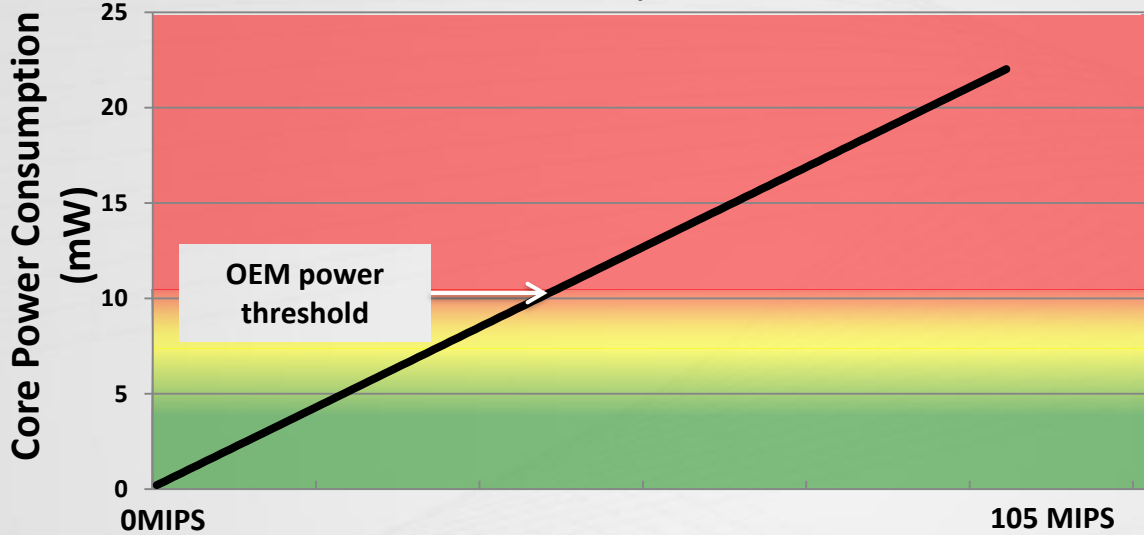
# QUALIFIED VENDOR LIST SPEEDS TIME-TO-MARKET

Our close collaboration with sensor vendors enables us to deliver solutions to the market as new sensors become available.



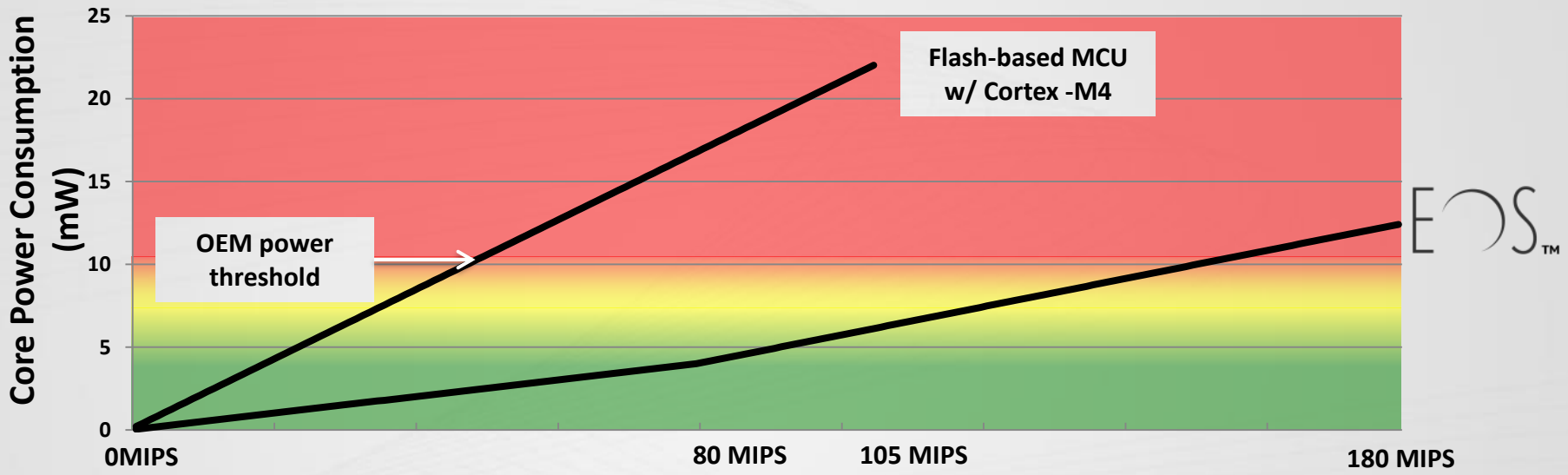
# IMMERSIVE EXPERIENCES CREATE POWER CHALLENGES

Flash-based MCU w/ ARM® Cortex™-M4





# QUICKLOGIC CHANGES THE POWER EQUATION



Today's Fundamental Algorithms



Voice Trigger and Commands



Motion-Compensated Heart Rate

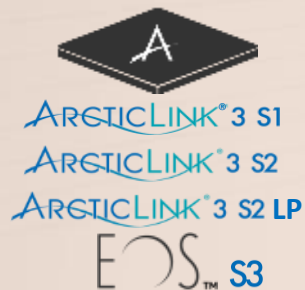


Indoor Navigation

Algorithm Evolution

# COMPREHENSIVE SENSOR PROCESSING SYSTEM

## Silicon Platforms and Roadmap



## SenseMe™ Sensor Algorithms



## Reference Platforms & Design Tools



**Flexible Fusion Engine**  
 PATENT PENDING

## QVL & Ecosystem Partners



# COMPETITIVE ANALYSIS

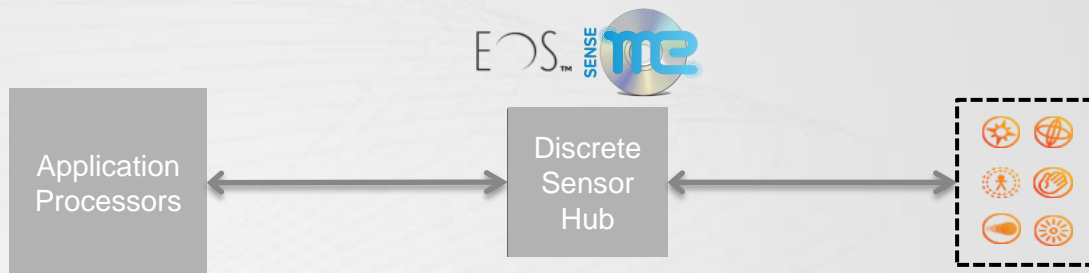
# SENSOR PROCESSING MARKET DYNAMICS

- Offloading sensor processing to a dedicated processor makes sense  
**The question is where it should be located?**
- **Battery Life** is the most significant factor in the growth of the discrete sensor processor market.
- In Wearables and IoT, **the sensor processor will be the SoC**

# QUICKLOGIC HAS SOLUTION FOR ANY ARCHITECTURE

## Location of Sensor Processor

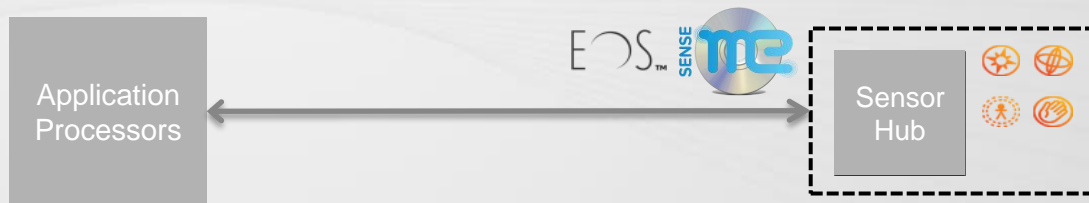
Discrete Sensor Hub



AP-Integrated



Sensor w/ Integrated MCU

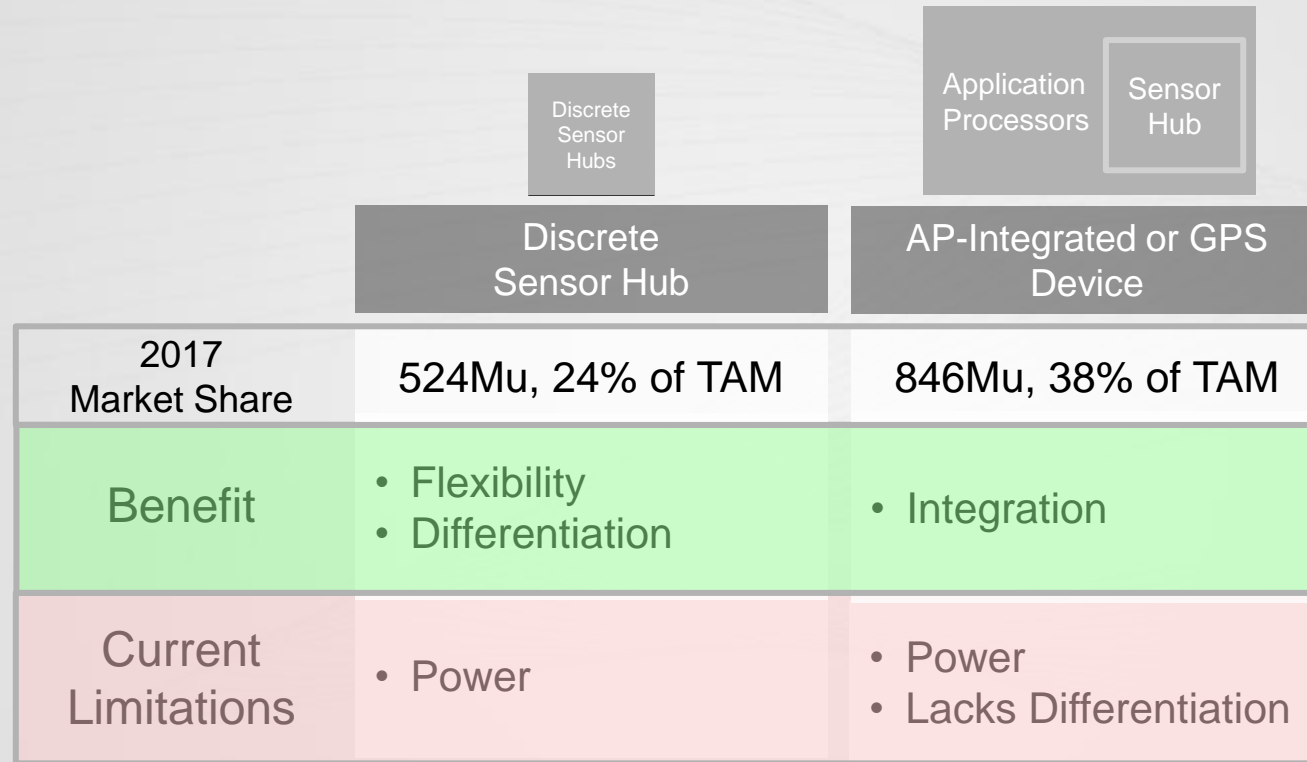


Discrete  
Sensor  
Hubs

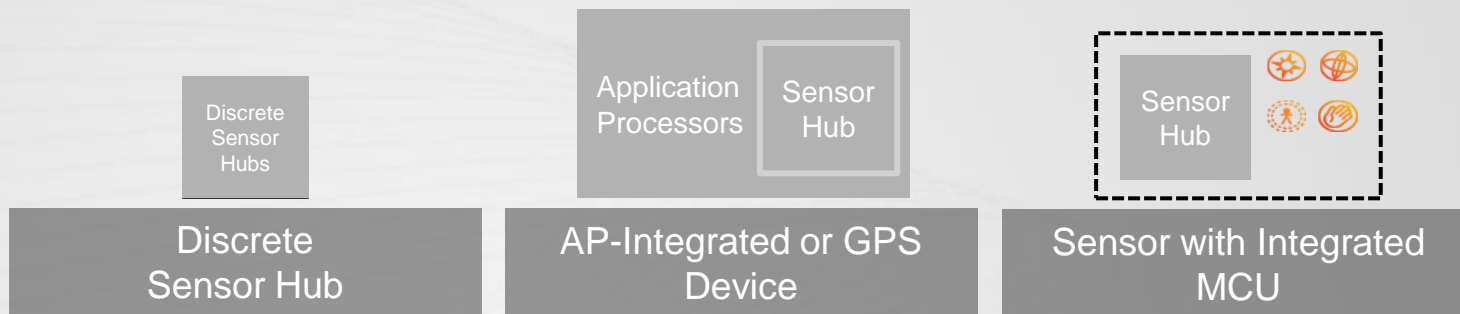
Discrete  
Sensor Hub

2017 Market Share	524Mu, 24% of TAM
Benefit	<ul style="list-style-type: none"><li>• Flexibility</li><li>• Differentiation</li></ul>
Current Limitations	<ul style="list-style-type: none"><li>• Power</li></ul>

# EXISTING ARCHITECTURES



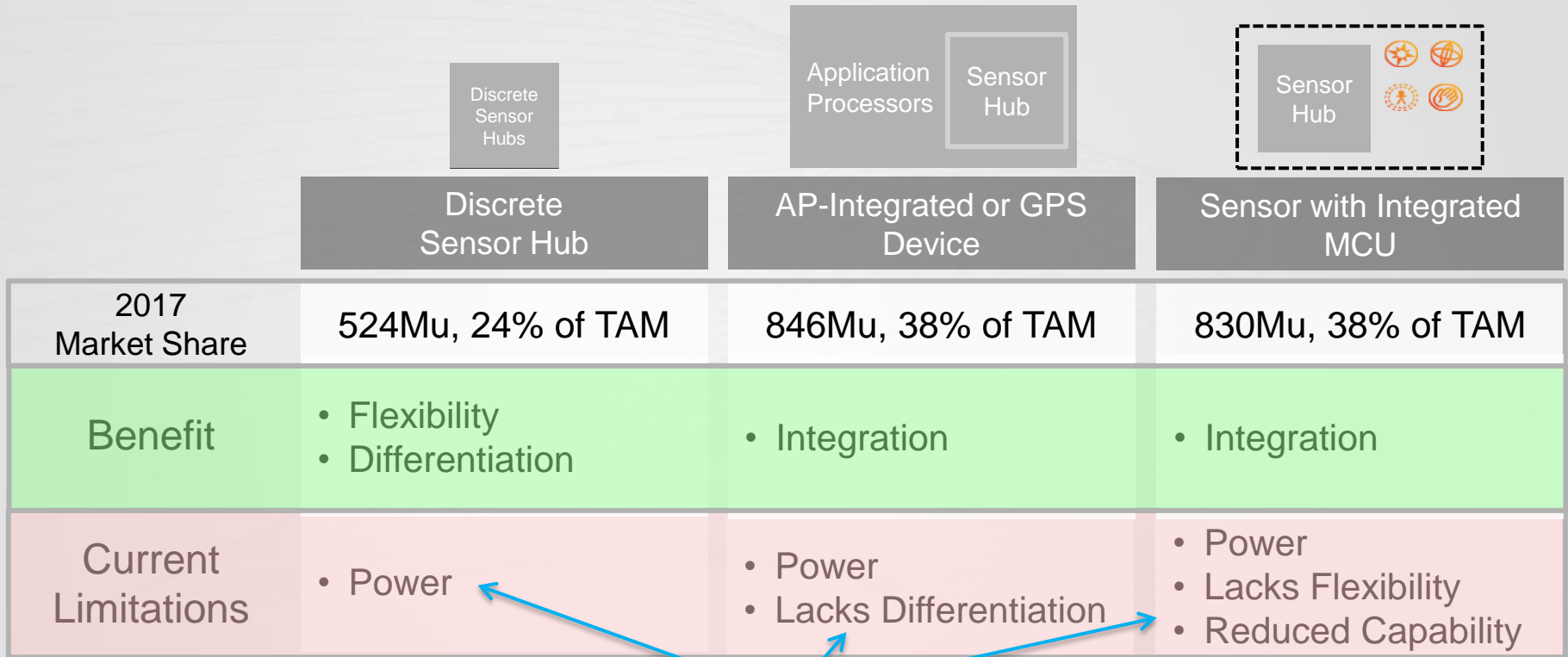
# EXISTING ARCHITECTURES



	Discrete Sensor Hub	AP-Integrated or GPS Device	Sensor with Integrated MCU
2017 Market Share	524Mu, 24% of TAM	846Mu, 38% of TAM	830Mu, 38% of TAM
Benefit	<ul style="list-style-type: none"> <li>• Flexibility</li> <li>• Differentiation</li> </ul>	<ul style="list-style-type: none"> <li>• Integration</li> </ul>	<ul style="list-style-type: none"> <li>• Integration</li> </ul>
Current Limitations	<ul style="list-style-type: none"> <li>• Power</li> </ul>	<ul style="list-style-type: none"> <li>• Power</li> <li>• Lacks Differentiation</li> </ul>	<ul style="list-style-type: none"> <li>• Power</li> <li>• Lacks Flexibility</li> <li>• Reduced Capability</li> </ul>



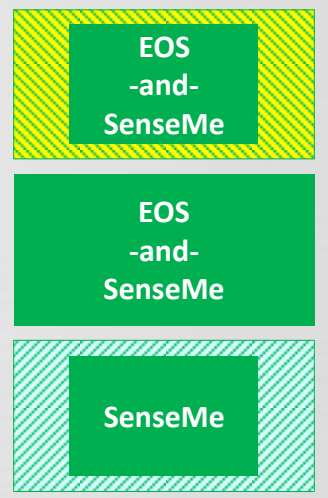
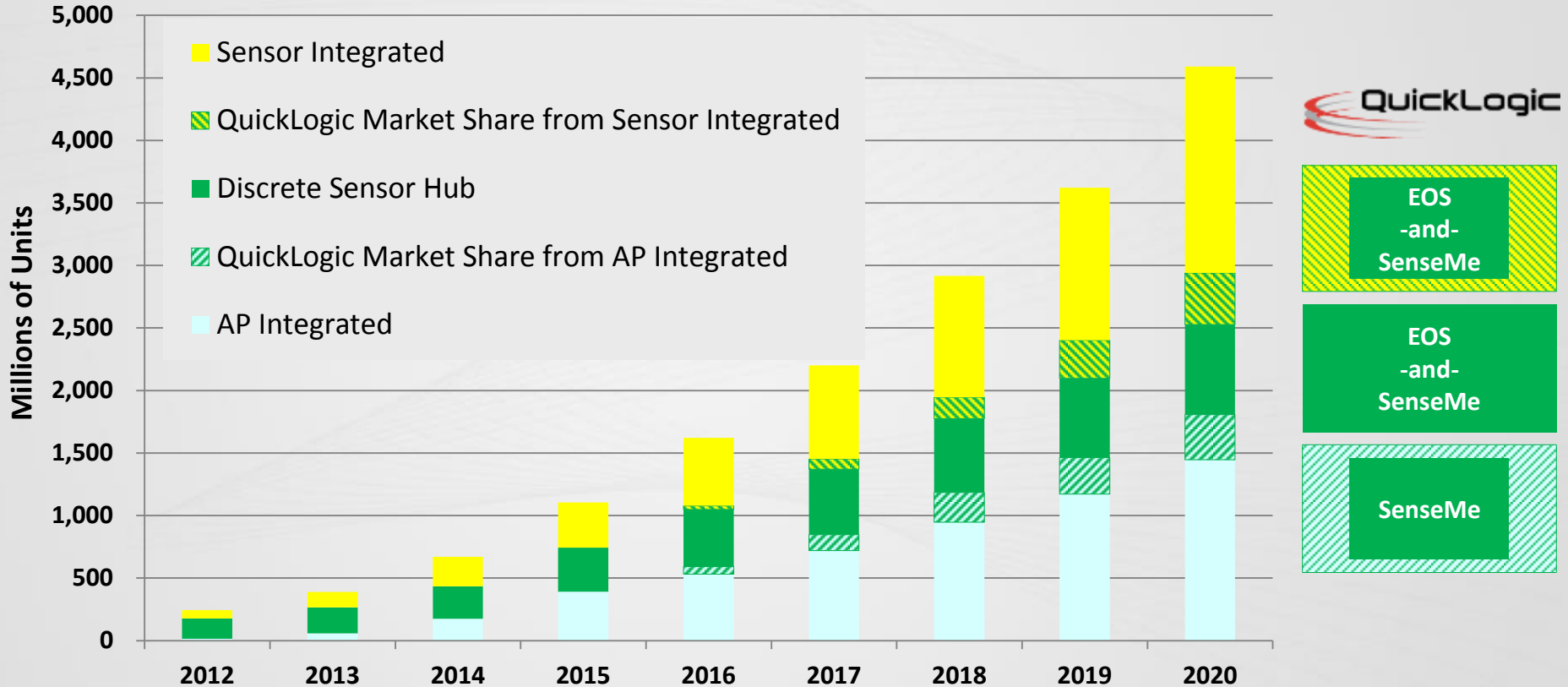
# QUICKLOGIC SOLVES THE PROBLEM



	Discrete Sensor Hub	AP-Integrated or GPS Device	Sensor with Integrated MCU
2017 Market Share	524Mu, 24% of TAM	846Mu, 38% of TAM	830Mu, 38% of TAM
Benefit	<ul style="list-style-type: none"> <li>Flexibility</li> <li>Differentiation</li> </ul>	<ul style="list-style-type: none"> <li>Integration</li> </ul>	<ul style="list-style-type: none"> <li>Integration</li> </ul>
Current Limitations	<ul style="list-style-type: none"> <li>Power</li> </ul>	<ul style="list-style-type: none"> <li>Power</li> <li>Lacks Differentiation</li> </ul>	<ul style="list-style-type: none"> <li>Power</li> <li>Lacks Flexibility</li> <li>Reduced Capability</li> </ul>

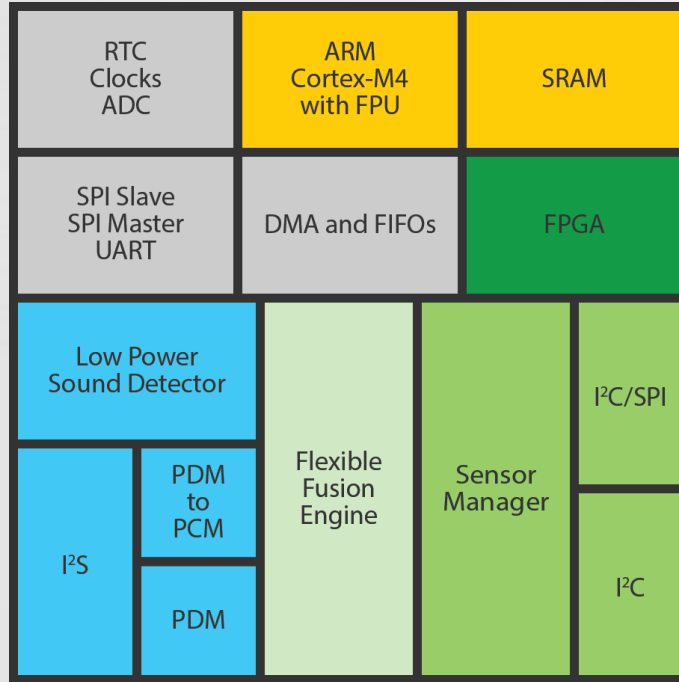
QuickLogic solves the power, differentiation and flexibility problems

# QUICKLOGIC IN POSITION TO MONETIZE ALL SEGMENTS

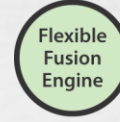


Source: Semico Sensor Hub Report, June 2015 with Company Estimates. Includes Smartphone, Health/Fitness, and Home Automation.

# EOS S3 MULTI-CORE SOC PLATFORM



Autonomously handles management and control of all sensors



10 MHz  $\mu$ DSP-like processor for always-on, real-time sensor data



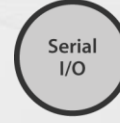
Allows implementation of additional FFE and other customer-specific IP



Digital min interfaces and Low Power Sound Detection\* (LPSD)  
\*LPSD optimized for Sensory TrueHandsFere™ Voice Control



80 MHz and 512 KB SRAM for general purpose processing and running O/S

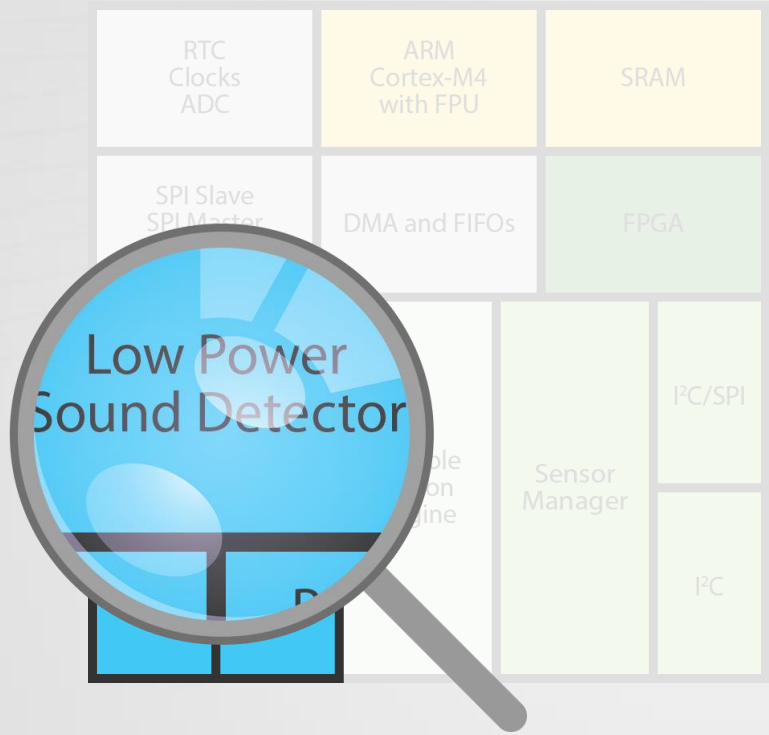


SPI Master/Slave, I<sup>2</sup>C, UART



DMA, Integrated RTC, Oscillators, ADC, and LDO

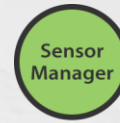
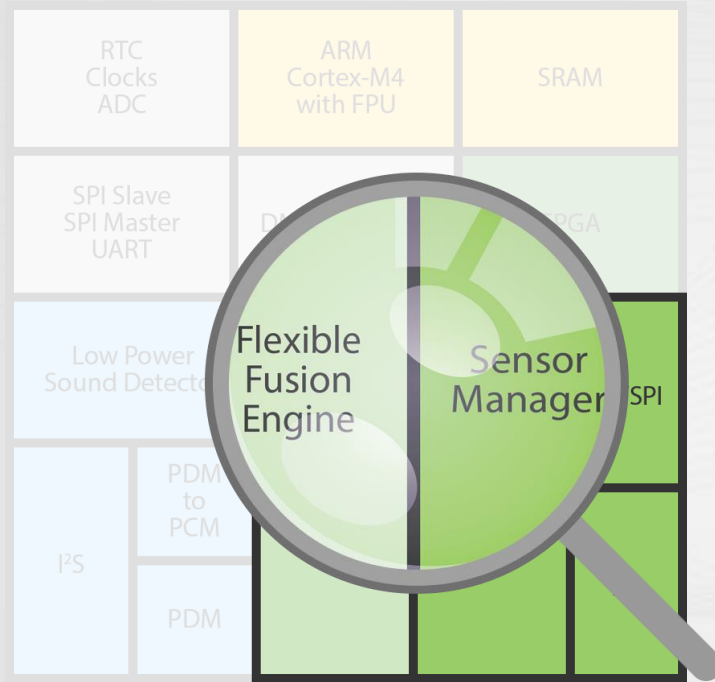
# EOS S3 MULTI-CORE SOC PLATFORM



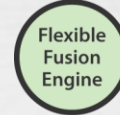
- Sensor Manager**: Autonomously handles management and control of all sensors
- Flexible Fusion Engine**: 10 MHz  $\mu$ DSP-like processor for always-on, real-time sensor data
- FPGA**: Allows implementation of additional FFE and other customer-specific IP
- Voice Processing**: Digital min interfaces and Low Power Sound Detection\* (LPSD)  
\*LPSD optimized for Sensory TrueHandsFere™ Voice Control
- Cortex M4-F**: 80 MHz and 512 KB SRAM for general purpose processing and running O/S
- Serial I/O**: SPI Master/Slave, I<sup>2</sup>C, UART
- System**: DMA, Integrated RTC, Oscillators, ADC, and LDO

The lowest power always-listening voice recognition

# EOS S3 MULTI-CORE SOC PLATFORM



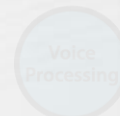
Autonomously handles management and control of all sensors



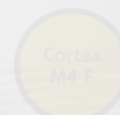
10 MHz  $\mu$ DSP-like processor for always-on, real-time sensor data



Allows implementation of additional FFE and other customer-specific IP



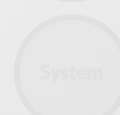
Digital min interfaces and Low Power Sound Detection\* (LPSD)  
\*LPSD optimized for Sensory TrueHandsFree™ Voice Control



80 MHz and 512 KB SRAM for general purpose processing and running O/S



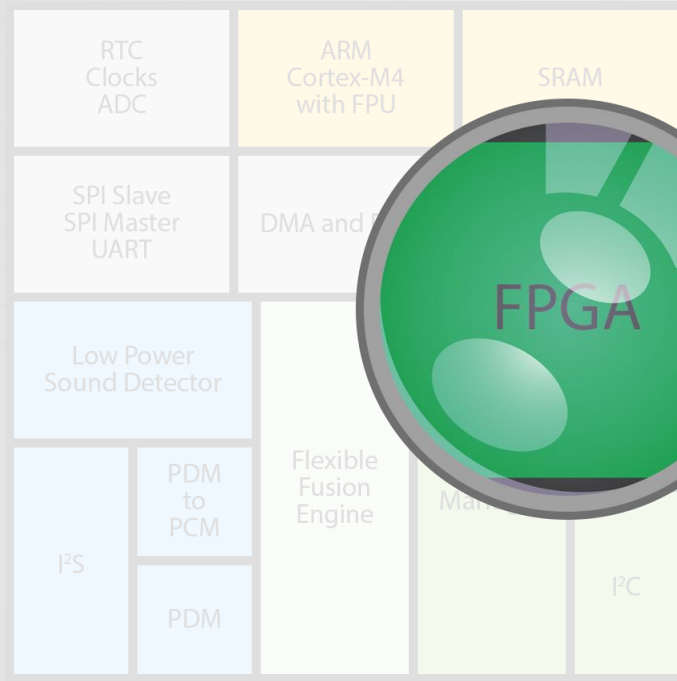
SPI Master/Slave, I<sup>2</sup>C, UART










DMA, Integrated RTC, Oscillators, ADC, and LDO

The lowest power always-on sensor processing engine

# EOS S3 MULTI-CORE SOC PLATFORM



- 
**Sensor Manager** - Autonomously handles management and control of all sensors
- 
**Flexible Fusion Engine** - 10 MHz  $\mu$ DSP-like processor for always-on, real-time sensor data
- 
**FPGA** - Allows implementation of additional FFE and other customer-specific IP
- 
**Voice Processing** - Digital min interfaces and Low Power Sound Detection\* (LPSD)  
\*LPSD optimized for Sensory TrueHandsFree™ Voice Control
- 
**Cortex M4-F** - 80 MHz and 512 KB SRAM for general purpose processing and running O/S
- 
**Serial I/O** - SPI Master/Slave, I2C, UART
- 
**System** - DMA, Integrated RTC, Oscillators, ADC, and LDO

The ONLY sensor processing SoC with integrated, ultra-low power FPGA

# GROWTH STRATEGY

# SCALABLE GROWTH STRATEGY

1. Grow market share in Wearables → Establish defensible value proposition
2. Leverage success in Wearables to Smartphones → Grow significant volume
3. Leverage success in Smartphones to Consumer IoT → Diversify into adjacent segments
4. Leverage success in Consumer IoT to Industrial IoT → Diversify into adjacent customers



All the above segments can be penetrated with only two devices  
from the newly launched EOS S3 and next generation EOS S4



# FINANCIAL OVERVIEW

## Disruptive Technology

- Sensor Processing SoCs and Re-programmable Logic ICs, software libraries and algorithms drive higher performance at far lower power usage

## Large, High Growth Markets

- Smartphones, Wearables, Tablets, and IoT
- QuickLogic potential addressable market of ~\$1.5B by 2018

## Top Tier Customer Adoption



## Strong Ecosystem



## Corporate

- NASDAQ: QUIK, HQ in Silicon Valley; R&D: Sunnyvale, Bangalore
- Field Sales and Support: South Korea, Japan, China, Taiwan, UK
- Employees – 92; Technical Staff – 65%
- >50 Patents in our core IP

# SUCCESS → MULTIPLE PRODUCTS, MARKETS, & CUSTOMERS

Sensor Processing

**FOXCONN**



**runtastic**



♥ Telepathy



Top Tier Engagements



Connectivity

**KYOCERA**



**JRC**



**HUAWEI**



**SHARP**



**THINKWARE**



Display Bridges

**G'FIVE**  
**WATER WORLD**  
**HiFlyway**



**UNICAIR**  
Communication

**FLY AUDIO**

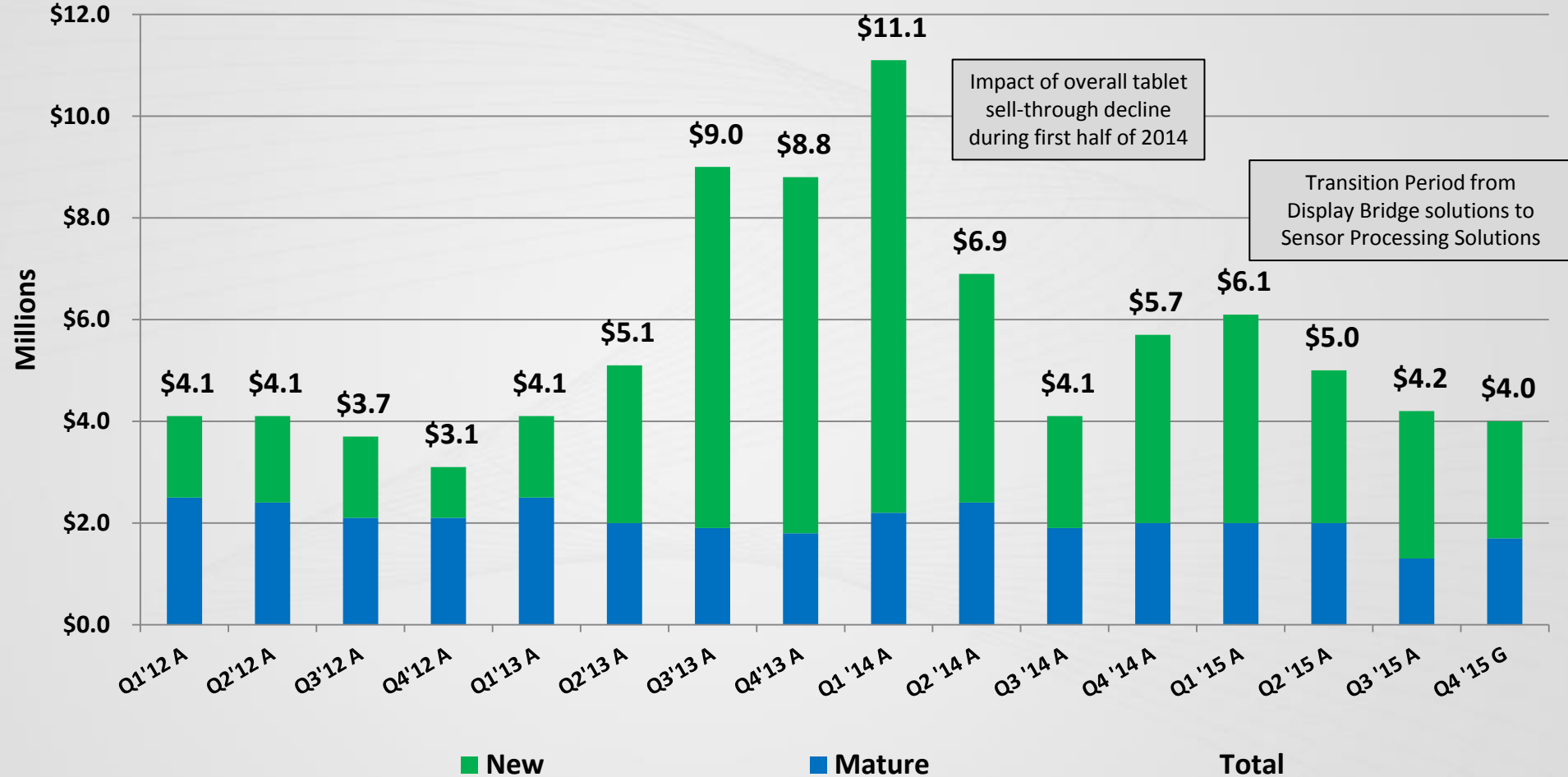


**SAMSUNG**

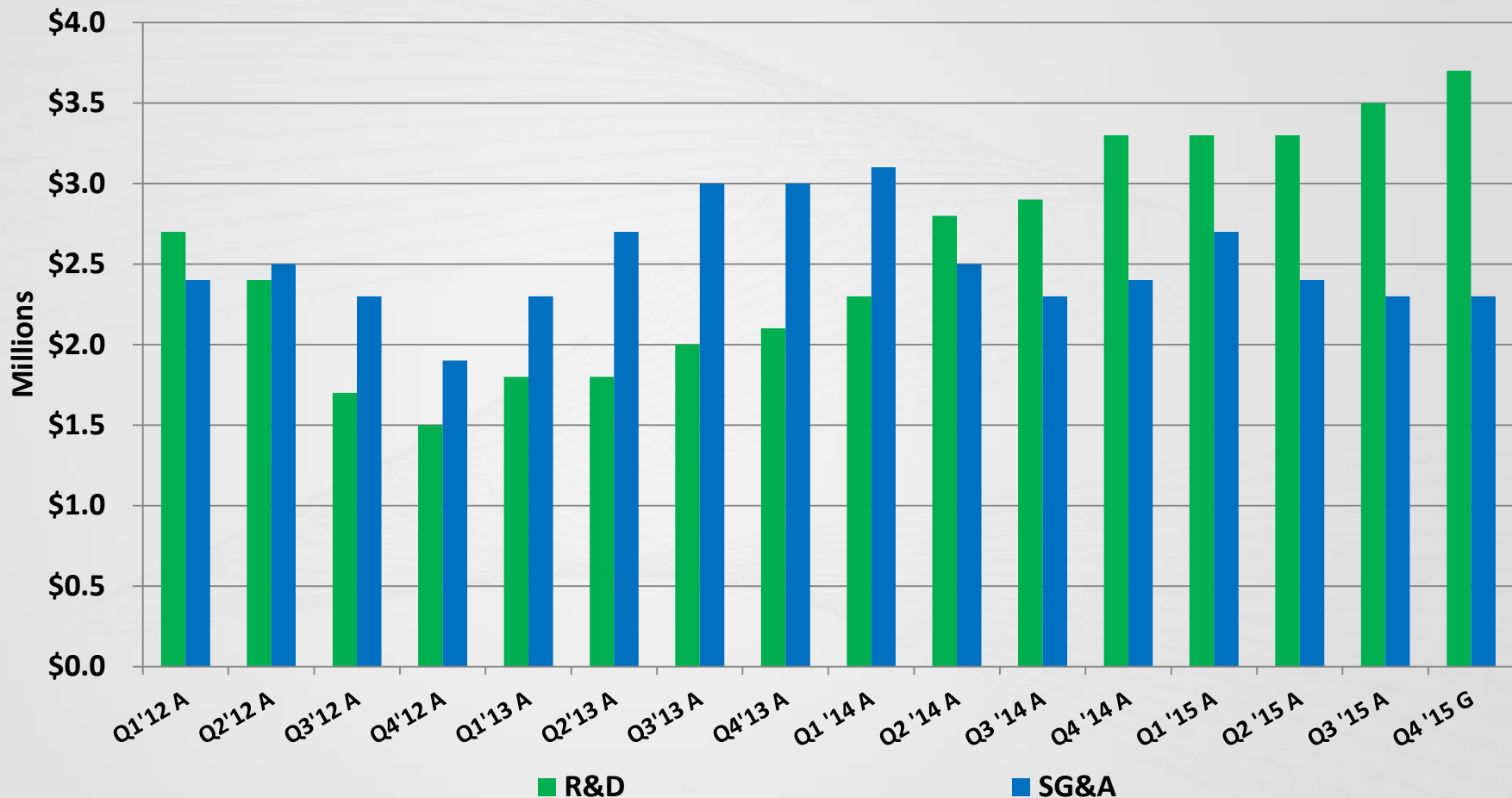


**SHARP**





# NON-GAAP OPERATING EXPENSE TREND



Non-GAAP Results Millions (except for EPS)	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	Q1'15 Actual	Q2'15 Actual	Q3'15 Actual	Q4'15 Guidance	FY 2015 Forecast
New Product Revenue	5.9	\$18.2	\$19.3	\$4.1	\$3.0	\$2.9	\$2.3	\$12.3
Mature Revenue	9.0	\$7.9	\$8.4	\$2.0	\$2.0	\$1.3	\$1.7	\$7.0
Total Revenue	14.9	\$26.1	\$27.8	\$6.1	\$5.0	\$4.2	\$4.0	\$19.3
Gross Margin %	49%	35%	40%	47%	44%	31%	42%	42%
Research & Development	8.3	\$7.7	\$11.3	\$3.3	\$3.3	\$3.5	\$3.7	\$13.8
SG&A	9.1	\$10.9	\$10.3	\$2.7	\$2.4	\$2.3	\$2.3	\$9.7
Total Operating Expense	17.4	\$18.6	\$21.7	\$6.0	\$5.7	\$5.8	\$6.0	\$23.5
Operating Income (Loss)	(\$10.1)	(\$9.5)	(\$10.5)	(\$3.1)	(\$3.5)	(\$4.5)	(\$4.3)	(\$15.3)
Net Income (Loss)	(\$10.3)	(\$9.9)	(\$10.8)	(\$3.1)	(\$3.6)	(\$4.5)	(\$4.3)	(\$15.6)
EPS	(\$0.25)	(\$0.22)	(\$0.19)	(\$0.06)	(\$0.06)	(\$0.08)	(\$0.08)	(\$0.28)



R&D investment increased 47% from 2013 to 2014 and expects to increase 22% in 2015 for new sensor platform development

Targets	Mid Term	Long Term
Revenue Growth	Revenue Growth Expectations Outpace Spending Growth	
Gross Margin *	Trending to Long Term Model	50%
Operating Margin *	NA	10%+
Cash Flow	Cash Burn Decreasing	Positive Cash Flow

\* Non-GAAP Measures

**NOTE:** These projections are subject to a number of assumptions, risks, uncertainties and other factors that may cause our actual results to differ materially from such projections

(Millions)	FY 2012 Actual	FY 2013 Actual	FY 2014 Actual	Q1'15 Actual	Q2'15 Actual	Q3'15 Actual
Cash	\$22.6	\$37.4	\$30.0	\$28.2	\$26.4	\$23.4
Current Assets (less cash)	\$5.6	\$8.7	\$7.7	\$6.1	\$5.5	\$4.9
Total Current Assets	\$28.2	\$46.1	\$37.7	\$34.3	\$31.9	\$28.3
<b>Total Assets</b>	<b>\$31.0</b>	<b>\$49.1</b>	<b>\$41.1</b>	<b>\$37.5</b>	<b>\$34.8</b>	<b>\$31.1</b>
Total Current Liabilities	\$3.3	\$8.3	\$4.3	\$3.8	\$5.5	\$5.4
<b>Total Liabilities *</b>	<b>\$3.7</b>	<b>\$8.5</b>	<b>\$5.6</b>	<b>\$5.1</b>	<b>\$5.7</b>	<b>\$6.6</b>
<b>Shareholders Equity</b>	<b>\$27.3</b>	<b>\$40.6</b>	<b>\$35.5</b>	<b>\$32.4</b>	<b>\$29.1</b>	<b>\$24.5</b>

\* Includes \$1M borrowing from SVB \$12M Line of Credit

Capitalization Table Highlights		
Common Stock Outstanding	56.6M	as of 9/27/2015
Market Cap	\$91.7M	as of 9/27/2015 (200 day avg price \$1.62)
Options Outstanding	6.0M	as of 9/27/2015 (weighted avg price \$2.68)
RSUs Outstanding	0.8M	as of 9/27/2015
Warrants Outstanding	2.3M	@ \$2.98, expire 6/2017



# CAP TABLE AND OUTSTANDING SHARES

Capitalization Table Highlights		
Common Stock Outstanding	56,594,752	as of 9/27/2015
Stock Price	\$1.65	as of 9/27/2015
Market Cap	\$93,381,341	as of 9/27/2015
Options Outstanding	5,987,776	as of 9/27/2015
Weighted Exercise Price	\$2.68	as of 9/27/2015
RSUs Outstanding	839,545	as of 9/27/2015
Warrants (2012 financing)	2,304,900	@ \$2.98, expire 6/2017
Total Warrants Outstanding	2,304,900	

- Rare opportunity to target a ~\$1.5B sensor processing market in high growth mobile consumer market aligned with our value proposition
- Disruptive, patented low power, in-system programmable logic optimized for mobile
- Highly differentiated sensor processing (hardware & software) solutions enable significantly longer battery life