

# Investor Presentation

2019 Gateway Conference

September 4, 2019



### Safe Harbor Statement

This press release contains forward-looking statements regarding our future business expectations, which are subject to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are only predictions and may differ materially from actual results due to a variety of factors including: delays in the market acceptance of the Company's new products; the ability to convert design opportunities into customer revenue; our ability to replace revenue from end-of-life products; the level and timing of customer design activity; the market acceptance of our customers' products; the risk that new orders may not result in future revenue; our ability to introduce and produce new products based on advanced wafer technology on a timely basis; our ability to adequately market the low power, competitive pricing and short time-to-market of our new products; intense competition, including the introduction of new products by competitors; our ability to hire and retain qualified personnel; changes in product demand or supply; capacity constraints; and general economic conditions. These and other potential factors and uncertainties that could cause actual results to differ from the results predicted are described in more detail in the Company's public reports filed with the Securities and Exchange Commission (the "SEC"), including the risks discussed in the "Risk Factors" section in the Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and in the Company's prior press releases, which are available on the Company's Investor Relations website at <a href="http://ir.quicklogic.com/">http://ir.quicklogic.com/</a> and on the SEC website at <a href="http://ir.quicklogic.com/">http://ir.quicklogic.com/</a> and on the SEC website at <a href="http://ir.quicklogic.com/">http://ir.quicklogic.com/</a> and on

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## QuickLogic at a Glance

### **Snapshot**



• Founded: 1989, public since 1999

Ticker: QUIK (NASDAQ)

Headquarters: San Jose, CA

■ Employees: ~100

Patents: 24 U.S. (plus 3 pending)

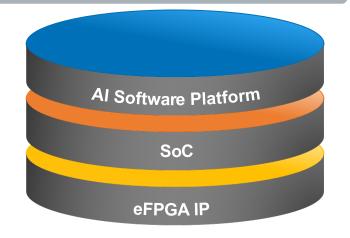
11 international (plus 5 pending)

#### (1) Per Company estimates, as displayed on pages 13, 14, 15, and 16.

#### **Business Highlights**

- We are a platform company that enables our customers to quickly and easily create intelligent ultra-low power endpoints to build a smarter, more connected world
- QuickLogic develops ultra-low power, multi-core semiconductor platforms and hardware- and software-based IP for AI, voice and sensor processing applications
- We leverage our fabless model to provide a unique combination of silicon platforms, IP cores, software drivers, and HW and SW solutions to our customers

#### **End-to-End Solutions**



### **Target Markets**

## \$1 Billion+(1) Served Addressable Market (SAM) Across:

- Hearables and wearables
- Consumer and industrial IoT
- Smartphones and tablets
- Consumer electronics
- Al-enabled devices



## QuickLogic's Transformed Business Model

ML / Al Growth Story with End-to-End Solution

- Democratizing power of Machine Learning (ML) / end-to-end solution for Edge Artificial Intelligence (AI) market
- End-to-end hardware (HW) / software (SW) solution for Internet of Things (IoT) and AI
- Large high-volume markets wearables, hearables, smartphones, consumer electronics, industrial and IoT

Acquisition of SensiML Transforms **Business Model** 

- Acquisition expands AI capability and served available market
- Full-Stack Solution Cross leverage SensiML's SW suite, QuickLogic's QuickAl platforms and eFPGA IP
- Drives higher SaaS margins and "stickier" revenues with subscription model

Strategic Partnership with **SiFive Expands** Licensing Model

- Leading provider of RISC-V core IP, development tools, silicon solutions and SoC templates
- SoC templates enable customers to greatly reduce design cycles and development costs
- Significant potential to further accelerate IP licensing, SW and SaaS revenue

**Robust IP Portfolio** 

- 30+ active patents globally in core IP predictable and high-margin licensing revenue
- eFPGA HW accelerators optimize endpoint AI applications
- End-to-end Al solution, from semiconductor IP through SaaS software first material subscription revenue from SensiML in Q1'19

**Top Tier Customers** and Ecosystem













































## Business Highlights – Q2'19 Conference Call

Significant Increase in S3 SoC Design Win Pipeline	Customer Win  Japanese Smartphone OEM	<b>Design Win</b> 4 smartphones, 1 feature phone	Anticipated Shipment  1st phone initial ramp 2H'19; others in 2H'19 and increasing through 2020		
	<ul> <li>Hearable Designs</li> </ul>	1More, JD.COM, SF Express, Cleer, 1 <sup>st</sup> AVS Close Talk Certification	Began early 2019 and increasing through 2020		
	Consumer Electronics	1st platform with potential for 10 more	1 <sup>st</sup> OEM delayed due to Q1'20		
		Remote Control design wins	1 <sup>st</sup> product MP in Q4'19		
	<ul><li>Large Consumer Goods</li></ul>	Infineon design + additional module maker	Q4'19 through 2020		
eFPGA IP & QuickAl Initiatives	eFPGA  • Finalized license Q2'19 with DoI		QuickAl vate HDK+SensiML software		
SensiML Acquisition	<ul> <li>12 SaaS customers (4 Fortune Global 500 companies) through Q2'19; anticipate closing FY'19 between 50-100 SaaS customers</li> <li>Strong interest from large semi companies to have SensiML ported to their processors extends reach of AI Software Platform</li> <li>Continue to forecast EBITDA positive for business unit for FY'19</li> </ul>				
SiFive Partnership	<ul><li>Strategic Partnership for <i>Freedo</i></li><li>Significantly extends software an</li></ul>	om Aware family of industry's first SoC templates for and IP business models	Edge/Endpoint AI applications		
Outlook and Breakeven <sup>(1)(2)</sup>	<ul> <li>Expected FY'19 revenue of \$13.</li> <li>Up from \$12.6M and 51%</li> <li>Expected Q1'20 cash flow and not seem to be a seem to</li></ul>		ow 60 percent range		



## Q1'20 Profitability Goals Remain In Place Despite Headwinds

### Several Revenue Pushouts During Past Several Weeks Outside Our Control

- 1 Military Customers were Faced with Funding Delays
- 2 Tariff Threats with Chinese Customers
- Hearables Market Amazon AVS Close Talk Certification/Qualification Process Pushed Out
- Japanese Smartphone OEM Release Schedule Extended

## Clarity Moving Forward - Confident Revenue Ramps Starting Q4'19

- Military
  Expect production demand will rebound in Q4 and hold through at least 2020
- Chinese Tariffs
  Large consumer electronics customer indicates it will ramp production of its first models in Q1'20 and as additional OEMs introduce voice control, we believe aggregate volume will ramp throughout 2020
- 3 Hearables Market
  - Anticipated completion of first Amazon AVS Close Talk Certified design this month
  - Believe AVS Close Talk Qualified Reference Design listed on the Amazon Dev Kit site later this year
  - Believe hearable demand will increase significantly in Q4 and accelerate beginning in Q1'20
  - Believe the first of what could be several voice-enabled TV remote controls will enter production late in Q4 and we expect it will begin ramping in Q1'20
- Japanese Smartphones

  Expect to have four smartphones running in production by end of 2019 with feature phone (2X-4X the volume) entering production in Q2'20

## Transformed Model: End-to-End HW/SW Platform Company

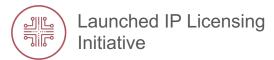
Doubled SAM Since 2016 to \$1B+(1) Through Strategic Initiatives and Acquisitions

2016

2017

2018

2019







Launched Edge/Endpoint Al Initiative

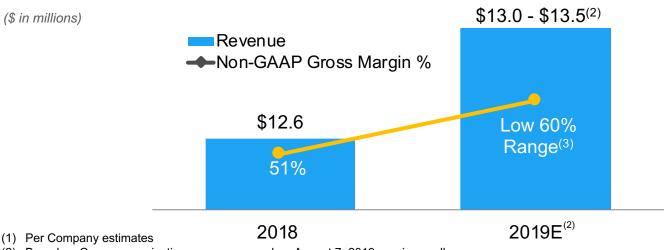


Acquired SensiML AI SW Platform



Strategic Partnership with SiFive

### Ramping Strategic New Product Revenue Driving to Achieve Profitability by Q1'20(2)



- Numerous design wins in strategic new products leading to **expanded Gross Margin**
- Gross margin expansion by ~10

  percentage points via Software, IP

  and SaaS revenue

- (2) Based on Company projections, as announced on August 7, 2019 earnings call.
- (3) Please refer to Appendix for Non-GAAP to GAAP reconciliation.



## Recent Developments – Strategic Acquisition and Partnership

### **SensiML Acquisition**

- Acquired by QuickLogic on January 4, 2019
- Software-as-a-Service AI Company
- End-to-end software platform
- Developed pattern matching sensor algorithms using ML technology
- Spin-out from Intel in 2017 and headquartered in Beaverton, Oregon



### **SiFive Strategic Partnership**

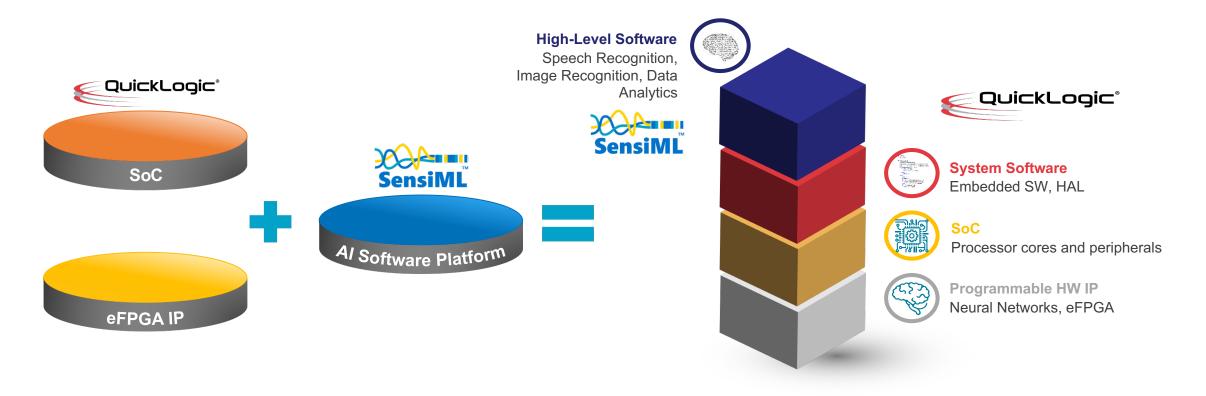
- Partnership with QuickLogic announced on April 25, 2019
- Leading provider of market-ready processor core IP, development tools, silicon solutions and SoC templates
- Based on open RISC-V instruction set architecture
- Executive team includes RISC-V inventors
- Investors include Intel Capital, Qualcomm Ventures, SK Telecom, Spark Capital, Sutter Hill Ventures and Western Digital





## QuickLogic / SensiML Combination

### **Creates Solution with Subscription Revenue Model**



Cross leverage QuickLogic's QuickAl platform and eFPGA IP with SensiML's software platform

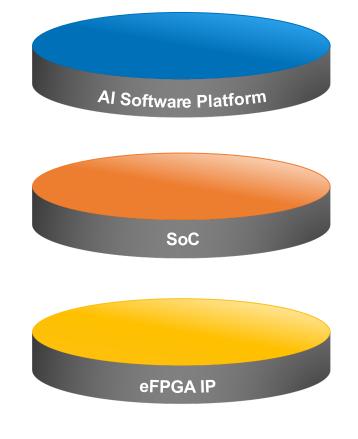


Subscription Model – "Stickier" recurring revenues and higher margins



### **Product Lines**

### **Core Technologies / Products**



### **End Markets**

#### **Mobile / Consumer IoT**











### **Customers & Partners**

















































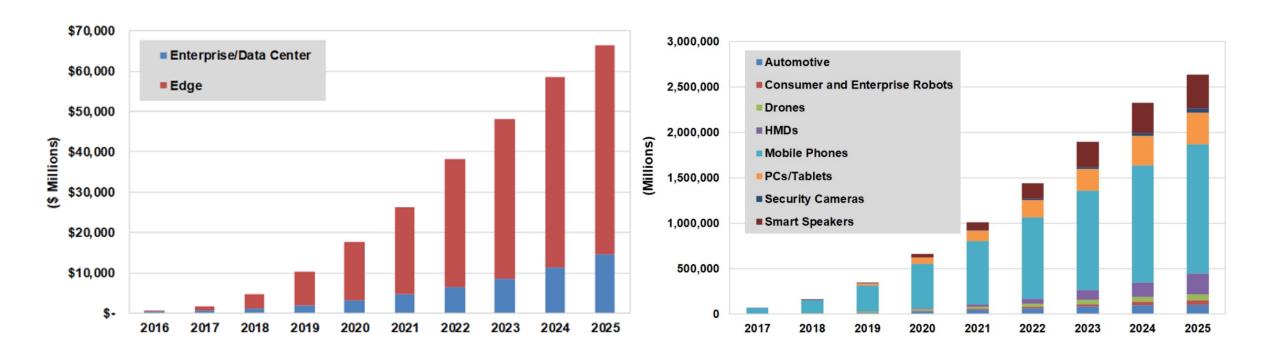




## Al Inference Opportunity at the Edge

#### **Deep Learning Chipset Revenue by Market Sector**

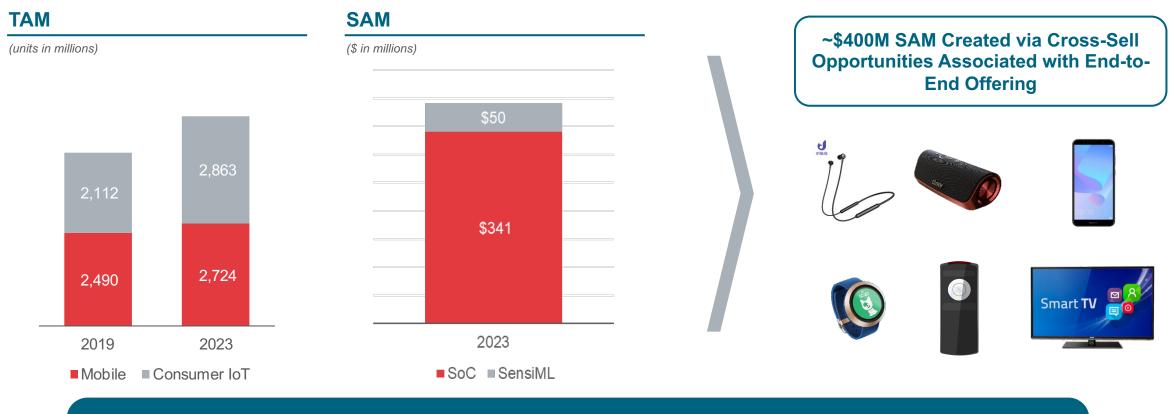
#### Al Edge Device Shipments by Category



SensiML acquisition significantly enhances ML inference capabilities at the edge and expands QuickLogic's end market opportunities

Source: Semiconductor Engineering, 2018.

### Consumer / Mobile - Voice-Enabled Products



### **Problem**

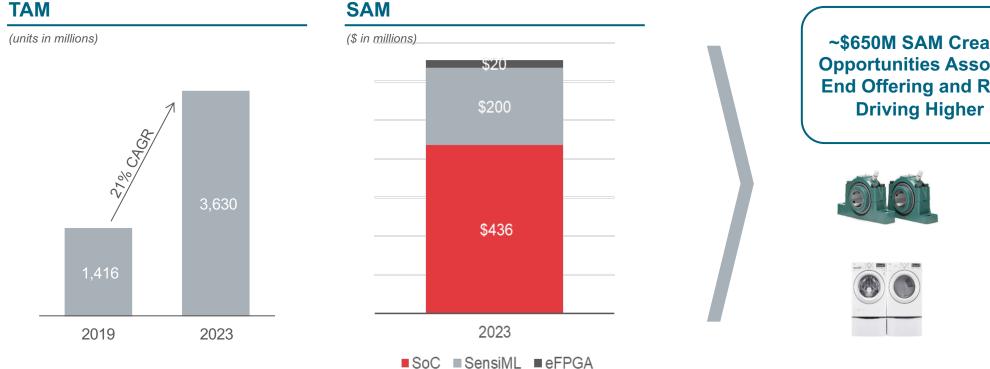
 Integrating always-on voice at very low power with additional sensors for user experience

### **Solution**

- EOS S3 Platform for Sensor & Voice Processing
- Optional SensiML AI toolkit for development of unique sensor algorithms

Source: ABI Research, Company Estimates.

### Industrial IoT – Predictive Maintenance & Structural Health



~\$650M SAM Created via Cross-Sell **Opportunities Associated with End-to-End Offering and Richer Revenue Mix Driving Higher Gross Margins** 





### **Problem**

- No "one size fits all" solution
- Cost and power required to send data to cloud

### Solution

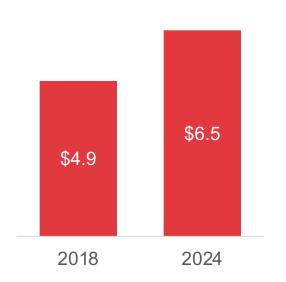
- SensiML toolkit for data collection, segmenting, labeling, ML and AI model creation
- EOS S3 Al Platform for Low Power Sensor Processing

Source: ABI Research, Company Estimates.

## eFPGA: Licensing Model Brings New High Margin Business



(\$ in millions)



#### **Benefits of SiFive Partnership**

- Strategic development partnership revolutionizes SoC design process
- Utilizes tested building blocks and full suite of development tools
- Drastically reduces design cycle times and total cost of first silicon
- Creates high gross margin manufacturing licenses revenue streams
- Delivers flexibility/reduced R&D costs for SoC vendors
- ETH Zurich final testing of Parallel Ultra Low Power platform targeting GLOBALFOUNDRIES' 22FDX using eFPGA expected to be completed in Q3'19

~\$10Ms SAM Created
Through Cross-Leverage of
End-to-End Offerings and
Strategic Partnership with
SiFive



### **Problem**

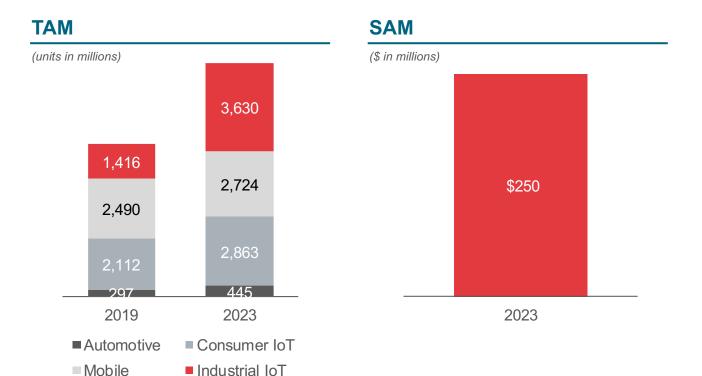
- Significant cost/time-to-market of modifying SoC/ASICs
- Power constraints to running AI in software on CPU/MCU

### **Solution**

 Adding re-programmable embedded FPGA technology to SoC/ASICs to accelerate AI functionality in more power efficient way

Source: Markets&Markets, Company Estimates.

### SensiML AI SW Platform





"I saw a live demo of SensiML last week, and was very impressed:



Capturing and labeling data for ML is so hard right now, especially for embedded applications and this solutions looks like a great step forward."



Pete Warden, Lead of the TensorFlow, Mobile / Embedded team at Google

### **Problem**

- Lack of understanding of the entire IoT stack requirements in the marketplace
- Requirement for an end-to-end solution that facilitates adoption without the need for data science

### **Solution**

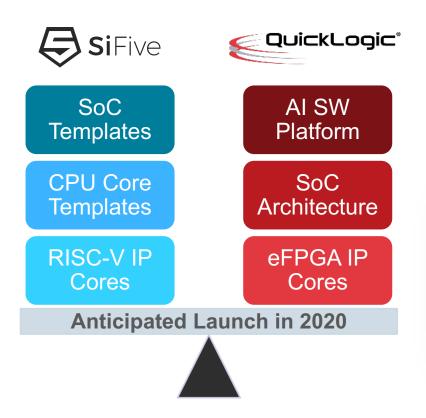
SensiML is an end-to-end software toolkit for automating the entire pipeline for capturing, labeling, analyzing, auto-generating code for a variety of ML algorithms on resource constrained microcontrollers

Source: ABI Research, Deloitte Research, Company Estimates, Pete Warden's Twitter (@petewarden, March 26, 2019, 1:16 PM PT).



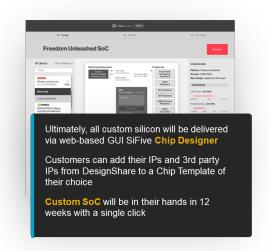
## The QuickLogic / SiFive Partnership

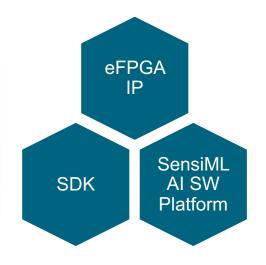
SiFive SoC templates extend the potential and reach of our IP and SensiML business models by enabling customers to quickly and cost-effectively scale their technologies



Significantly **reduces time-to-samples** from 24 months to 3-4 months, at **less than 50% the development cost** 

#### **Cloud-Based SoC Design Platform**





QuickLogic
monetizes the
platform from
architecture
and core
technology
contributions
to SoC
Templates

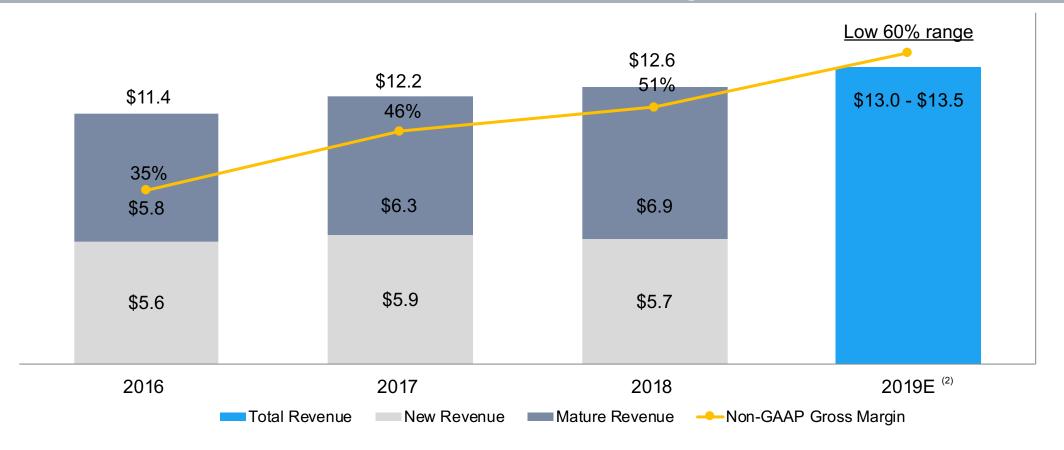


# Financial Overview



## Financial Summary

### Revenue and Non-GAAP Gross Margin<sup>(1,2)</sup>

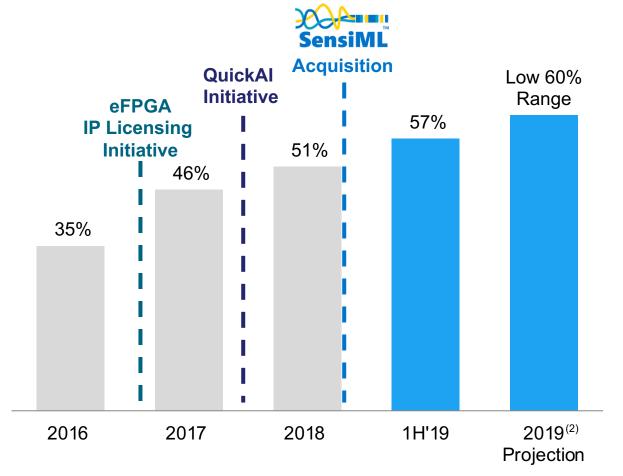


<sup>(1)</sup> Please refer to Appendix for Non-GAAP to GAAP reconciliation.

<sup>(2)</sup> Based on Company projections, as announced on August 7, 2019 earnings call.

### Transformed Financial Model





### **Gross Margin Expansion Drivers**

- Licensing opportunities with eFPGA and QuickAl
- Revenue mix shift from display bridges to high-margin mature product and SaaS subscriptions
- 3 Royalties from SiFive

- (1) Please refer to Appendix for Non-GAAP to GAAP reconciliation.
- (2) Based on Company projections, as announced on August 7, 2019 earnings call.

# Balance Sheet and Capitalization Summary

<b>Balance Sheet Summary as of June</b>	30, 2019	Capitalization as of June 30, 2019			
(\$ in thousands)		Common Stock Outstanding (in thousands of shares)			116,121
Assets		Debt	Interest Rate	Maturity	Amount
Current assets:		Revolving Credit Line – Heritage Bank	6.0%	Sep. 28, 2020	\$15.0M
Cash and cash equivalents	\$ 28,151				
Accounts receivable	1,519	Stock-Based Compensation (in thousands of shares)	Weighted Exercise Price		Amount
Inventories	3,502	Options Outstanding	\$2.29		2,617
Other current assets	1,717	Restricted Stock Units (in thousands of shares)			5,391
Total current assets	\$ 34,889	· ·			
		Warrants (in thousands of shares)	Exercise Price	Maturity	Amount
Long-term assets	\$ 5,242	May 2018 Offering	\$1.38	May 29, 2023	5,405
Total assets	\$ 40,131			•	
Liabilities					
Total current liabilities	\$ 18,716				
Long-term liabilities / other	1,553				
Total liabilities	\$ 20,269				
Stockholders' equity					
Common stock	\$ 116				
Additional paid-in capital	295,670				
Accumulated deficit	(275,924)				
Total stockholders' equity	\$ 19,862				
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Total liabilities and stockholders' equity	\$ 40,131				

Source: SEC filings.

## Non-GAAP Trended Income Statement

(\$ in millions, except per share data)	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19
New product revenue	\$ 1.6	\$ 1.5	\$ 1.3	\$ 0.7	\$ 0.7
Mature revenue	1.5	2.0	1.9	2.5	1.4
Total revenue	3.1	3.5	3.2	3.2	2.1
Gross margin %	50%	51%	53%	63%	50%
Operating expense					
Research and development	2.2	2.2	2.3	2.6	2.7
Sales, general and administrative	2.3	2.3	2.0	2.1	2.1
Total operating expense	4.5	4.5	4.3	4.7	4.8
Loss from operations	(3.0)	(2.7)	(2.6)	(2.8)	(3.7)
Net loss	\$ (3.0)	\$ (2.7)	\$ (2.6)	\$ (2.5)	\$ (3.8)
Basic and diluted net loss per share	\$ (0.04)	\$ (0.03)	\$ (0.03)	\$ (0.03)	\$ (0.04)

## **Investment Highlights**

- ML / Al Growth Story with End-to-End Solution in High-Volume End Markets with Fortune Global 500s
- Acquisition of SensiML Transforms Business Model and will Drive High-Margin Recurring SaaS Revenues
- Strategic Partnership with SiFive Expands Licensing Model Opportunities
- Robust IP Portfolio Enables High-Margin Licensing Revenue and Enhanced Solutions for Al Applications
- Gross Margin Expansion Every Year for Past Four Years, from 35% to Low 60% Range
- Despite External Factors Impacting 2H'19 Revenue Maintaining Outlook to Achieve Break-Even in Q1'20



# Addendum



### GAAP to Non-GAAP Reconciliation

(\$ in thousands, except per share data)	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19
Non-GAAP operating loss	\$ (2,967)	\$ (2,711)	\$ (2,578)	\$ (2,758)	\$ (3,740)
Adjustments:					
Stock-based compensation	(479)	(516)	(474)	(951)	(791)
FA impairment and/or write-off	-	-	-	-	(2)
GAAP operating loss	\$ (3,446)	\$ (3,227)	\$ (3,052)	\$ (3,709)	\$ (4,533)
Non-GAAP net loss	\$ (3,005)	\$ (2,744)	\$ (2,591)	\$ (2,525)	\$ (3,841)
Adjustments:					
Stock-based compensation	(479)	(516)	(474)	(951)	(791)
FA impairment and/or write-off	-	-	-	-	(2)
GAAP net loss	\$ (3,484)	\$ (3,260)	\$ (3,065)	\$ (3,476)	\$ (4,634)
Non-GAAP net loss per share	\$ (0.04)	\$ (0.03)	\$ (0.03)	\$ (0.03)	\$ (0.04)
Adjustment for stock-based compensation	-	-	-	(0.01)	(0.01)
GAAP net loss per share	\$ (0.04)	\$ (0.03)	\$ (0.03)	\$ (0.04)	\$ (0.05)
Non-GAAP gross margin %	50.1%	50.5%	52.6%	62.8%	49.8%
Adjustment for stock-based compensation	(1.1%)	(0.8%)	(0.9%)	(0.8%)	(0.8%)
GAAP gross margin %	49.0%	49.7%	51.7%	62.0%	49.0%