UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)
October 12, 2017

Lattice Semiconductor Corporation

(Exact name of registrant as specified in its charter)

Delaware	**000-18032**	**93-0835214**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

111 SW Fifth Ave, Ste 700
Portland, Oregon 97204
(Address of principal executive offices, including zip code)

(503) 268-8000
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company [ ]

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. [ ]

Item 2.02. Results of Operations and Financial Condition.

On October 12, 2017, Lattice Semiconductor Corporation (the "Company") presented business and financial information at a publicly available webcast meeting (the "Analyst and Investor Meeting"). These presentations included certain preliminary financial results for the third quarter ended September 30, 2017. The Company issued a press release with the preliminary result prior to the Analyst and Investor Meeting, which is filed as an exhibit to this Form 8-K. Final results for this period will be more fully announced in our earnings release and conference call in early November 2017.

Item 7.01. Regulation FD Disclosure.

On October 12, 2017, Lattice Semiconductor Corporation (the "Company") presented business and financial information at a publicly available webcast meeting (the "Analyst and Investor Meeting"). Attached hereto as exhibits and incorporated by reference herein are the Analyst and Investor Meeting press release and presentation slides. The press release was disseminated prior to the webcast.

During the course of the Analyst and Investor Meeting, the Company's executives discussed its preliminary business outlook based on current expectations. The presentations include forward-looking statements. A replay of the live webcast may be found at ir.latticesemi.com.

Copies of the press release and the presentation slides are furnished (not filed) as Exhibits 99.1 and 99.2, respectively, to this Current Report on Form 8-K. The information in Exhibits 99.1 and 99.2 shall not be deemed to be "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or incorporated by reference in any filing under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

The following exhibits are being furnished herewith:

Exhibit No.	Description
99.1	Press Release, dated October 12, 2017 (furnished herewith).
99.2	Presentation Slides for Analyst and Investor Meeting, October 12, 2017 (furnished herewith).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

LATTICE SEMICONDUCTOR CORPORATION

By: /s/ Max Downing

Max Downing
Chief Financial Officer

Date: October 13, 2017

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release, dated October 12, 2017 (furnished herewith).
99.2	Presentation Slides for Analyst and Investor Meeting, October 12, 2017 (furnished herewith).

Exhibit 99.1

News Release

For more information contact:
David Pasquale
Global IR Partners
914-337-8801
lscc@globalirpartners.com

LATTICE SEMICONDUCTOR TO DISCUSS BUSINESS OUTLOOK AT TODAY'S ANALYST & INVESTOR MEETING

PORTLAND, OR - October 12, 2017 - Lattice Semiconductor Corporation (NASDAQ: LSCC), the leading provider of customizable smart connectivity solutions, announced that it would discuss its preliminary business outlook based on current expectations at the Company's analyst and investor meeting today at the Shelburne NYC Hotel. A live webcast will begin at 10:00 a.m. EDT today at www.LatticeSemi.com, with a replay available for those unable to attend the presentations in person. The Company plans to release financial results and host a conference call for the third quarter of 2017 in early November.

Darin Billerbeck, President and CEO, commented, "We have a clear pathway to growth and profitability, with stability in our core business as the foundation to build upon. At today's analyst and investor meeting, we are discussing how Edge of the cloud devices and applications require our Edge connectivity and Edge intelligence solutions. Edge connectivity drives our core business stability and growth today, while Edge intelligence will accelerate our future growth. We remain committed to creating greater shareholder value as we work to deliver increased free cash flow for future investments and to pay down our debt."

Preliminary Company Business Outlook Based on Current Expectations:

- Revenue: Revenue is expected to be approximately $91 million to $93 million for the third quarter 2017, approximately $92 million to $97 million for the fourth quarter 2017, and approximately $383 million to $388 million for the full year 2017.
- Gross Margin: Gross margin percentage for the third quarter of 2017 is expected to be approximately 56% plus or minus 2%, with gross margin for both the fourth quarter and full year 2017 expected to be approximately 56% plus or minus 2% on a GAAP basis. Gross margin percentage is expected to be approximately 56% plus or minus 2% on a non-GAAP basis for the third quarter of 2017, with gross margin for both the fourth quarter and full year 2017 expected to be approximately 56% plus or minus 2% on a non-GAAP basis.

- Total Operating Expenses: Total operating expenses, excluding acquisition, impairment and restructuring related charges, amortization of intangibles and stock compensation, are expected to be approximately $45 million to $47 million for the third quarter 2017, approximately $43 million to $45 million for the fourth quarter 2017 and approximately $182 million to $186 million on a non-GAAP basis for the full year 2017.
- Full Year 2018: The Company is targeting double-digit annual revenue growth, gross margin percentage at the mid-50% level, operating expenses excluding items noted above at approximately 37% to 38% of revenue and operating income in the mid-to-high teens, with EBITDA of approximately $110 million to $120 million, free cash flow of approximately $80 million to $100 million and a debt reduction of approximately $50 million to $60 million.
- Restructuring and Impairment Charges: The Company expects GAAP results for the third quarter 2017 will reflect restructuring charges of approximately $3.5 million to $4.0 million, primarily related to operating expense reduction actions taken. The Company also expects GAAP results for the third quarter 2017 will reflect a non-cash impairment charge of approximately $36 million, related to the Company's strategic decision to cease future investment in wired ASSP development as it concentrates its resources on higher potential growth opportunities.

Forward-Looking Statements Notice:

The foregoing paragraphs contain forward-looking statements that involve estimates, assumptions, risks and uncertainties. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. Such forward-looking statements include statements relating to: our belief that we have a clear pathway to growth and profitability, with stability in our core business as the foundation to build upon; that Edge of the cloud devices and applications require our Edge connectivity and Edge intelligence solutions; that Edge connectivity will drive our core business stability and growth today, while Edge intelligence will accelerate our future growth; and those statements under the heading "Company Updates Business Outlook" relating to revenue, gross margin, total operating expenses, EBITDA, free cash flow and debt reduction for Q3 2017, Q4 2017 and the full fiscal years 2017 and 2018, and restructuring and impairment charges for Q3 2017. Other forward-looking statements may be indicated by words such as "will," "could," "should," "would," "may," "expect," "plan," "project," "anticipate," "intend," "forecast," "future," "believe," "estimate," "predict," "propose," "potential," "continue" or the negative of these terms or other comparable terminology. Lattice believes the factors identified below could cause actual results to differ materially from the forward-looking statements.

Estimates of future revenue are inherently uncertain due to, among other things, the high percentage of quarterly "turns" business. In addition, revenue is affected by such factors as global economic conditions, which may affect customer demand, pricing pressures, competitive actions, the demand for our Mature, Mainstream and New products, and in particular our iCE40™ and MachXO3L™ devices, the ability to supply products to customers in a timely manner, changes in our distribution relationships, or the volatility of our consumer business. Actual gross margin percentage and operating expenses could vary from the estimates on the basis of, among other things, changes in revenue levels, changes in product pricing and mix, changes in wafer, assembly, test and other costs,

including commodity costs, variations in manufacturing yields, the failure to sustain operational improvements, the actual amount of compensation charges due to stock price changes. Any unanticipated declines in revenue or gross margin, any unanticipated increases in our operating expenses or unanticipated charges could adversely affect our profitability.

In addition to the foregoing, other factors that may cause actual results to differ materially from the forward-looking statements in this press release include global economic uncertainty, overall semiconductor market conditions, market acceptance and demand for our new products, the Company's dependencies on its silicon wafer suppliers, the impact of competitive products and pricing, and technological and product development risks. In addition, actual results are subject to other risks and uncertainties that relate more broadly to our overall business, including those risks more fully described in Lattice's filings with the SEC including its annual report on Form 10-K for the fiscal year ended December 31, 2016, and Lattice's quarterly reports filed on Form 10-Q.

You should not unduly rely on forward-looking statements because actual results could differ materially from those expressed in any forward-looking statements. In addition, any forward-looking statement applies only as of the date on which it is made. The Company does not intend to update or revise any forward-looking statements, whether as a result of events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

About Lattice Semiconductor:

Lattice Semiconductor (NASDAQ: LSCC) is a leader in smart connectivity solutions at the network edge, where the "things" of IoT live. Our low power FPGA, 60 GHz millimeter wave, video ASSP and IP products deliver edge intelligence, edge connectivity, and control solutions to the consumer, communications, industrial, compute, and automotive markets. Our unwavering commitment to our global customers enables them to accelerate their innovation, creating an ever better and more connected world.

For more information about Lattice please visit www.latticesemi.com. You can also follow us via LinkedIn, Twitter, Facebook, YouTube, WeChat, Weibo or Youku.

# # #

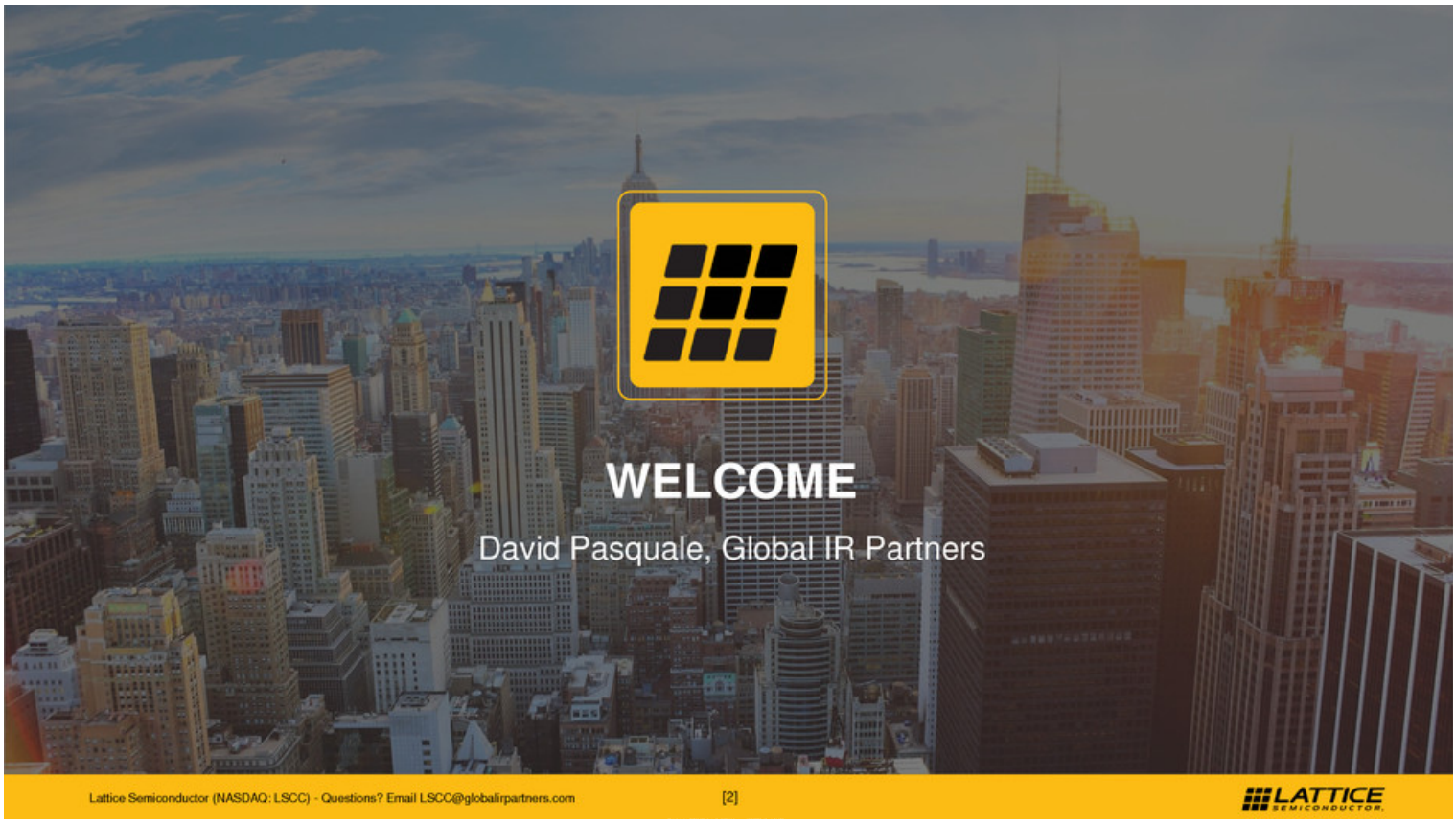
Exhibit 99.2

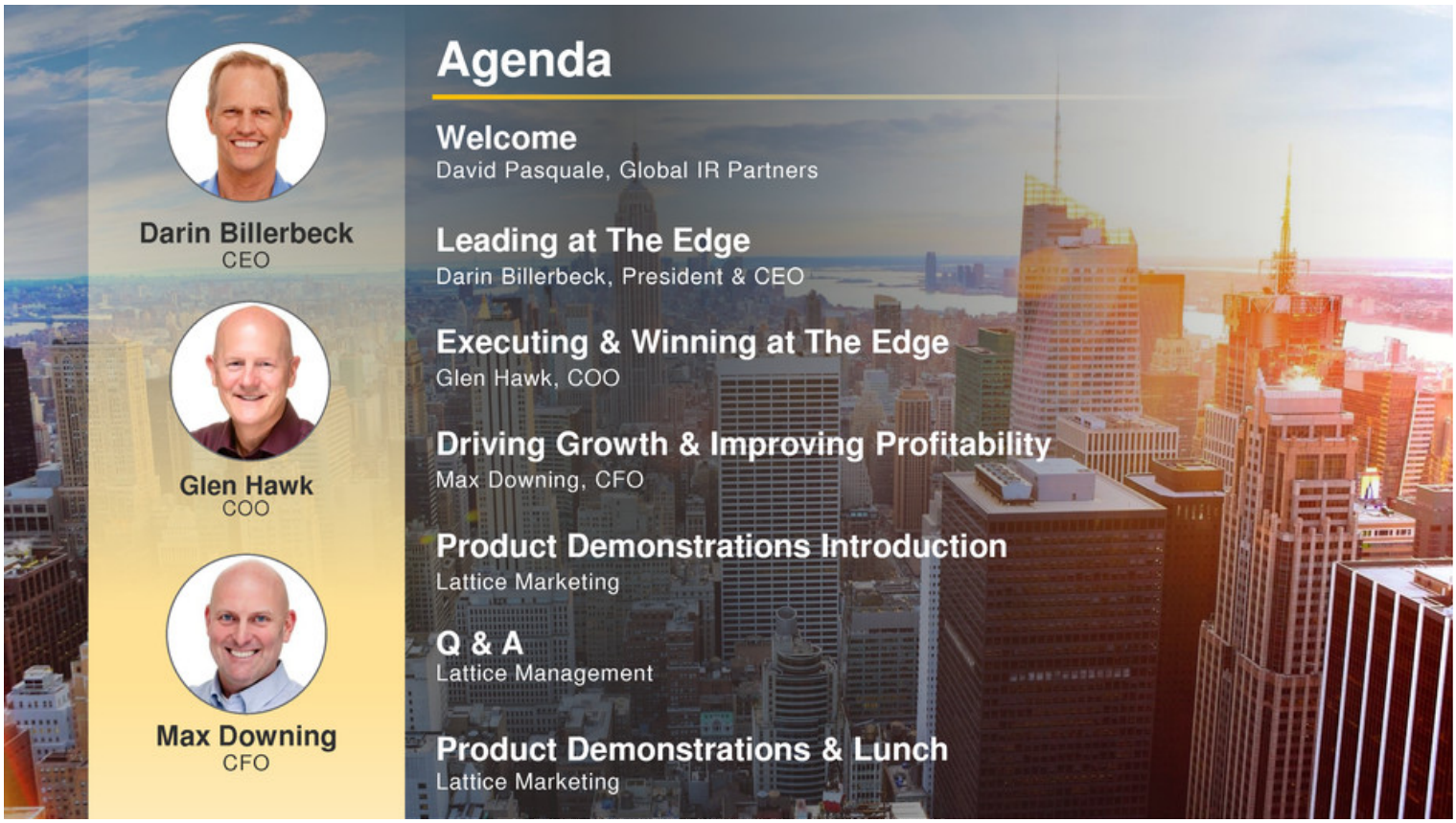
Stability & Growth at the Edge of the Network

Analyst & Investor Day
October 12, 2017

NASDAQ: LSCC

LATTICE SEMICONDUCTOR


WELCOME
David Pasquale, Global IR Partners


Darin Billerbeck
CEO
Glen Hawk
COO
Max Downing
CFO
Agenda
Welcome
David Pasquale, Global IR Partners
Leading at The Edge
Darin Billerbeck, President & CEO
Executing & Winning at The Edge
Glen Hawk, COO
Driving Growth & Improving Profitability
Max Downing, CFO
Product Demonstrations Introduction
Lattice Marketing
Q & A
Lattice Management
Product Demonstrations & Lunch
Lattice Marketing

Safe Harbor

This presentation contains forward-looking statements that involve estimates, assumptions, risks and uncertainties, including statements relating to our belief that Edge connectivity will drive solid base business growth, that Edge intelligence will accelerate future growth, that stability and growth will drive solid financial returns, that the Lattice opportunity doubles to $2 billion by 2022 with Edge computing and statements relating to our financial outlook for Q3 2017, Q4 2017, fiscal 2017 and our fiscal 2018 financial model, including estimates regarding revenue, gross margin, operating expenses, EPS, EBITDA, debt reduction, leverage ratio, free cash flow, cash flow and liquidity. Lattice believes the factors identified below could cause our actual results to differ materially from the forward-looking statements.

Factors that may cause our actual results to differ materially from the forward-looking statements in this presentation include global economic uncertainty, overall semiconductor market conditions, market acceptance and demand for our new and existing products, the Company's dependencies on its silicon wafer suppliers, the impact of competitive products and pricing, and technological and product development risks. In addition, actual results are subject to other risks and uncertainties that relate more broadly to our overall business, including those risks more fully described in Lattice's filings with the SEC including its annual report on Form 10-K for the fiscal year ended December 31, 2017 and our quarterly filings on Form 10-Q.

Certain information in this presentation is identified as having been prepared on a non-GAAP basis. Management uses non-GAAP measures to better assess operating performance and to establish operational goals. Non-GAAP information should not be viewed by investors as a substitute for data prepared in accordance with GAAP.

You should not unduly rely on forward-looking statements because actual results could differ materially from those expressed in any forward-looking statements. In addition, any forward-looking statement applies only as of the date on which it is made. The Company does not intend to update or revise any forward-looking statements, whether as a result of events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

LEADING AT THE EDGE

Darin G. Billerbeck, President & CEO


Edge
Cloud
Data
Computing
Decisions
Process
Internet of Things
Translation
Connectivity
Teach
Brain
Perception
Interconnect
IoT
Cognition
Artificial Intelligence
Machine Learning
Neural Network
Convolutional
Decide
Send
Binarized
Latency
Image
CNN
Security
Bandwidth
AI
Core
Neural
Algorithm
System
Inferencing
Recognition

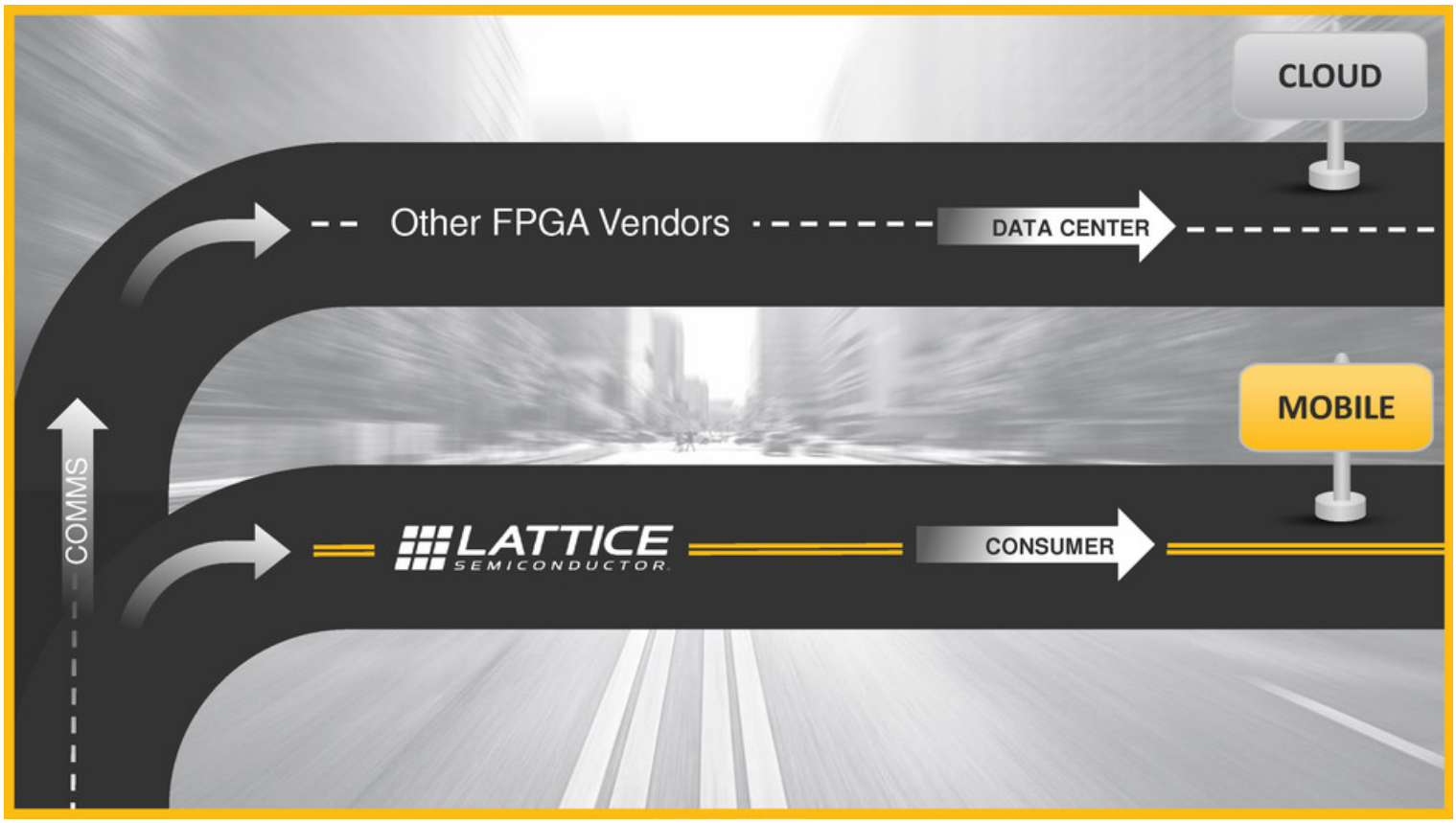

Cloud
Edge

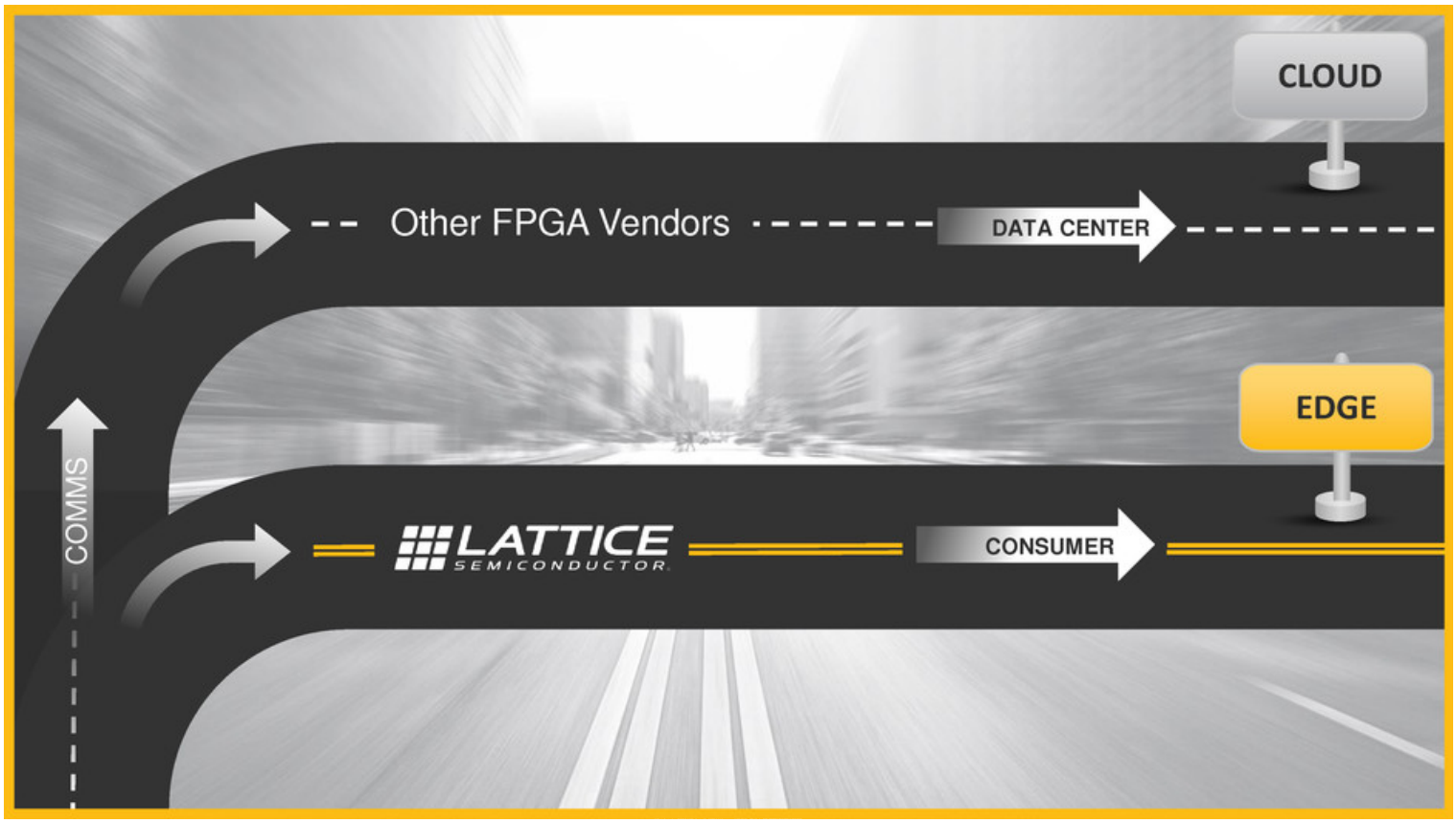

Cloud

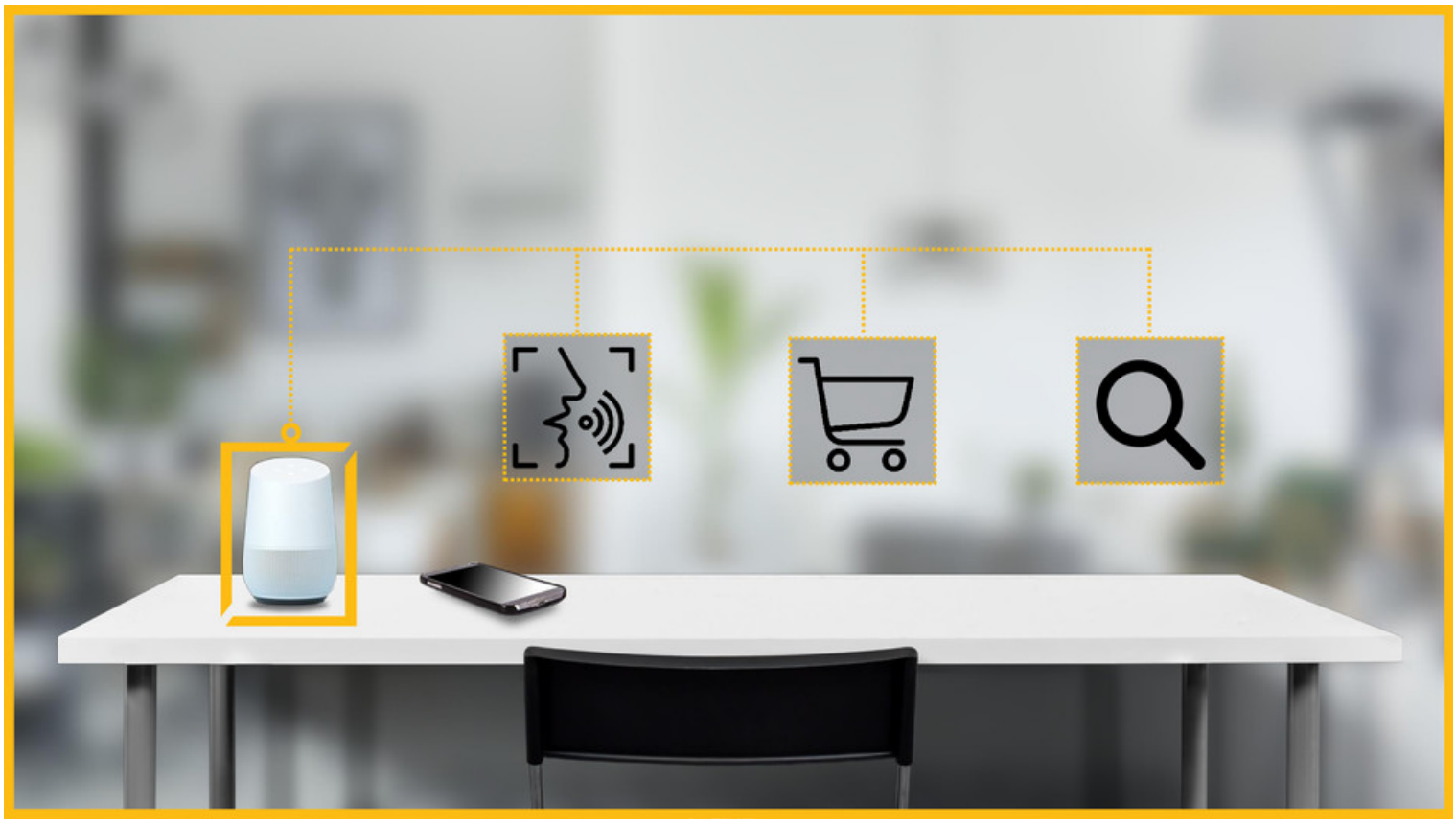

Edge
STOP
Self-driving MODE
Battery level 85%
MENU MUSIC PHONE

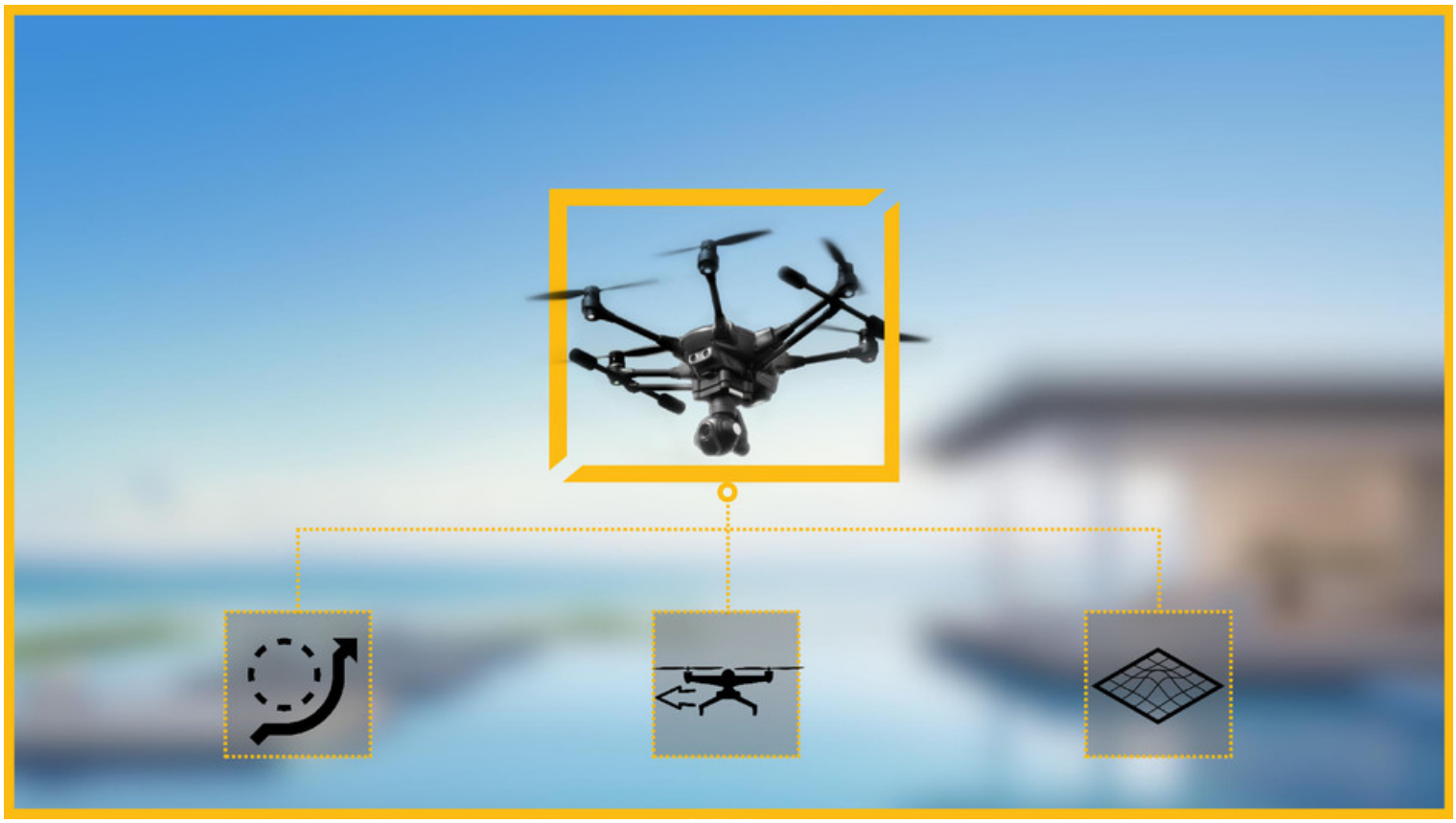

Edge
STOP
Self-driving MODE
Battery level 85%
MENU
MUSIC
PHONE

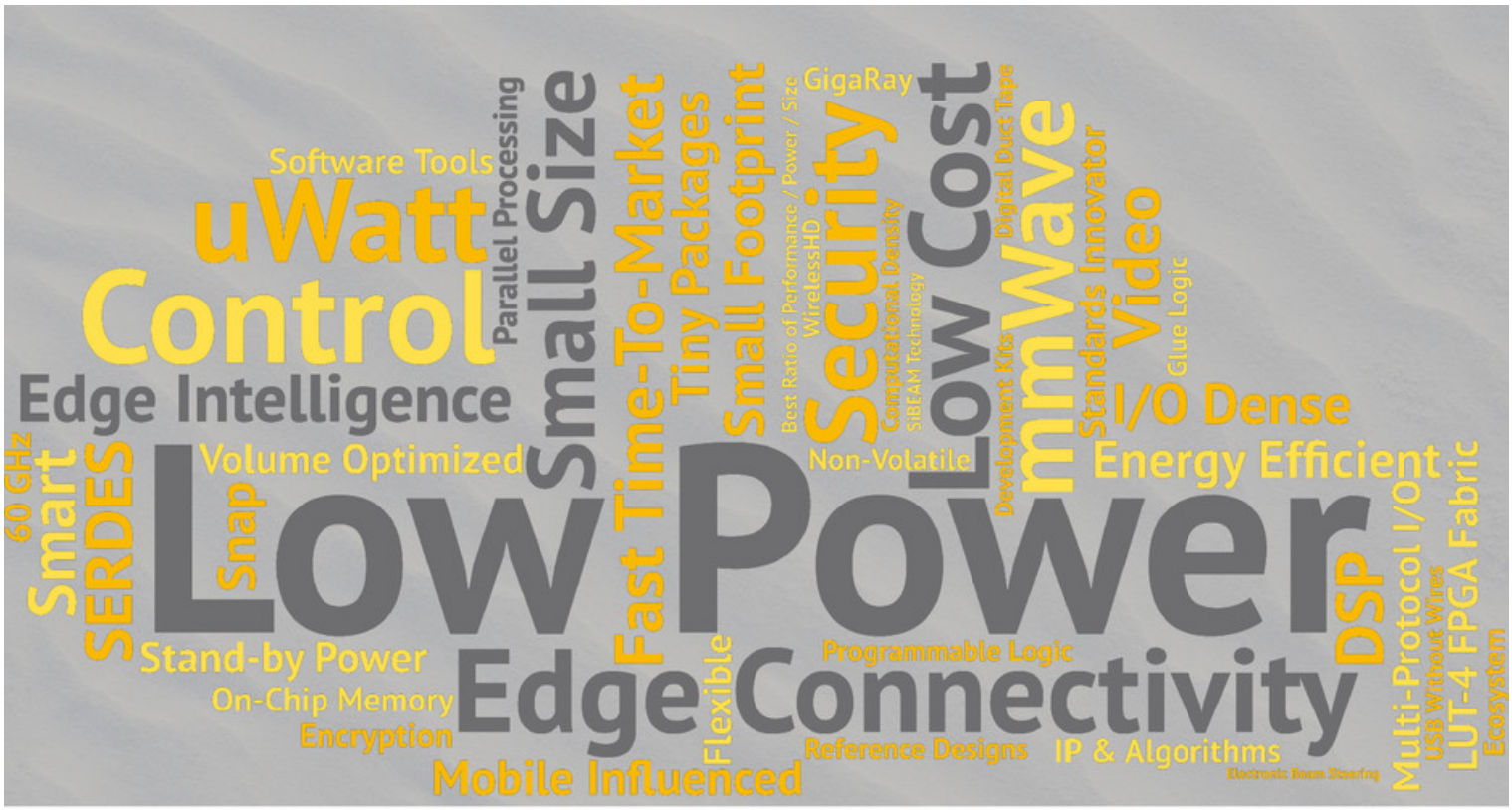
SO WHAT?


CLOUD
Other FPGA Vendors
DATA CENTER
MOBILE
COMMS
LATTICE
SEMICONDUCTOR
CONSUMER


CLOUD
Other FPGA Vendors
DATA CENTER
EDGE
COMMS
LATTICE
SEMICONDUCTOR
CONSUMER

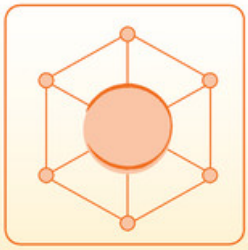





Low Power
Edge Connectivity
Control
uWatt
Small Size
Low Cost
Security
mmWave
Video
I/O Dense
Energy Efficient
Edge Intelligence
Volume Optimized
Non-Volatile
Fast Time-To-Market
Small Footprint
Tiny Packages
Parallel Processing
Software Tools
GigaRay
Digital Duct Tape
Standards Innovator
Glue Logic
Development Kits
Computational Density
SiBEAM Technology
Best Ratio of Performance / Power / Size
WirelessHD
60 GHz
Smart
SERDES
Snap
Stand-by Power
On-Chip Memory
Encryption
Flexible
Programmable Logic
Reference Designs
IP & Algorithms
Electronic Beam Steering
Mobile Influenced
DSP
Multi-Protocol I/O
USB Without Wires
LUT-4 FPGA Fabric
Ecosystem

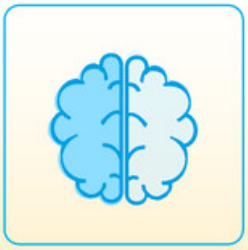
Lattice Semiconductor

Pathway to Growth and Profitability



EDGE CONNECTIVITY

Edge connectivity drives stable base business growth



EDGE COMPUTING

Edge computing accelerates future growth

FINANCIAL GROWTH

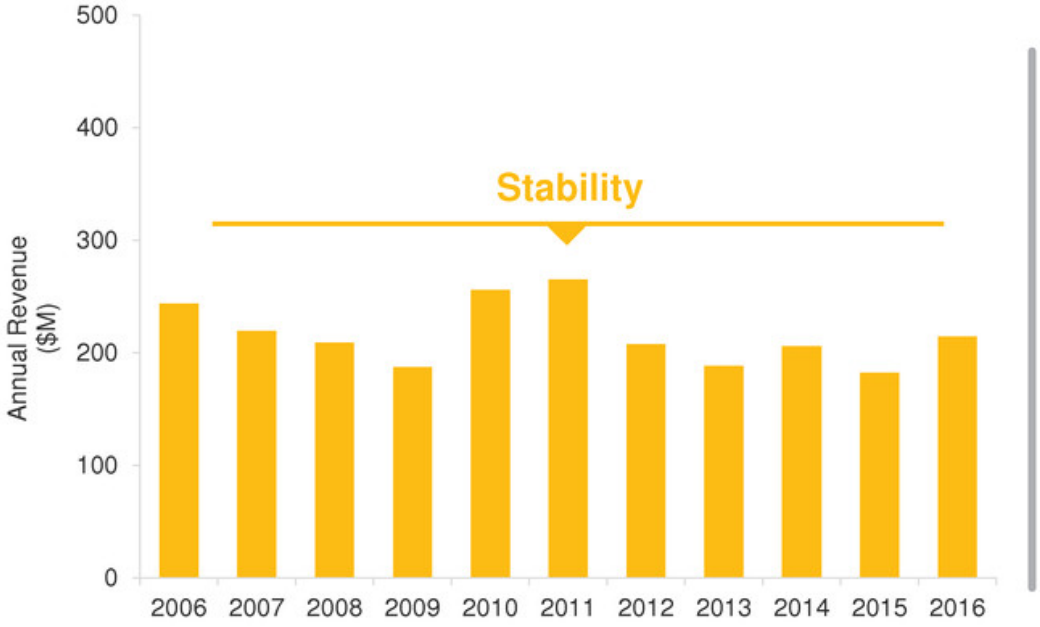
Stability & growth drive solid financial returns


EXECUTING AT THE EDGE
Glen Hawk, COO


2 CONNECT
1 CONTROL
3 COMPUTE

Decades of Leadership for Stability

Control, Connectivity and Computing for Edge Intelligence

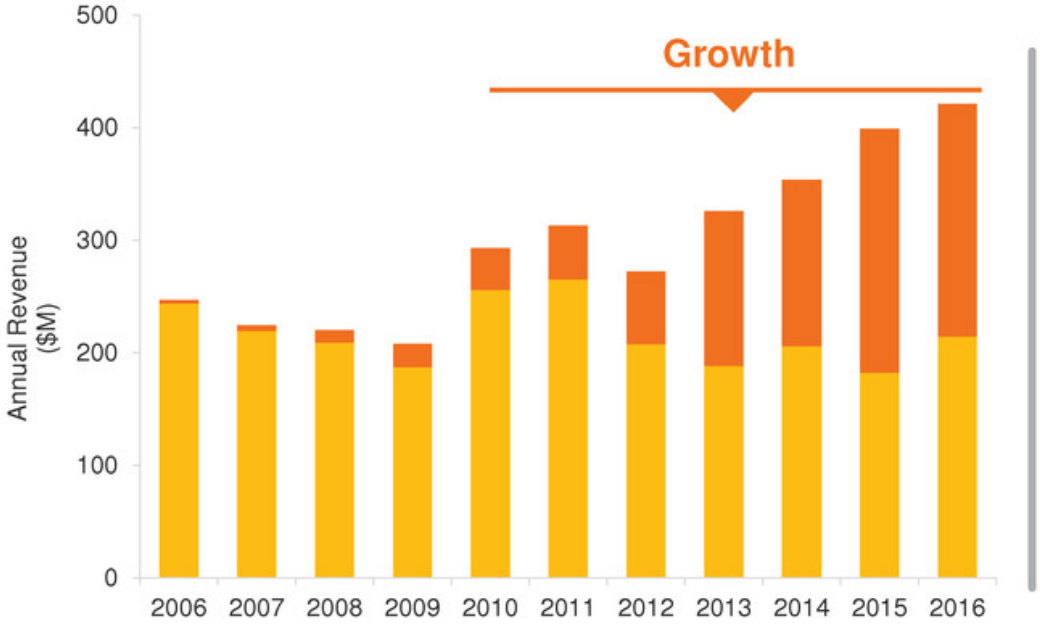


Control PLDs
Financial Stability
Edge Incumbency

Control

Edge Connectivity for Growth

Control, Connectivity and Computing for Edge Intelligence

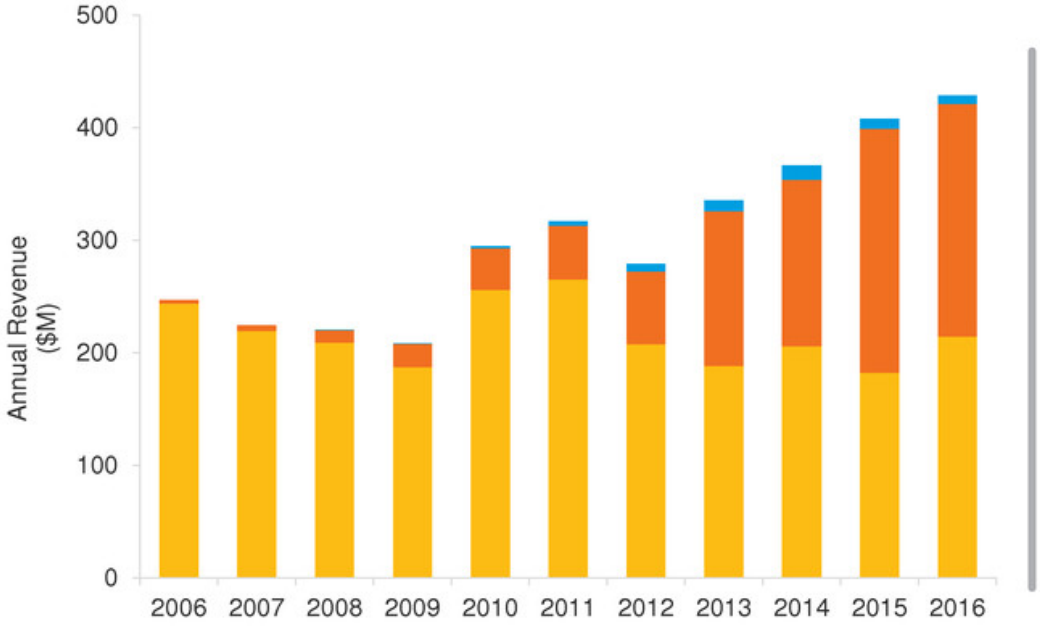


Edge Connectivity
Proven Growth Driver
Leveraging Acquisitions

Control PLDs
Financial Stability
Edge Incumbency

Edge Computing for the Future

Control, Connectivity and Computing for Edge Intelligence



Edge Computing
Future Growth Driver
New Market Needs
Existing Lattice Products

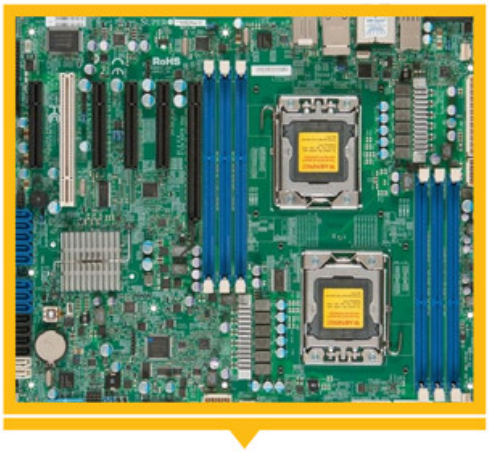
Edge Connectivity
Proven Growth Driver
Leveraging Acquisitions

Control PLDs
Financial Stability
Edge Incumbency


2 CONNECT
1 CONTROL
3 COMPUTE

Control Products for Board Management

Lattice Control PLD Solutions



c.2012 Server Motherboard

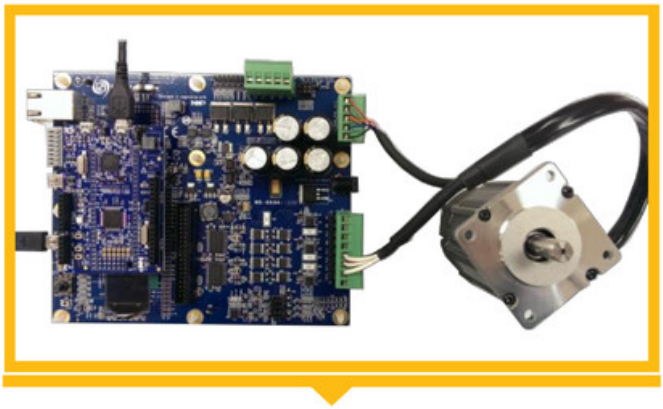
Lattice Solution: MachXO2, ~100 I/O

c.2017 Server Motherboard

Lattice Solution: MachXO3, ~300 I/O

Control Products for System Management

Lattice Control PLD Solutions



c.2012 Single Motor control

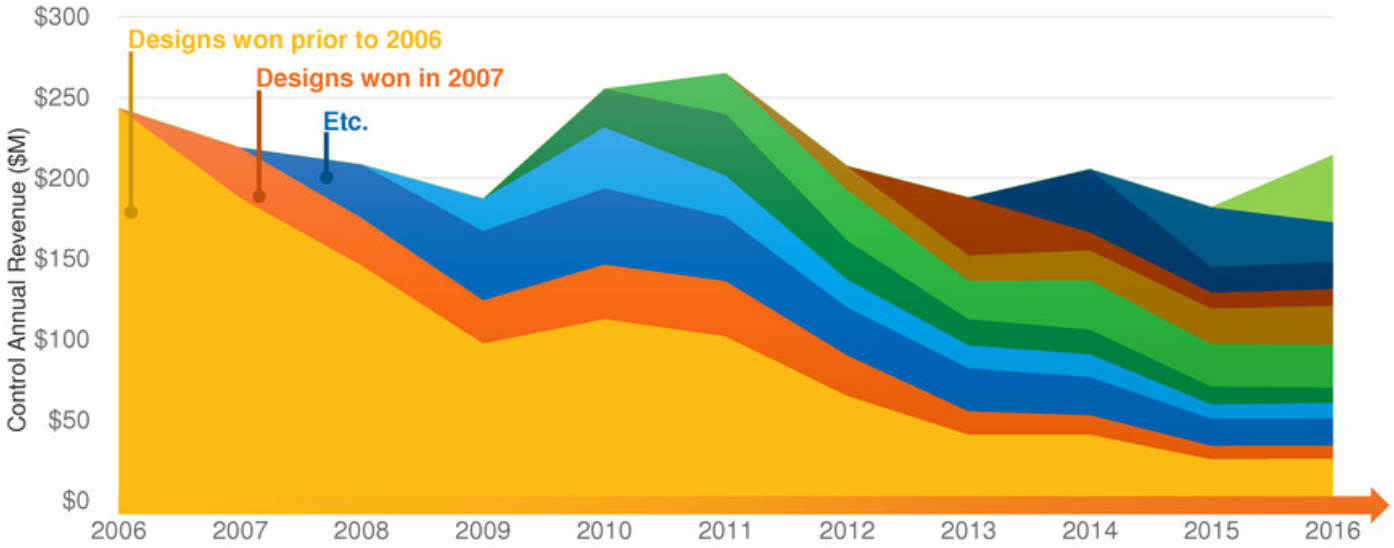
Lattice Solution: MachXO2

c.2017 Industrial Robotics

Lattice Solution: MachXO3, Lattice XP2

Control Products Establish Stable Revenue Base

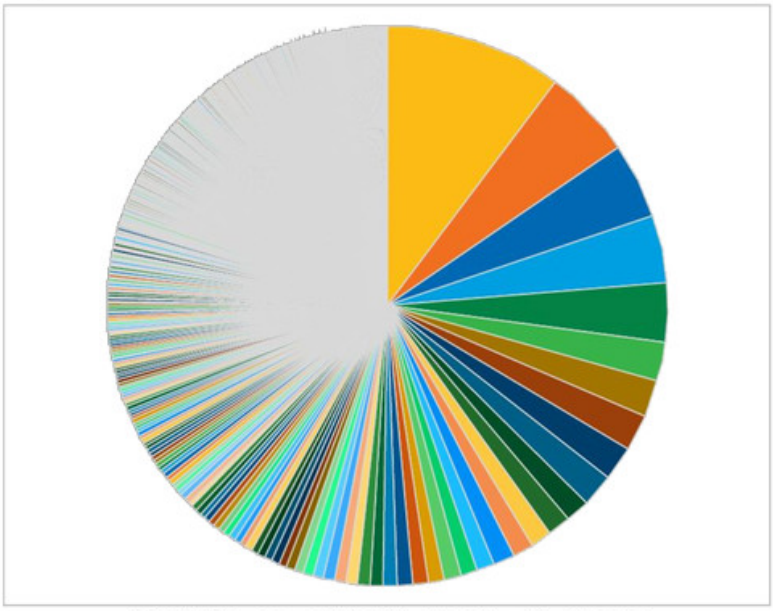
Long Design Cycles and Longer Production Windows



Customers trust Lattice for stable supply of high quality products

Control Products Establish Stable Revenue Base

Over 4,000 Customers in 2016



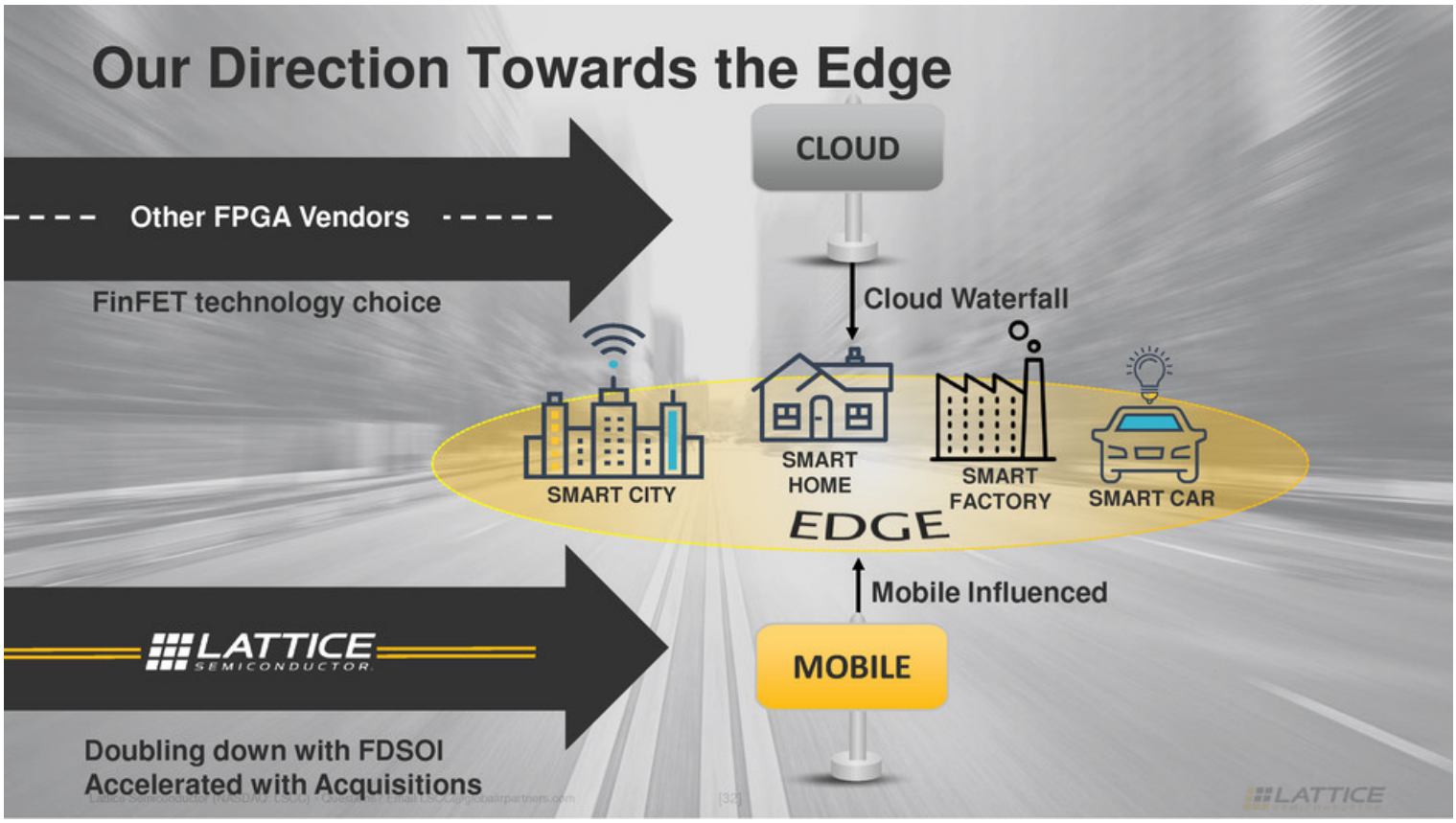
2016 Revenue Distribution by Customer

Optimized Sales Channels
Supporting broad customer base with unique requirements

Design-in Support
Deep systems expertise enables customer innovations

Edge Incumbents
Lattice was already there


2 CONNECT
1 CONTROL
3 COMPUTE


Our Direction Towards the Edge
CLOUD
Other FPGA Vendors
FinFET technology choice
Cloud Waterfall
SMART CITY
SMART HOME
SMART FACTORY
SMART CAR
EDGE
Mobile Influenced
MOBILE
LATTICE SEMICONDUCTOR
Doubling down with FDSOI
Accelerated with Acquisitions

Mobile Influenced Edge Connectivity

Lattice's iCE FPGA Design Wins

Mobile Influenced Edge Connectivity

Lattice's CrossLink FPGA Design Wins

ADAS, INFOTAINMENT

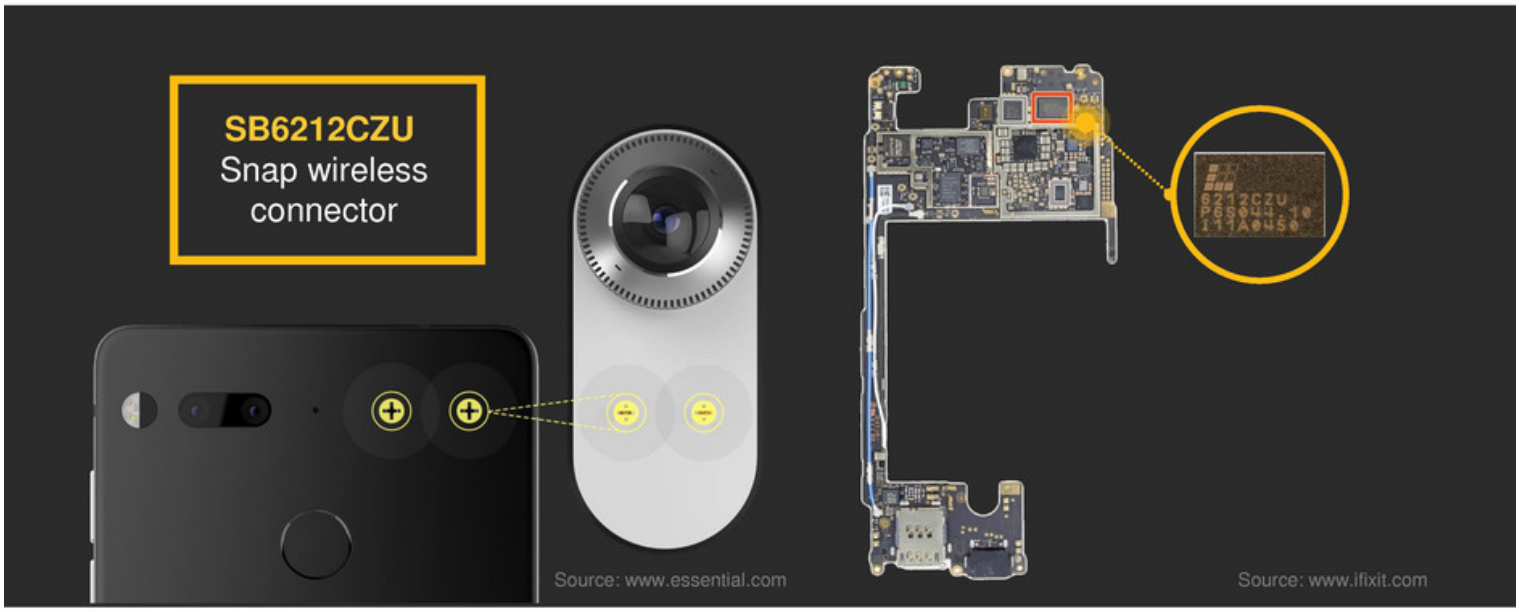
SURVEILLANCE

MACHINE VISION

TABLETS

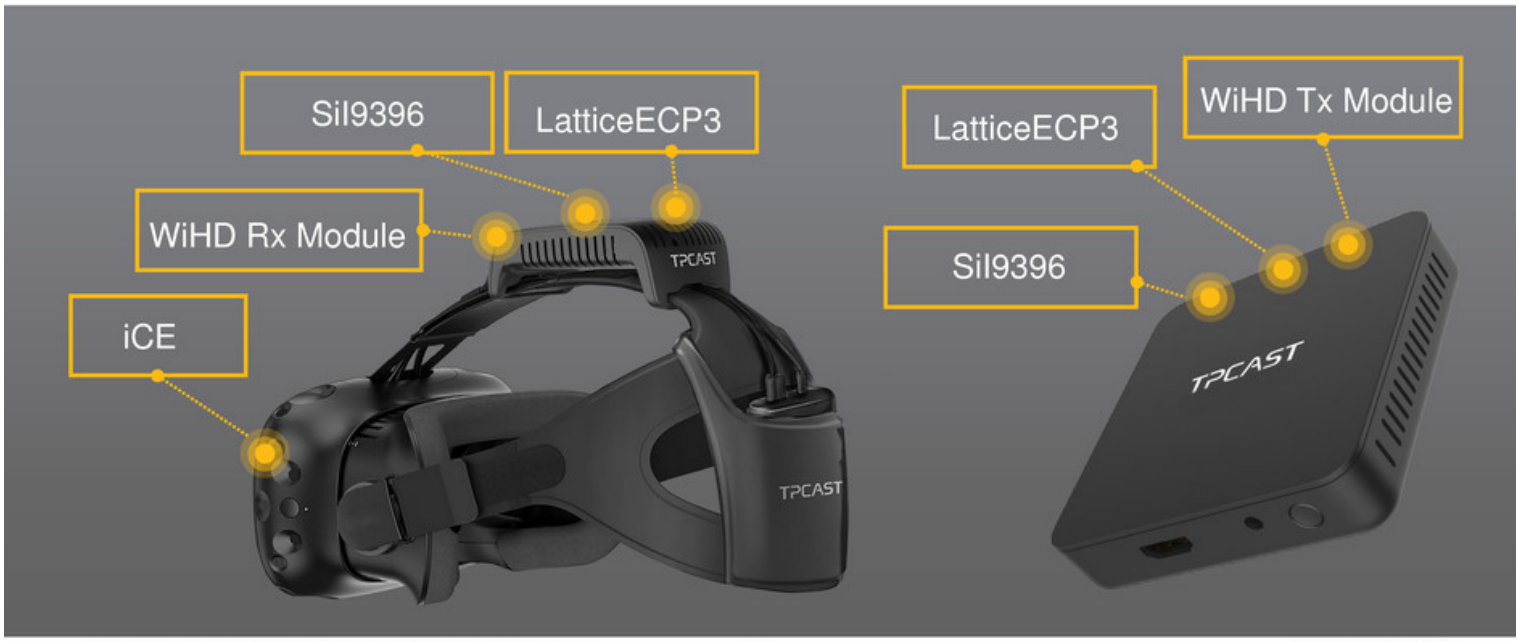
Wireless Edge Connectivity

Essential Phone Design Win

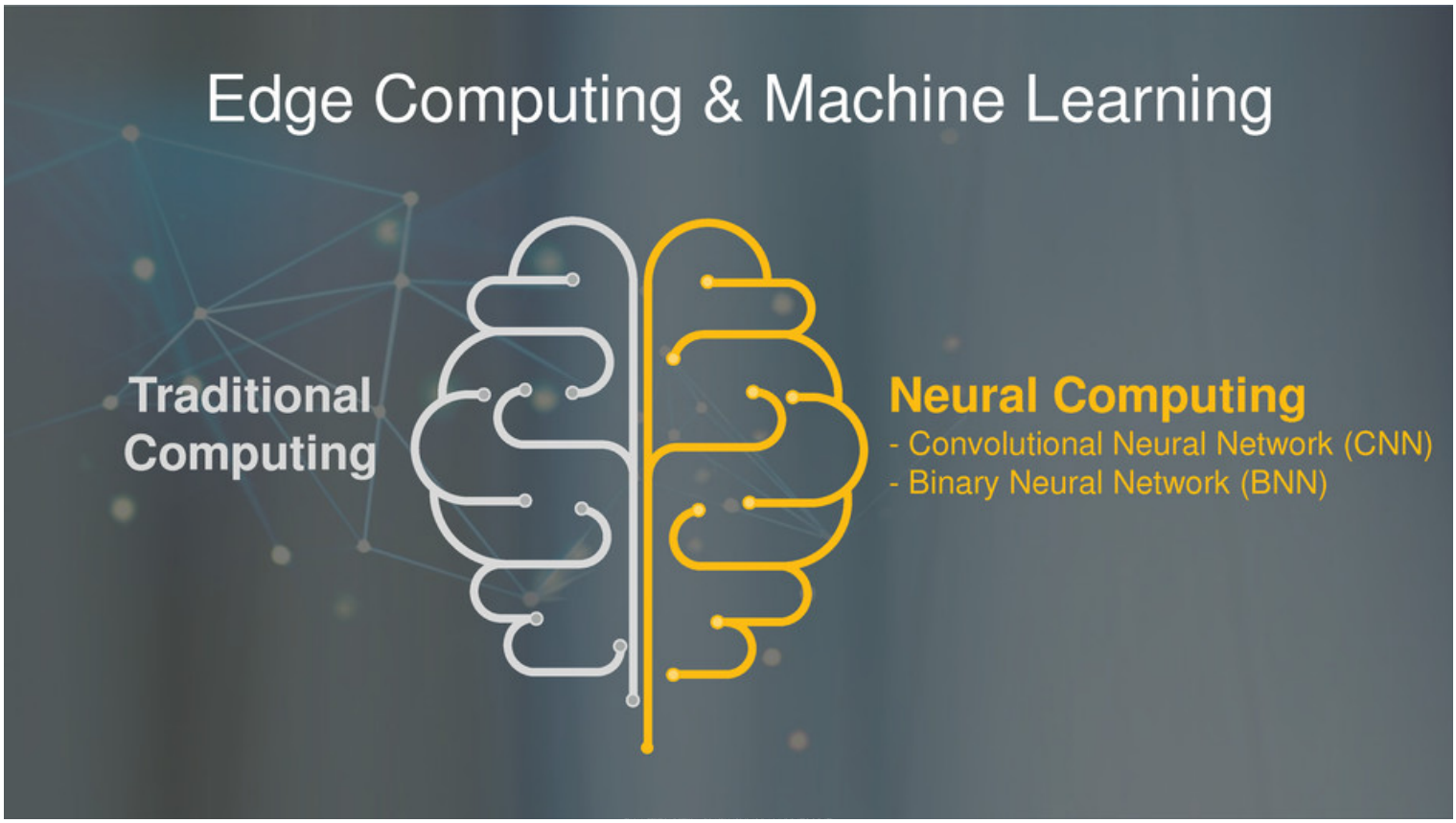


Wireless Edge Connectivity

TPCAST Design Win – Immersive Wireless VR Enabled by Lattice Portfolio




2 CONNECT
1 CONTROL
3 COMPUTE


Edge Computing & Machine Learning
Traditional Computing
Neural Computing
- Convolutional Neural Network (CNN)
- Binary Neural Network (BNN)

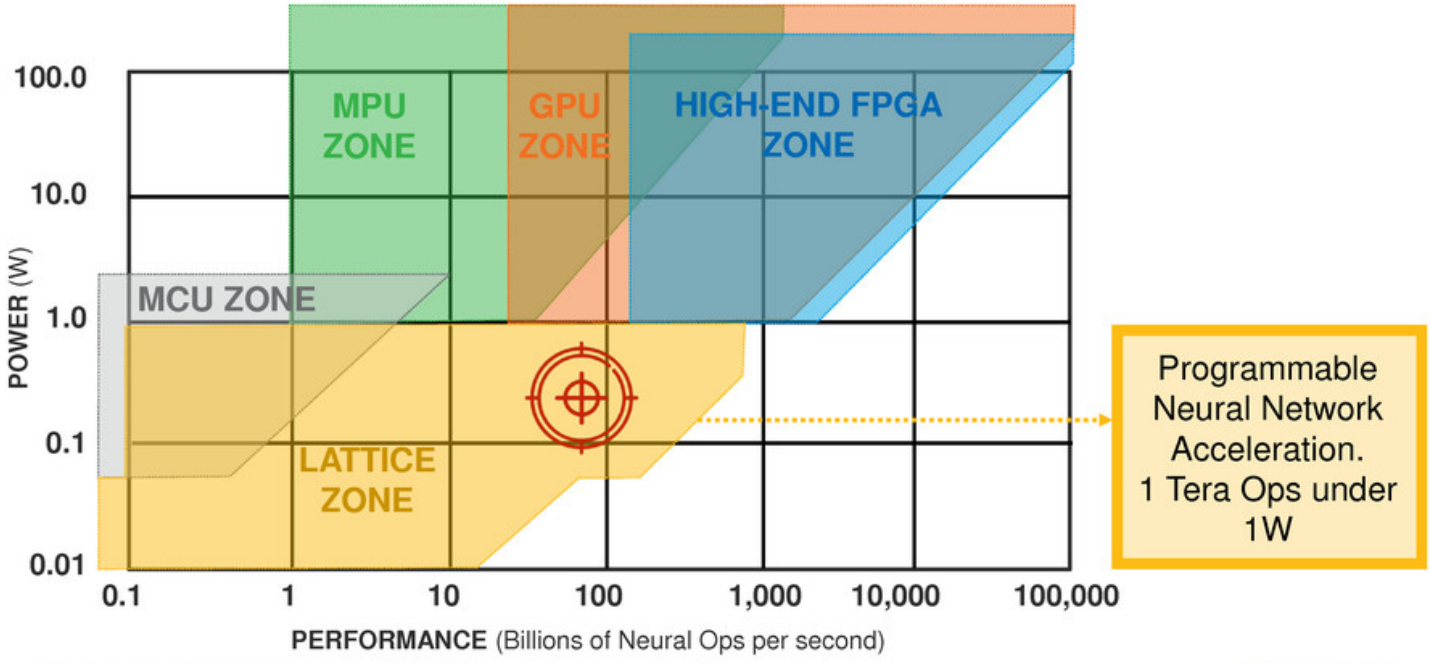
Edge Computing Applications

Wide Range of Requirements

	MOBILE	SMART HOME	SMART CITY	SMART FACTORY	SMART CAR
					
Applications	Face detection	Speech recognition	License plate recognition	Fault detection	Collision avoidance
End Devices	Smartphones Wearables	Smart speakers AR/VR	Surveillance cameras Drones	Machine vision Robotics	Automation Levels 3,4,5
Power	<10 mWs	<500 mWs	<1W	<3W	>10W
Price	<$1	<$3	<$5	<$10	>$20
Performance	~1 BOPS	~10 BOPS	~100 BOPS	~1,000 BOPS	>10,000 BOPS

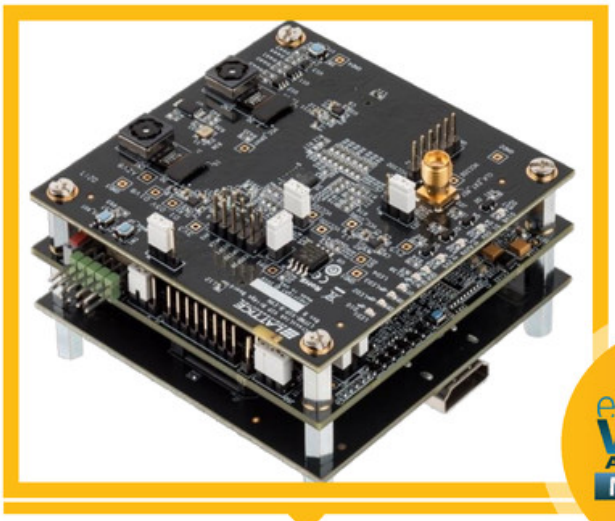
Edge Computing Differentiation

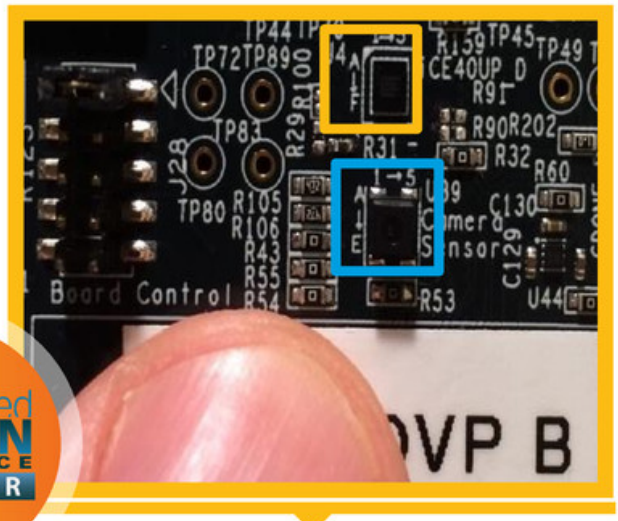
Lattice Advantage for Neural Networks and Machine Learning



Edge Computing Enablement

Lattice's Energy Efficient Neural Network Acceleration





Convolutional Neural Network Based Face Tracking

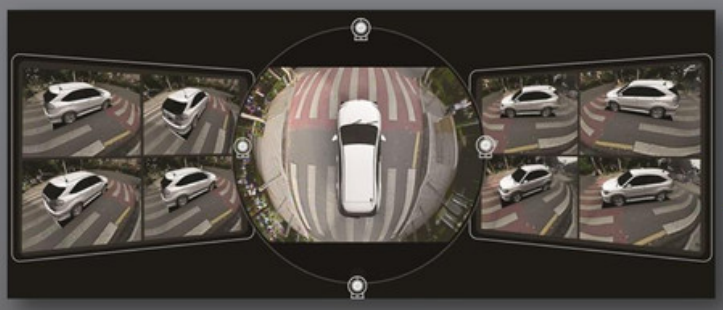
- <1W on ECP5

Binarized Neural Network Based Face Detection

- <5mW on iCE40 UltraPlus

Edge Computing Design Win Examples

Existing Product Capability Ideal for Emerging Requirements



360º Surround View ADAS

License Plate Detection

AR/VR Positional Tracking

Human Computer Interaction Demonstration

Leveraging Investments to Deliver More Advanced Edge Computing Solutions

10X Richer Data

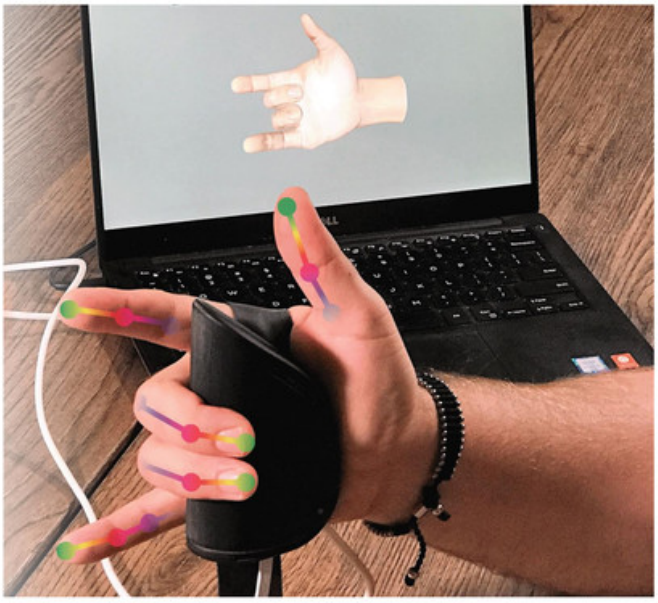
>1,000Hz Sampling

Capture User Intent

Lower Latency by 90%

<1ms Latency

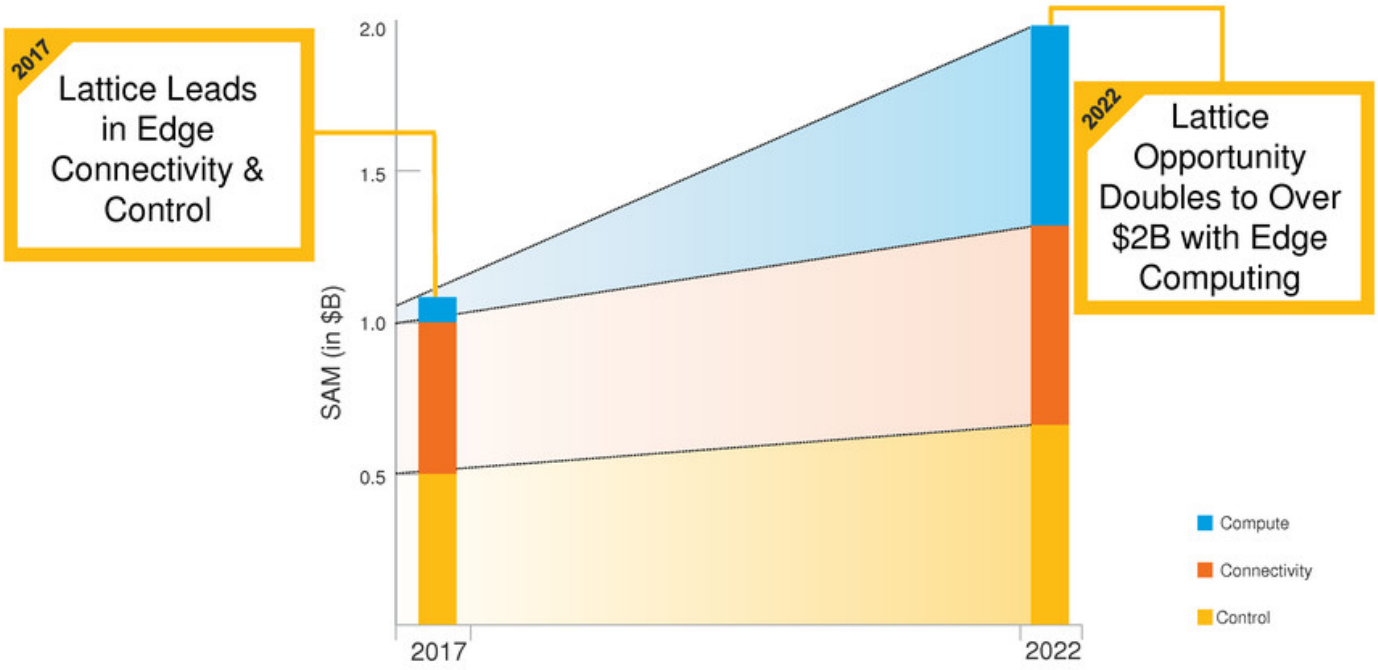
No Perceivable Lag




2 CONNECT
1 CONTROL
3 COMPUTE

The Edge Intelligence Opportunity

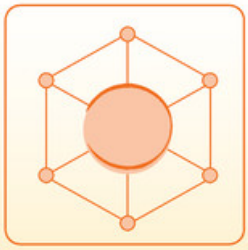
Serviceable Available Market Expected to Double by 2022



Source: IHS Markit, IDC, Lattice

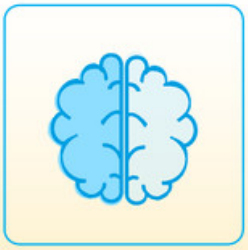
Lattice Semiconductor

Pathway to Growth and Profitability



EDGE CONNECTIVITY

Edge connectivity drives stable base business growth



EDGE COMPUTING

Edge computing accelerates future growth

FINANCIAL GROWTH

Stability & growth drive solid financial returns

DRIVING GROWTH & IMPROVING PROFITABILITY

Max Downing, CFO

2017 Outlook

	3Q17E	4Q17E	2017E	vs. 2016
Revenue	$91M - $93M	$92M - $97M	$383M - $388M	Down 9 - 10%
GM	56% +/-2%	56% +/-2%	56% +/-2%	Above Model
OpEx*	$45M - $47M	$43M - $45M	$182M - $186M	Improved by 8 - 10%

3Q17 Earnings Call in Early November

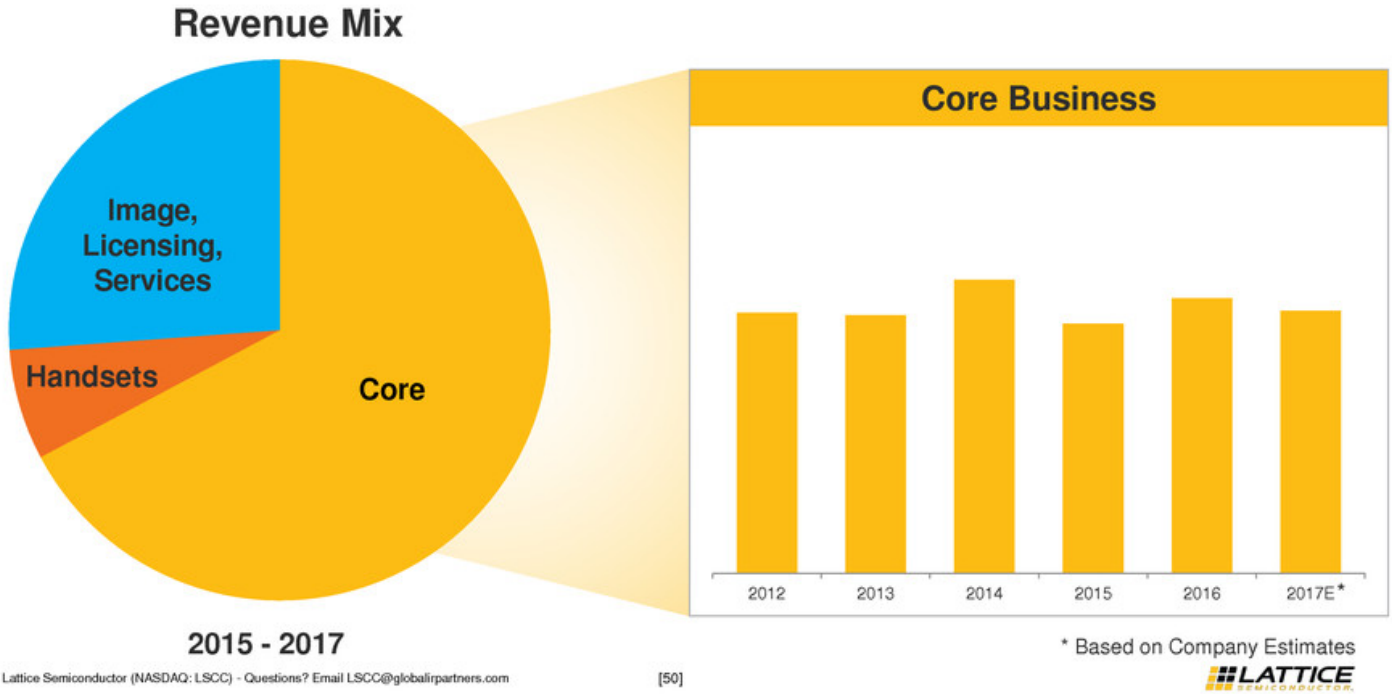
*Non-GAAP

Financial Model

P&L Financials	Model	2018
Revenue	In Line with Market CAGR	Double Digit Growth
Gross Margin	55%	Mid 50's
OpEx*	35% of Revenue	37-38% of Revenue
Operating Income*	20% of Revenue	Mid to High Teens
EBITDA	$110M - 120M	Triple Digits
Free Cash Flow	$80M - 100M	~20% in Debt Reduction

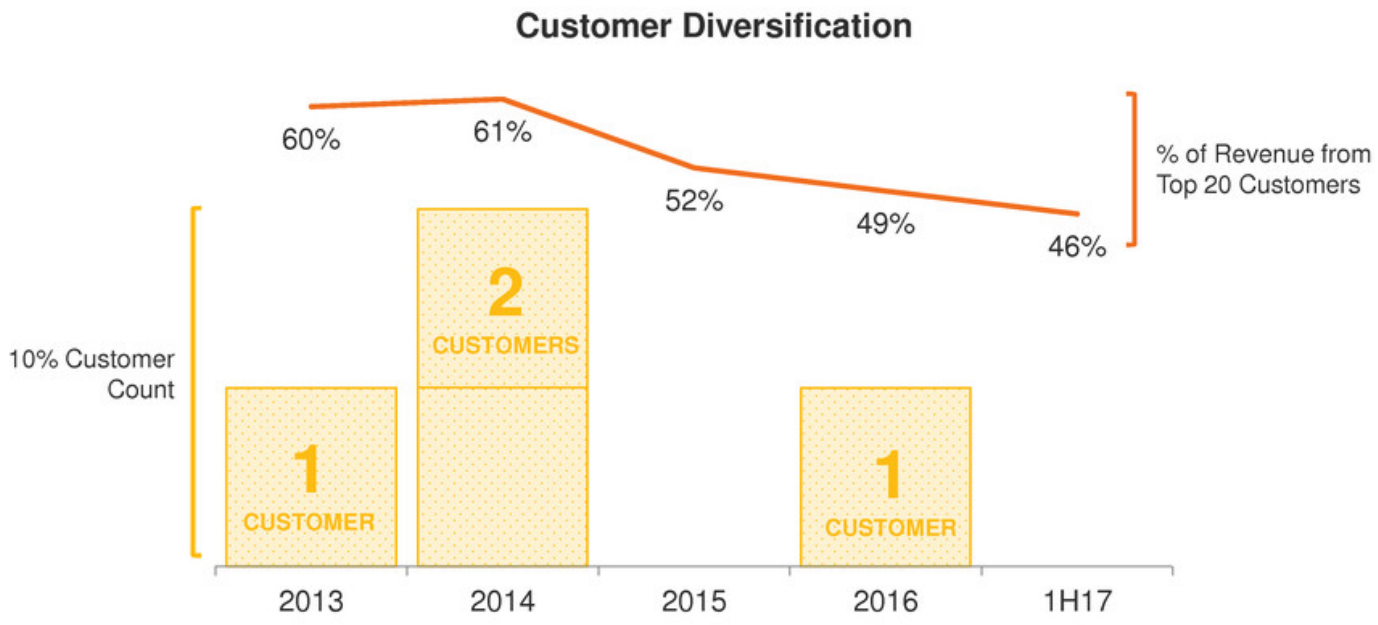
*Non-GAAP

Stable Revenue From Base

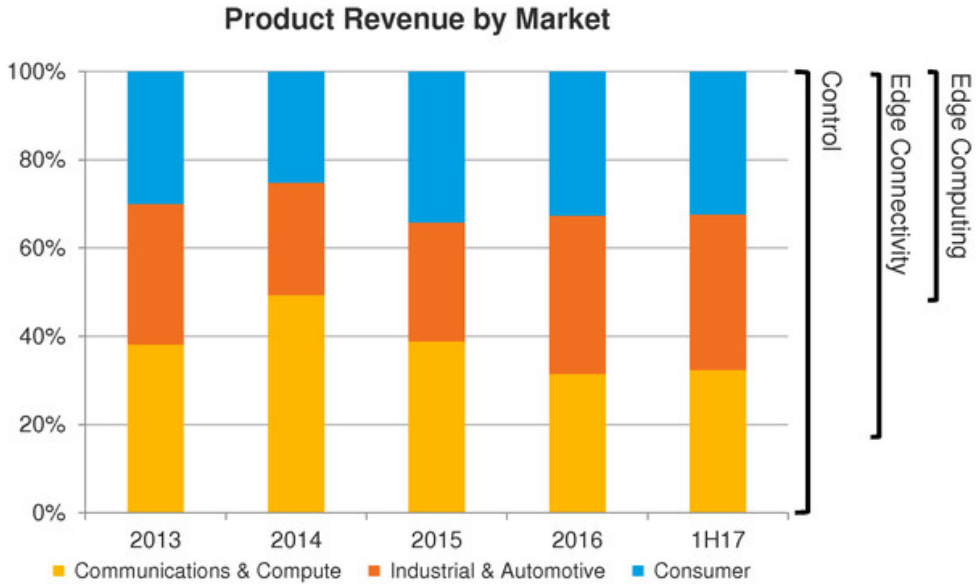


* Based on Company Estimates

Diversified Customer Base Provides Stability



Diversified Markets for Stability and Growth



PLD CAGR*
2016 – 2021

Consumer +6%

Industrial +10%

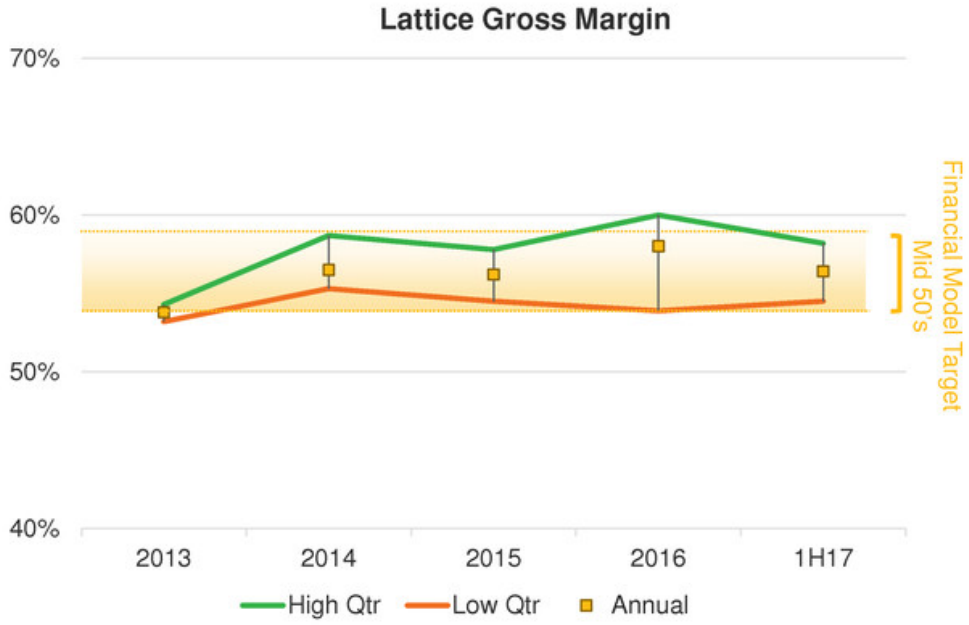
Automotive +11%

Communications +0%

Compute +6%

*IHS Markit WW Semi Shipments Q2'17

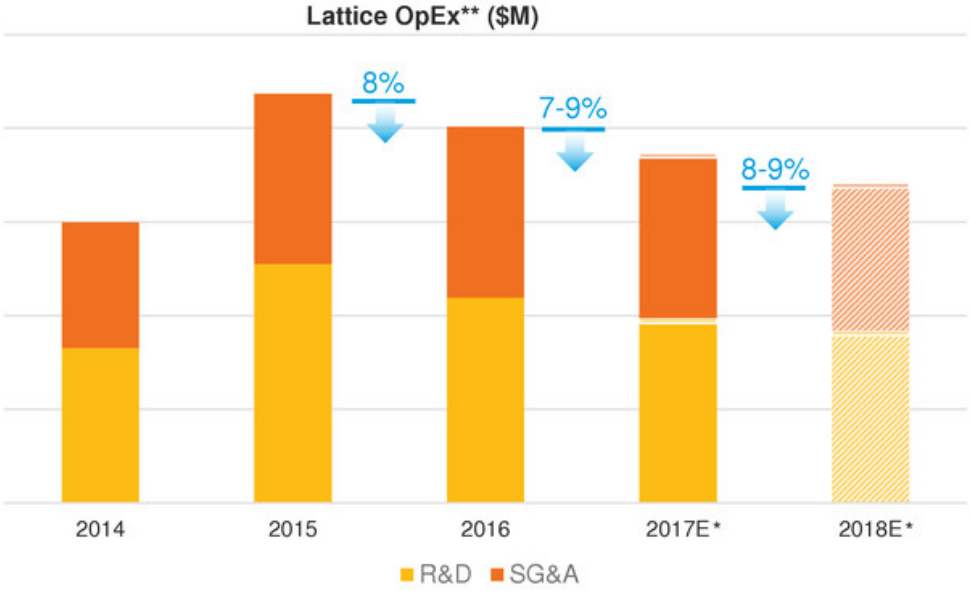
Executing to Gross Margin Model



GM Range	
Consumer	40% - 50%
Comms & Compute	50% - 60%
Industrial & Auto	65% - 75%
IP & Services	85% - 95%

Significantly Reducing OpEx

Growth Plans Achievable with This Level of Spending



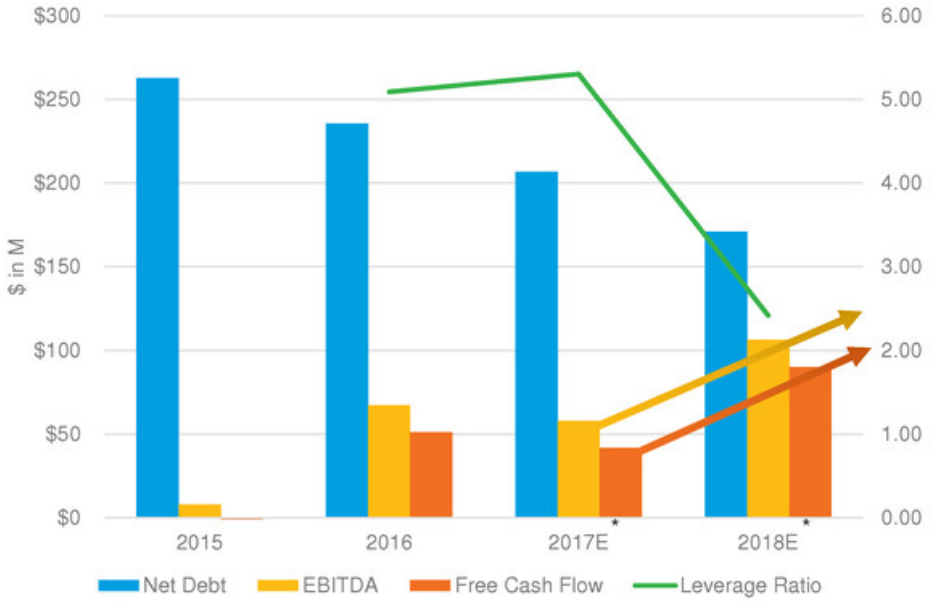
- Headcount actions taken & other actions well underway
- Reductions indexed to base business
- New product investments funded

**Non-GAAP

* Based on Company Estimates

Improving Liquidity & Cash Flow

Priority #1 is to Pay Down the Debt



2018 Expectations

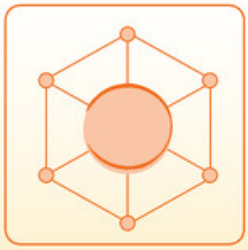
- Triple digit EBITDA
- Enables $50M to $60M in debt reduction
- Improved leverage ratio

Net Debt = debt minus cash

* Based on Company Estimates

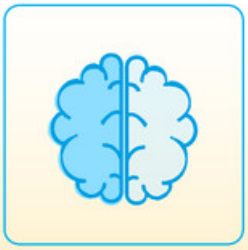
Lattice Semiconductor

Pathway to Growth and Profitability



EDGE CONNECTIVITY

Edge connectivity drives stable base business growth



EDGE COMPUTING

Edge computing accelerates future growth

FINANCIAL GROWTH

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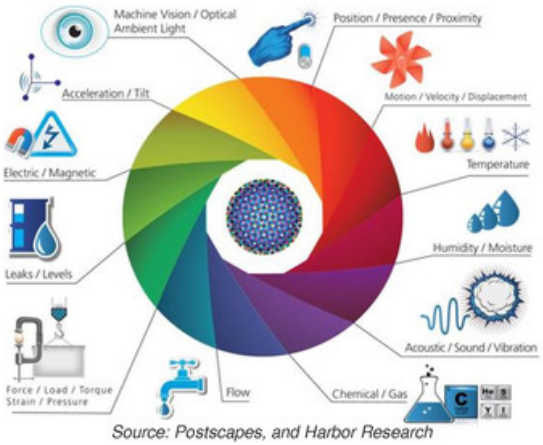
DEMONSTRATIONS
EDGE CONNECTIVITY
Lattice Marketing

Connectivity – Bridging & Aggregation

Abdullah Raouf

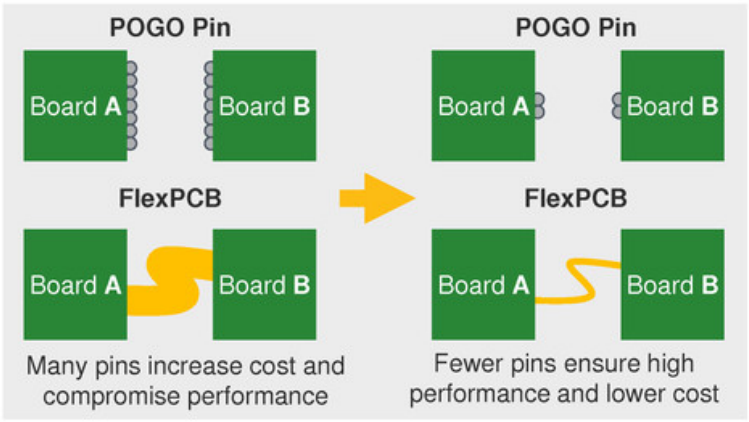
Edge Connectivity

IoT Sensor Bridging & Aggregation



Source: Postscapes, and Harbor Research

- Concurrent sensor data required
- Single processing engine systems
- Pins are exponentially increasing SoC costs



Edge Connectivity

Demo Overview: Production Design Wins

Amazon Echo Dot
(1st battery powered enabled Echo)

LingLong DingDong

Samsung Galaxy Note8

Customer Needs

- Concurrent sensor data
- Single processing engine support
- SoC pin reduction

Lattice Capability

- Time-to-market (quick turn design in weeks)
- Low power “always on” routing
- Small PCB area (~2 mm x 2 mm)

Wireless Connectivity

Abdullah Raouf

Edge Connectivity

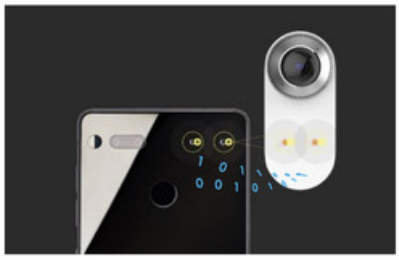
Snap Wireless Connector Replacement

Short Range Data Transfer (12 Gbps @ mm distance)

- Because connectors wear out
- Because connectors limit the design
- Because consumers demand elegance

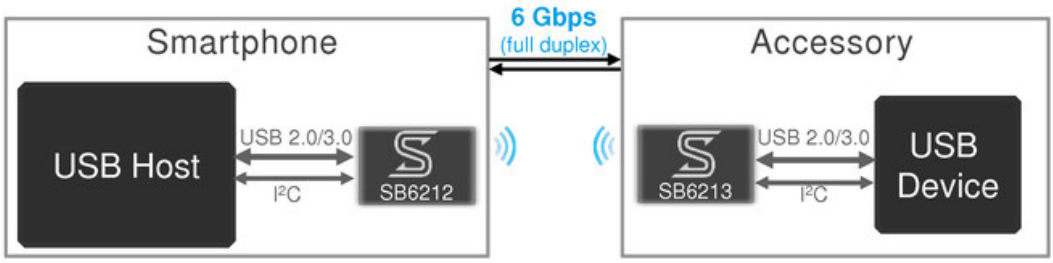
Edge Connectivity

Demo Overview: Snap Wireless Connector



- World's 1st 12 Gbps wireless connector
- Traditional USB without the wires
- For an upgradeable phone with elegance
- Lattice's SiBEAM Snap technology delivers USB across a wireless connection in Essential's Click Connect

Solution Details



Edge Connectivity

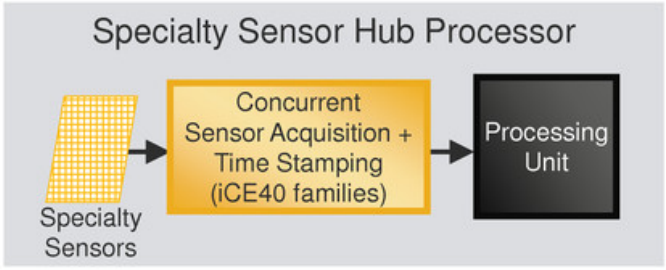
Full Stack FPGA & Wireless VR Solution

Wireless VR Without Lag

2K Wireless Video Transmission using Lattice's WirelessHD®

Wireless connection to removes cable between PC & Head Mount Display

Real-time Hand & Head Tracking




Edge Connectivity Portfolio
Demo Overview: TPCAST & HTC
Wireless video transfer with Lattice's WiHD
Signal aggregation with Lattice's iCE40
Video connectivity with Lattice's HDMI 2.0 & LatticeECP3
WiHD Tx Module
LatticeECP3
Sil9396
WiHD Rx Module
LatticeECP3
Sil9396
iCE40
TPCAST
TPCAST
TPCAST
LATTICE SEMICONDUCTOR

Wireless Connectivity

Peiju Chiang

Wireless Connectivity

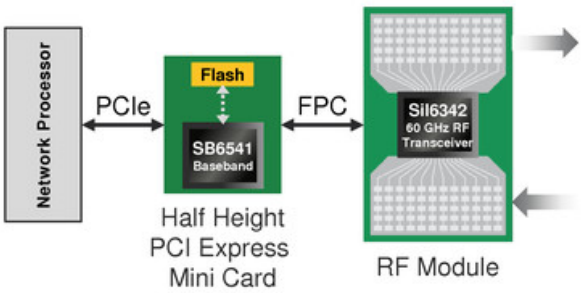
GigaRay Wireless Infrastructure

Customer Needs

- Increasing data demand drives the need for capacity
- mmWave wireless offers gigabit speeds and is flexible and cheap compared to fiber

Lattice Capability

- Lattice's SiBEAM electronic beam-steering technology reduces the lifetime cost of wireless networks
- Lattice's GigaRay module sets offer high performance and are simple to integrate

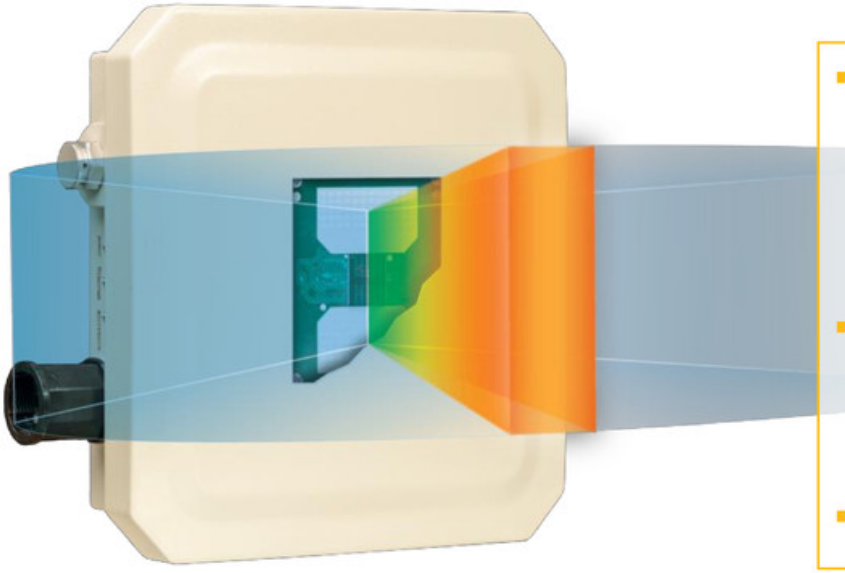


Half Height PCI Express Mini Card

RF Module

Wireless Infrastructure

Demo Overview: Just-Tone Wireless Node



- High Performance
  - Up to 200 m @ 1 Gbps
  - Up to 300 m @ 300 Mbps
  - 90° horizontal steering range
- Easy Integration
  - PCIe card
  - Linux driver
- Regulatory Certification


DEMONSTRATIONS
EDGE COMPUTING
Lattice Marketing

Embedded Vision & Machine Learning

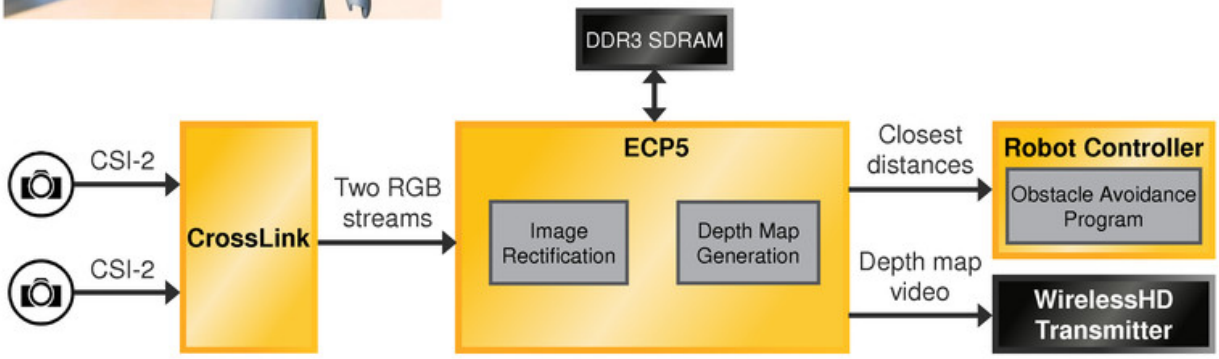
Deepak Boppana

Edge Computing

3D Depth Mapping with Wireless Connectivity

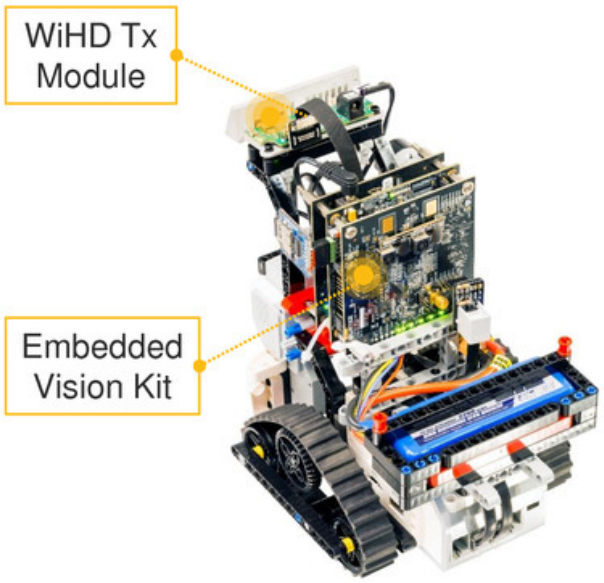
Obstacle avoidance and remote surveillance

Unique combination of energy efficient computing with ECP5 and wireless connectivity with WiHD



Edge Computing

Demo Overview: 3D Depth Mapping with Wireless Connectivity

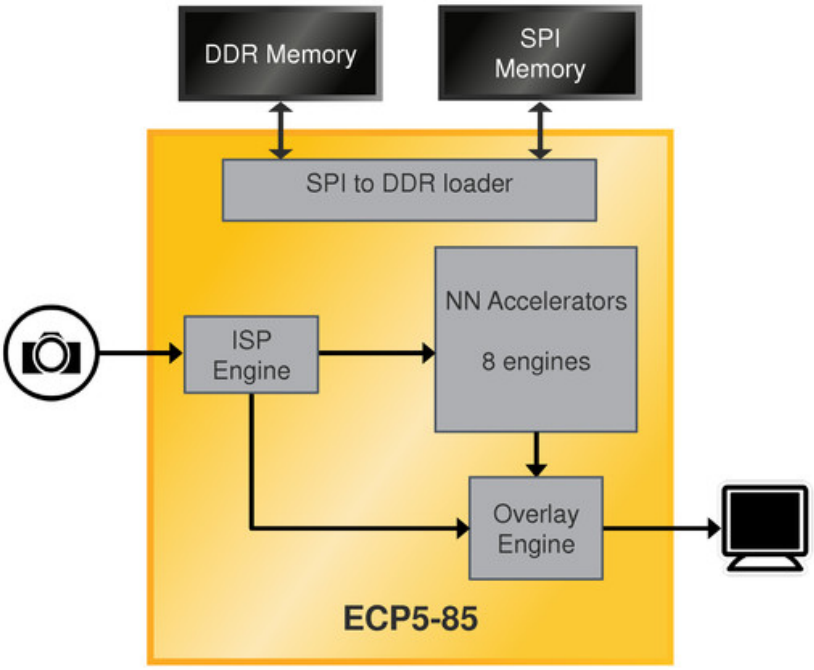


- Obstacle Avoidance using Depth Map
  - Depth map generation from stereo images
- System Specification
  - Embedded Vision Kit
    - Stereo camera
    - Depth map generation in ECP5
  - WirelessHD Tx/Rx modules
  - LEGO Mindstorms EV3 robotics kit
- Features
  - Input: 1080p @ 60 fps stereo video
  - Output: 320 x 240 @ 60 fps depth map with 64 depth levels
  - Obstacle detection based on minimum distance and collision avoidance
  - Less than **1 W** of power consumption in ECP5

Edge Computing

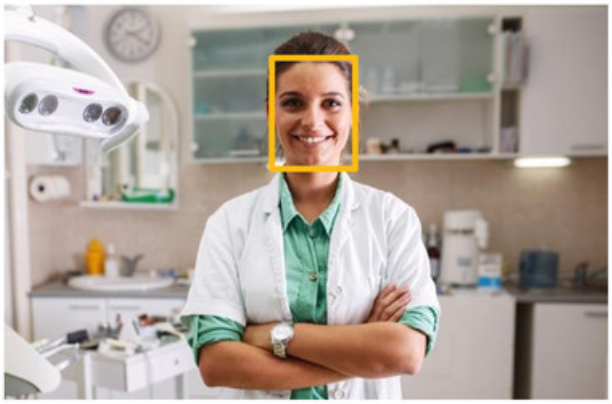
Face Tracking with ECP5

- Indicates where face is in image
- Programmable, energy efficient neural network acceleration with ECP5



Edge Computing

Demo Overview: Face Tracking with ECP5



Yellow box indicates location of the face

- Implementation
  - ECP5-85 with 8 NN engines
    - Fits in smaller device with some tradeoffs
  - Network – LatticeNET2
    - 90 x 90 RGB Input
    - 8 convolution layers
  - Standalone – operates at power up
- Key Features
  - Runs @ 14 fps (could be 200 fps with 32 x 32 RGB)
  - Total ECP5 power is **0.85 W**

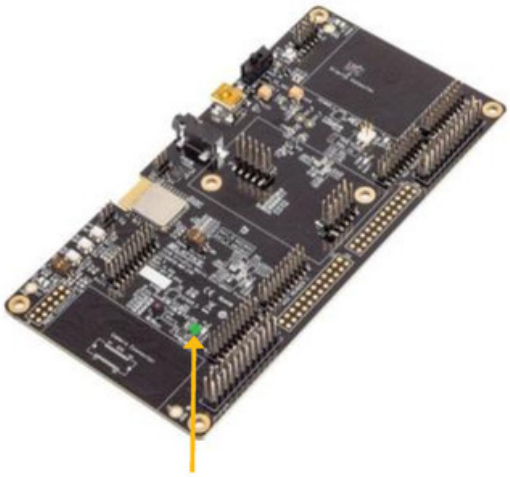
Edge Computing

Face Detection with iCE40

- Solution Description
  - Live stream video capture data is searched real-time for a face
- Use Case
  - Always on camera
    - Wakes AP for facial detection only when face is looking at phone
    - AP can perform detail high power facial recognition
- Lattice Value
  - Small size (2.2 x 2.6 mm)
  - Low power
  - Single chip solution

Edge Computing

Demo Overview: Face Detection with iCE40



Green LED indicates face detected

- Indicates if face is present
  - LED indicates face in field of view of the camera
- Implementation
  - iCE40 with 2 BNN engines
  - Network – BNN
    - 32 x 32 RGB Input (after downscaling)
    - 6 convolution and 3 Max-Pooling steps
  - Standalone – operates at power up
- Key Stats
  - Lowest power solution in the market
    - Total FPGA logic power is **4.4 mW** + image sensor
  - Smallest solution: 2.15 x 2.55 mm package

Human Computer Interaction (HCI)

Jim Tavacoli

Edge Computing

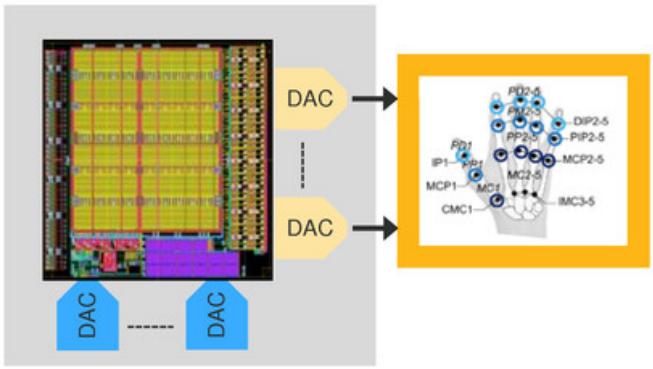
HCI: Enabling Immersive AR / VR User Experiences

Market Needs

Fastest Response
Capture User Intent

Solution Overview

Parallel Sense & Compute
Enables Lowest Latency & Highest Raw Data



Edge Computing

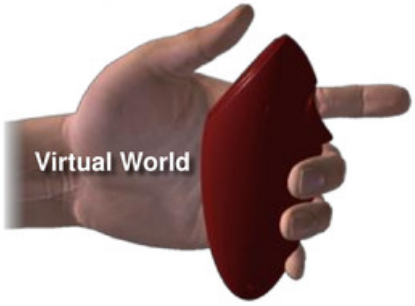
Demo Overview: HCI / Sense in 3D

Key Differentiators

Sense fingertips and hands as a precise 3D model

Enable 3D sight all around a device in near real-time

Slash hardware & software latency to equate physical response



Value to Developer

Sense Hand as a Precise 3D Model

Device Hand Skeletal Tracking

Full 3D Hand Model

Q&A

Stability & Growth at the Edge of the Network

Lattice Management

Questions? Email LSCC@globalirpartners.com

Stability & Growth at the Edge of the Network

Analyst & Investor Day
October 12, 2017

NASDAQ: LSCC

LATTICE SEMICONDUCTOR