



The Low Power Programmable Leader

2019 FINANCIAL ANALYST DAY

NEW YORK

Safe Harbor

This presentation contains forward-looking statements that involve estimates, assumptions, risks and uncertainties, including statements relating to our expectations about the growth of our end markets, our belief that we will launch new products over the next 12 months, that we will accelerate profitable revenue growth, that we will expand our position in servers, that our SAM will grow to \$3 billion in 2022, that growth acceleration will be driven by our new platform, and our expectations regarding achievable results under the heading “Financial Priorities,” including revenue growth, OpEx discipline, gross margin expansion, cash generation, profit expansion and leverage.

Factors that may cause actual results to differ materially from the forward-looking statements in this presentation include 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 29, 2018 and quarterly filings.

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.

Agenda

1 Overview

Jim Anderson

2 Markets

Esam Elashmawi

3 Products

Steve Douglass

4 Customers

Mark Nelson

5 Financials

Sherri Luther

6 Q & A

All

7 Wrap Up

Jim Anderson



Overview

LATTICE

2019 FINANCIAL ANALYST DAY

OVERVIEW

JIM ANDERSON

PRESIDENT & CEO



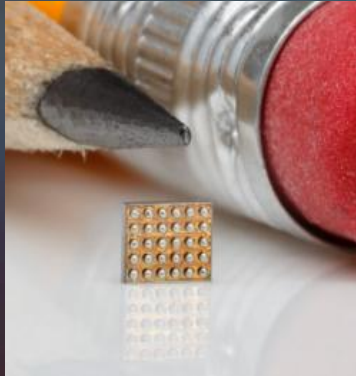
The Low Power Programmable Leader

Lattice Opportunity



GROWING END MARKETS

Large Growing TAM
New Usage Models
High Value Solutions



DIFFERENTIATED TECHNOLOGY

Lowest Power
Smallest Size
Easy to Use



HIGH-GROWTH APPLICATIONS

Edge AI & Compute
5G Infrastructure
Platform Security



BROAD CUSTOMER RELATIONSHIPS

Position in Top OEMs
Multi-generational
Diverse Customer Base



PROFIT GROWTH

Strong Business Model
Above Market Growth
Margin Expansion

Changes to Position Lattice for Success

FOCUSED STRATEGY



100% Focus on FPGA

STABLE GROWTH



Sustainable, Multi-year
Revenue Streams

STRONGER ROADMAP



Faster Cadence;
System Solutions

REVITALIZED CULTURE



Fast, Accountable,
Performance Driven

FINANCIAL DISCIPLINE



Consistent Profitability and
Cash Flow Expansion

RE-ENERGIZED TEAM



New Leadership with
Deep Industry Expertise

Our Mission



The Low Power Programmable Leader



Positioned in Growing End Markets

COMMUNICATIONS



5G Wireless

Switches/Routers

COMPUTE



Servers

Client

INDUSTRIAL



Industrial IoT

Factory Automation

AUTOMOTIVE



ADAS

Infotainment

CONSUMER



Smart Home

Wearables

Large \$3B SAM with Multiple Secular Growth Drivers

Lattice Product Portfolio

BROAD FAMILY OF LOW POWER FPGAs

GENERAL PURPOSE



Addresses a broad range of applications across multiple markets

FPGA FAMILIES TAILORED FOR SPECIFIC NEEDS

VIDEO CONNECTIVITY



Optimized for high speed video and sensor applications

ULTRA LOW POWER



World's lowest power FPGAs; Optimized for small form factor

CONTROL & SECURITY

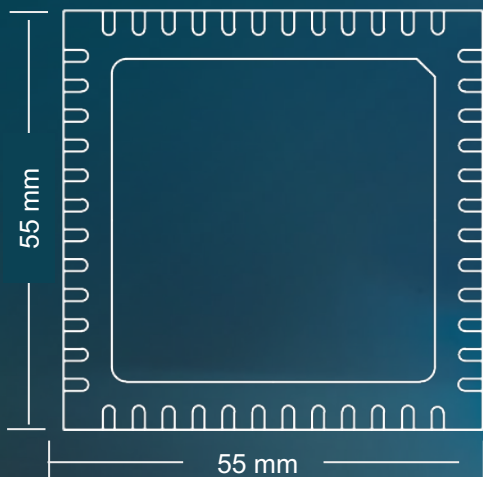


Optimized for platform management & security applications

Differentiated Product Strategy

OTHER FPGA COMPANIES

Focused on Large, High Power Devices for Data Center Compute



~200 W With Heat Sink



Focused on Low Power, Smaller Form Factors

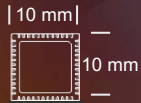


~1 W
(Small)

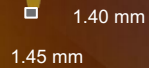
~1 mW
(Smallest)

Addressing Applications Where Power Efficiency & Small Size are Important

Solving Problems at the Edge



~1 W
(Small)



~1 mW
(Smallest)



AI & IoT

AI Inferencing at the Edge



VIDEO

Embedded Vision



SECURITY

Hardware Platform Security



5G INFRASTRUCTURE

Control & Management



AUTOMATION

Precision Robotic Motor Control

Strong and Diversified Sales Channels

STRONG POSITION WITH LEADING OEMS



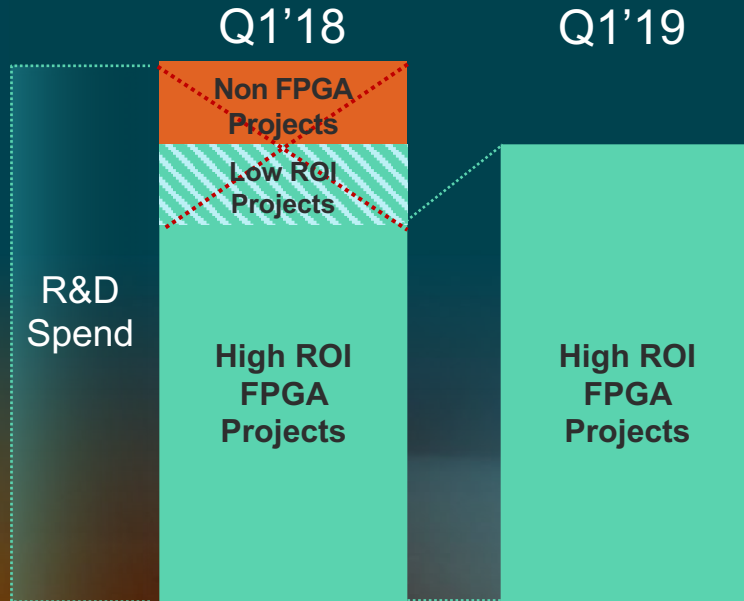
DIVERSE CUSTOMER BASE VIA DISTRIBUTION



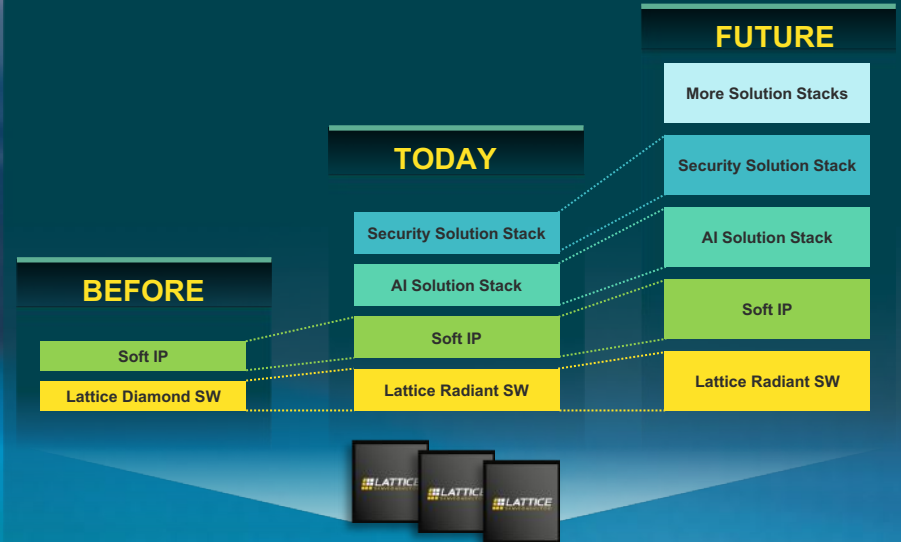
Diversified Global Footprint with Opportunity to Expand

Product Roadmap Investment

FOCUSED AND OPTIMIZED PORTFOLIO



EXPANDING OUR SOLUTION STACK



Focusing our Investment and Expanding our Solutions

New Products Over the Next 12 Months



New AI Capabilities

Launching Today



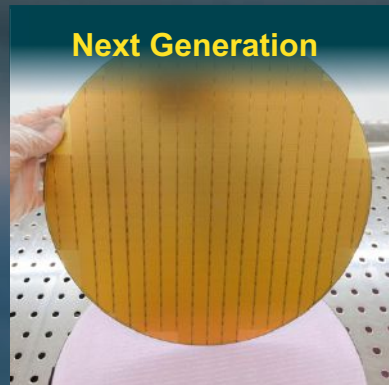
Robust Platform Security

Launching Today



Enhanced Video Bridging

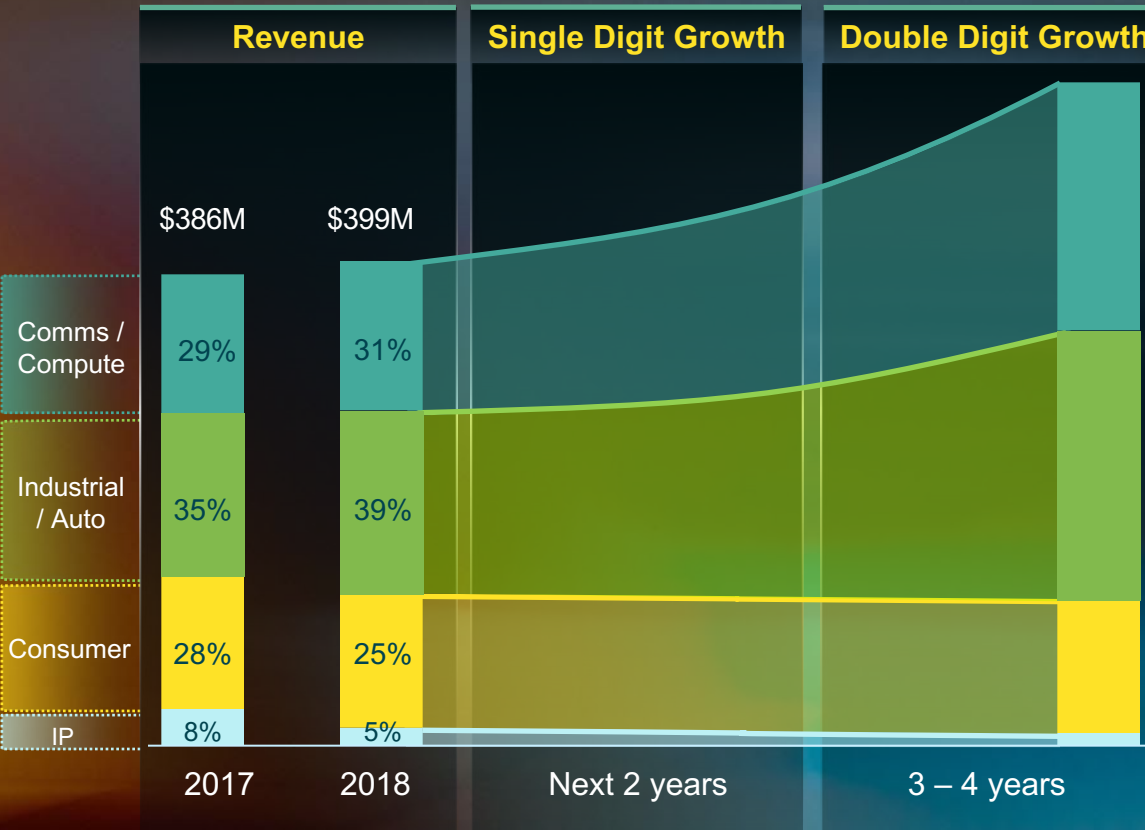
Sampling in H2 2019



Next Generation FPGA Platform

Sampling early 2020

Revenue Growth by End Markets



SEGMENT DRIVERS

5G Infrastructure Deployments
Servers in Cloud and Enterprise
Client Compute Platforms

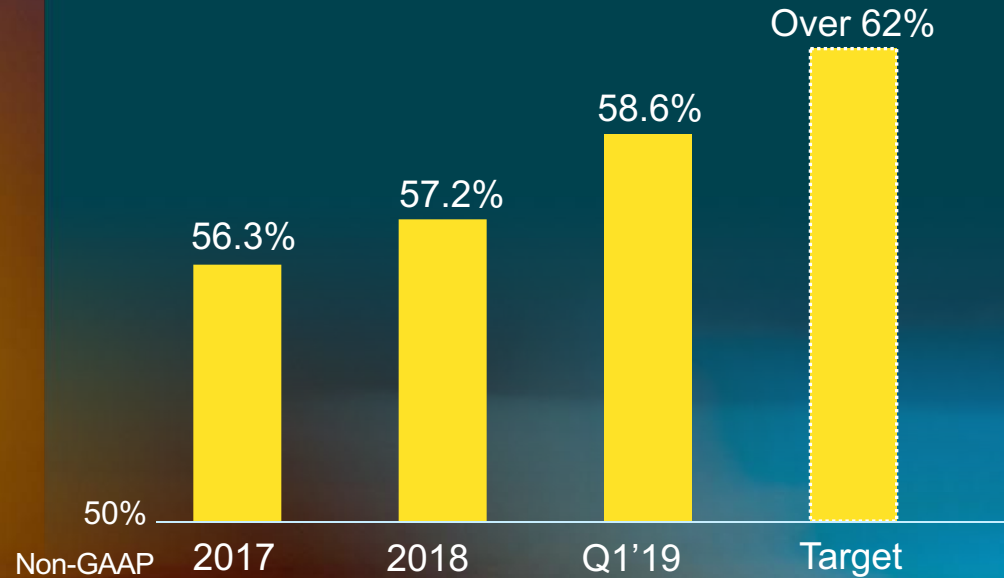
Industrial IoT
Factory Automation
Automotive Electronics

Smart Home
Prosumer

Accelerating Profitable Revenue Growth

Gross Margin Expansion

GROSS MARGIN



EXPANSION STRATEGIES

Pricing Optimization

Product Cost Improvement

Mix Shift

Driving Multiple Strategies for Gross Margin Expansion

Target Long Term Model



**REVENUE
GROWTH**

Low Double Digit



**GROSS MARGIN
EXPANSION**

Over 62% GM



**OPEX
DISCIPLINE**

OpEx of 35%



**OPERATING
PROFIT**

25% to 30%

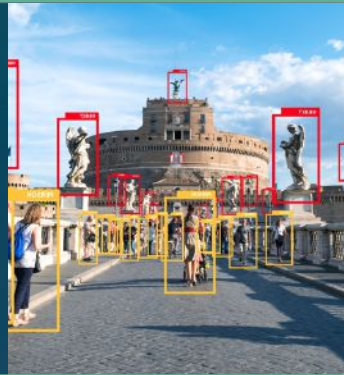
Positioned for Success



**GROWING
END MARKETS**



**DIFFERENTIATED
TECHNOLOGY**



**HIGH-GROWTH
APPLICATIONS**



**BROAD CUSTOMER
RELATIONSHIPS**



**PROFIT
GROWTH**

Lattice Executive Leadership Team



Jim Anderson
CEO

Overview



Esam Elashmawi
Marketing & Strategy

Markets



Steve Douglass
Research & Development

Products



Mark Nelson
Sales

Customers



Sherri Luther
CFO

Financials



Glenn O'Rourke
Operations

Q&A

Lattice Executive Leadership Team



Jim Anderson
CEO

Overview



Esam Elashmawi
Marketing & Strategy

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Q&A

LATTICE

2019 FINANCIAL ANALYST DAY MARKETS

ESAM ELASHMAWI
MARKETING & STRATEGY



The Low Power Programmable Leader

FPGA Value Proposition



Faster Time to Market

Programmability and Tuning

Personalization

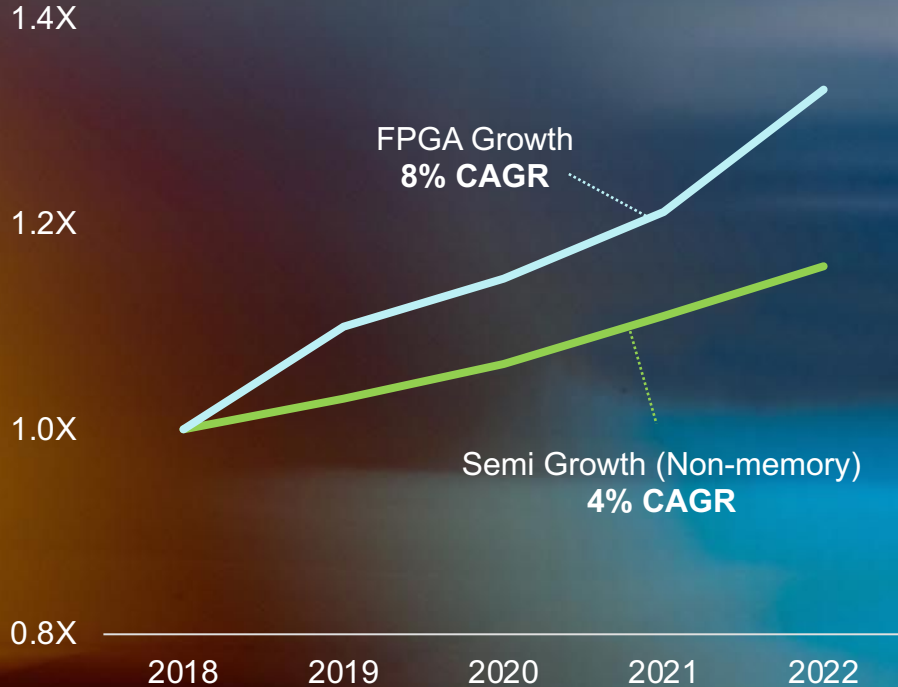
Supply Chain Flexibility

Evolving Standards

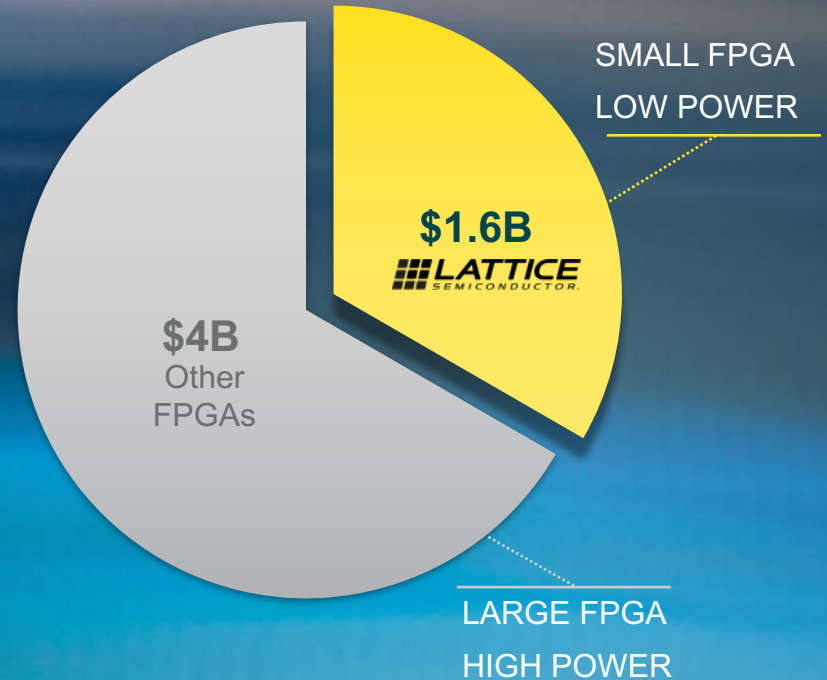
Parallel Processing

FPGA Market Overview

FPGA MARKET FORECAST



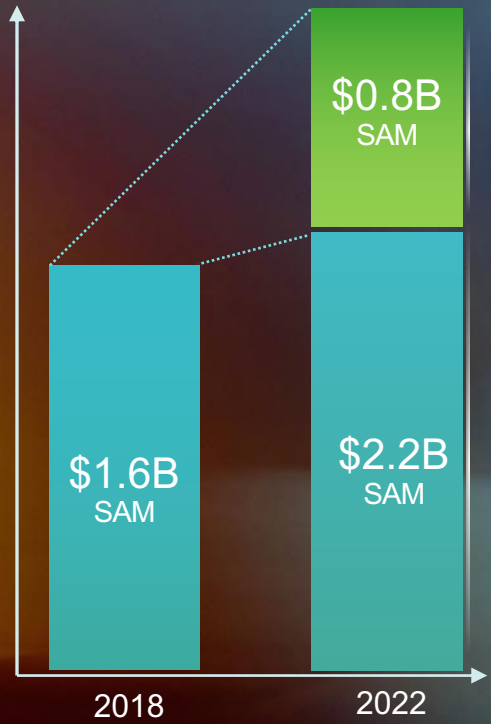
2018 FPGA TAM



Source: IHS Q1'19

Lattice SAM Expansion

LATTICE SAM DOUBLES TO \$3B SAM



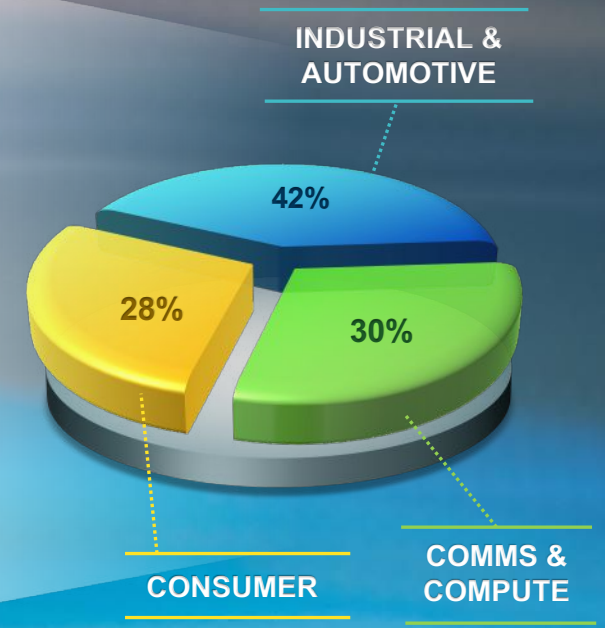
NEW APPLICATIONS

- AI
- Security
- Embedded Vision

TRADITIONAL APPLICATIONS

- 5G Infrastructure
- Factory Automation
- Server and Client
- Automotive
- Prosumer

2022 SAM BY MARKETS



5G Industry Impact



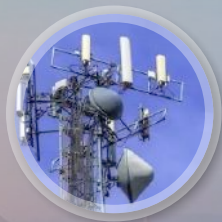
COMMS & COMPUTE



INDUSTRIAL & AUTO



CONSUMER



Change Our Connected
Experience

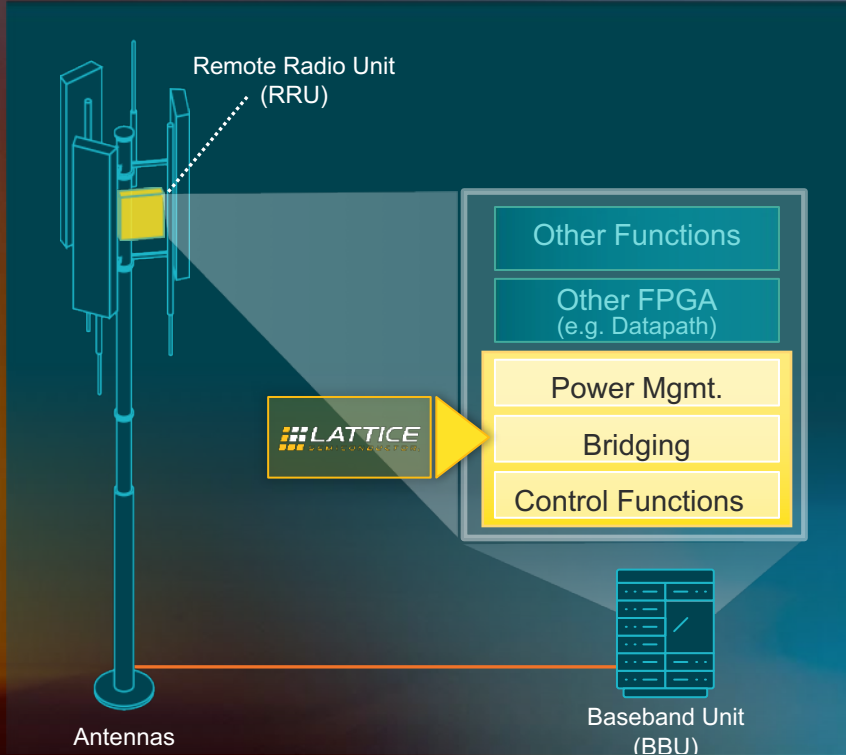
Drive Infrastructure
Content

Drive Re-refresh of
Connected Devices

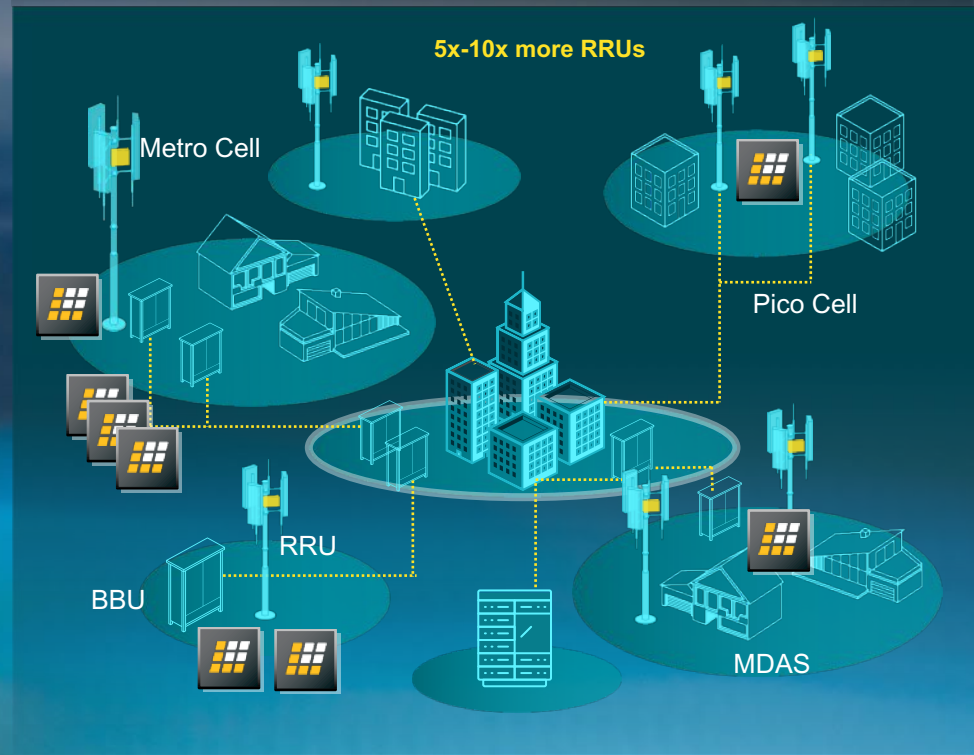
Lattice Content In 5G



5G MACRO BBU/RRU



5G HETEROGENEOUS NETWORK



Datacenter Market



COMMS & COMPUTE



INDUSTRIAL & AUTO



CONSUMER

BIG DATA



Age of Data and Processing

CLOUD



Datacenter Build-out

Hyperscaler Driving Change

Expanding Position In Servers



COMMS & COMPUTE



INDUSTRIAL & AUTO



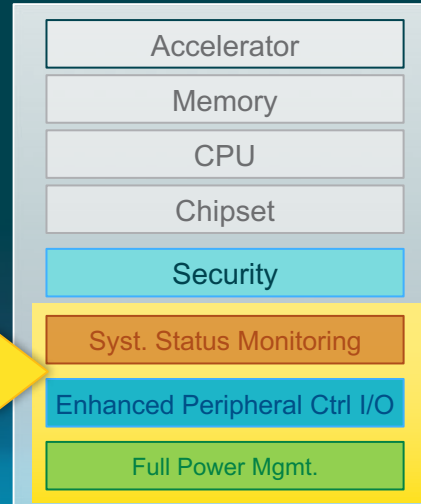
CONSUMER

PRIOR SERVER PLATFORM (Ramping Down)

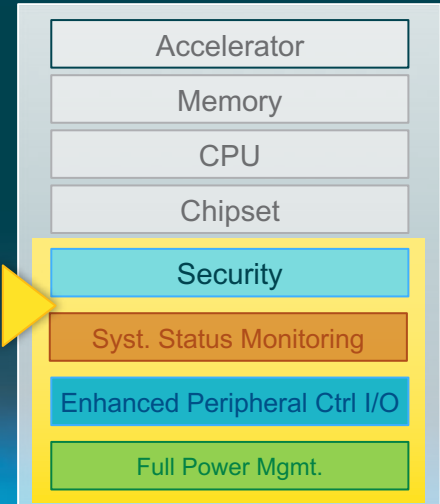
Other FPGA,
GPUs, etc.



CURRENT SERVER PLATFORM (Ramping Now)



NEXT GEN SERVER PLATFORM (In Design Now)



ATTACH
RATE



ASP

1X



2X



3X

Increasing Attach Rate & ASP

Industrial & Automotive



COMMS & COMPUTE



INDUSTRIAL & AUTO



CONSUMER



Factory
Automation

Machine
Vision

Robotics



Connected

Autonomous

Electrification

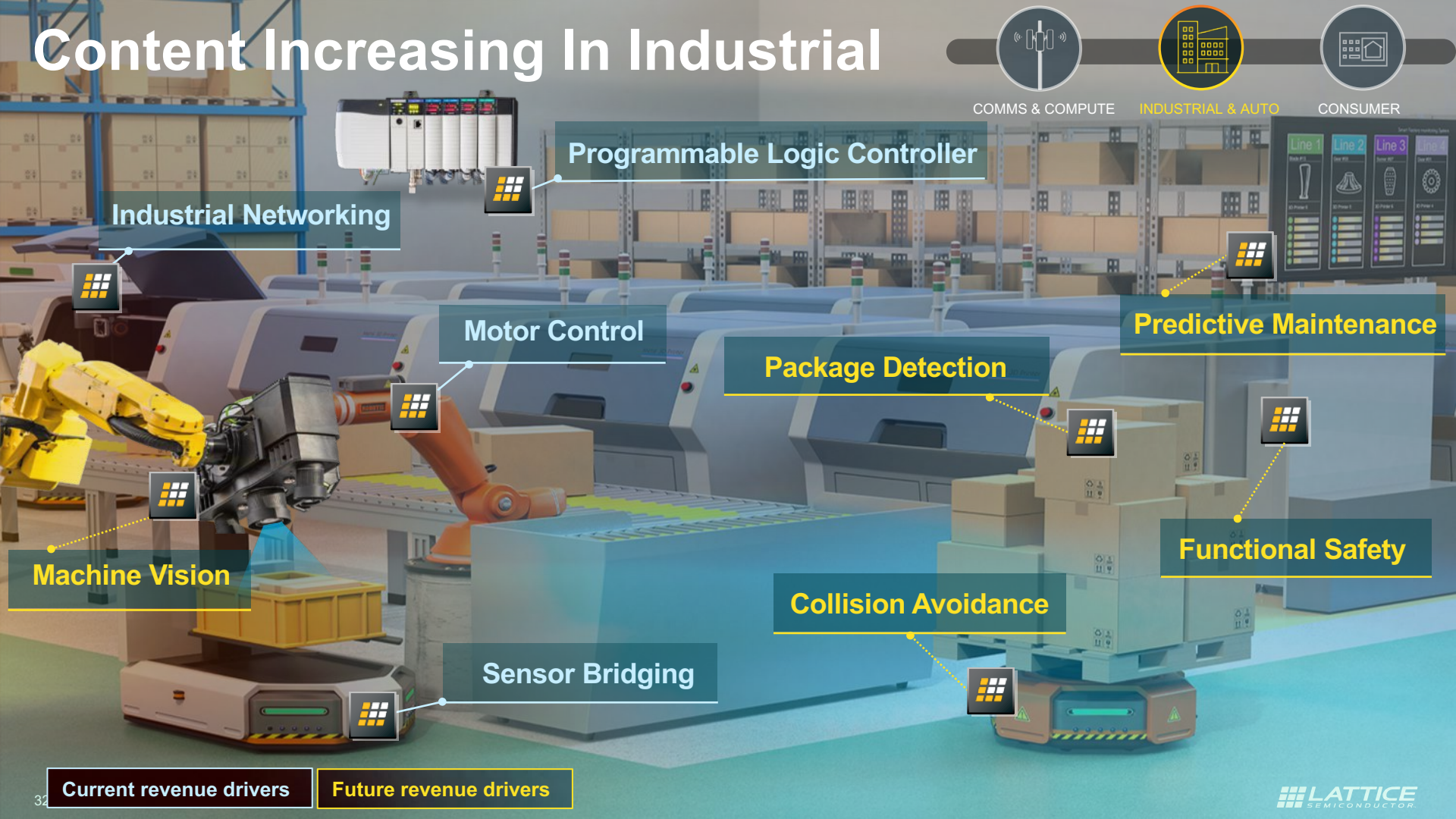
Content Increasing In Industrial



COMMS & COMPUTE

INDUSTRIAL & AUTO

CONSUMER



Programmable Logic Controller

Industrial Networking

Motor Control

Package Detection

Predictive Maintenance

Machine Vision

Functional Safety

Collision Avoidance

Sensor Bridging

Current revenue drivers

Future revenue drivers

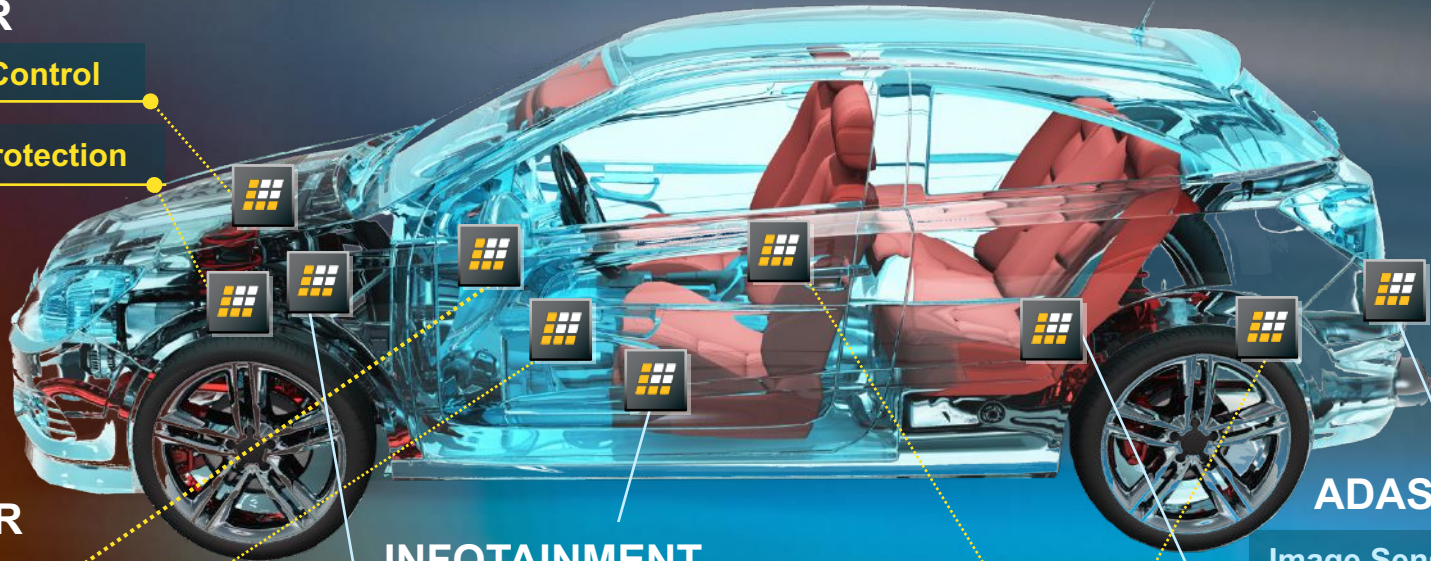
Content Increasing In Automotive



EV CAR

Motor Control

IGBT Protection



E-MIRROR

De-Fog

ISP

INFOTAINMENT

Audio Bridging

Display Bridging

Driver Monitoring

360° Surround View

ADAS

Image Sensor Bridging and Aggregation

Radar Sensor Bridging and Aggregation

Current revenue drivers

Future revenue drivers

Consumer



COMMS & COMPUTE

INDUSTRIAL & AUTO

CONSUMER



Prosumer

Smart Home

Wearables

Consumer



COMMS & COMPUTE



INDUSTRIAL & AUTO



CONSUMER

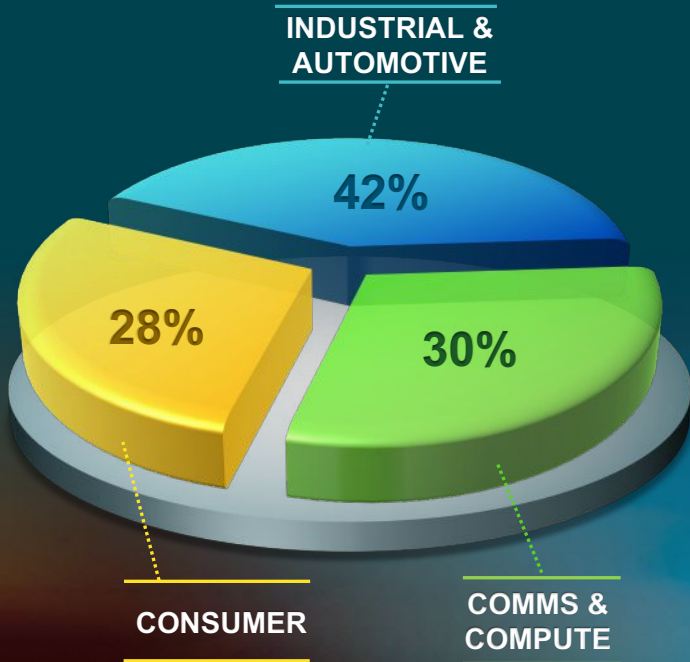


Current revenue drivers

Future revenue drivers

The Low Power Programmable Leader

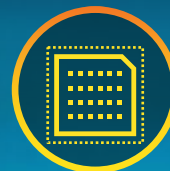
\$3B LATTICE SAM IN 2022



GROWTH POTENTIAL
\$3B SAM Opportunity



END MARKETS
Fast Growing Applications



VALUED SOLUTIONS
FPGA Proliferation

Lattice Executive Leadership Team



Jim Anderson
CEO

Overview



Esam Elashmawi
Marketing & Strategy

Markets



Steve Douglass
Research & Development

Products



Mark Nelson
Sales

Customers



Sherri Luther
CFO

Financials



Glenn O'Rourke
Operations

Q&A

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PRODUCTS

STEVE DOUGLASS

RESEARCH & DEVELOPMENT



The Low Power Programmable Leader



R&D Strategy



STRENGTHS

Talented, Dedicated Team

Customer Driven Roadmap

Differentiated Products



CHALLENGES

Too Many Projects

Multiple FPGA Architectures

Growing System Complexity



STRATEGY

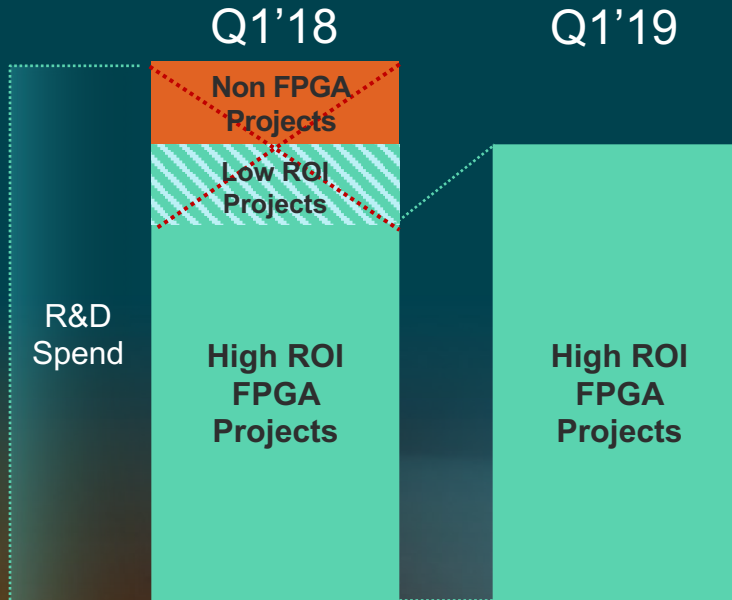
Focus on FPGA

Platform Based Design

Expand System Solutions

Focus on FPGA

FOCUSED AND OPTIMIZED PORTFOLIO



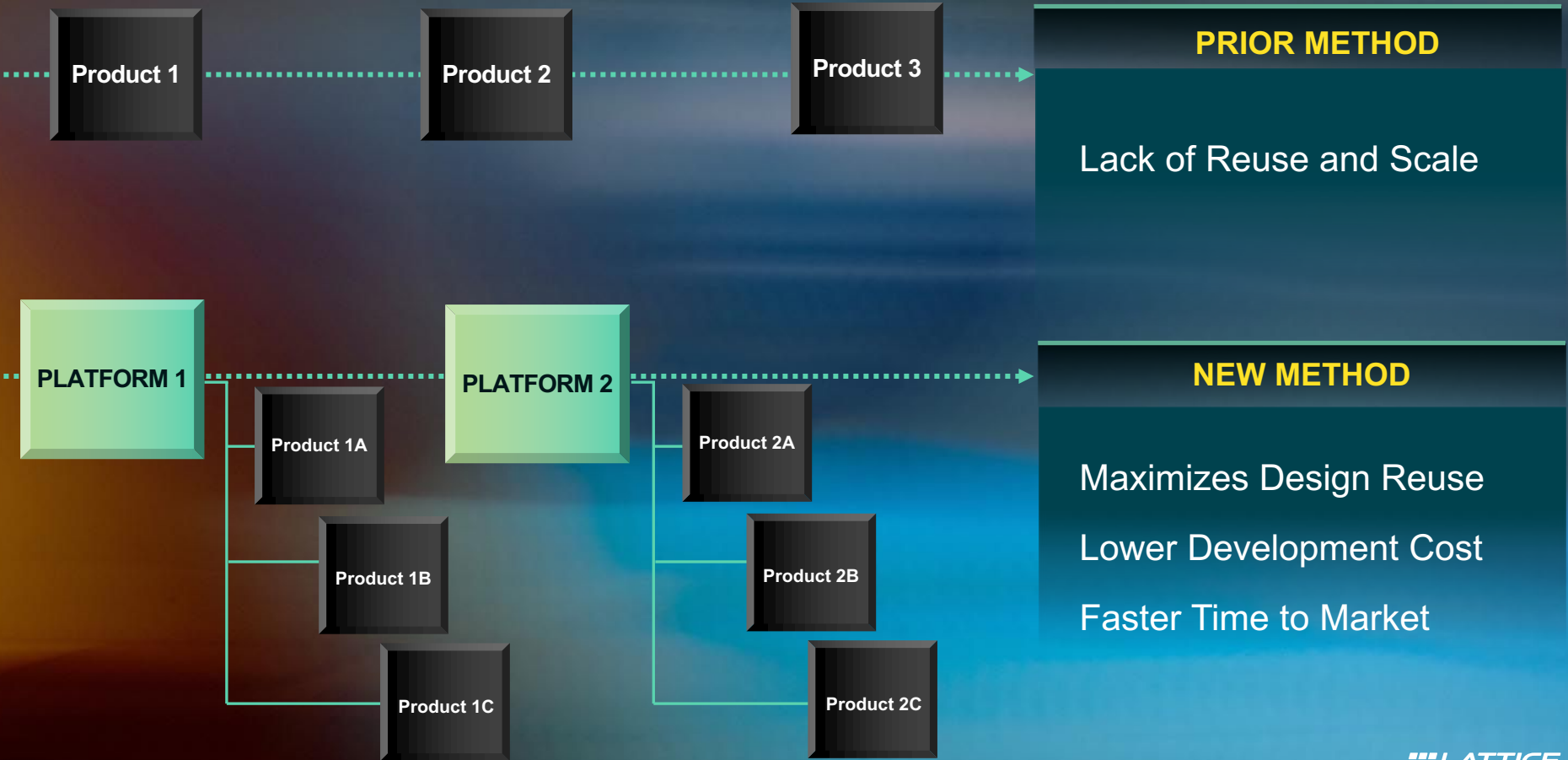
Canceled Non FPGA & Low ROI Projects

Concentrated Investment in FPGA Projects

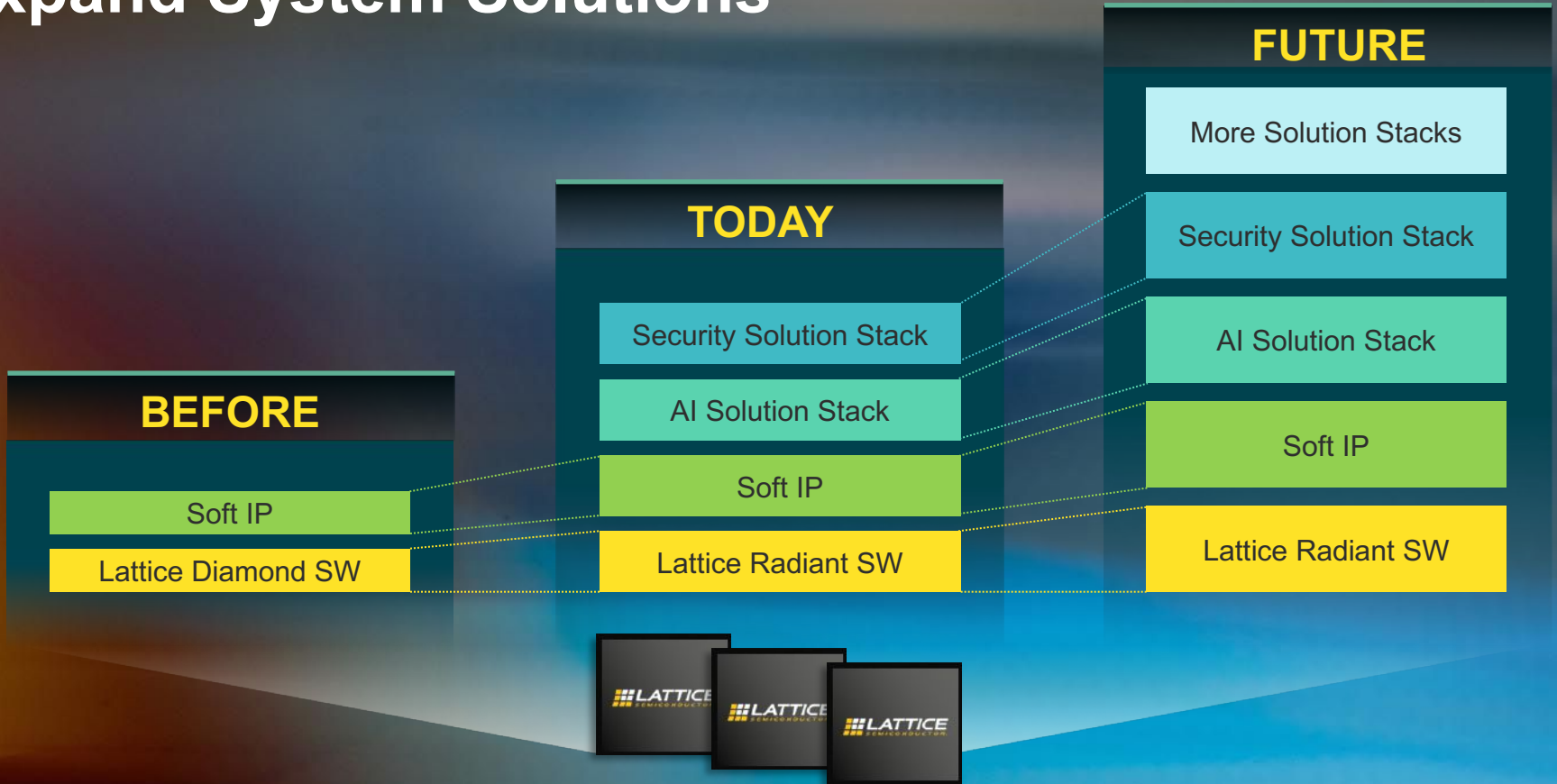
Accelerated Investment in Software

R&D Spend Within Model
(20% of revenue)

Platform Based Design



Expand System Solutions



Bringing Additional Value to Our Customers

New Products Over the Next 12 Months



New AI
Capabilities

Launching Today



Robust Platform
Security

Launching Today



Enhanced
Video Bridging

Sampling in H2 2019



Next Generation
FPGA Platform

Sampling early 2020



Accelerating AI at the Edge

Lattice sensAI 2.0: Low Power Inferencing

sensAI 2.0



New AI
Capabilities

Launching Today



High Performance Inferencing Under 1W

Lowest power, smallest form factor solutions
10X faster real time image processing



Expanded Machine Learning Capability

Quantized training for faster development time
Adding Keras framework support for broader adoption



Complete Solution Enablement

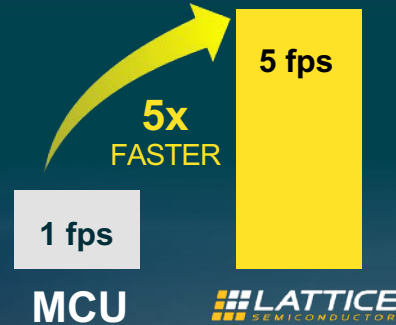
Presence detection, object counting
Increased partner ecosystem

sensAI 2.0 Customer Example: IoT Security Camera

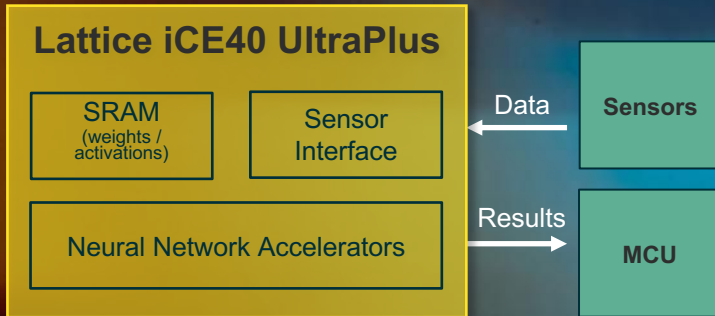
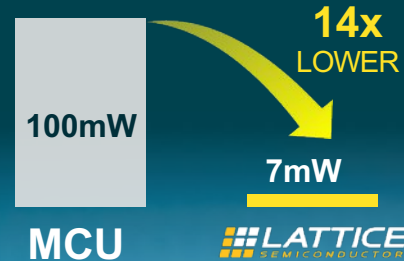
ALWAYS-ON HUMAN PRESENCE DETECTION



PERFORMANCE



POWER



LAUNCHING TODAY



Introducing MachXO3D

Lattice MachXO3D

MachXO3D



Robust Platform
Security

Launching Today



Secure Hardware
Root of Trust capability
First on, last off for maximum security



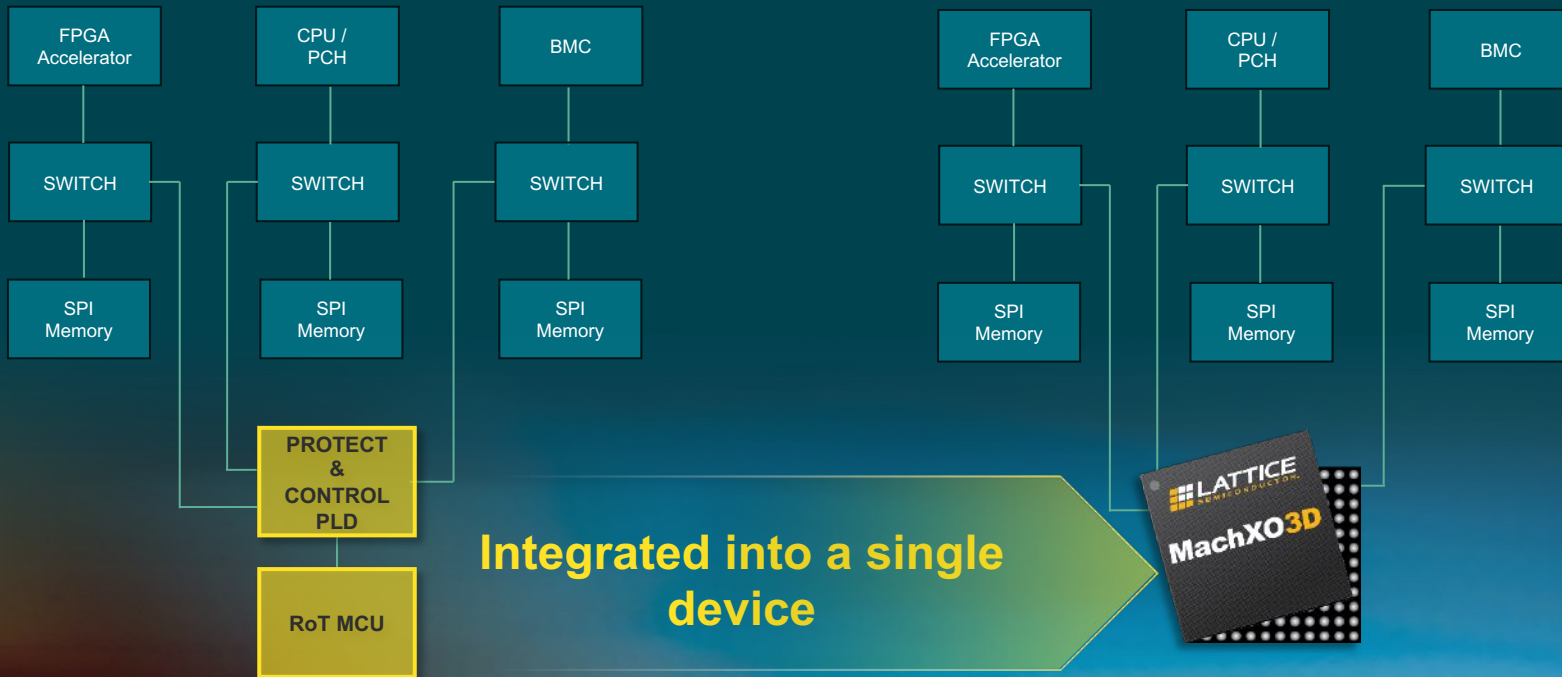
Designed for NIST Compliance
Protect, Detect AND Recover
Secures multiple firmware images



Customer Samples Delivered
Top server OEMs and Hyperscalers

MachXO3D Customer Example: Hyperscaler Server

REDUCES POWER AND SYSTEM COST



LAUNCHING
TODAY

Lattice CrossLinkPlus

CrossLinkPlus



Enhanced
Video Bridging

Sampling in H2 2019



Optimized for Video and Display
Aggregate up to five image sensor streams
Dedicated MIPI interface for HD capability



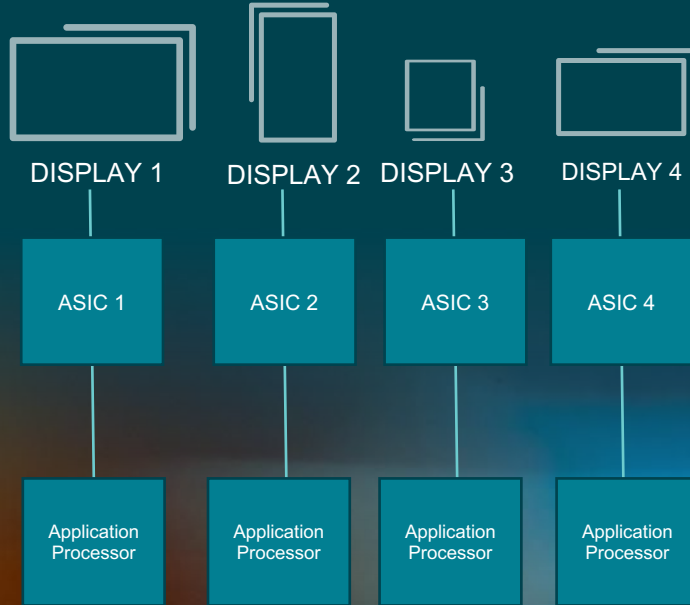
Instant-On Capability
Less than 10 ms boot-up time



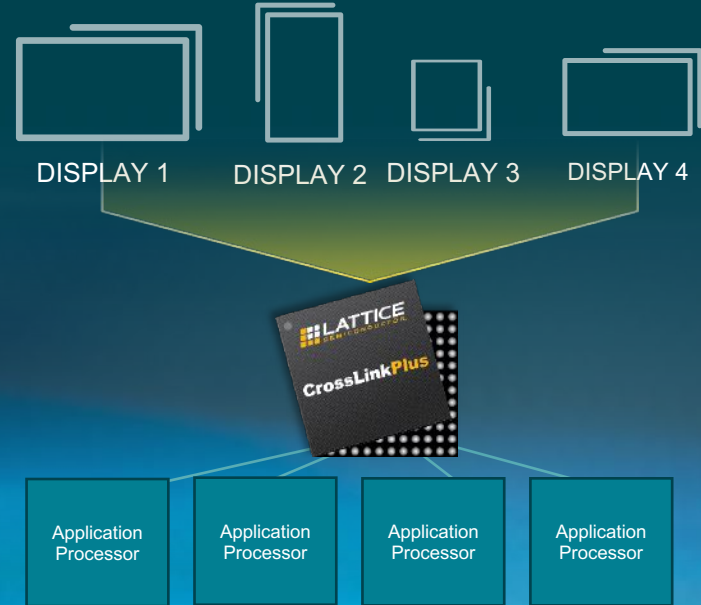
Strong Customer Engagement
Camera and Display applications

CrossLinkPlus Customer Example: Display Application

CUSTOM ASIC REQUIRED FOR EACH DISPLAY TYPE



LATTICE SINGLE DEVICE SOLUTION

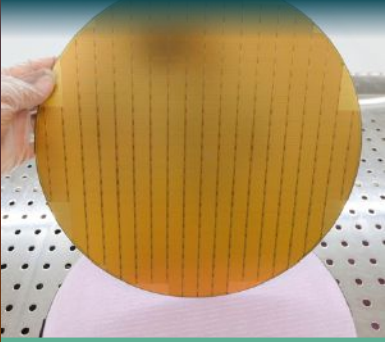


Customers Need Flexible Programmable Solution as Display Sizes and Resolution Vary by Application

SAMPLING
H2-2019

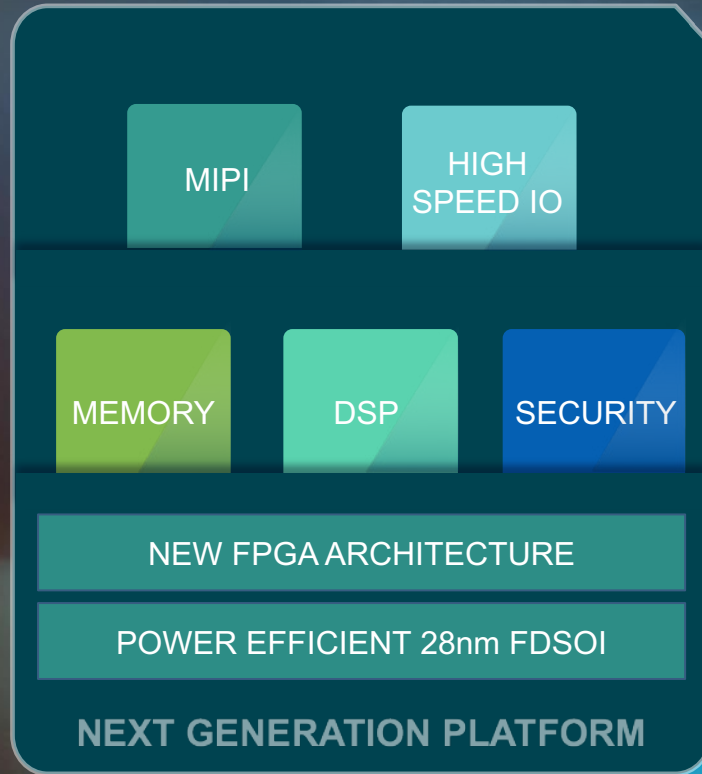
Next Generation FPGA Platform

Next Generation



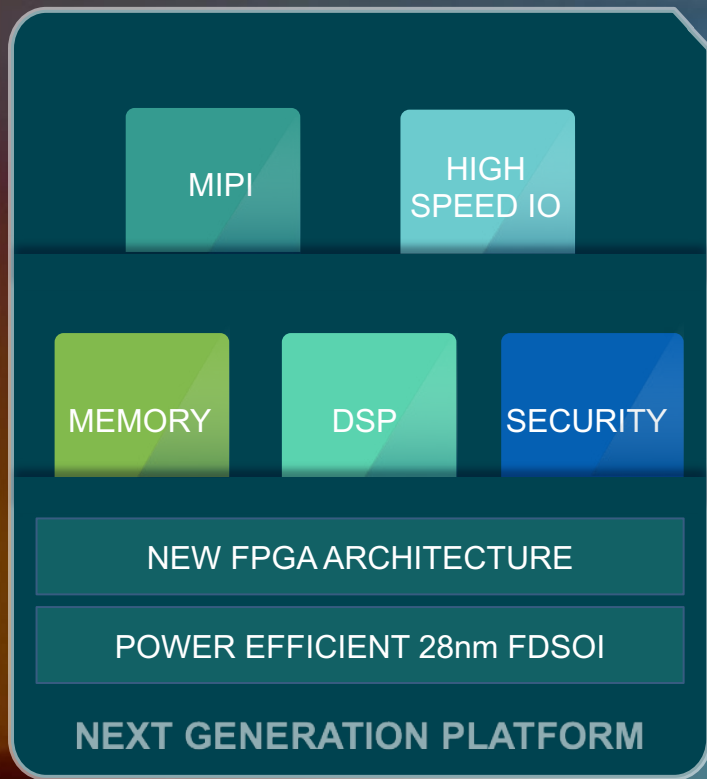
Next Generation
FPGA Platform

Sampling early 2020



Multiple Product
Families From
One Platform

Next Generation FPGA Platform



Faster Connectivity

Double the video bandwidth
50% faster system interfaces

Optimized for AI Inferencing

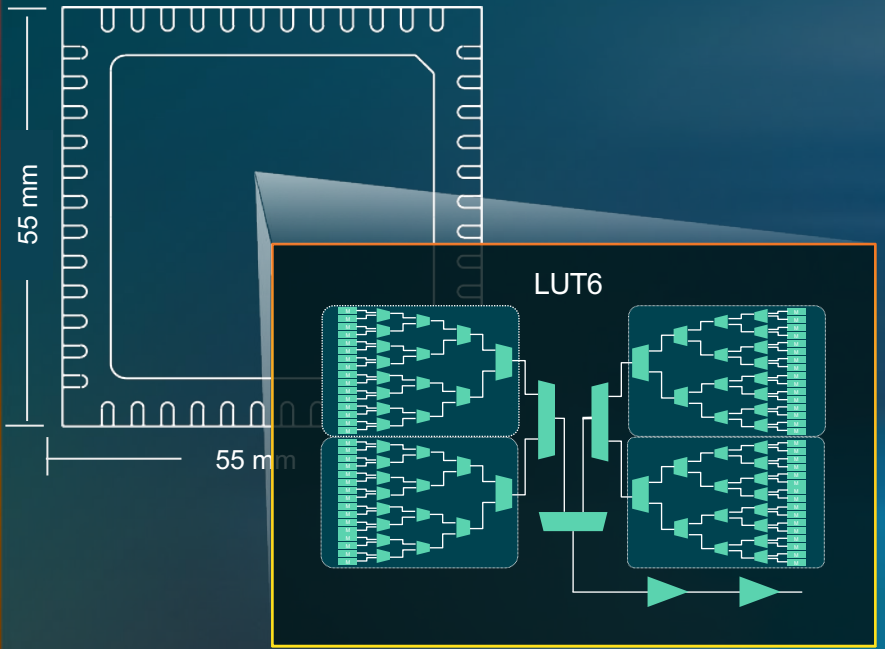
Enhanced DSP capability
UP to 5X more on-chip memory

Advanced Hardware Security

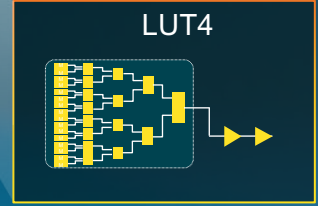
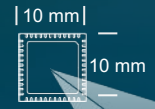
Hardware Root of Trust
Secure key provisioning

Architecture Optimized for Power Efficiency

OTHER FPGA COMPANIES



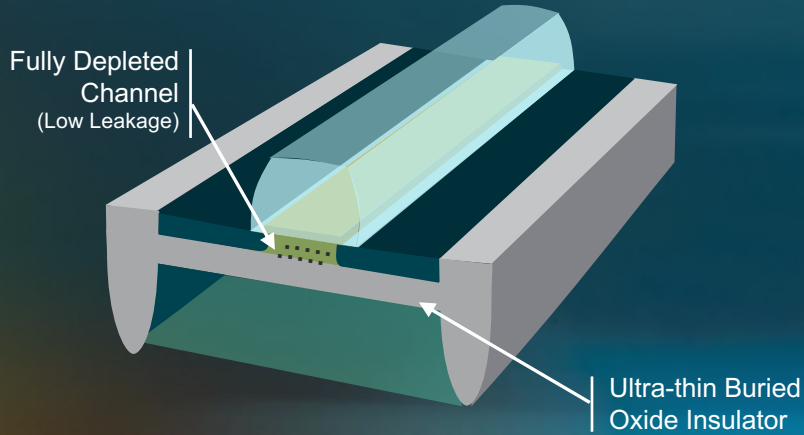
Faster Performance, 2X Larger Area



Half the Power, Half the Area

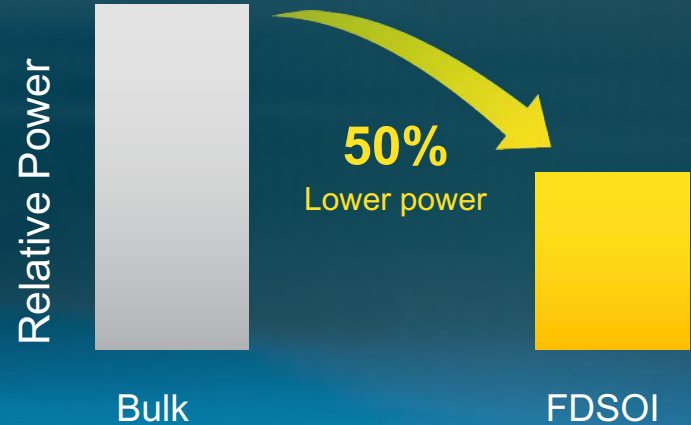
Expanding Low Power Leadership

FDSOI



SAMSUNG

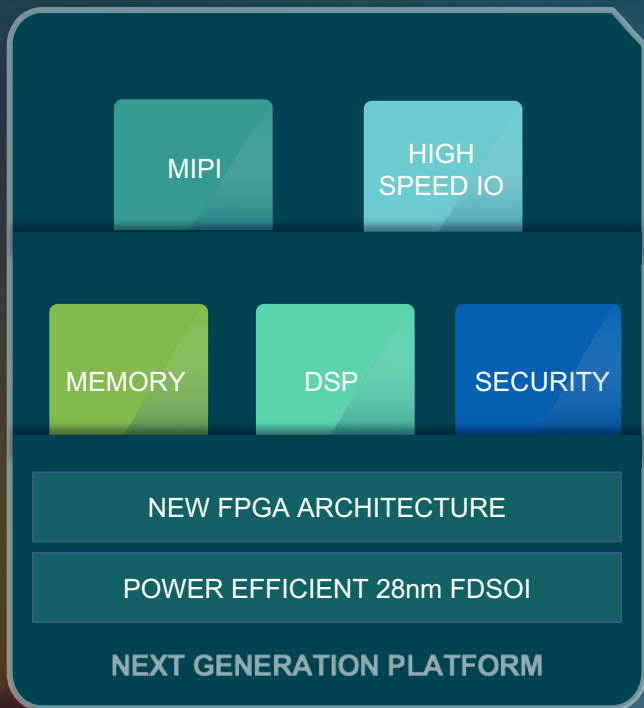
HALF THE POWER AT THE SAME PERFORMANCE



Built on Innovative FDSOI Technology

**SAMPLING
2020**

Accelerating Innovation



Focus on FPGA



Platform Based Design



Expand System Level Solutions

Lattice Executive Leadership Team



Jim Anderson
CEO

Overview



Esam Elashmawi
Marketing & Strategy

Markets



Steve Douglass
Research & Development

Products



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Sales

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Glenn O'Rourke
Operations

Q&A

LATTICE

2019 FINANCIAL ANALYST DAY

CUSTOMERS

MARK NELSON

SALES



Voice of Our Customers

“Your competitors are only focused on data center compute acceleration...we need FPGAs for our business.”

*Design Engineering Manager,
Large Industrial Automation Customer*

“We have known the Lattice FAE for years and we trust him.”

*System Architect,
Prosumer Product Company*

“I want to give Lattice more business... We would like to influence your roadmap.”

*Sourcing VP,
Leading Wireless Company*

“Low power is critical in our systems and we are happy that you are keeping your focus on power.”

*Central Engineering,
Global Tier One Automotive Supplier*

“Security discussions are happening weekly and we could leverage your solution across platforms.”

*Business Unit Executive,
Server & Enterprise Client Leader*

Customers Like Our Focus and Want to Expand their Business with Us

Enhanced Customer Engagement Strategy



SALES
MODEL



OPPORTUNITY
PIPELINE



ENABLING
SCALE



VALUE
CREATION

Restructured Sales Team



Fragmented sales force

Complex compensation structure

Siloed knowledgeable talent

Unified regional sales team

Simple compensation structure

Collaborative and disciplined

New Focused Coverage Model

LATTICE \$3B SAM BREAKDOWN

TOP 20 CUSTOMERS

50%

NEXT 200 CUSTOMERS

30%

BROAD BASE CUSTOMERS

20%

IMPROVED COVERAGE MODEL



Focused coverage

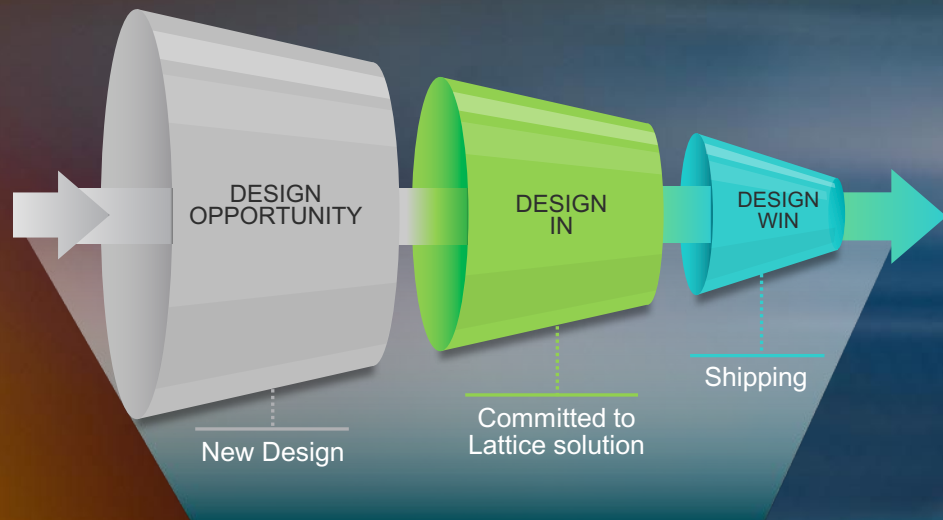


Leverage partners



Scale with distribution

Strengthening the Pipeline



Segment	Pipeline
Industrial & Auto	40%
Comms & Compute	40%
Consumer	20%

Increase focus on large customers

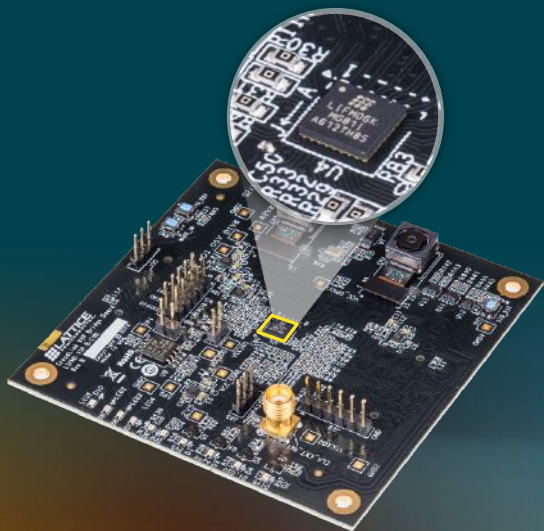
Drive mix towards multi-year revenue streams

Enable SAM expansion with new applications

Enabling Scale

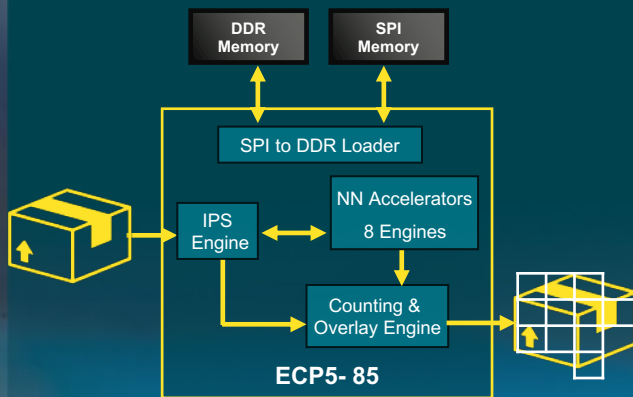
DEMO BOARDS

(e.g. Vehicle Classification)



REFERENCE DESIGNS

(e.g. Package Detection)



JOINT MARKETING PROGRAMS



ARROW ELECTRONICS, INC.



MACNICA



Accelerating Time to Market for Broad Set of Customers

New Value Creation Opportunities



EARLY ARCHITECTURAL ENGAGEMENT WITH CUSTOMERS

Differentiated products
Outstanding support



DRIVING GREATER SOFTWARE CONTENT INTO SOLUTIONS

System level approach
Solution selling



VALUE BASED SELLING

Market segment pricing
Advanced pricing analytics

Enhanced Customer Engagement Strategy



COVERAGE
MODEL

Large SAM
Customers



OPPORTUNITY
PIPELINE

Healthy
Pipeline



ENABLING
SCALE

Solutions
& Partners



VALUE
CREATION

Early
Engagement

Lattice Executive Leadership Team



Jim Anderson
CEO

Overview



Esam Elashmawi
Marketing & Strategy

Markets



Steve Douglass
Research & Development

Products



Mark Nelson
Sales

Customers



Sherri Luther
CFO

Financials



Glenn O'Rourke
Operations

Q&A

LATTICE

2019 FINANCIAL ANALYST DAY

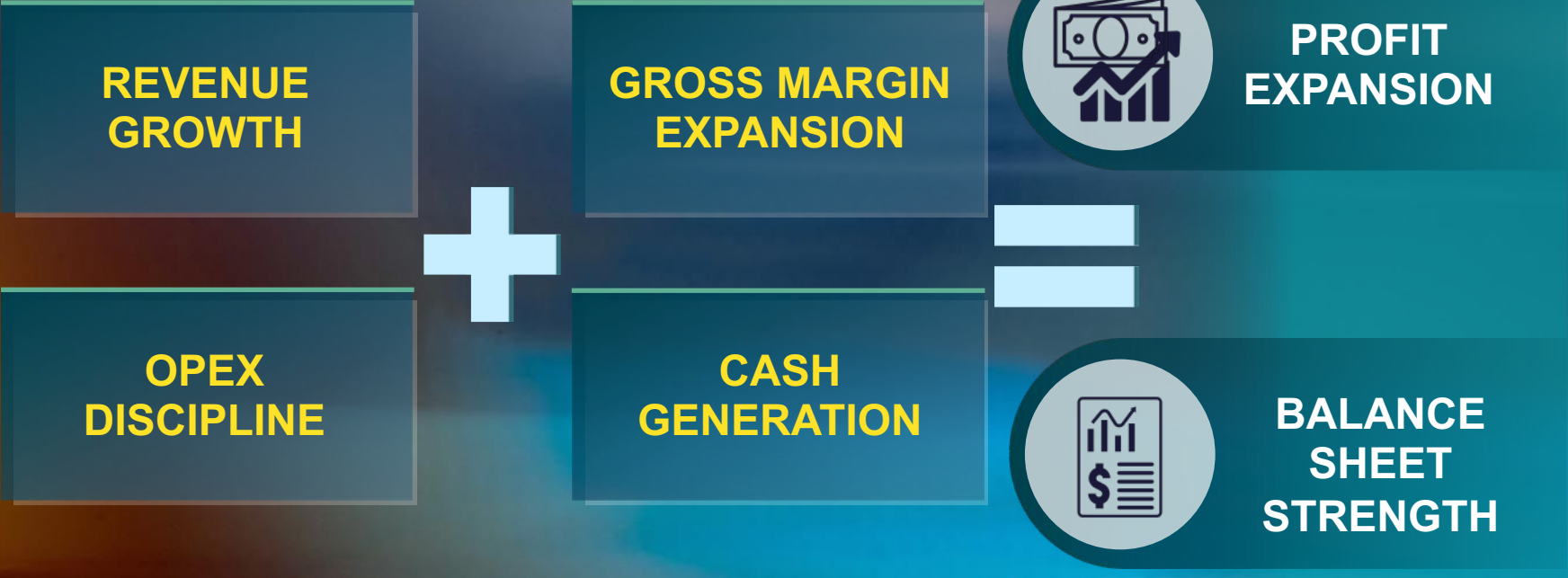
FINANCIALS

SHERRI LUTHER

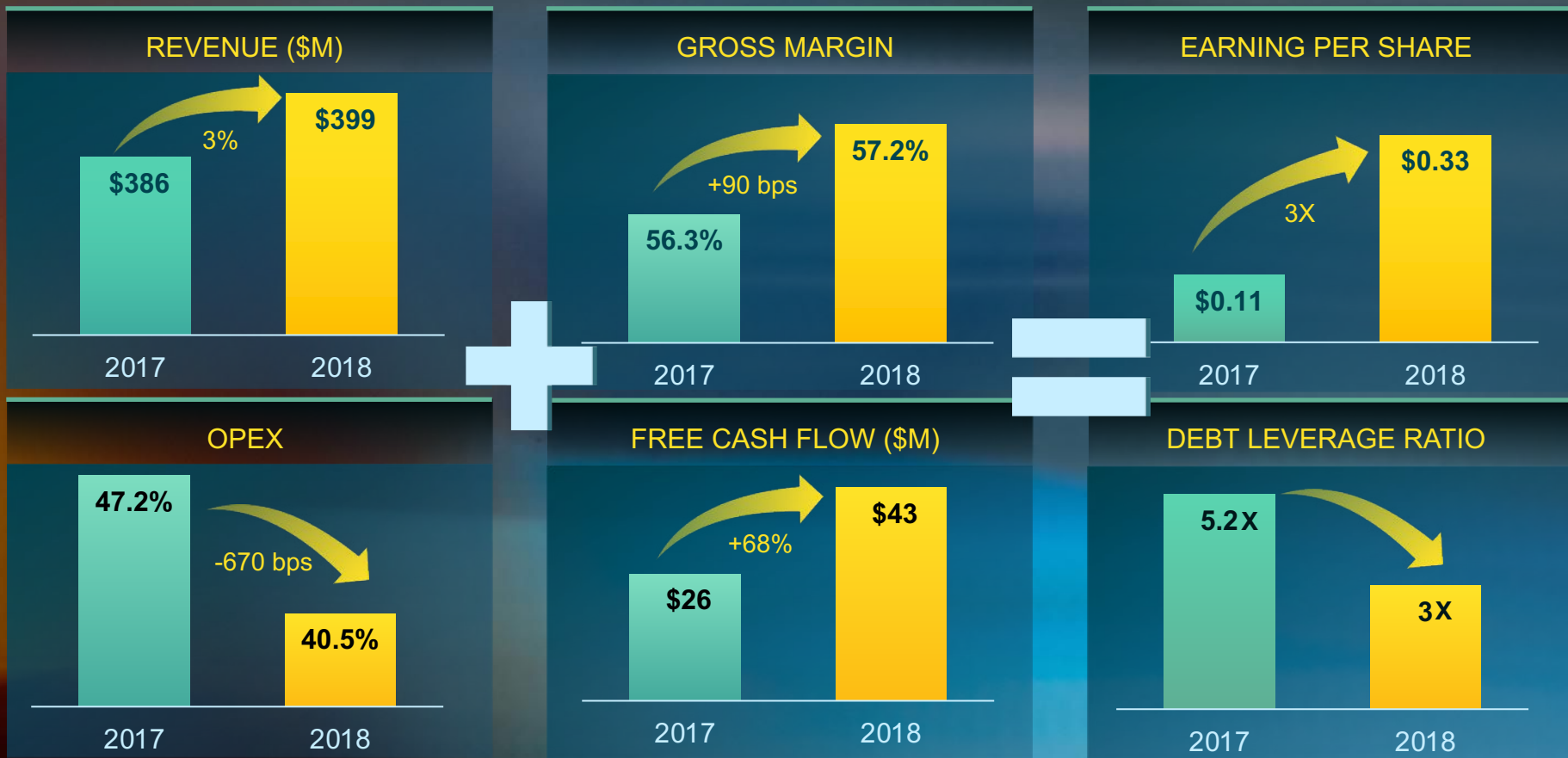
CFO



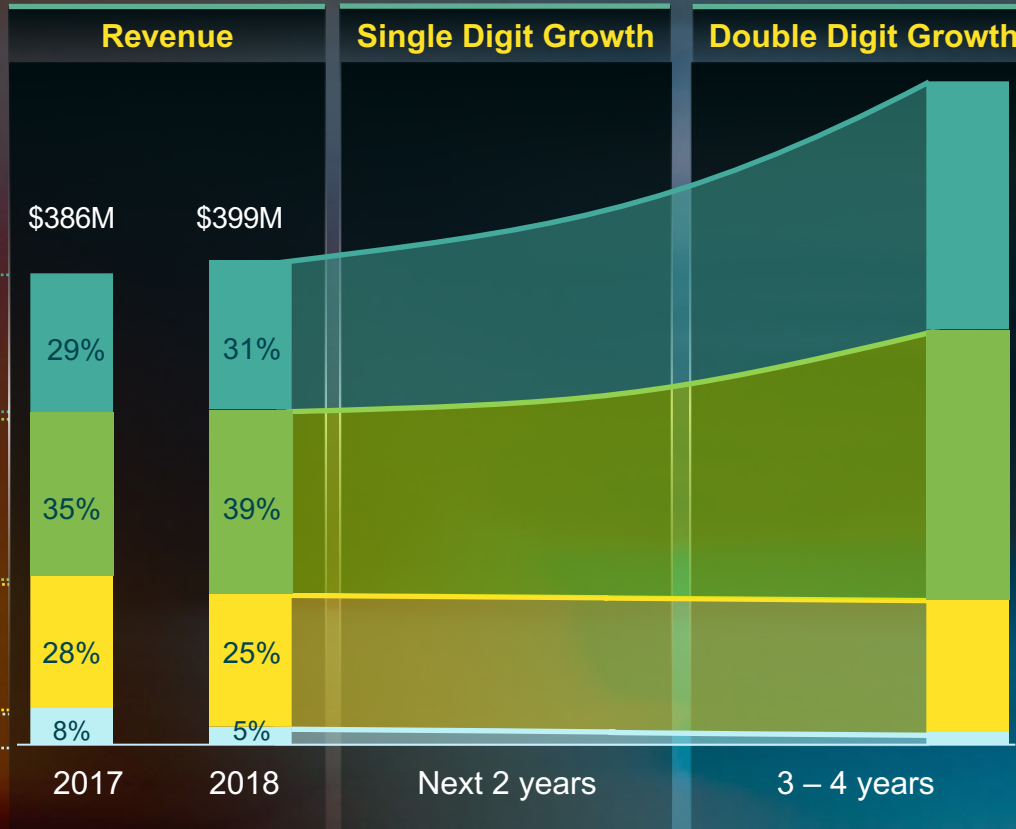
Financial Priorities



2018 Accomplishments



Revenue Growth by End Markets



SEGMENT DRIVERS

5G Infrastructure Deployments
Servers in Cloud and Enterprise
Client Compute Platforms

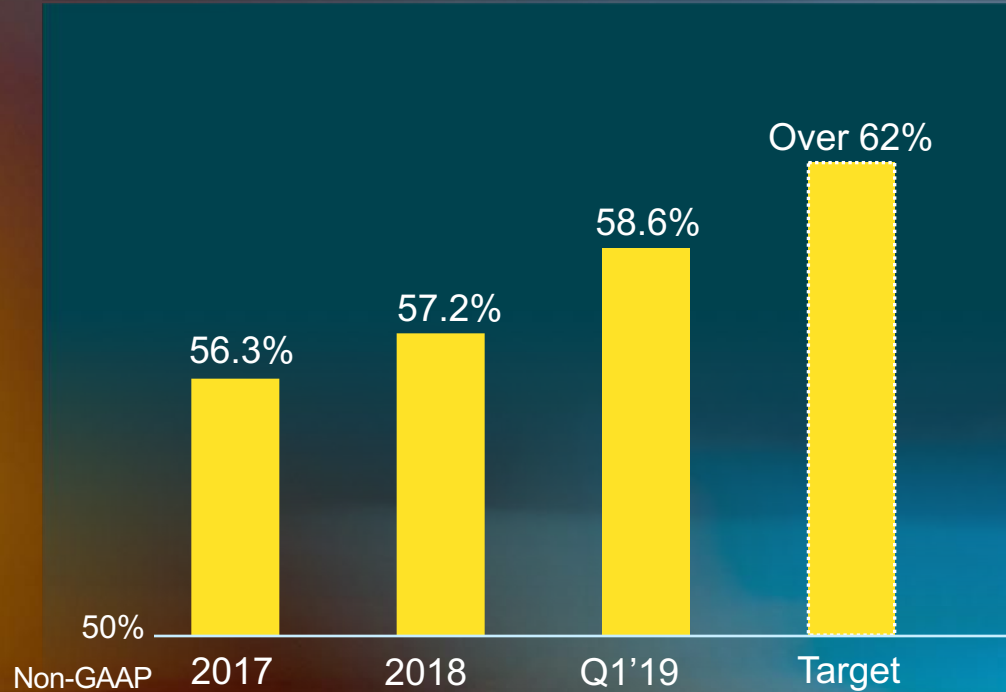
Industrial IoT
Factory Automation
Automotive Electronics

Smart Home
Prosumer

Accelerating Profitable Revenue Growth

Gross Margin Expansion

GROSS MARGIN



EXPANSION STRATEGIES

Pricing Optimization

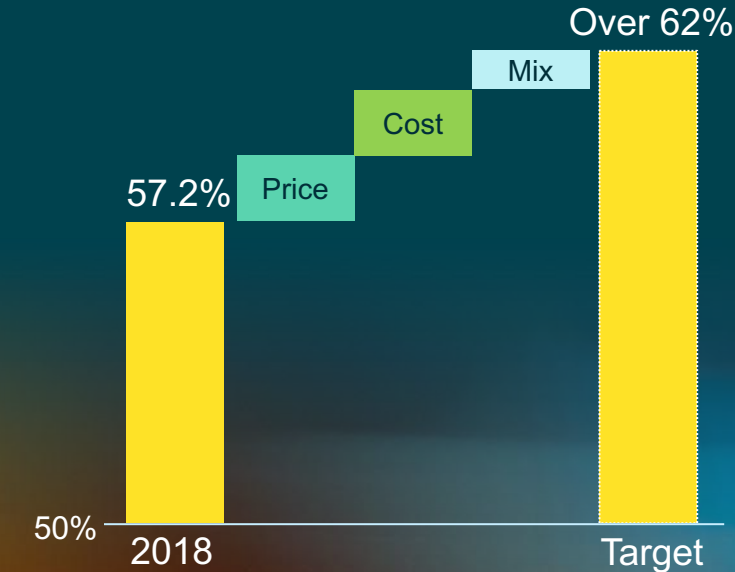
Product Cost Improvement

Mix Shift

Driving Multiple Strategies for Gross Margin Expansion

Gross Margin Expansion Strategies

GROSS MARGIN BRIDGE



Non-GAAP

EXPANSION STRATEGIES

PRICE

- New advanced pricing analytics and price management tools
- Quote to consumption management
- New products with new capabilities bring higher ASPs

COST

- Operational improvements in efficiency, productivity & yield
- Reductions in fixed costs & overhead
- Improved inventory management

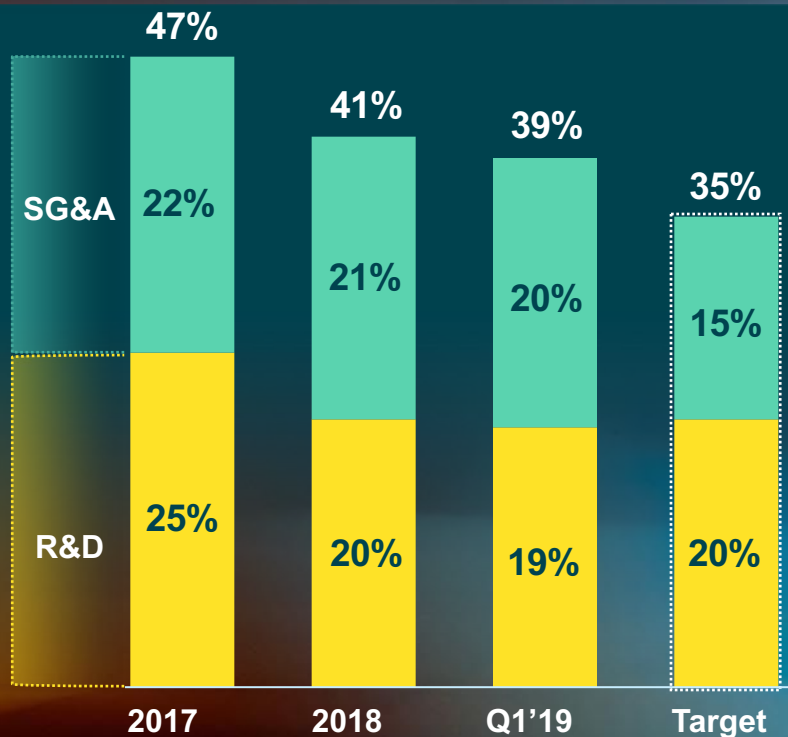
MIX

- Higher percent of revenue from Ind/Auto & Comms/Compute
- Decline in IP revenue

Driving Multiple Strategies for Gross Margin Expansion

OpEx Strategy

OPERATING EXPENSES (\$M)



Non-GAAP

EXPENSE MANAGEMENT

SG&A

- Site consolidation
- IT and Infrastructure efficiency
- Greater leverage of low cost geos
- Operational leverage as revenue grows

R&D

- Continue portfolio optimization for better ROI
- Expand investment toward software and solutions
- Scale with revenue and invest in roadmap

Capital Structure

DEBT BALANCE & LEVERAGE RATIO



Note: Non-GAAP, Free Cash Flow is before debt payment

CASH ALLOCATION

Maintain cash balance above \$100M

Excess cash used to pay down debt

Drive leverage ratio below 2.0

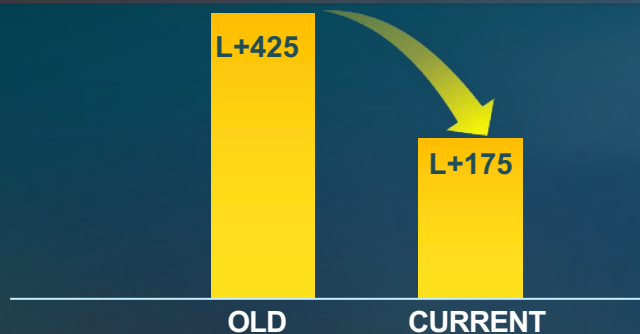
Consider other options for cash after leverage ratio is met

Additional \$25M discretionary debt payment made to date in Q2'19

Significant Progress on Balance Sheet De-lever

Debt Refinance

DEBT INTEREST RATE



BALLOON PAYMENT SCHEDULE



DEBT REFINANCE DETAILS

Reduced interest rate and improved terms

Interest rate dropped by 250 bps; Further step downs as leverage declines

Extended maturity by 3 years to May 2024

Greater flexibility allowing stock buy backs

Includes \$75 million revolver

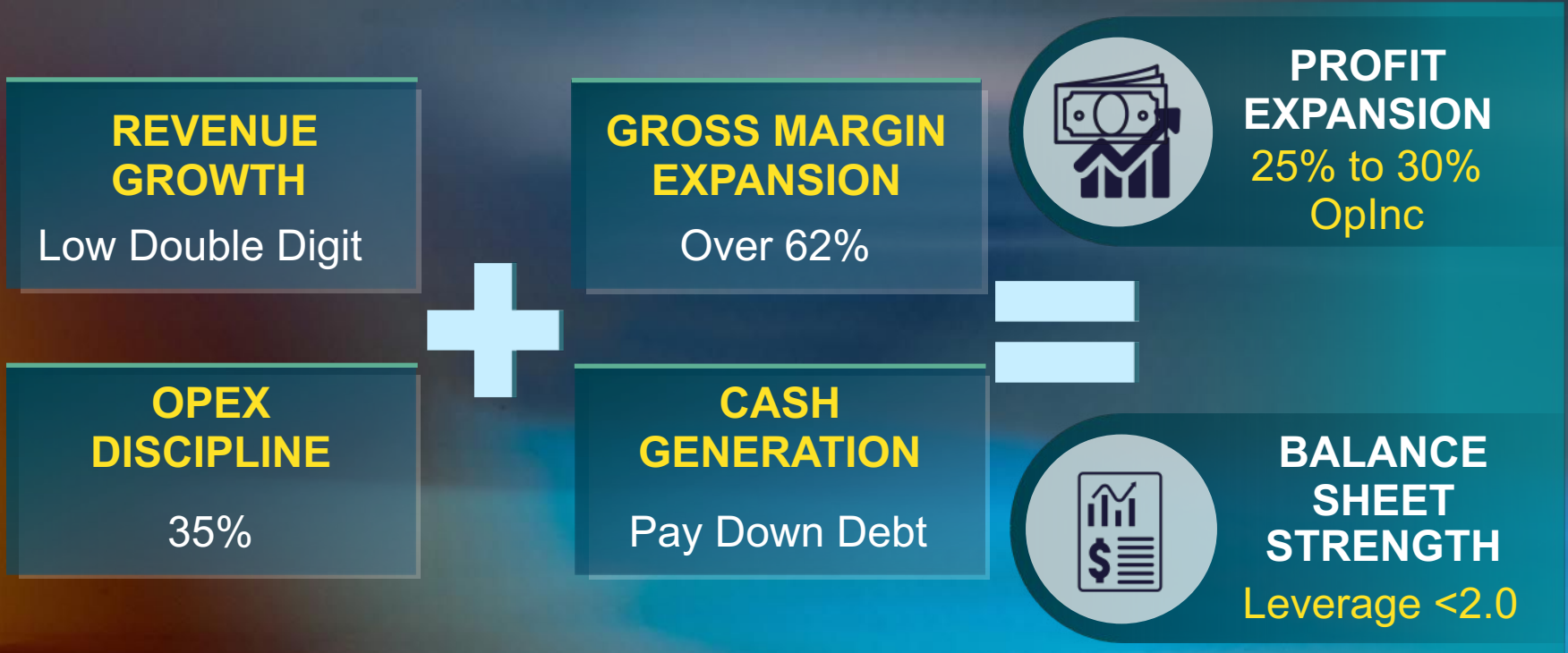
Refer to 8K filing for additional details

Financial Target Model

	2018	Q1'19	Target Model (3 – 4 Yrs.)
Revenue Growth (YoY)	+3%	Flat	Low Double Digits
Gross Margin*	57.2%	58.6%	Over 62%
OpEx*	41%	39%	35%
Operating Income*	17%	20%	25% - 30%

*Non-GAAP

Financial Priorities

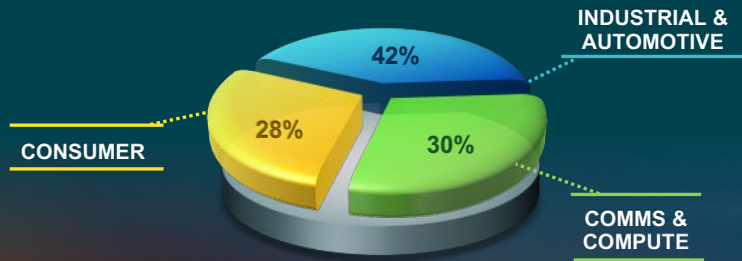




Q&A

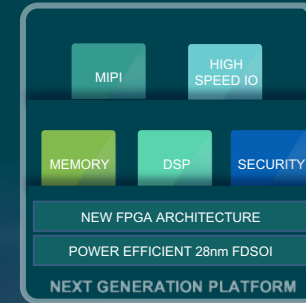
Wrap Up

MARKETS



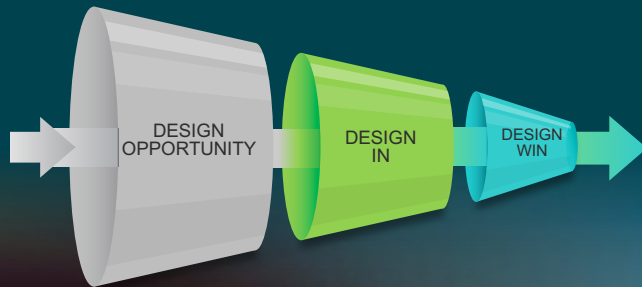
\$3B LATTICE SAM IN 2022

PRODUCTS



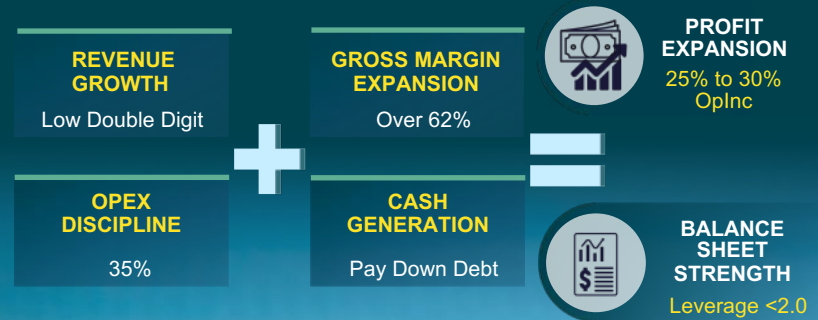
ACCELERATING INNOVATION

CUSTOMERS



EXPANDING CUSTOMER FOOTPRINT

FINANCIALS





The Low Power Programmable Leader

2019 FINANCIAL ANALYST DAY

NEW YORK

Appendix

Operating Expenses Reconciliation

(Thousands except percentages)	Q1 2019	2018	2017
GAAP Operating expenses	\$ 45,176	\$ 222,559	\$ 264,199
% of Revenue	46.1%	55.8%	68.5%
Amortization of acquired intangible assets	(3,389)	(17,690)	(31,340)
Restructuring charges	(1,341)	(17,349)	(7,196)
Acquisition related charges	-	(1,531)	(3,781)
Impairment of acquired intangible assets	1,023	(11,686)	(32,431)
Stock-based compensation expense	(3,484)	(12,706)	(11,755)
Gain on sale of building	-	-	4,624
Non-GAAP Operating expenses	\$ 37,985	\$ 161,597	\$ 182,320
% of Revenue	38.7%	40.5%	47.2%

Gross Margin Reconciliation

(Thousands except percentages)	Q1 2019	2018	2017
GAAP Gross Margin	\$ 57,652	\$ 219,439	\$ 216,579
GAAP Gross Margin %	58.8%	55.0%	56.1%
Inventory adjustment related to restructured operations	(338)	7,829	-
Stock-based compensation expense	202	940	788
Non-GAAP Gross Margin	\$ 57,516	\$ 228,208	\$ 217,367
Non-GAAP Gross Margin %	58.6%	57.2%	56.3%

Earnings Per Share Reconciliation

	Q1 2019	2018	2017
GAAP net loss per share - diluted	0.05	(0.21)	(0.58)
Inventory adjs related to restructured operations	(0.00)	0.06	-
Amortization of acquired intangible assets	0.03	0.14	0.25
Restructuring charges	0.00	0.13	0.06
Acquisition related charges	-	0.01	0.03
Impairment of acquired intangible assets	0.01	0.09	0.26
Stock-based compensation expense	0.03	0.11	0.10
Gain on sale of building	-	-	(0.03)
Loss on sale of assets and business units	-	-	0.02
Non-GAAP Operating expenses	0.11	0.33	0.11