

# **MaxLinear Investor Presentation**

November 2018

그 과학을 하면 이 문제가 가지 않는 것 같은 것 같이 많이 다.

## Disclaimer

#### Forward-Looking Statements

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include, among others, statements concerning our future financial performance; trends and growth opportunities in our product markets; anticipated benefits and synergies arising from our recent acquisition of Exar Corporation; and opportunities for MaxLinear and Exar as a combined company. These forwardlooking statements involve known and unknown risks, uncertainties, and other factors that may cause actual results to be materially different from any future results expressed or implied by the forward-looking statements. Forward-looking statements are based on management's current, preliminary expectations and are subject to various risks and uncertainties. Risks and uncertainties affecting our business, operating results, financial condition, and stock price, include, among others, integration risks arising from Exar; intense competition in our industry; our dependence on a limited number of customers for a substantial portion of our revenues; uncertainties concerning how end user markets for our products will develop; potential uncertainties arising from continued consolidation among cable television and satellite operators; our ability to develop and introduce new and enhanced products on a timely basis and achieve market acceptance of those products, particularly as we seek to expand outside of our historic markets; potential decreases in average selling prices for our products; limited trading volumes; risks relating to intellectual property protection and the prevalence of intellectual property litigation in our industry, including pending litigation against us by a third party with the United States International Trade Commission and in United States District Court in Delaware; our reliance on a limited number of third party manufacturers; and our lack of long-term supply contracts and dependence on limited sources of supply. Risks relating to our recently completed acquisition of Exar Corporation include the challenges and costs of closing, integrating, restructuring, and achieving currently anticipated synergies; the ability to retain key employees, customers, and suppliers of newly acquired Exar Corporation or MaxLinear; and other factors generally affecting the business, operating results, and financial condition of either MaxLinear, newly acquired Exar Corporation or the combined company. In addition to these risks and uncertainties, investors should review the risks and uncertainties contained in our filings with the Securities and Exchange Commission (SEC), including our most recent Annual Report on Form 10-K on February 20, 2018 and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2018. Unless otherwise indicated herein, all forward looking statements are based on estimates, projections and assumptions of MaxLinear as of the date of this presentation. These slides do not constitute confirmation or an update of previously provided guidance. MaxLinear is under no obligation (and expressly disclaims any such obligation) to update or revise any forward-looking statements whether as a result of new information, future events, or otherwise.

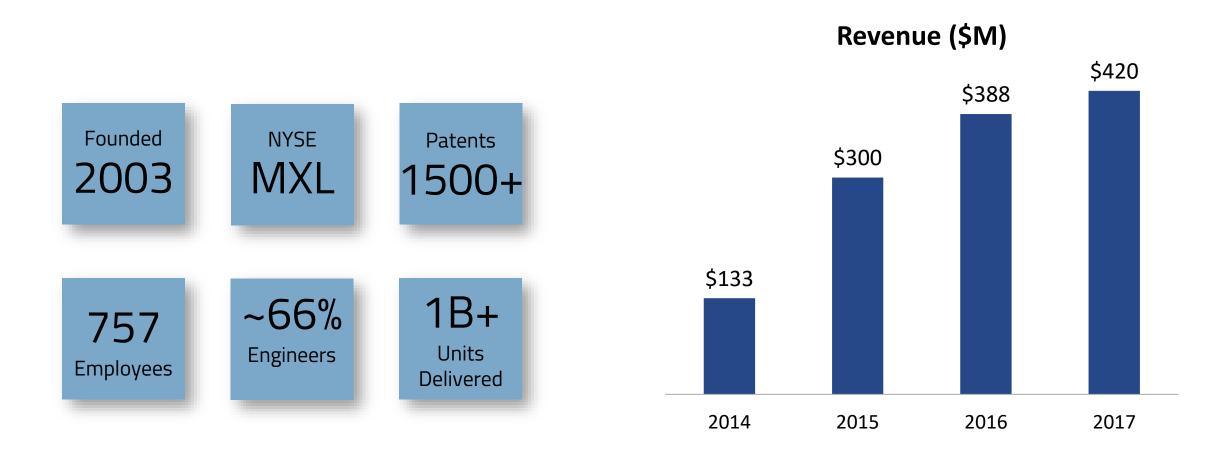
#### Non-GAAP Financial Measures

This communication may contain certain non-GAAP financial measures, which MaxLinear management believes are useful to investors and others in evaluating business combinations. Further detail and reconciliations between the non-GAAP financial measures and the GAAP financial measures are available in MaxLinear's published financial results press release and in our filings with the SEC, including our Annual Report on Form 10-K on February 20, 2018 and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2018.

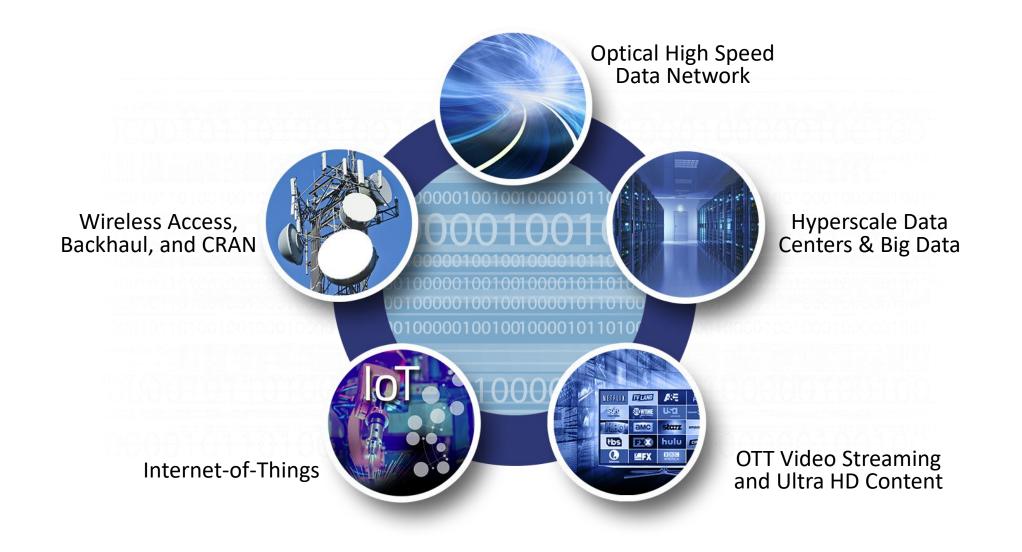


# MaxLinear

Pioneer of Low Power, CMOS RF and Mixed-Signal Digital SoCs

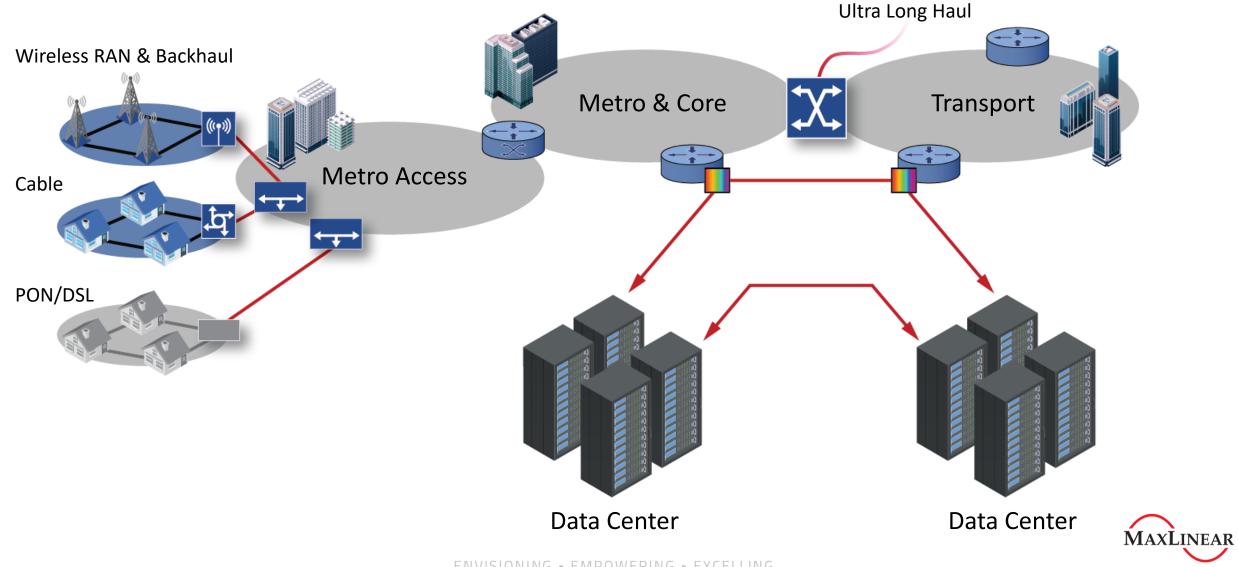


#### Exploding Data & Traffic Demand Fatter & Faster Data Pipes

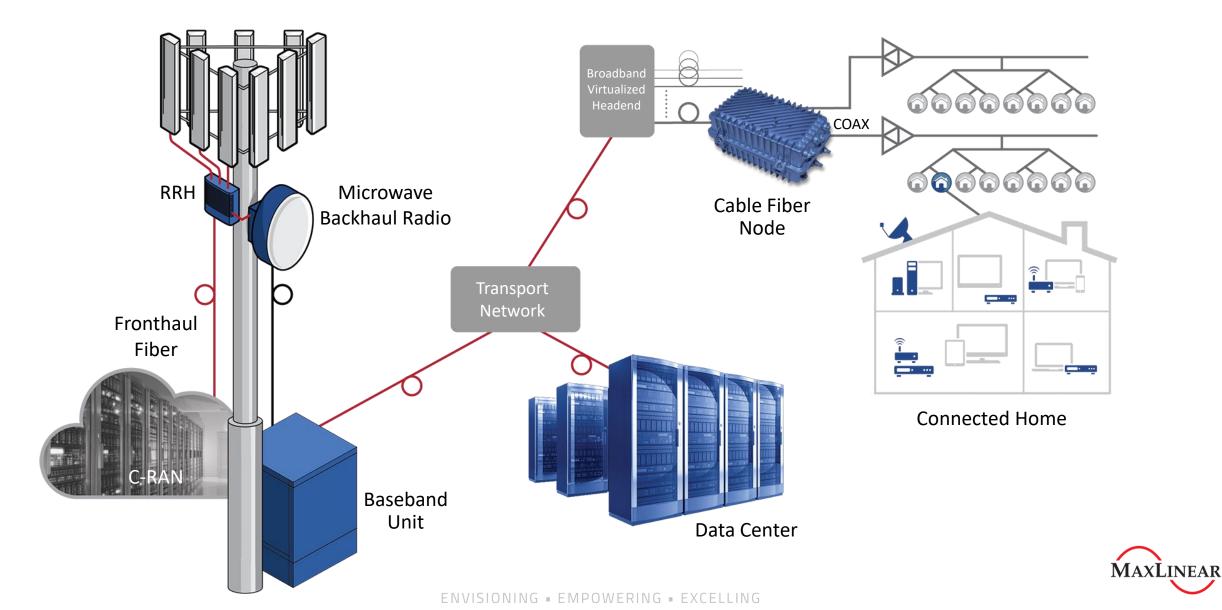




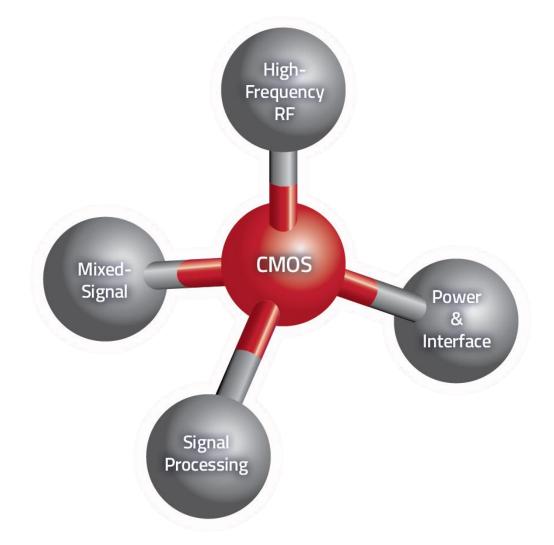
# We Solve Communication Network Bottlenecks



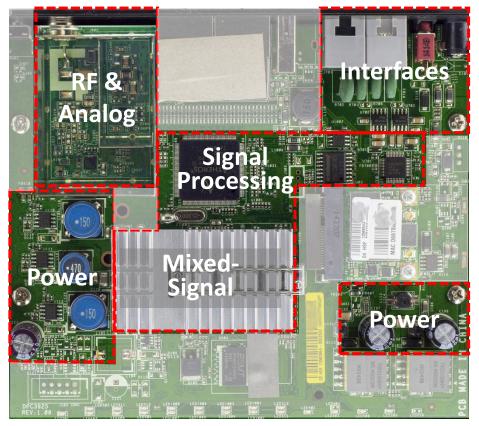
# With End-to-End Communication Network Solutions



#### Our Core Technology Platform Scales Across Multiple Communications End Markets



7

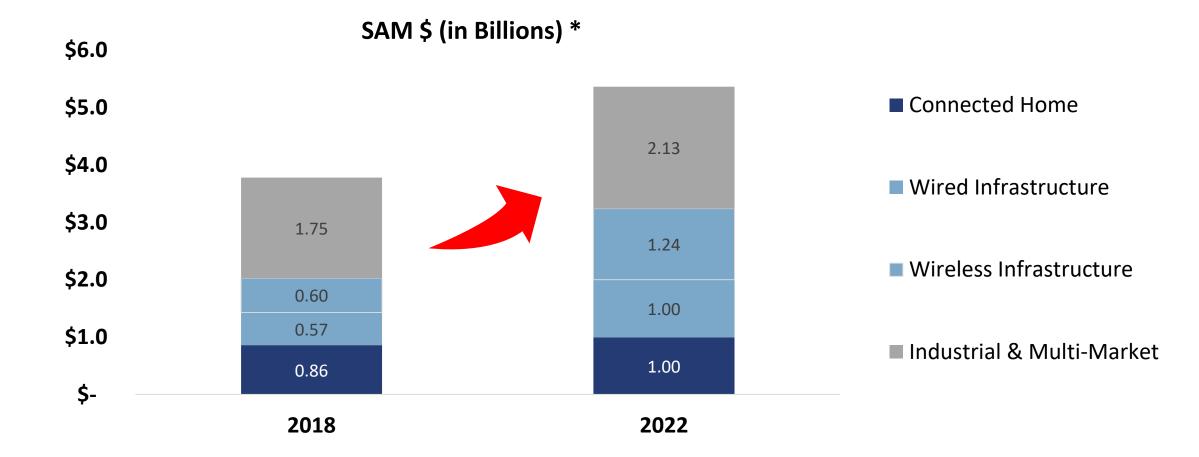


#### **Typical Communication Link**



ENVISIONING = EMPOWERING = EXCELLING

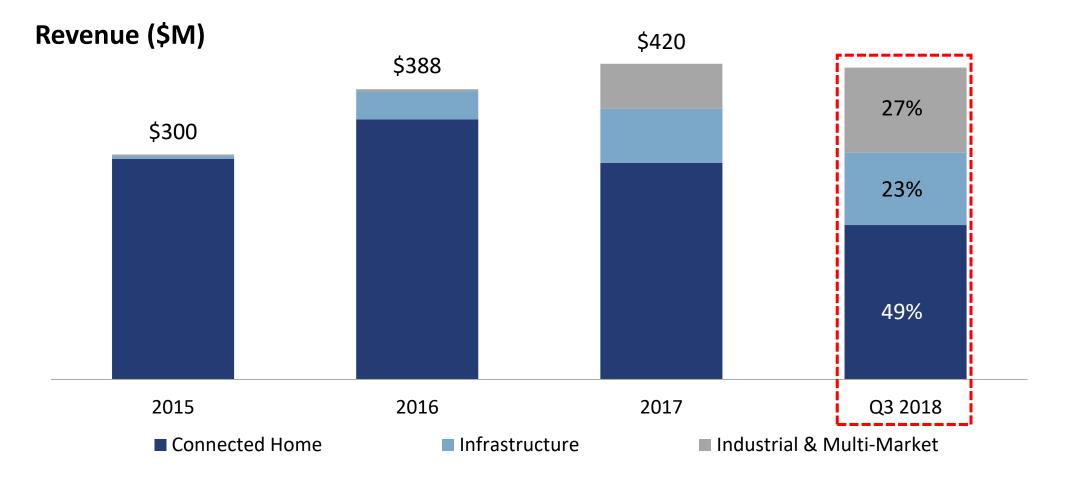
#### Expanding Addressable Markets Through Organic Growth and Strategic Acquisitions





\*All data based on a combination of industry research reports and management estimates

#### Record of Strong Growth & Profitability Diversifying Revenues into Large High Value End Markets



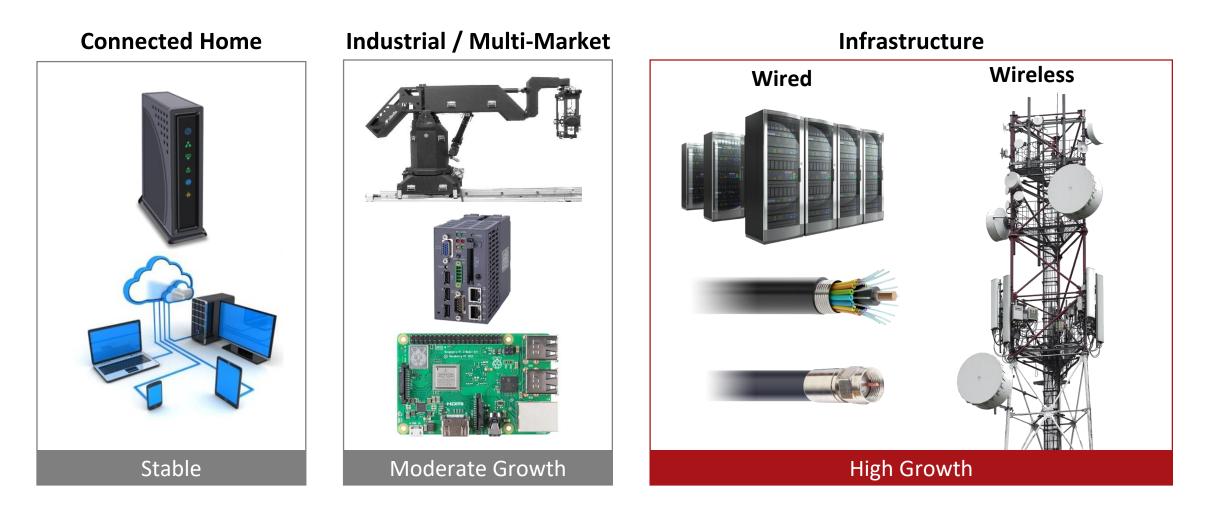


#### **Global Locations**

#### Support Customers and Attract Talent



# **Diversified End Market Portfolio**





ENVISIONING = EMPOWERING = EXCELLING

# **Connected Home**

Comprehensive Solutions Enabling Bandwidth Expansion into and throughout the Home

**In-Home Connectivity** 

COMCAST

Cable Broadband Data

Satellite Video Gateways & ODUs







Spectrum







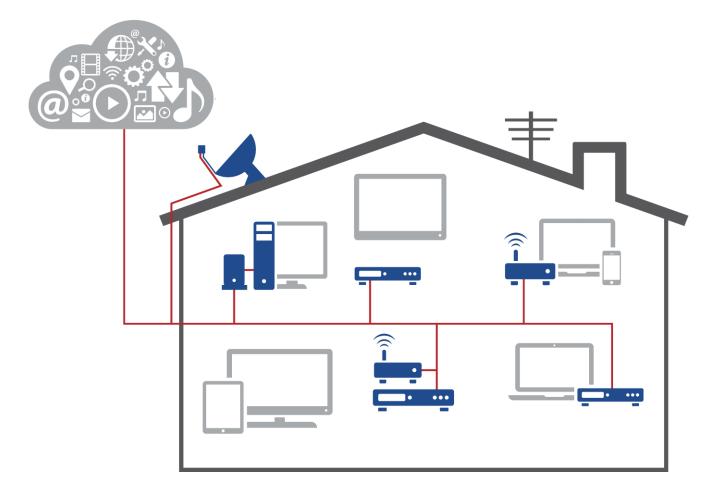


# Connected Home

Stable, and Highly Profitable Revenue Platform

\$975 \$954 \$900 2019 2020 2021 Connectivity Cable Data Video

SAM \$ (in millions)\*



\*All data based on a combination of industry research reports and management estimates



#### Cable Access DOCSIS Front Ends & PGA



Leader in CMOS RF Front Ends for Cable Data Platforms over 3 Generations

100+ Million Units in Operation

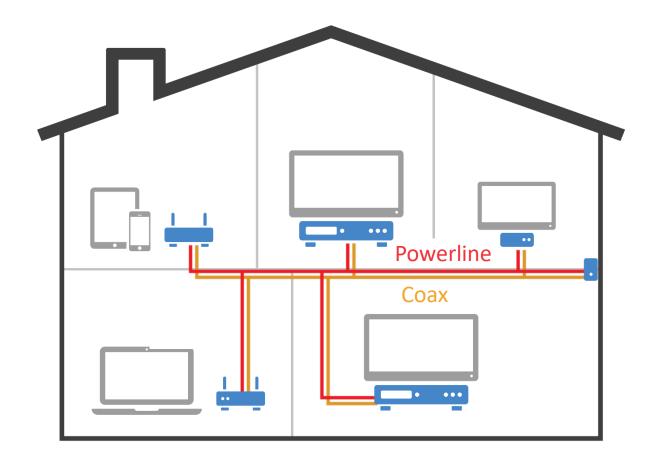
Lowest Power Consumption CMOS PGAs Expands MaxLinear Footprint

Leading the Transition to Full Duplex DOCSIS3.1 Systems



### **In-Home Connectivity**

Wireline Multi-Gigabit/s Data Distribution Using MoCA & G.hn



Multi-Gigabit Any-Wire Portfolio (Coaxial Cable, or Powerline)

Solves Wi-Fi Coverage, Power and Throughput Issues

Improves Reliability of On Demand and OTT Streaming Video

Lowers CAPEX by Enabling Gateway/Client STB Architecture



#### Wireless Infrastructure 5G Build-Out Enables 10X Data Speeds versus 4G

Access

Microwave & mm-Wave Backhaul & Front Haul

**Optical Fronthaul** 





NOKIA

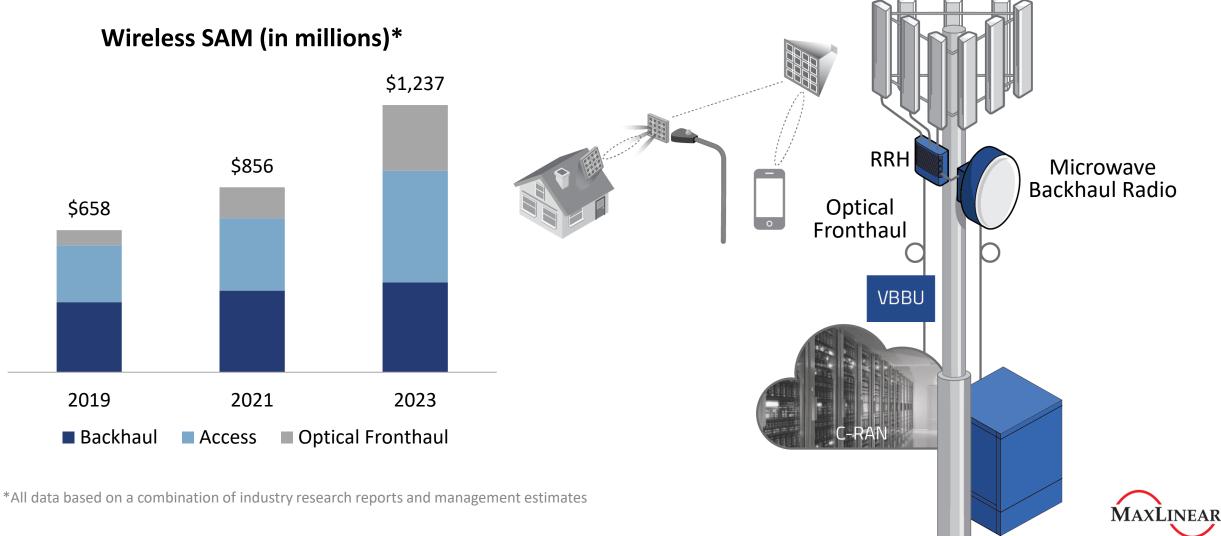




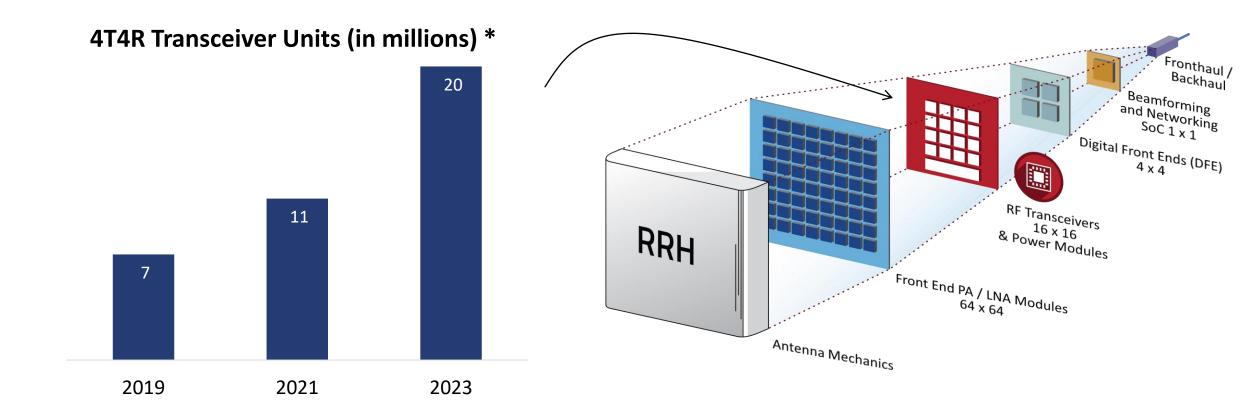


# 4G & 5G Wireless Infrastructure

Wireless Access, Wireless Backhaul, and Optical Front Haul



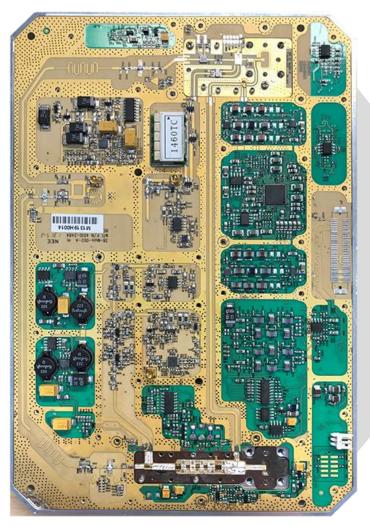
#### 5G Wireless Access – Massive MIMO Transceivers Active Antenna Systems 10x Data Rates



\*All data based on a combination of industry research reports and management estimates



# Wireless Backhaul & Fronthaul Microwave & mm-Wave



Competition



MaxLinear

Only Single-Chip RF Transceiver Solution (CMOS) for Entire Frequency Spectrum of 6-to-44GHz

Reduced Complexity = Single SKU for all Frequency Bands; Lowest Power

Industry's Only Full System Solution (up to 20Gbps data rates) = RF + Baseband Modem



# Wired Infrastructure

#### Comprehensive Solutions Enabling Bandwidth Expansion

**Data Center Optical Fiber** 

**Optical Metro/Long Haul Fiber** 

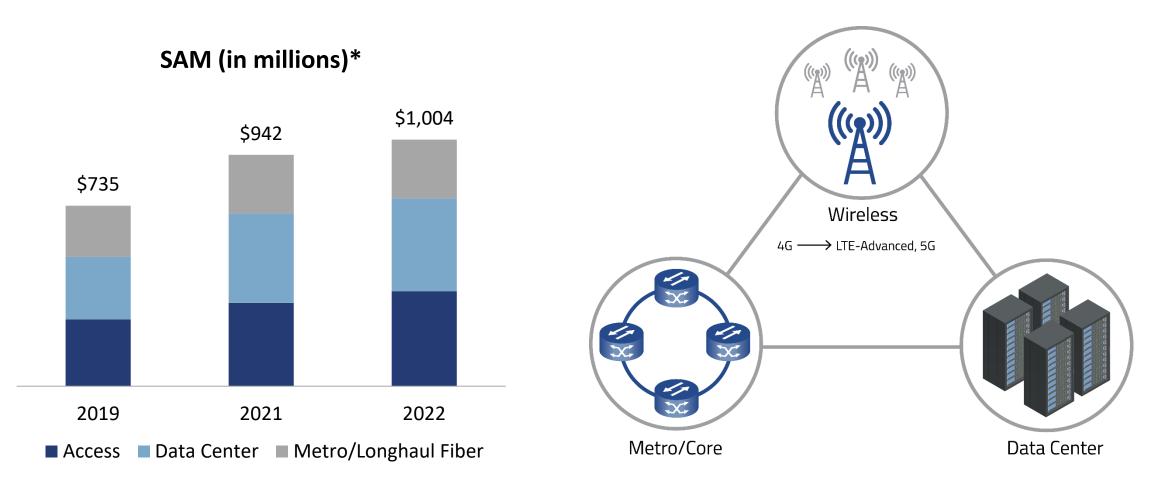
Last Mile Access





# Wired Infrastructure

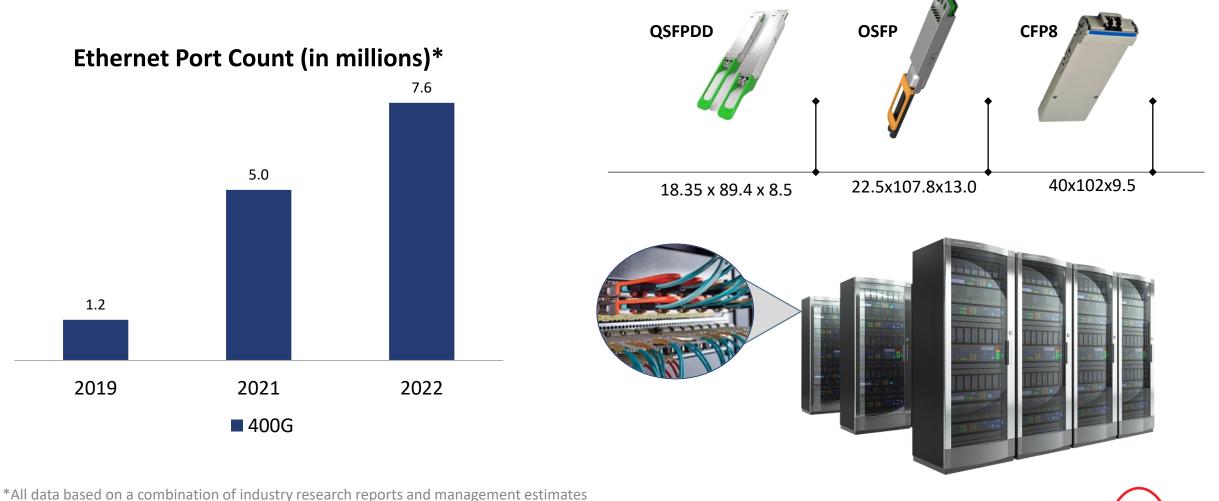
Data Center Fiber Optics, Last Mile Access, & Metro/Long Haul Fiber



\*All data based on a combination of industry research reports and management estimates



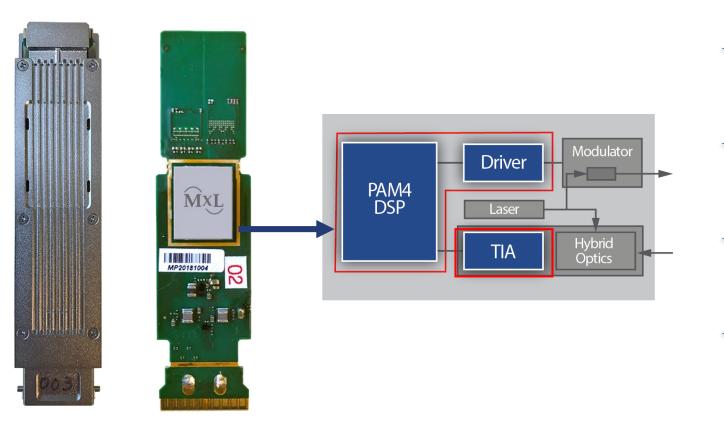
#### Data Center Fiber PAM4 DSP for 400Gbps Single-Lambda Optics Based Interconnects



MAXLINEAR

Il data based on a complination of industry research reports and management estimates

# Telluride PAM4 Single-Lambda SoC Platform 4x100G, 2x100G and 1x100G DC Optical Interconnects



1<sup>st</sup> 400G Data Center Transceiver Chipset with Integrated Laser Driver

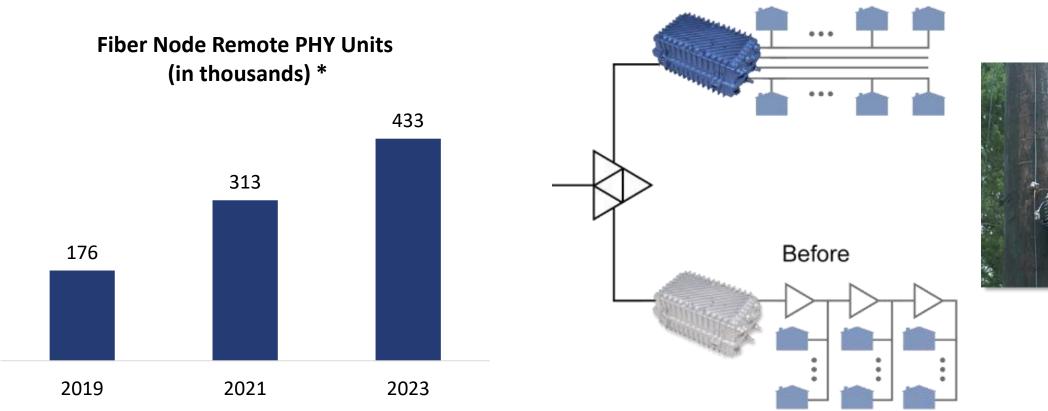
Supports 100/200/400Gbps

Enables <10W 400G Solution

Only Supplier with Integrated PAM4 DSP and Laser Driver + TIA System Solution



#### Last Mile Access Cable Full Duplex DOCSIS Fiber Node





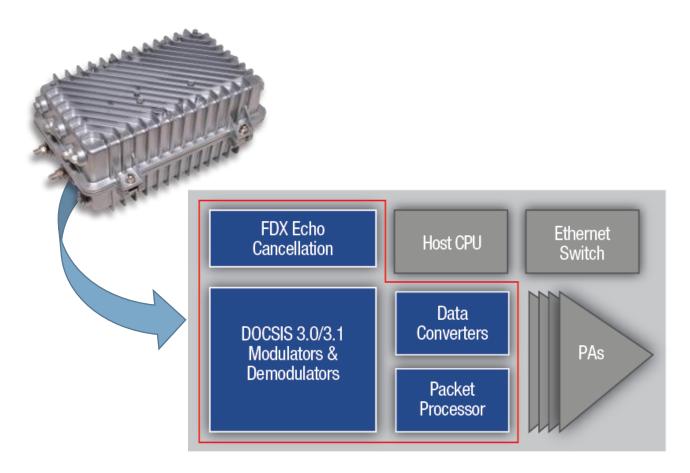
After FDX

\*All data based on a combination of industry research reports and management estimates



# Cronus FDX Fiber Node SoC

Enables 10Gbit Downstream & 5Gbit Upstream DOCSIS3.1 Services



World's 1<sup>st</sup> Full Duplex (FDX) Capable Remote PHY SoC for Fiber Node

Highest Level of Integration

Lowest Power; Fits into Existing Power and Size Footprint of Fiber Nodes

Enables 10Gbit Symmetric Data Services to the Home using Existing Coaxial Cable



#### Industrial & Multi-Market

#### Power Management and Interface Products

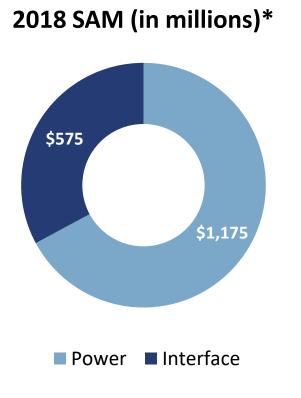






# Industrial & Multi-Market

Expansive Interface and Growing Power Management Portfolio Address a Large Stable Market



#### Industrial / Multi-Market

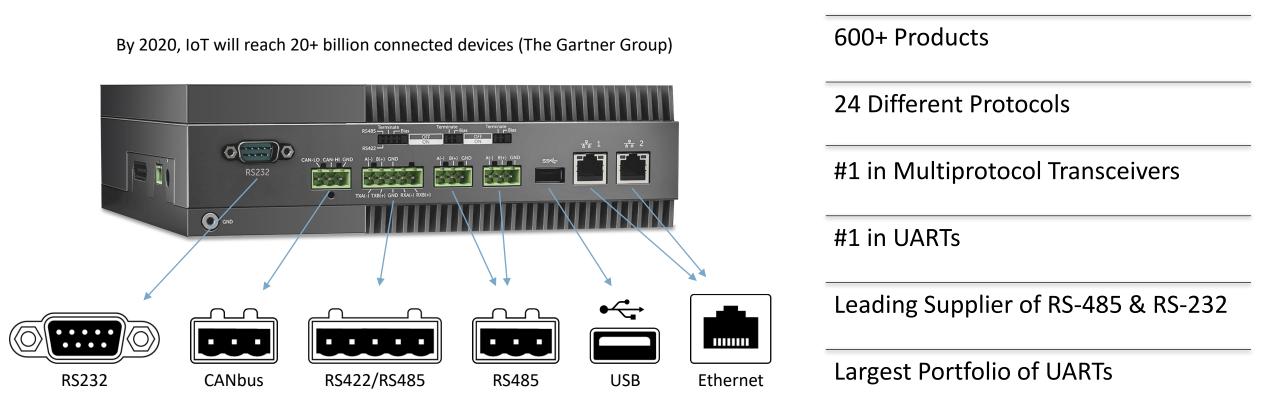


\*All data based on a combination of industry research reports and management estimates



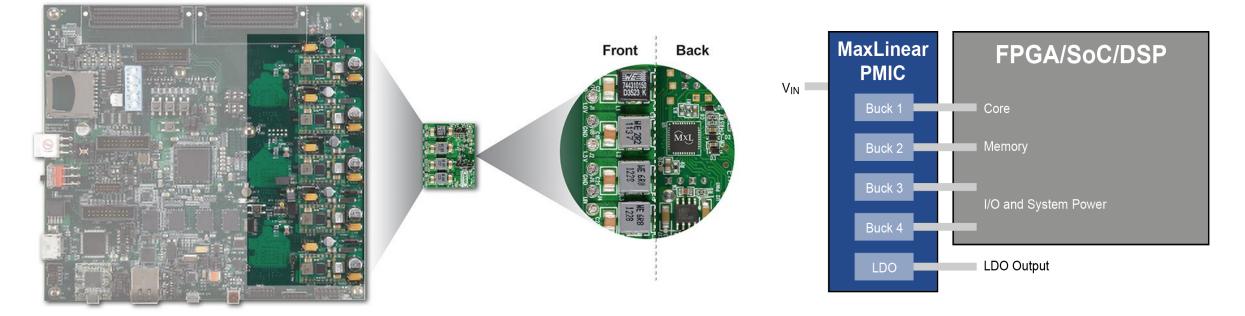
## History of Leadership in Interfaces

Supplying Interface ICs to the Industrial Market for Over 40 Years





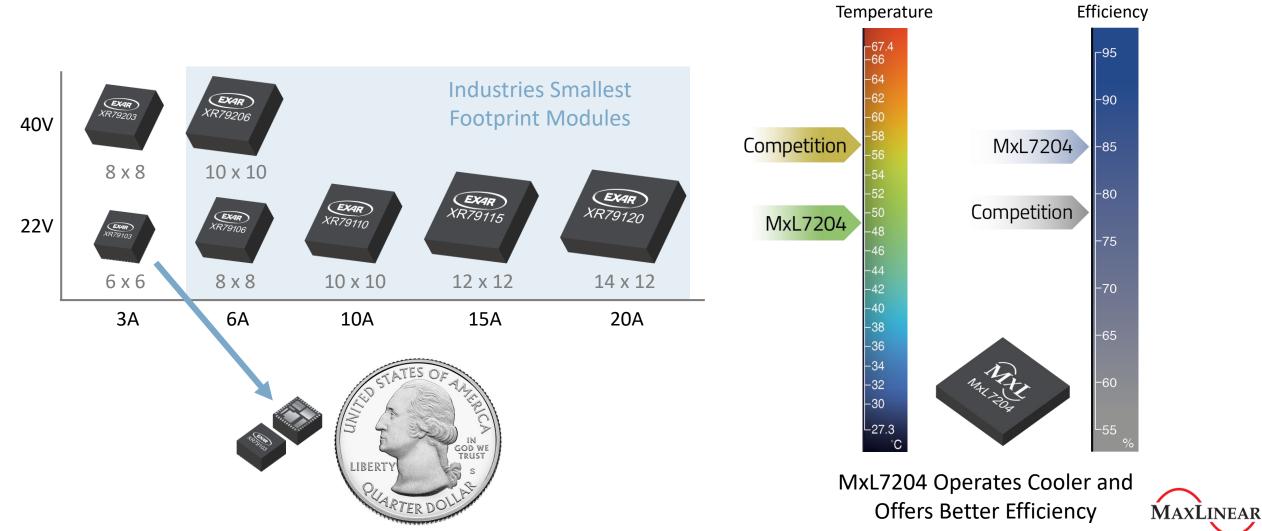
#### Optimized Power Management ICs Provide Highly Efficient Power Supply Rails for FPGAs and SoCs



Highly Integrated Universal PMICs Reduce Footprint by 88% Integrated Bucks Provide System, Memory, I/O and Core Power

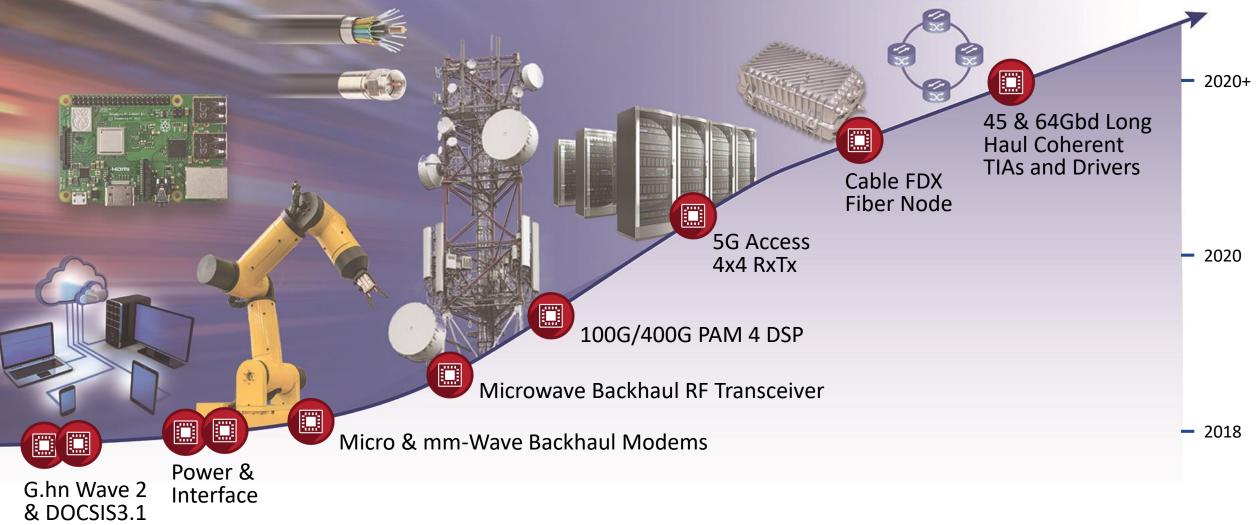


# High Density Power Modules Simplify Electrical and Thermal Design, Save Board Space, and Improve System Cost



ENVISIONING • EMPOWERING • EXCELLING

#### New Infrastructure Products Driving Long Term Growth





# Grow & Diversify into Large, Rapidly Transforming Markets







# **Financial Overview**

\_ 93 [316]0[12]6 m [\_ [5][36332 [2][12]6 m [\_ 20][ \_ [] N6

## Strong Growth, Margin Leverage, & Cash Generation

- Accelerating Revenue Growth and Increasing Gross margins Drive Earnings Power
  - > Roadmap Delivers Meaningful Operating Leverage on Increased Investment Levels
- Strong Profitability Enables Continued Expansion of our Total Addressable Market Opportunities
- Exited Q3 2018 with \$68.2M Cash and Investments
  - > \$31M of cashflow from operations in Q3'18
  - Prepayments of \$155M towards 7yr \$425M Term Loan B bringing loan balance to \$270M



## Quarterly Non-GAAP Financial Model

NON-GAAP	Q1 2017 Results	Q2 2017 Results	Q3 2017 Results	Q4 2017 Results	Q1 2018 Results	Q2 2018 Results	Q3 2018 Results	Q4 2018 Guidance
Revenue	\$88.8M	\$104.2M	\$113.6M	\$113.7M	\$110.8M	\$101.5M	\$85.0M	\$85M-\$89M
Gross Margin	62.7%	64.4%	62.5%	62.0%	64.9%	64.6%	62.5%	63.0%
Operating Expenses	\$30M	\$37M	\$38M	\$38M	\$39M	\$37M	\$36M	\$37.25M
OpEx % of Revenue	33.8%	35.4%	33.4%	33.7%	35.5%	36.6%	41.8%	42%-44%
Operating Income	\$26M	\$30M	\$33M	\$32M	\$33M	\$28M	\$18M	\$16M-\$19M
Operating Margin	28.9%	29.0%	29.1%	28.4%	29.4%	28.0%	20.7%	19%-21%

Notes:

- Interest and other expense related to the 7 year \$425M Term Loan B is expected to be \$3.3M in Q4 2018
- NON-GAAP tax rate is expected to be 7%



# **Quarterly GAAP Financial Model**

GAAP	Q1 2017 Results	Q2 2017 Results	Q3 2017 Results	Q4 2017 Results	Q1 2018 Results	Q2 2018 Results	Q3 2018 Results	Q4 2018 Guidance
Revenue	\$88.8M	\$104.2M	\$113.6M	\$113.7M	\$110.8M	\$101.5M	\$85.0M	\$85M-\$89M
Gross Margin	59.6%	61.3%	45.6%	45.8%	56.5%	55.5%	51.6%	52.5%
Operating Expenses	\$42M	\$67M	\$62M	\$58M	\$58M	\$57M	\$56M	\$56M
OpEx % of Revenue	47.8%	75.3%	55.0%	50.8%	52.5%	55.7%	66.4%	63%-66%
Operating Income	\$10M	-\$16M	-\$11M	-\$6M	\$4M	-\$0M	-\$13M	\$-9M to \$-11M
Operating Margin	11.7%	-17.8%	-9.4%	-5.0%	4.0%	-0.2%	-14.7%	-10% to -13%

Notes:

- Interest and other expense related to the 7 year \$425M Term Loan B is expected to be \$3.3M in Q4 2018
- NON-GAAP tax rate is expected to be 7%



### Key Take-Aways

- Technology Pioneer in CMOS Broadband RF & Mixed-Signal
- Rapid Growth & Profitability
- High Gross Margins and Increased Operating Leverage Enables Strong Free Cash Flow Generation
- Growth strategy Expand Footprint in Existing Platforms, and Grow Into High Value End Markets in Wireline and Wireless Infrastructure, and Industrial and Multi-markets
- Unique R&D Intensity and Strong Intellectual Property Portfolio of Approx. 1,500+ Granted/Pending Patents





# Thank You

\_ 312 | \$10 | 12 | 6 m L | 51 | 20 | 32 | 21 | 16 m L 20 | L | N 22

## Annual Non-GAAP Financial Model

NON - GAAP	2013	2014	2015	2016	2017
Revenue (M)	\$120	\$133	\$300	\$388	\$420
Gross Margin	62%	62%	58%	63%	63%
R&D	35%	34%	22%	20%	21%
SG&A	17%	18%	13%	11%	13%
Impairment & Restructuring Charges	0%	0%	0%	0%	0%
Operating Margin	10%	10%	24%	32%	<b>29</b> %



*Note:* Fiscal year-end is December 31.

ENVISIONING • EMPOWERING • EXCELLING

## Annual GAAP Financial Model

GAAP	2013	2014	2015	2016	2017
Revenue (M)	\$120	\$133	\$300	\$388	\$420
Gross Margin	61%	62%	52%	59%	<b>49</b> %
R&D	44%	43%	28%	25%	27%
SG&A	27%	26%	26%	17%	25%
Impairment & Restructuring Charges	0%	0%	12%	1%	3%
Operating Margin	-10%	-7%	-15%	16%	-5%



*Note:* Fiscal year-end is December 31.

ENVISIONING = EMPOWERING = EXCELLING