

The logo for Quantenna, featuring three curved lines above the word "Quantenna" in a white, sans-serif font.

Quantenna

is

Wi-Fi Perfected



Investor Presentation
Q1 2019

Safe Harbor and Non-GAAP Financial Measures



This presentation contains “forward-looking” statements that are based on our beliefs and assumptions and on information currently available to us. Forward-looking statements include information concerning our possible or assumed future results of operations, business strategies, product development plans, competitive position, potential growth opportunities, use of proceeds and the effects of competition. Forward-looking statements include all statements that are not historical facts and can be identified by terms such as “anticipate,” “believe,” “could,” “seek,” “estimate,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would” or similar expressions and the negatives of those terms.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks, uncertainties and other factors include, but are not limited to, the risk factors listed in our 10-K filed on February 28, 2018 and subsequent 10-Q filings. Forward-looking statements represent our beliefs and assumptions only as of the date of this presentation. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

This presentation includes certain non-GAAP financial measures as defined by the SEC rules. We have provided a reconciliation of those measures to the most directly comparable GAAP measures, which is available in the appendix to this presentation.

Company Highlights



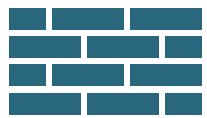
High-performance Wi-Fi leader

Pioneer in 8x8, 5x5, 4x4 and 2x4 advanced MIMO technology
Trendsetter and influencer within IEEE 802.11 standards body



Proven execution & innovation
across four generations of solutions

Land and expand within each product generation yields rapid
revenue growth with less incremental selling expense



Sustainable advantage & multiple
barriers to entry

Over 1,700 man years of R&D and IP development
Demonstrated leadership in 8x8 10G Wave 3, with nationwide
deployment underway at scale



Long product lifecycles and sticky
design wins

Service provider positioning in Wi-Fi is unmatched
Over 90% follow-on design success with existing sockets



Demonstrated initial success with
multiple growth drivers

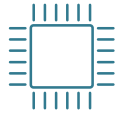
Service provider telco opened up satellite opportunity >> current
opportunity is cable MSO >> future is retail and enterprise



Attractive financial model with
significant operating leverage

Drove a 41% CAGR in revenue over last six years
Generated cash from operations for the last three fiscal years
Strong gross margin profile of ~50%

At a Glance



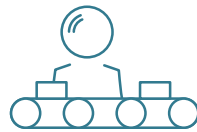
200 million+
chips shipped



60+
products with
Quantenna inside



50+
service providers



40+
OEMs / ODMs



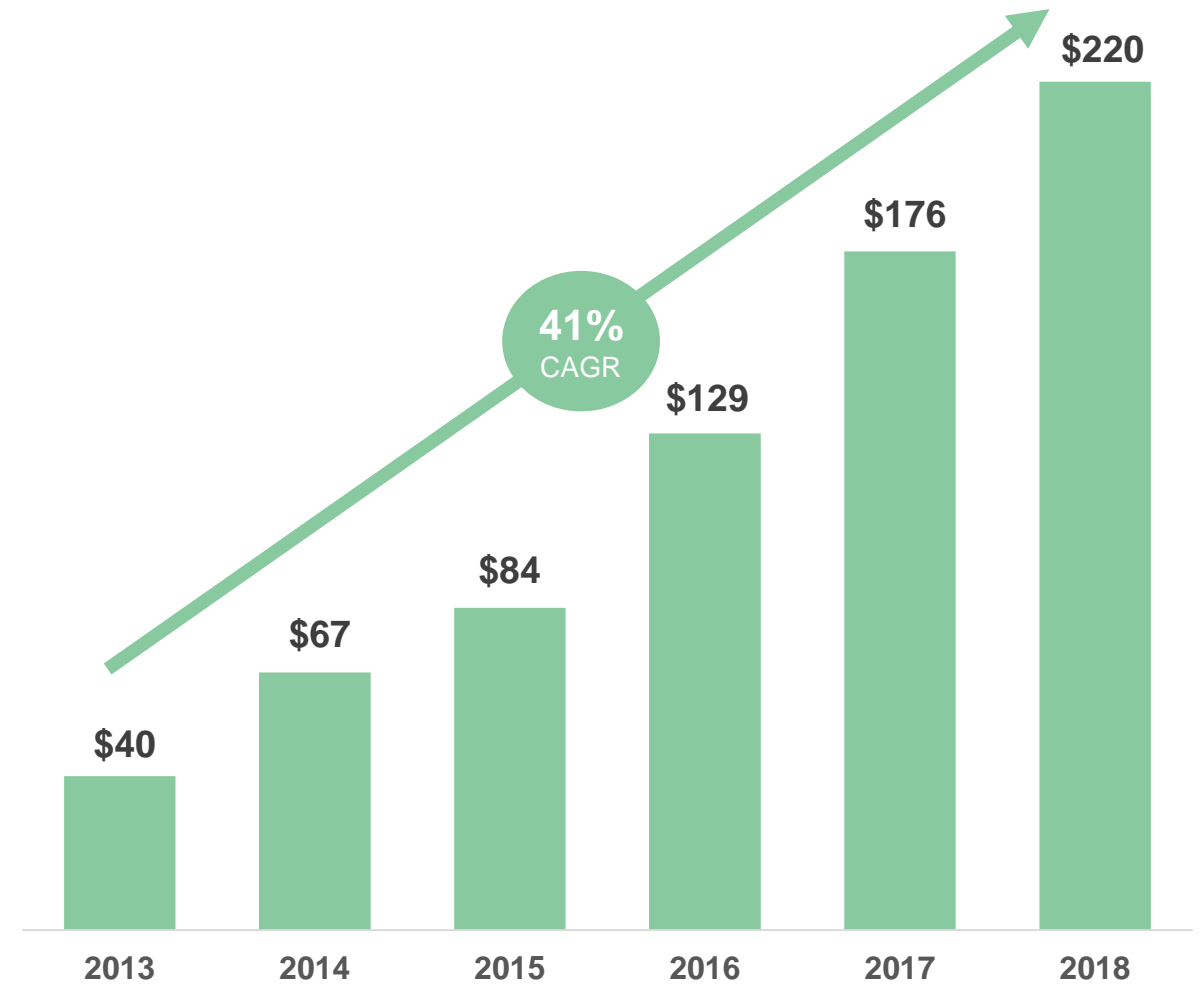
~415
employees



95+
Issued and pending
patents worldwide

Strong Revenue Growth Profile

\$MM



Factors Driving the Need for Better Wi-Fi



Over 3 billion annual Wi-Fi enabled device shipments expected in 2018⁽¹⁾

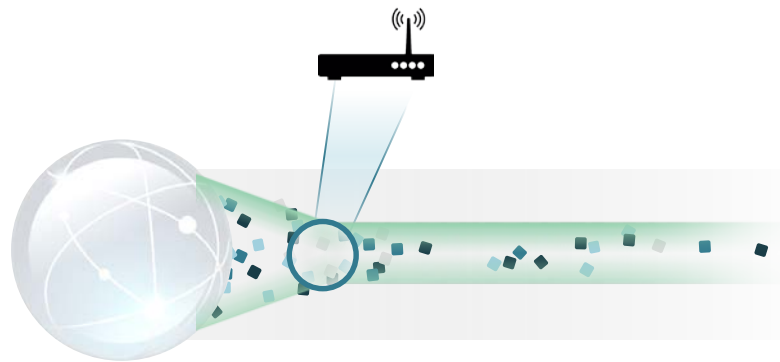


333 exabytes of consumer data per month by 2022⁽²⁾

Increasing OTT and cloud content



Applications are increasingly bandwidth intensive



Wi-Fi is the network bottleneck. End-to-end speed needed to upsell higher broadband service



Guarantee of performance under interference and at distance

Data Sources:

1. ABI Research, Wi-Fi Forecast
2. Cisco Visual Networking Index: Forecast and Trends, 2017-2022; published November 26, 2018

Diverse Applications



Broadband Gateway



Video Bridge / Video Client



Retail Access Point



Wi-Fi Booster



Mesh Repeaters



Enterprise / Outdoor



Motion Sensor

Taking Wi-Fi to Unparalleled Performance



Value-Add Proprietary Software & Algorithmic Features



Innovative Implementation



Optional Features of Standards



- 2.4GHz + 5GHz Integrated Dual-Band Chipset
- Complete Host Offload
- SuperTx Multiplexing
- Full Access Point in a Single Chipset

- ESP enhanced beamforming and MU-MIMO to legacy devices
- Dynamic adaptive switching between 8x8 and dual 4x4 MIMO
- IQStream Traffic Management
- SuperDFS Dynamic Channel Selection
- ViSiON Embedded cloud-based Wi-Fi analytics platform
- SONiQ Smart Managed Wi-Fi Solution for multiple access points



Basic Features of Standards



Basic Functionality and Interoperability

- Advanced MIMO
- Advanced MU-MIMO
- Transmit Beamforming

Better Performance

High Performance

Wi-Fi Perfected™

Technology

4x4 MIMO

8x8 MIMO

Dual-Band

8x8 + 4x4 MIMO

Predictive Software

Advanced Routing

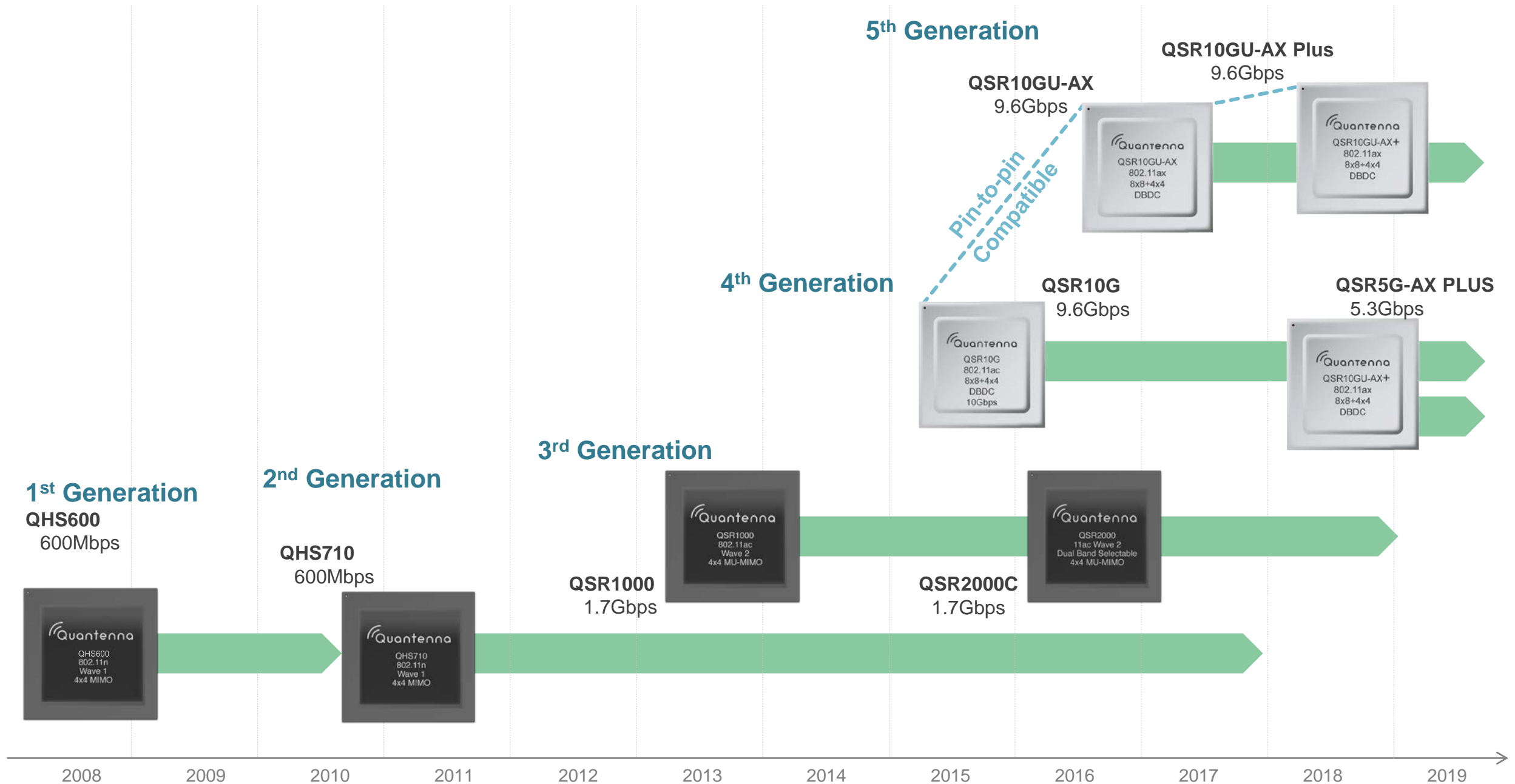
Performance

2Gbps

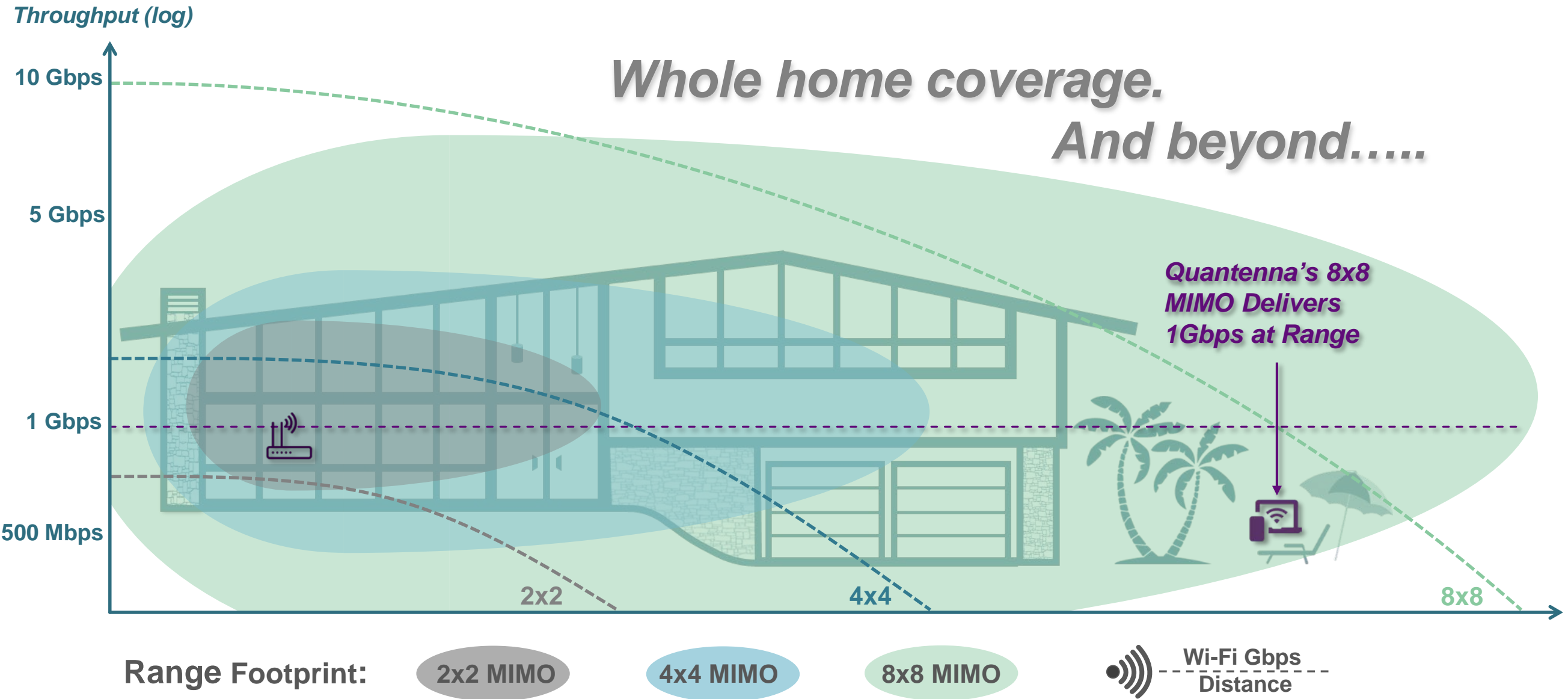
5Gbps

10 Gbps

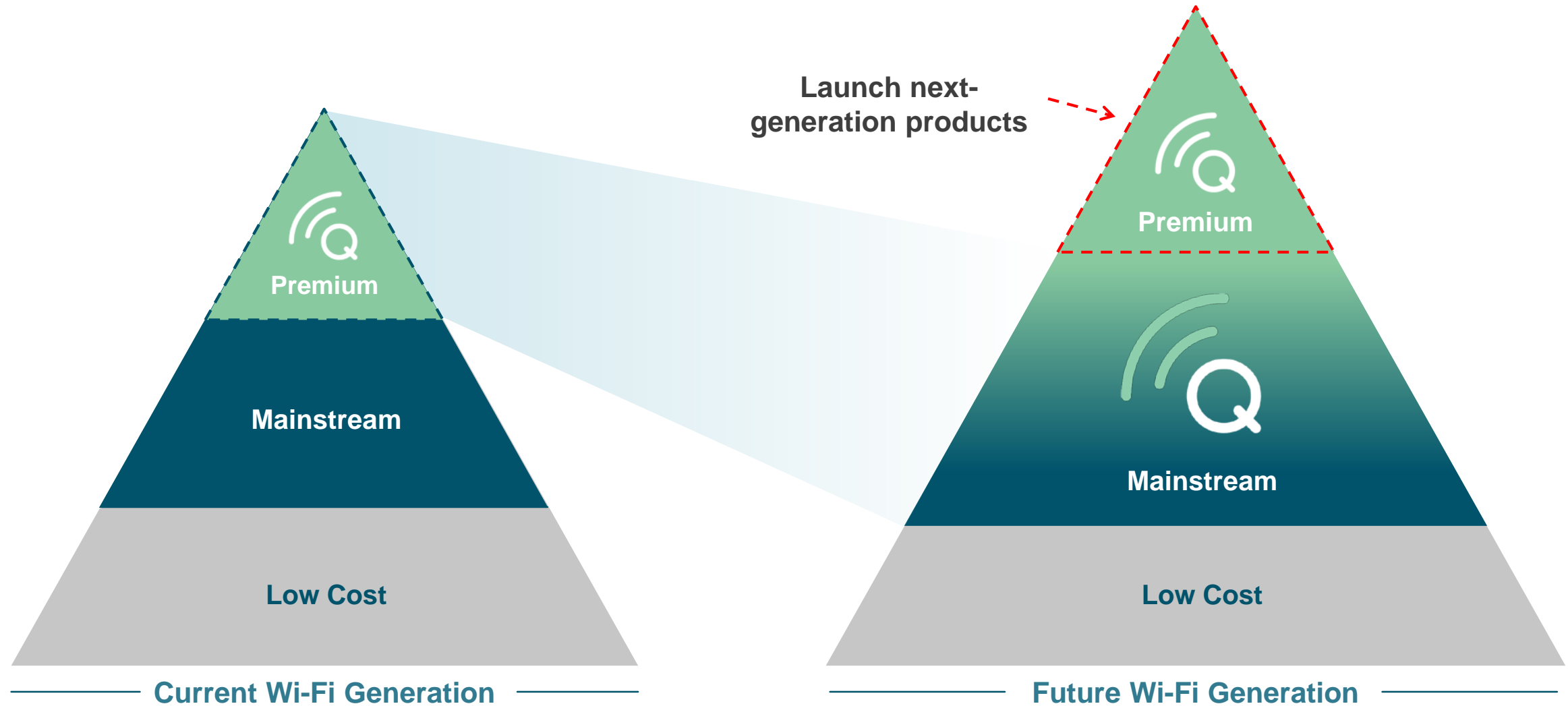
Product Family History and R&D Roadmap



Our Value Proposition with 8x8 MIMO



Premium Strategy Drives Share Gains Each Tech Cycle



- ✓ Continue leadership in the premium market with new products

- ✓ Extend the previous generation to mainstream with cost-optimized products and introduce new products

Sizing Up the Premium Wi-Fi Market

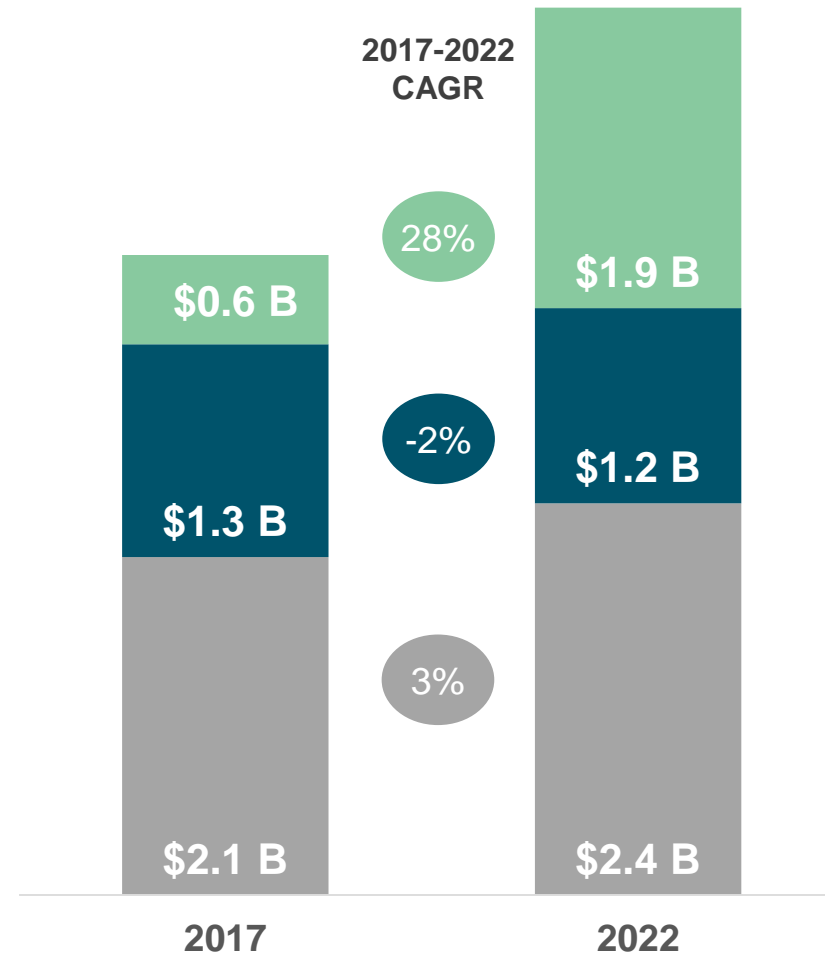


Quantenna's premium Wi-Fi technology leads the high performance, fixed-point device market.

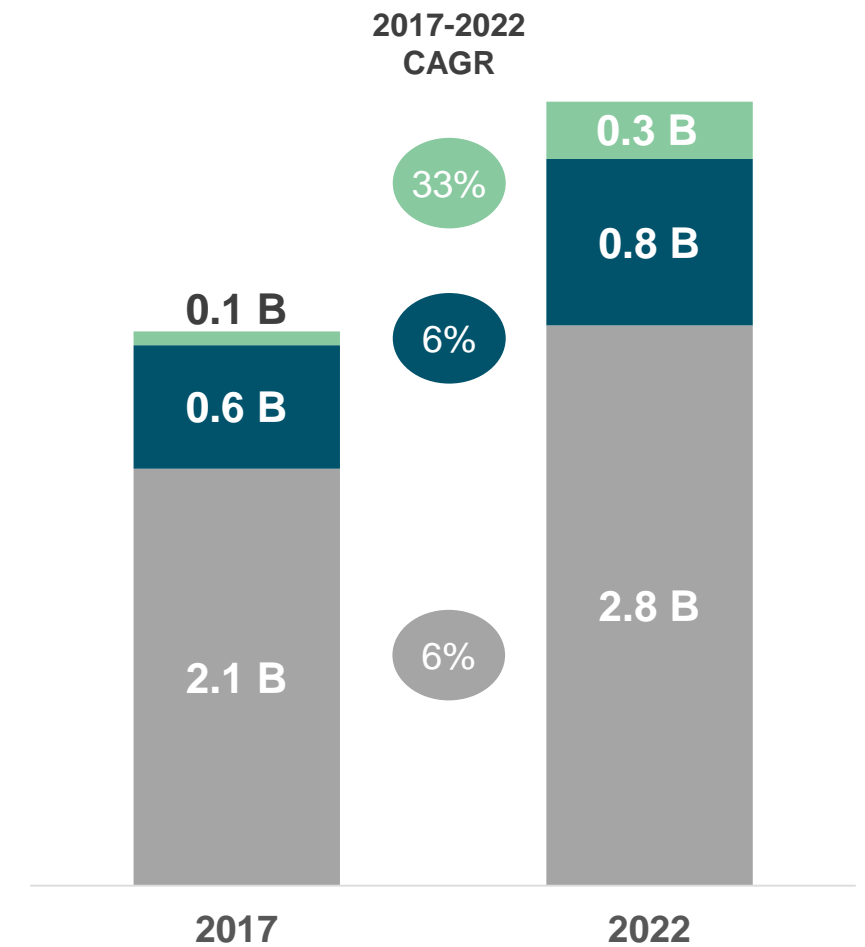
- Premium Wi-Fi* in Fixed-Point Devices
- Mainstream Wi-Fi in Fixed-Point Devices
- Wi-Fi in Portable Devices

* Premium Wi-Fi chipsets are defined by 4x4 MIMO or higher performance.

Total Wi-Fi Chipset Revenue

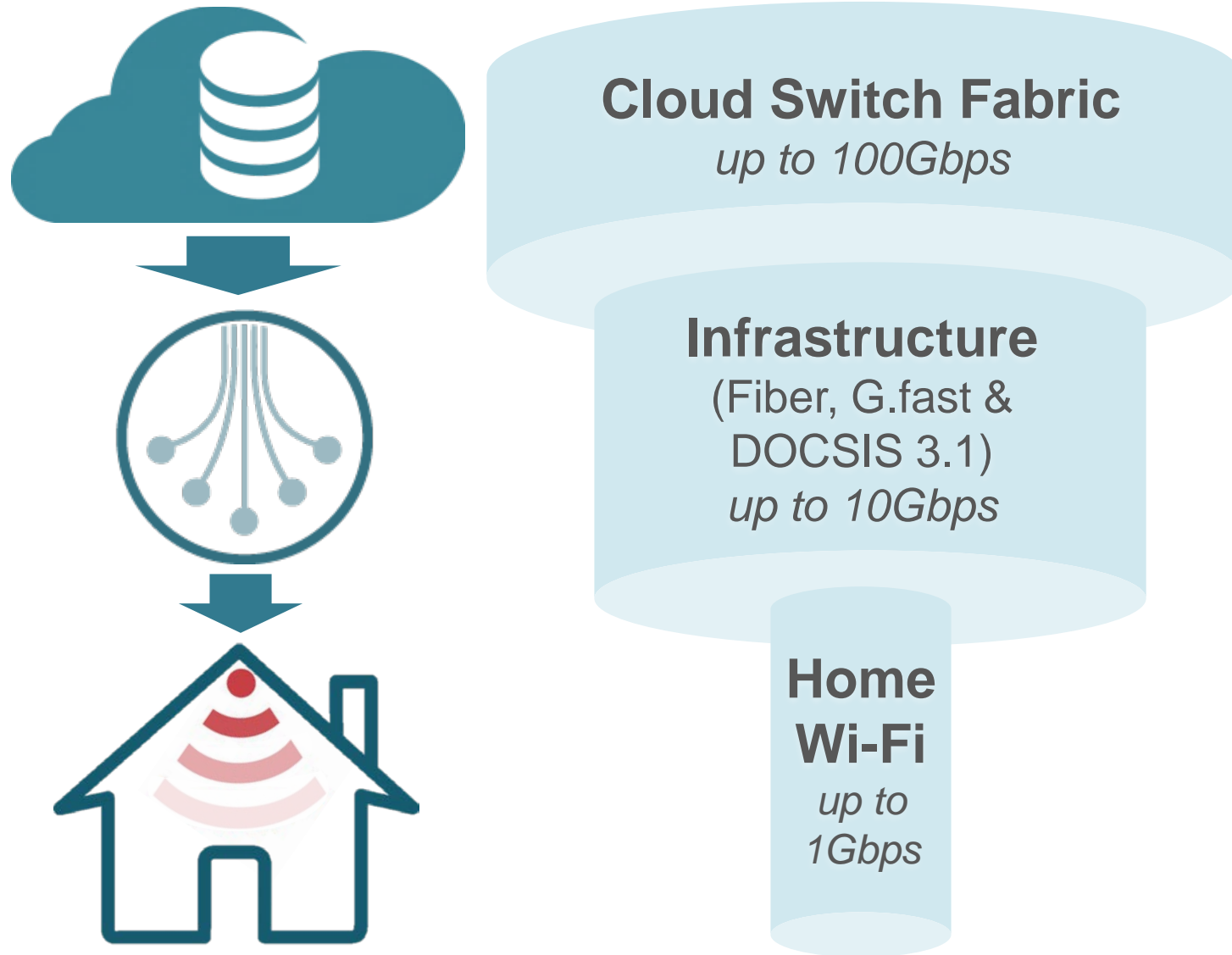


Total Wi-Fi Enabled Device Shipments

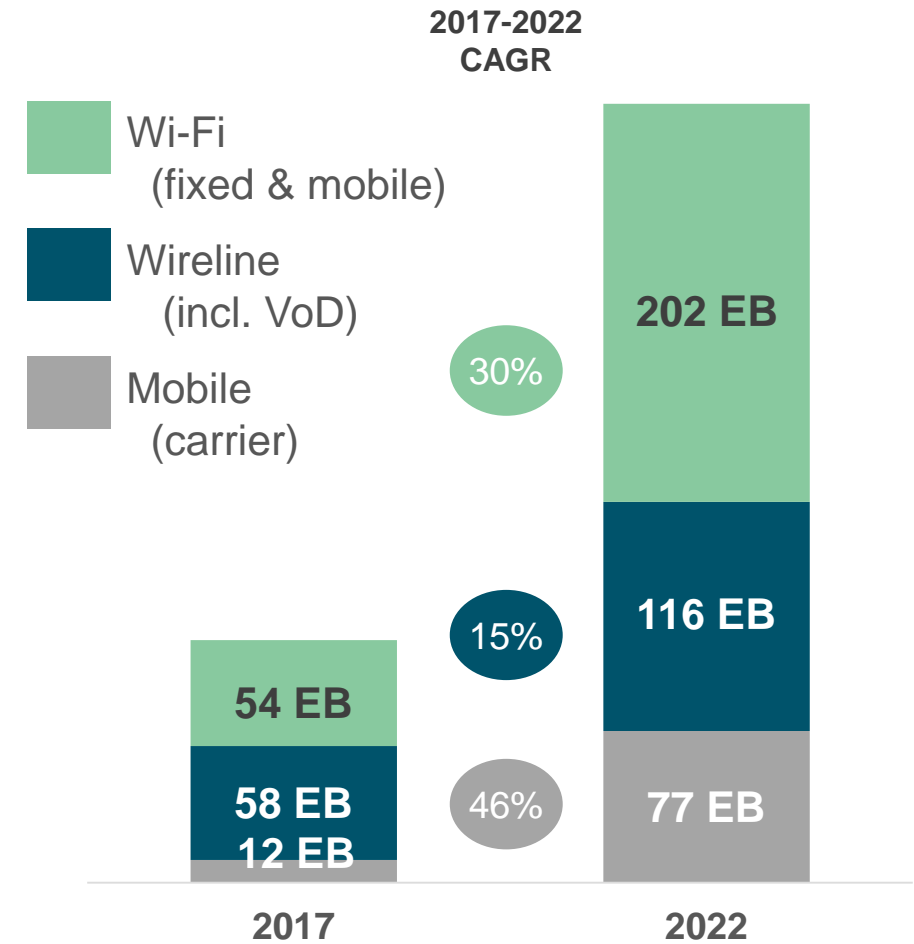


Source: ABI Research Wi-Fi Device Report 2Q 2018 and Quantenna assumptions
 Portable Devices include smartphones, feature phones, mobile device accessories, portable PCs, tablets, PC accessories, portable consumer electronics, smart home nodes and wearables.
 Non-Portable Devices include networking, connected home devices, gateways, set-top boxes, televisions, gaming consoles, desktop PCs, automotive, industrial, IoT, and others.

Explosive IP Traffic Growth Stresses Wi-Fi Bottleneck



Worldwide IP Traffic in Exabytes per Month



Wi-Fi expected to deliver 54% of WW IP traffic growth from 2017-2022

Source: Cisco Visual Networking Index: Forecast and Trends, 2017-2022; published November 26, 2018

Wi-Fi Integral to Cable MSO Mobile Strategy



Cable MSO MVNO strategy

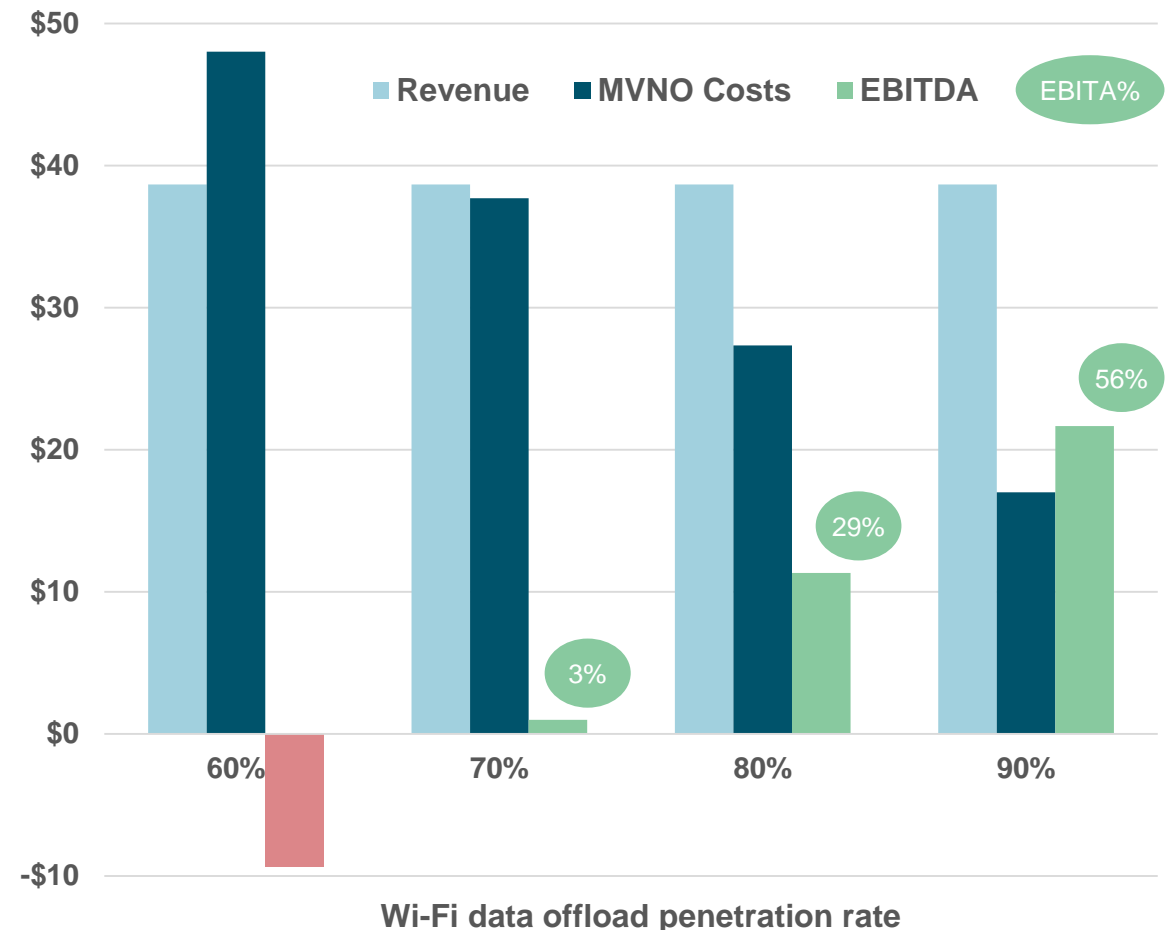
- Leases expensive mobile airtime with other carriers in a “virtual” arrangement to complete network
- Creates a “sticky” bundling strategy to retain subscribers longer-term

Wi-Fi offload is critical to success

- Without Wi-Fi data offload, the MSO would lose money
- The offload portion unleashes incremental leverage to subscriber EBITDA
- In this example, every 1% of Wi-Fi data offload translates to 2.7% of EBITDA expansion per subscriber

Wi-Fi Offload a Requirement for MVNO Profitability

Monthly per Subscriber Metrics





Financial Highlights



Addressing a large market opportunity in high-performance Wi-Fi



Proven land & expand strategy with top-tier service providers



Robust design wins and strong pipeline contribute to customer diversification



Sticky design wins and long product lifecycles create solid foundation for growth



Demonstrated strong historical revenue growth



Strong operating leverage driving margin expansion

Q4 2018 Income Statement Highlights*



Record quarterly revenue of \$62.6 million

- 52% Y/Y growth vs Q4 2017
- 5% Q/Q growth vs Q3 2018

Record annual revenue of \$220.5 million

- 25% Y/Y growth vs FY2017

Gross margin of 50.1%

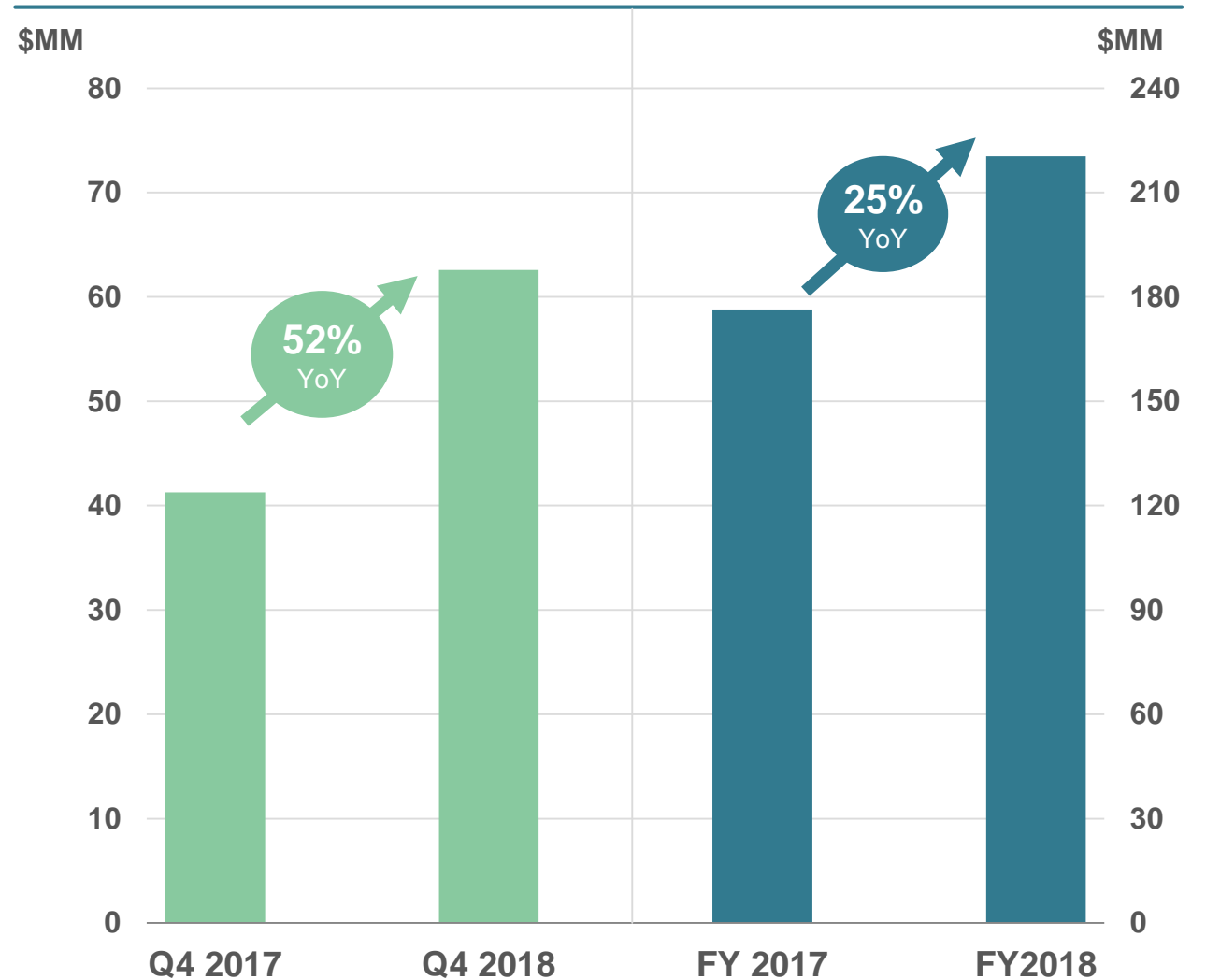
Record quarterly earnings performance

- \$7.6 million net income
- \$0.19 in EPS

Record annual earnings performance

- \$20.4 million net income
- \$0.51 in EPS

Strong Revenue Growth Profile



*Gross margin, income and EPS figures are fully diluted based on non-GAAP reporting which excludes stock-based compensation and other specified one-time items. See reconciliation table.

Q4 2018 Cash Flow and Balance Sheet Highlights*



Generated \$5M in CFFO in Q4 2018

- \$0.13 per share
- Compares to (\$8M) usage in Q4 2017

Generated \$25M in CFFO in FY2018

- \$0.63 per share
- 274% Y/Y growth

Cumulatively generated \$31M in CFFO over the last two years

- \$0.80 per share

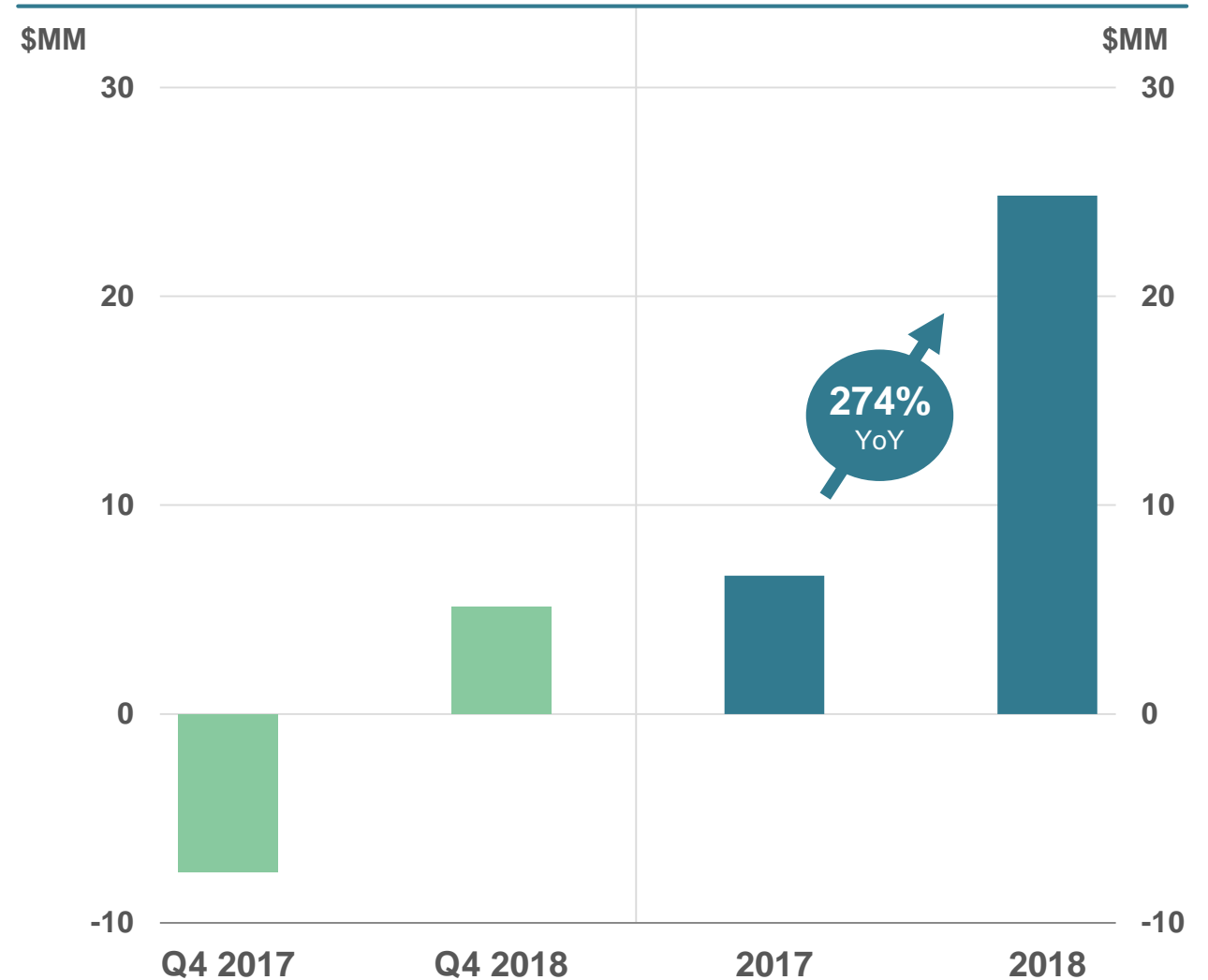
Generated \$20M in FCF in FY 2018

- \$0.50 per share

Cash, cash equivalents and investments of \$136M and no debt

- \$3.40 per share

Strong Operating Cash Flow Performance



*Gross margin, income and EPS figures are fully diluted based on non-GAAP reporting which excludes stock-based compensation and other specified one-time items. See reconciliation table. CFFO means Cash Flow From Operations and FCF means Free Cash Flow.

Wi-Fi Technology Segmentation Highlights



802.11ac Wave 3 (10G) revenue

Q4 was a record at \$19.4 million

- Q/Q growth of 9% or \$1.6 million
- Y/Y growth of 683% or \$16.9 million
- Q1 revenue expected to decline approximately \$3 million Q/Q

802.11ac Wave 2 revenue

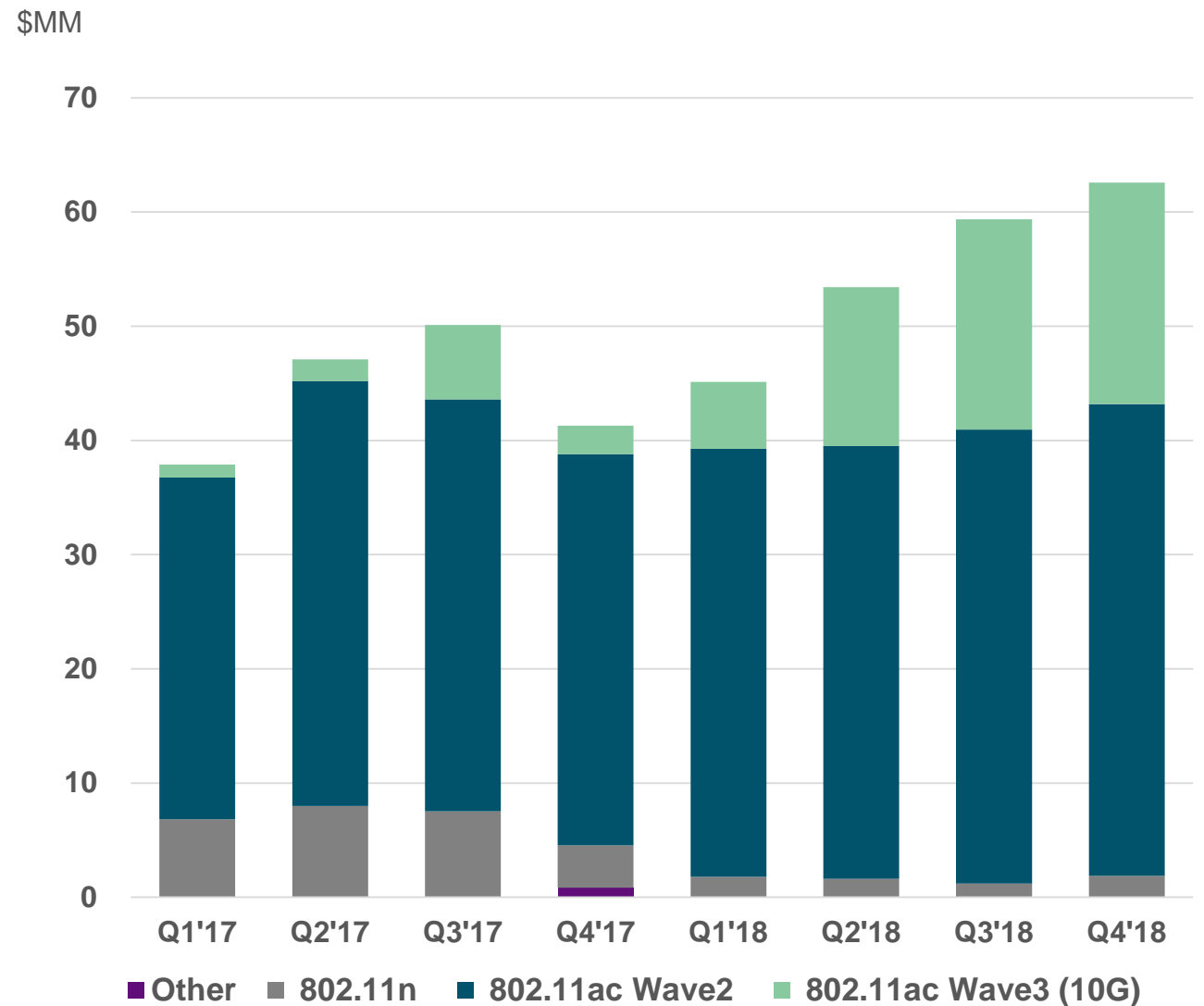
Q4 was a record at \$41.3 million

- Q/Q growth of 2% or \$0.9 million
- Y/Y growth of 21% or \$7.0 million
- Q1 revenue is expected to decline approximately \$2 million Q/Q

802.11n revenue

- Q4 increased 58% Q/Q or \$0.7 million
- Q4 revenue expected decline Q/Q

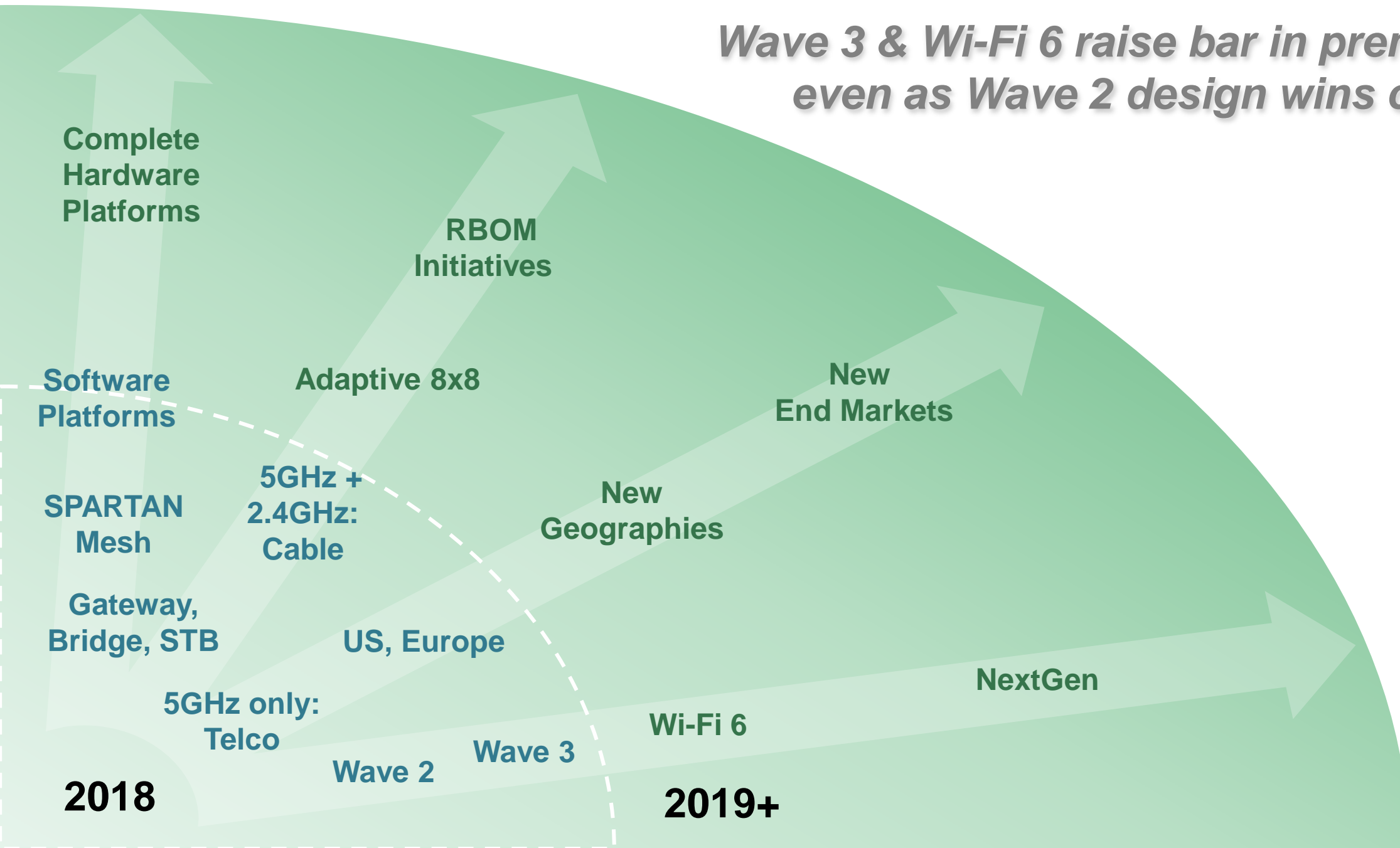
Technology Cycles Drive Growth



New Initiatives Expanding Served Markets



Wave 3 & Wi-Fi 6 raise bar in premium Wi-Fi, even as Wave 2 design wins continue



Operating Results & Guidance*



| | 2017 | Q3 2018 | Q4 2018 | 2018 | Q1 2019 Guidance |
|--------------|---------|---------|---------|---------|--|
| Revenue (M) | \$176.4 | \$59.3 | \$62.6 | \$220.5 | \$56M - \$59M |
| Gross Margin | 50% | 50% | 50% | 50% | GAAP: 50.4% +/- 50bps Non-GAAP: 50.5% +/- 50bps |
| OPEX | 44% | 38% | 38% | 41% | GAAP: \$27.4M to 28.4M Non-GAAP: \$23.0M to \$24.0M |
| EPS | \$0.26 | \$0.17 | \$0.19 | \$0.51 | GAAP: \$0.02 – \$0.04 Non-GAAP: \$0.13 – \$0.15 |

*Gross margin, OPEX and EPS figures are based on non-GAAP reporting which excludes stock-based compensation and other one-time items.

Balance Sheet Summary



| <i>(in millions)</i> | 2017 | Q2 2018 | Q3 2018 | 2018 |
|--|----------------|----------------|----------------|----------------|
| Cash, Cash Equivalents & Marketable Securities | \$118.6 | \$120.1 | \$132.0 | \$136.1 |
| Total Assets | \$212.7 | \$226.8 | \$234.6 | \$245.7 |
| Total Debt | \$3.9 | \$0.0 | \$0.0 | \$0.0 |
| Total Liabilities | \$32.1 | \$35.3 | \$36.1 | \$39.2 |
| Total Stockholders' Equity | \$180.6 | \$191.5 | \$198.5 | \$206.5 |

Appendix



Non-GAAP to GAAP Operating Margin Reconciliation*



| | 2016 | 2017 | Q3 2018 | Q4 2018 | 2018 |
|---------------------------|------|------|---------|---------|------|
| Non-GAAP Gross Margin | 50% | 50% | 50% | 50% | 50% |
| SBC: Gross Margin | 0% | 0% | 0% | 0% | 0% |
| GAAP Gross Margin | 50% | 50% | 50% | 50% | 50% |
| Non-GAAP Operating Margin | 2% | 6% | 12% | 12% | 9% |
| SBC: R&D | 1% | 3% | 4% | 4% | 4% |
| SBC: S&M | 0% | 1% | 1% | 1% | 1% |
| SBC: G&A | 1% | 2% | 2% | 2% | 2% |
| Non-recurring items | 0% | 0% | 0% | 0% | 0% |
| GAAP Operating Margin | (1%) | (1%) | 5% | 5% | 1% |

*SBC means stock-based compensation, non-recurring items comprised of executive severance, percentages may not total due to rounding

Non-GAAP to GAAP Net Margin Reconciliation*



| | 2016 | 2017 | Q3 2018 | Q4 2018 | 2018 |
|---------------------|------|-------|---------|---------|------|
| Non-GAAP Net Margin | 1% | 6% | 12% | 12% | 9% |
| SBC: Gross Margin | 0% | 0% | 0% | 0% | 0% |
| SBC: R&D | 1% | 3% | 4% | 4% | 4% |
| SBC: S&M | 0% | 1% | 1% | 1% | 1% |
| SBC: G&A | 1% | 2% | 2% | 2% | 2% |
| Non-recurring items | 0% | (20%) | (1%) | (3%) | 0% |
| GAAP Net Margin | (1%) | 20% | 6% | 2% | 1% |

*SBC means stock-based compensation, non-recurring items comprised of executive severance and income tax adjustment relating to recognition of US Federal deferred tax asset pursuant to release of valuation allowance. Percentages may not total due to rounding



Wi-Fi Perfected™



Semiconductors

System
Software

Cloud
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