

MARVELL®

# Marvell Investor Day 2018

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October 16, 2018

# Agenda

Becoming an Infrastructure Leader

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Matt Murphy

Revolutionizing Storage

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Dan Christman

Networking the Future

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Raghib Hussain

Driving Growth

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Tom Lagatta

Creating Long-Term Shareholder Value

Jean Hu

# Forward-looking statements

This presentation contains forward-looking statements (within the meaning of the federal securities laws) that involve risks and uncertainties. Words such as “anticipates,” “expects,” “intends,” “plans,” “projects,” “believes,” “seeks,” “estimates,” “can,” “may,” “will,” “would” and similar expressions identify such forward-looking statements. These statements are not guarantees of results and should not be considered as an indication of future activity or future performance. Actual events or results may differ materially from those described in this presentation due to a number of risks and uncertainties, including, but not limited to those detailed in Marvell’s SEC filings from time to time.

For other factors that could cause Marvell’s results to vary from expectations, please see the risk factors identified in Marvell’s Quarterly Report on Form 10-Q for the fiscal quarter ended [August 4, 2018](#) as filed with the SEC on [September 12, 2018](#) and other factors detailed from time to time in Marvell’s filings with the SEC. Marvell undertakes no obligation to revise or update publicly any forward-looking statements.



# Non-GAAP financial measures

These slides provide financial measures on a U.S. GAAP as well as a non-GAAP basis. We believe that the presentation of non-GAAP financial measures provides important supplemental information to management and investors regarding financial and business trends relating to our financial condition and results of operations.

While we use non-GAAP financial measures as a tool to enhance our understanding of certain aspects of our financial performance, we do not consider these measures to be a substitute for, or superior to, the information provided by GAAP financial measures.

A reconciliation in accordance with SEC Regulation G for the non-GAAP financial measures used in these slides is available in the financial statements section of this presentation and/or in the Investor Relations section of our website at <https://www.marvell.com>.

# Becoming an Infrastructure Leader

MATT MURPHY | PRESIDENT AND CEO

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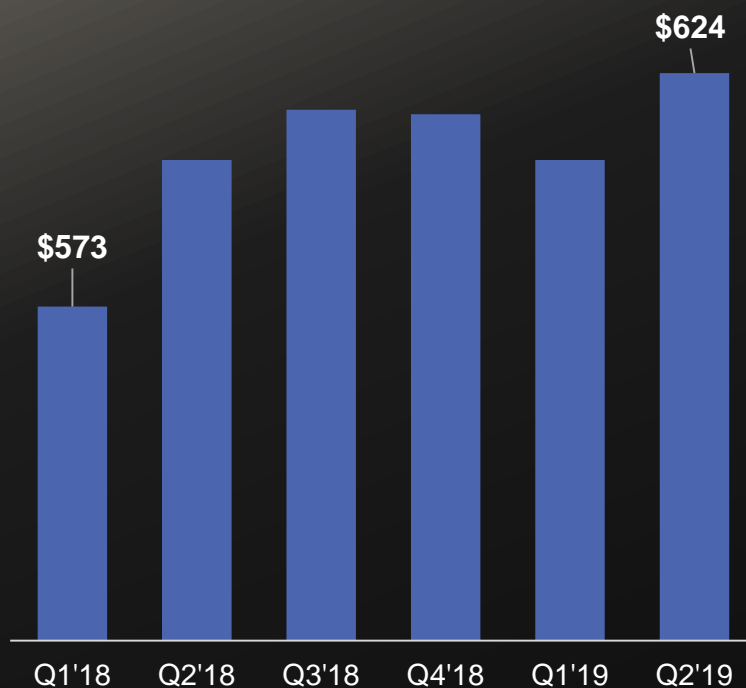
October 16, 2018



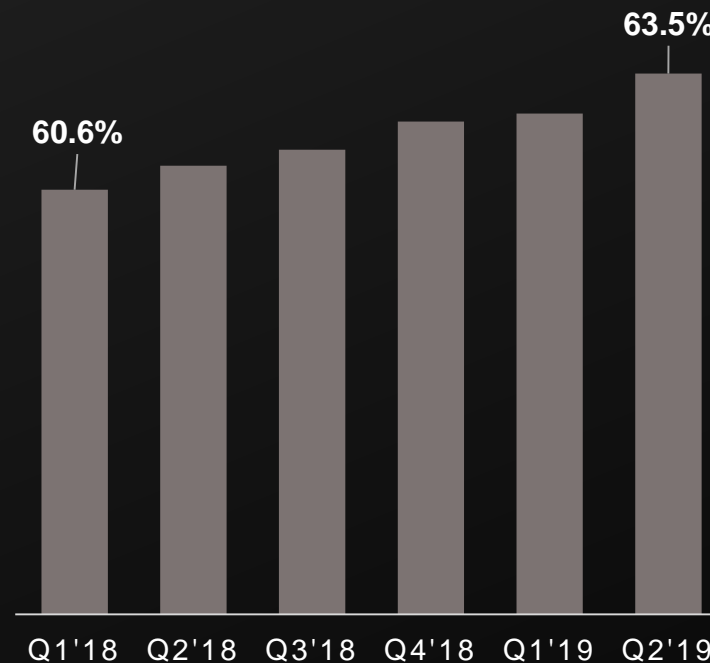


# Meeting our commitments – six quarters early

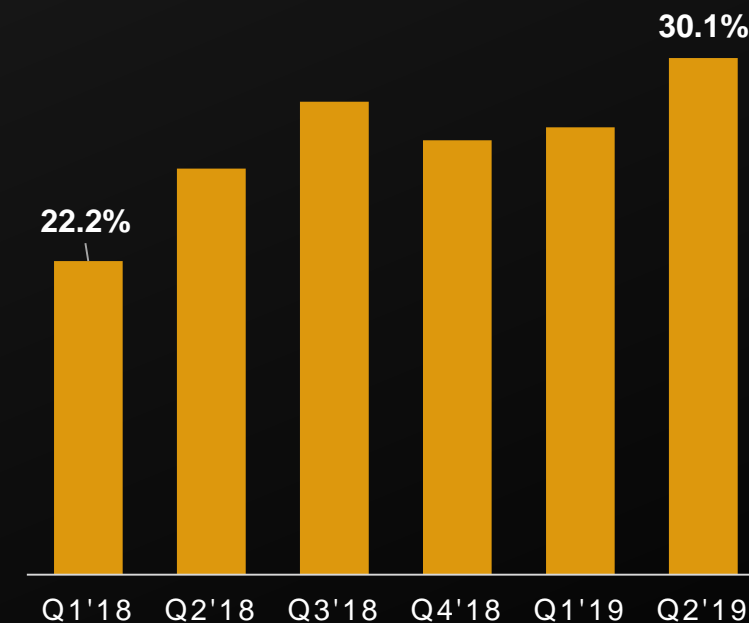
Revenue (\$M)



Non-GAAP Gross Margin %



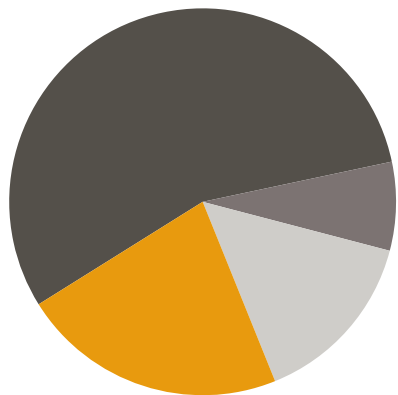
Non-GAAP Operating Margin %



Fiscal quarter financial results do not include the results of Cavium. Revenue, Gross Margin and Operating Margin are presented on a non-GAAP basis and exclude special items. A reconciliation can be found at the end of the presentation.

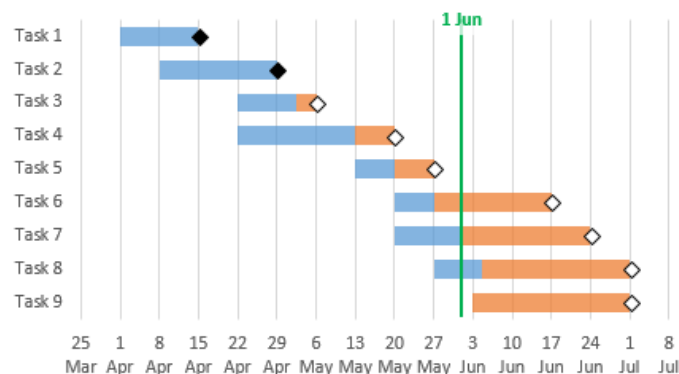
# Data-driven approach to managing the business

## Aligning to the right markets



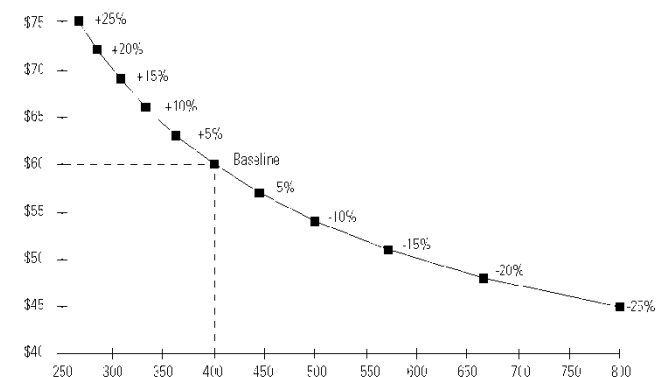
Market Share

## Time-to-market counts



Project Plan

## Data drives business decisions



Price Curve



# Creating a high-performance culture



Act with integrity  
and treat everyone  
with respect



Innovate to solve  
customer needs



Execute with  
thoroughness  
and rigor



Help others achieve  
their objectives





# Marvell's mission

We develop and deliver semiconductor solutions that **move, store, process** and **secure** the world's data faster and more reliably than anyone else.

# Infrastructure is an attractive long-term market



- 12-month design cycles
- Price sensitive
- 3-4 year product lifespan
- Multi-sourced

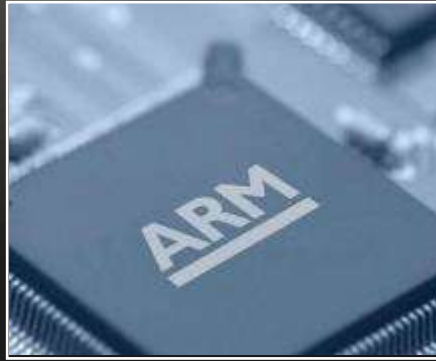
- 3-5 year design cycles
- Value partnership
- 7-10+ year product lifespan
- Single-sourced



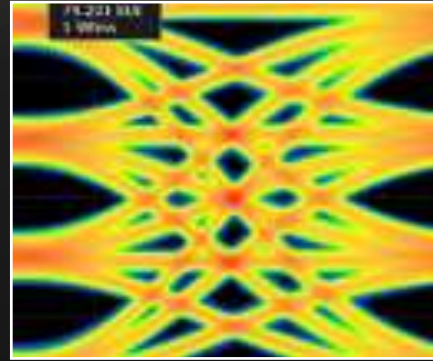
# Marvell's engineering DNA is perfect for infrastructure



**20 YEARS  
OF ETHERNET  
KNOW-HOW**



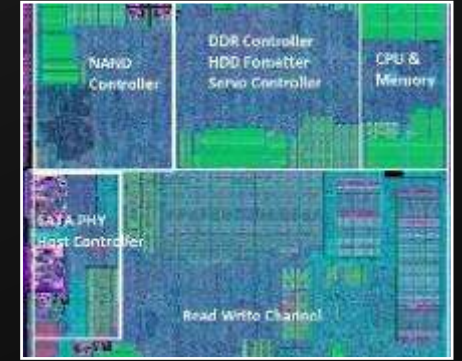
**DEEP CPU CORE  
EXPERIENCE**



**IN-HOUSE IP  
DEVELOPMENT**



**SOFTWARE  
PLATFORMS**



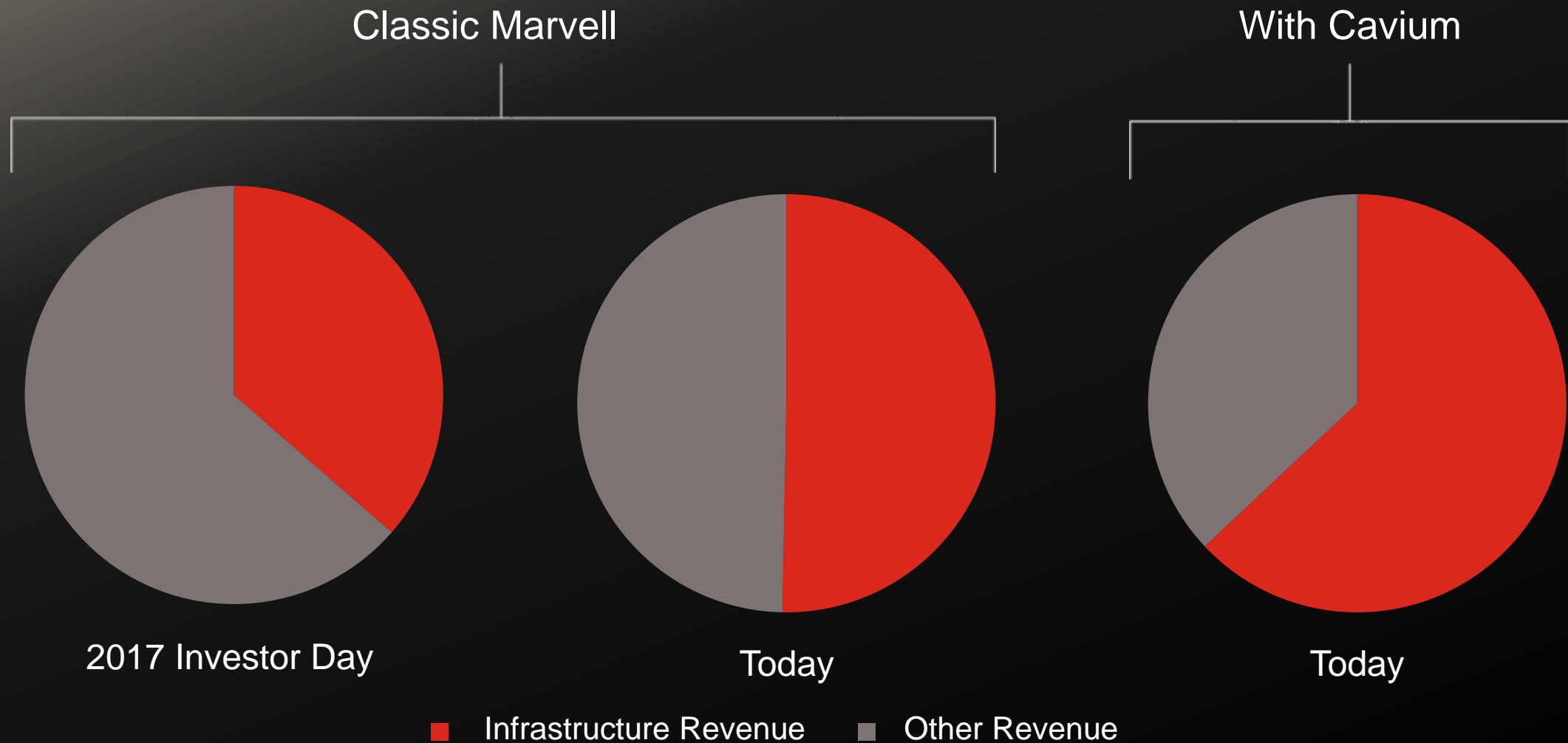
**SOC DESIGN  
EXPERTISE**

**TOP 100  
GLOBAL  
INNOVATORS**

**Clarivate  
Analytics**

**>10,000 patents across technologies and markets**

# Becoming an infrastructure leader



Marvell Estimates

# The new Marvell combines the best of two companies

**Cavium** + **Marvell**

Nimble start-up mentality

End-to-end technology development

Technology leadership

Execution & scale

Strength in Data Center & Carrier

Strength in Enterprise



# Marvell offers the most complete infrastructure portfolio



Storage



Networking



Processors



Security

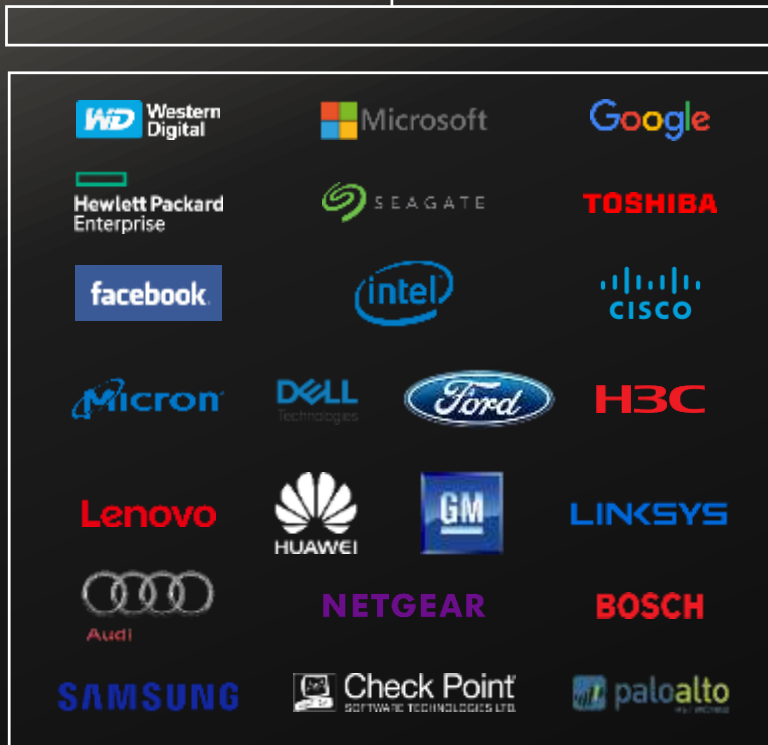


Connectivity

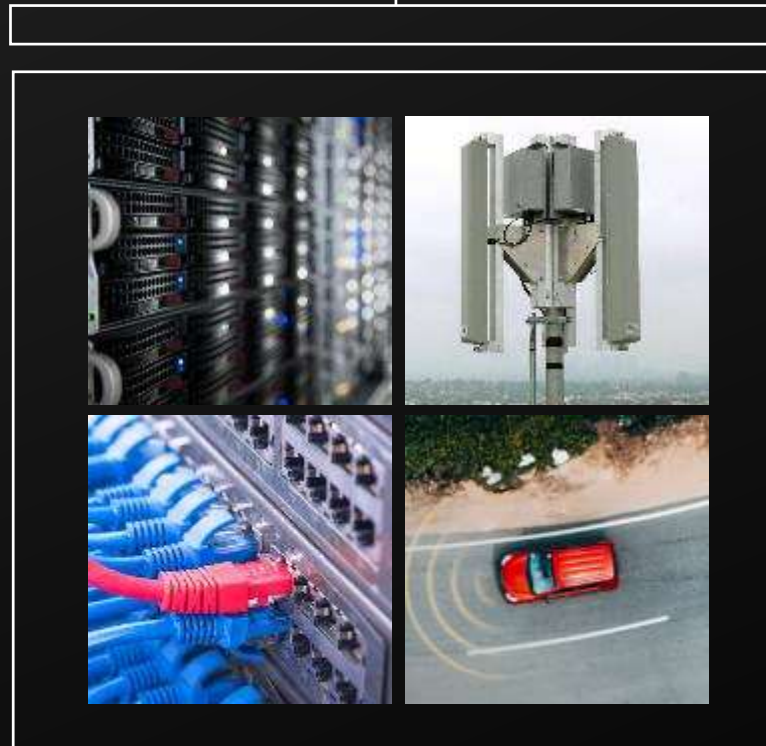


# Marvell has a diverse business, positioned for growth

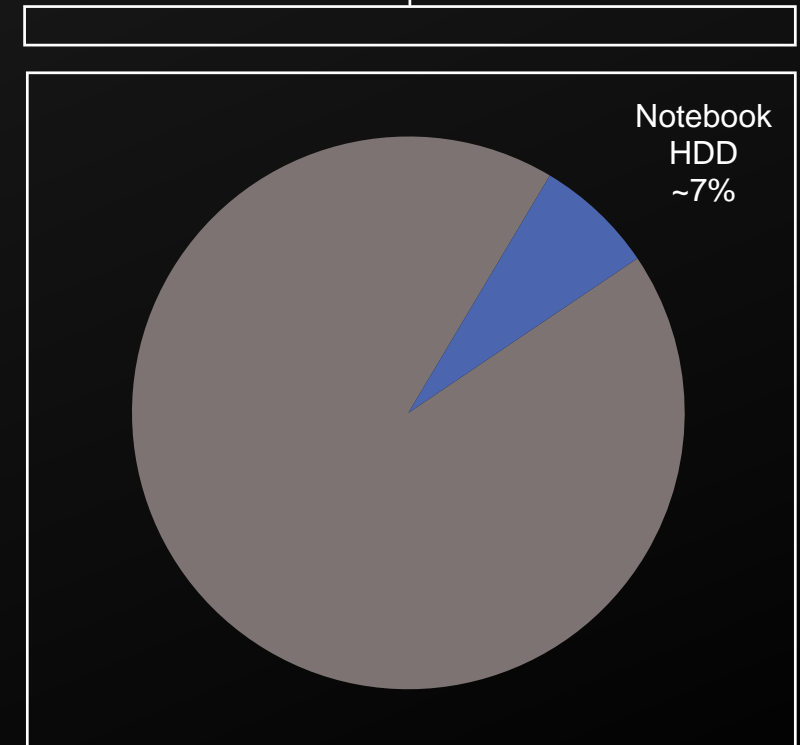
## CUSTOMERS



## END MARKETS



## REDUCED NOTEBOOK HDD EXPOSURE



Marvell Estimates

# Diverse portfolio driving long-term success

## STRATEGIC INVESTMENTS

- New markets
- Significant growth potential
- Products leverage existing IP in adjacent markets

## GROWTH

- Growing markets
- Leadership/strong position
- Gaining share

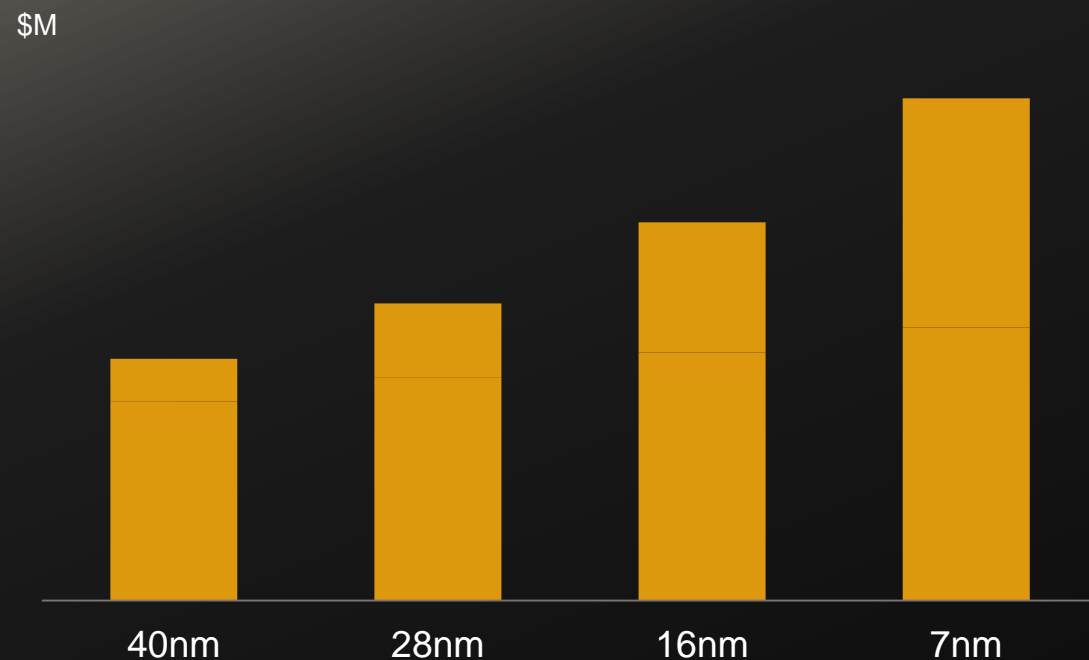
## ESTABLISHED

- Market leader
- Technology differentiation
- Highly profitable

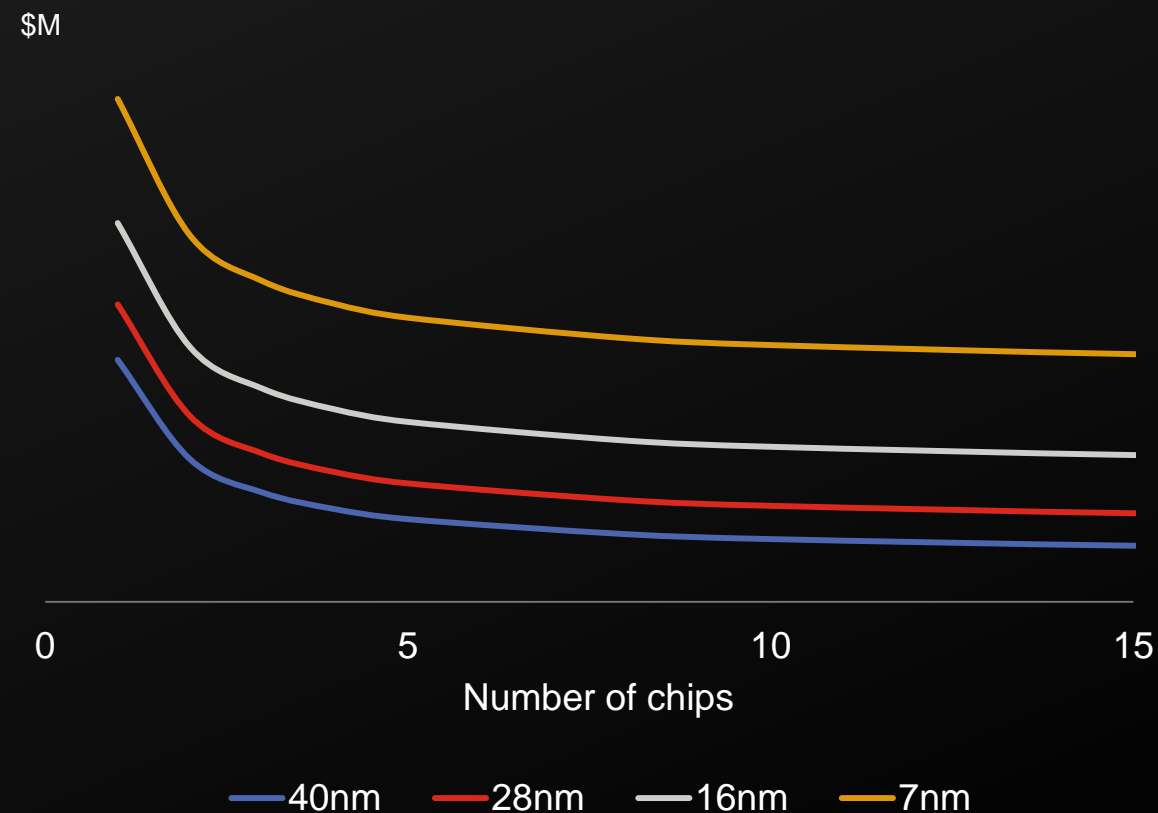


# Scale matters now more than ever

## TECHNOLOGY COSTS ARE RISING



## ECONOMIES OF SCALE NEEDED

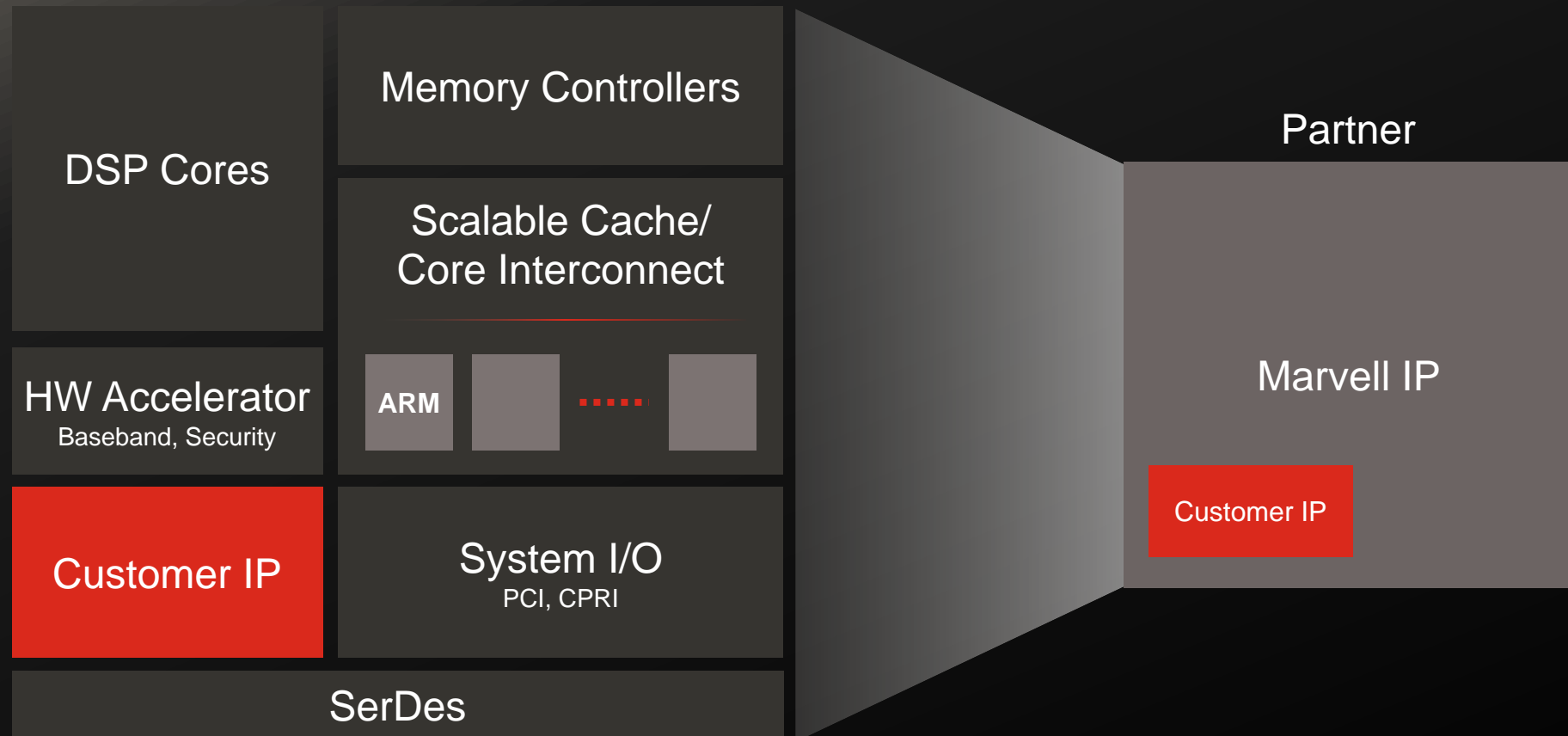


Marvell Estimates

# To build or not to build: Scale matters



# Partnering to create differentiated solutions



Focus on differentiation | Time-to-market | Total R&D cost



# How we are going to grow

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# Market forces



Explosion of data and bandwidth demand

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Compute is moving to the data

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End-to-end security required

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Need for power efficiency



# Multiple drivers for growth



Enabling disruptions in storage

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Enterprise upgrade cycle under way

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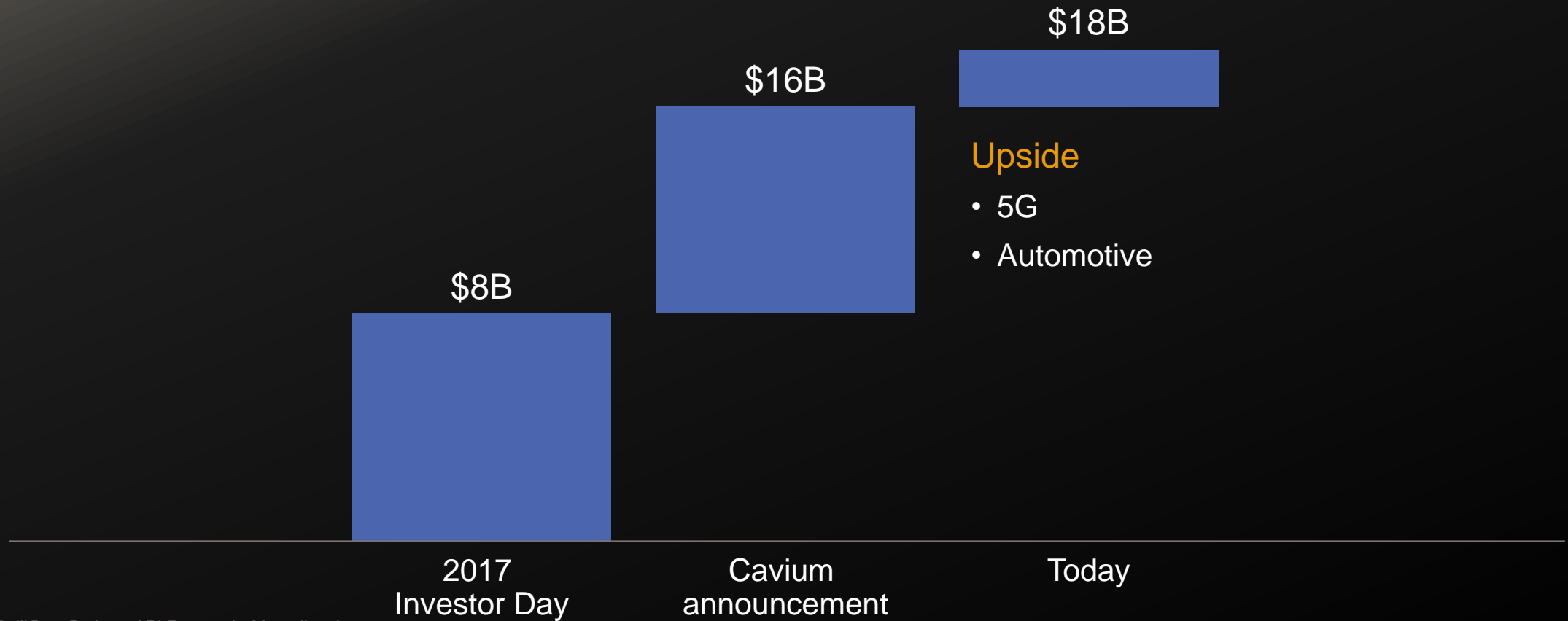
Capitalizing on 5G rollout

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Emerging opportunities  
in Data Center & Edge

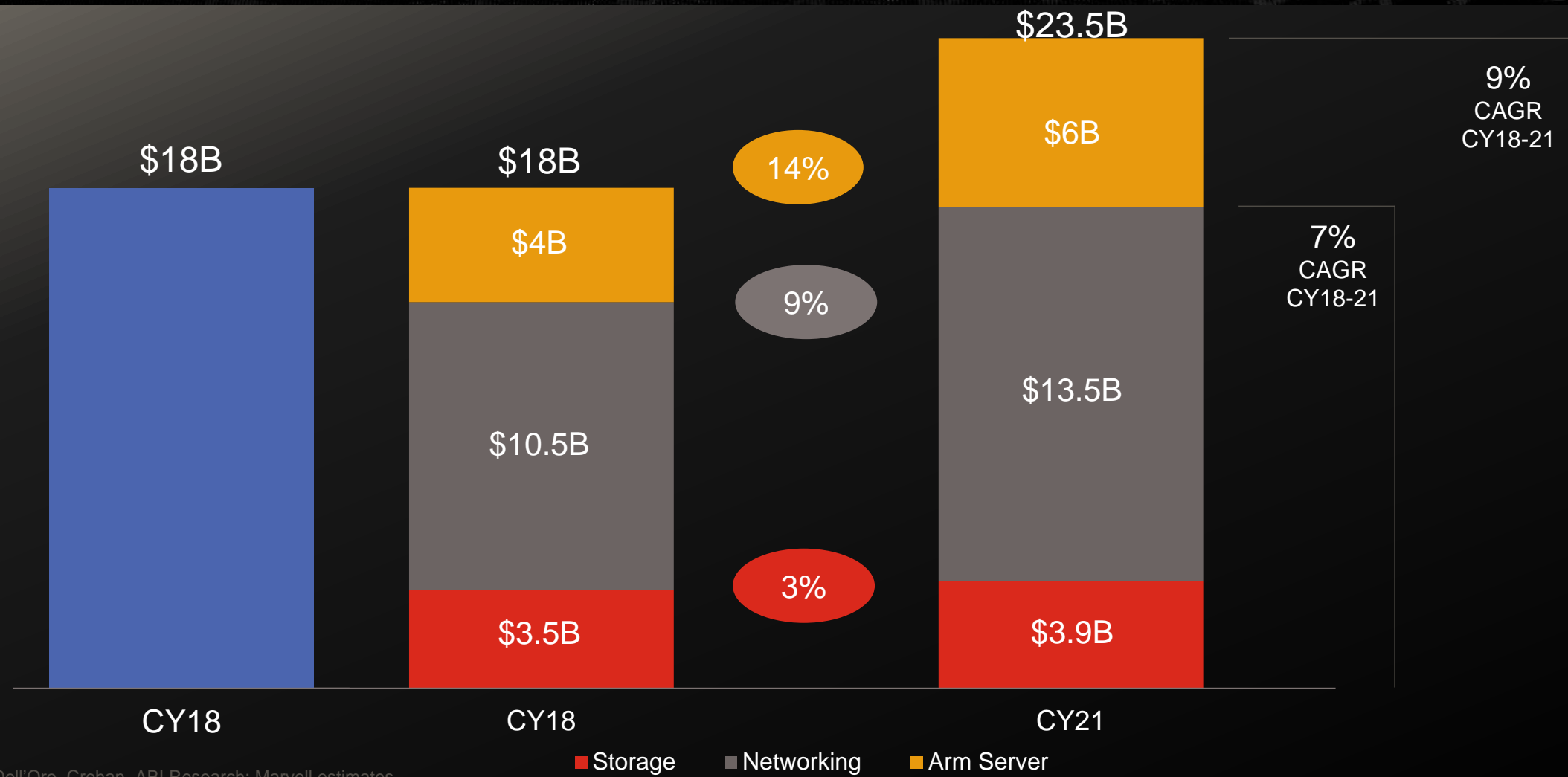


# A large addressable market



Gartner, Dell'Oro, Crehan, ABI Research; Marvell estimates

# Strong core market growth



Gartner, Dell'Oro, Crehan, ABI Research; Marvell estimates

# Marvell is positioned for growth

- 1 Leading infrastructure provider
- 2 Meaningful scale and diversification
- 3 Enabling 5G and other market disruptions
- 4 Track record of strong execution



# Revolutionizing Storage

DAN CHRISTMAN | EVP, STORAGE

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# Enabling disruptions in the Storage market



Leading from a position of strength

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Shifting from PC to infrastructure

---

Pioneering new architectures

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Expanding products to architecture solutions



# Leading the way in Storage solutions

## FIBRE CHANNEL



Fibre Channel Adapters

## HDD SOLUTIONS



HDD Controllers

Preamps

## FLASH SOLUTIONS

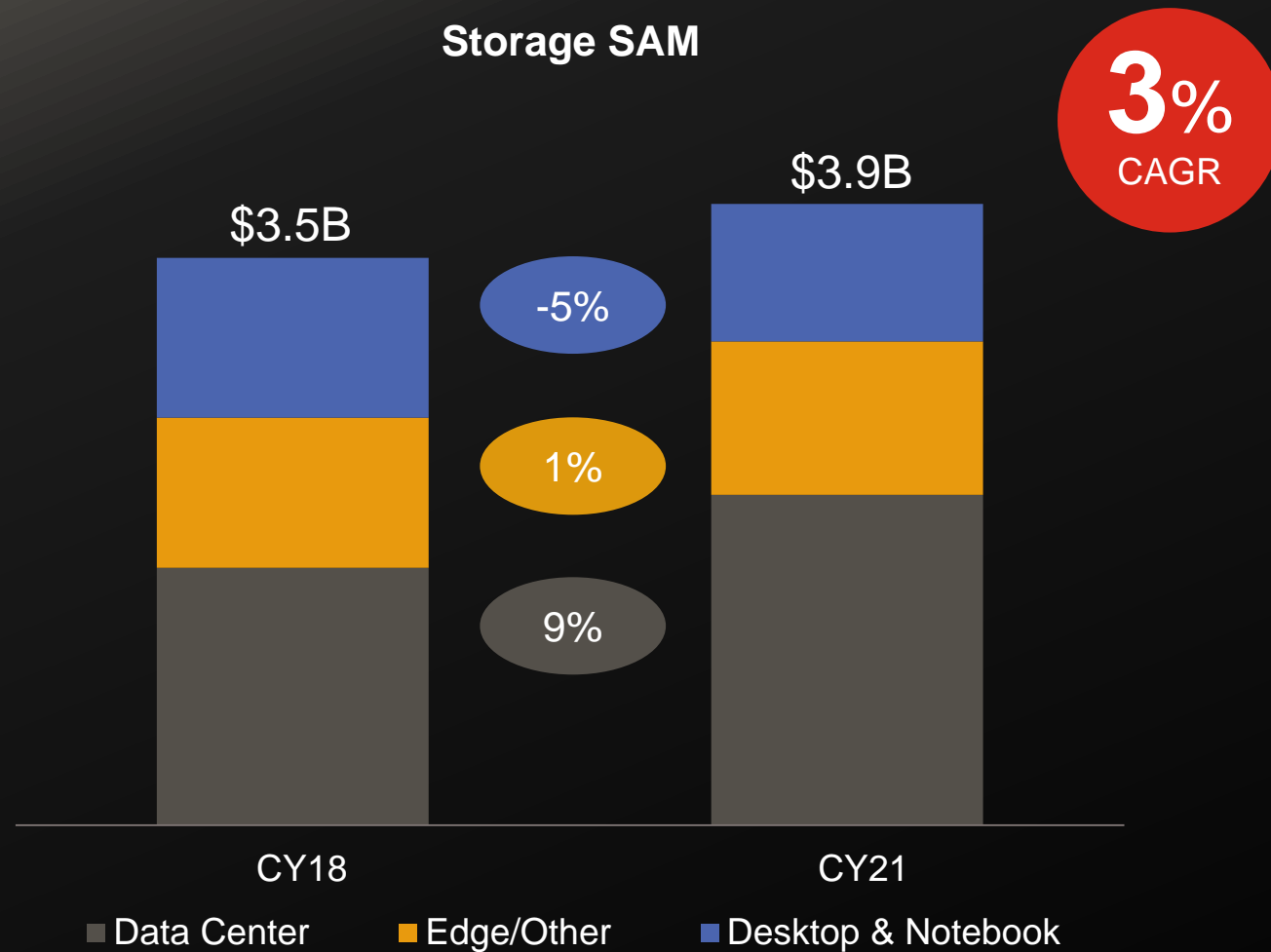


SSD Controllers

Aggregators, Accelerators  
& Converters



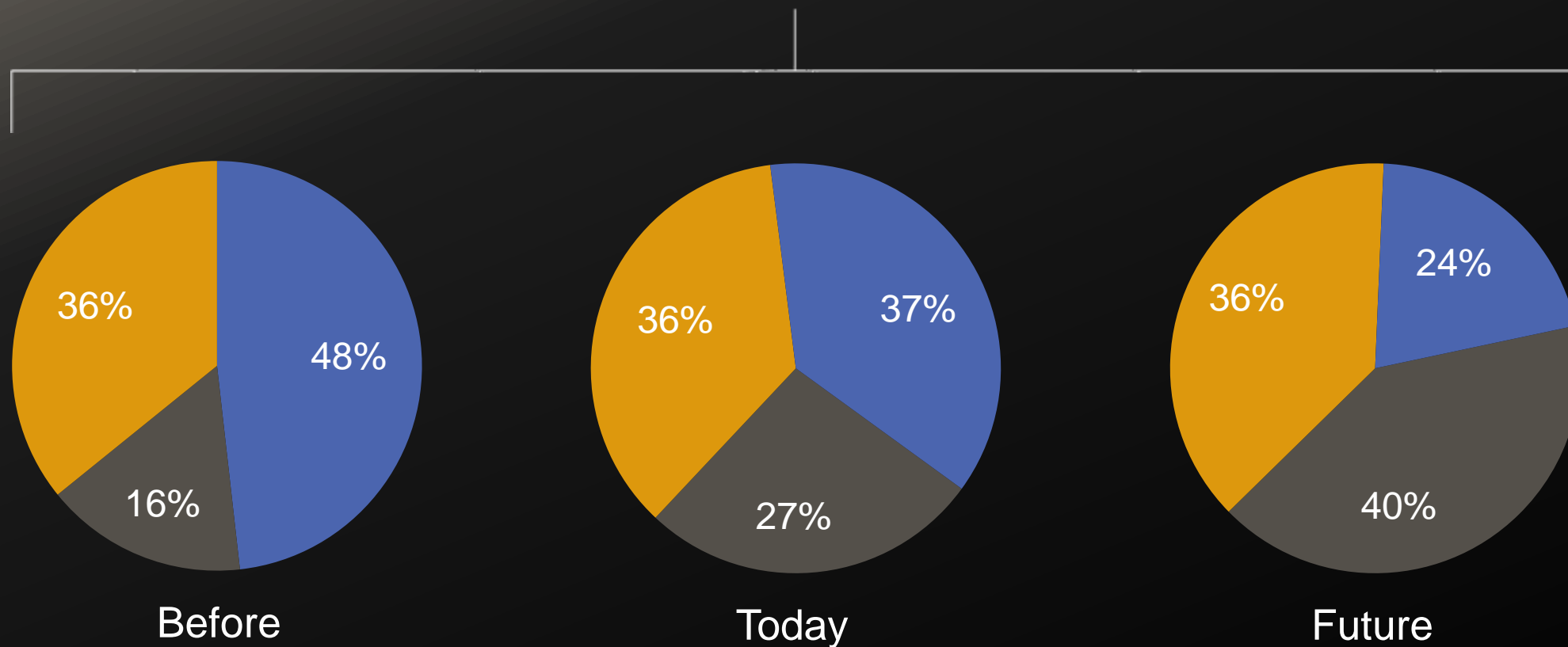
# The opportunity in Storage is changing



Gartner and Marvell estimates.

# Pivoting to the Data Center

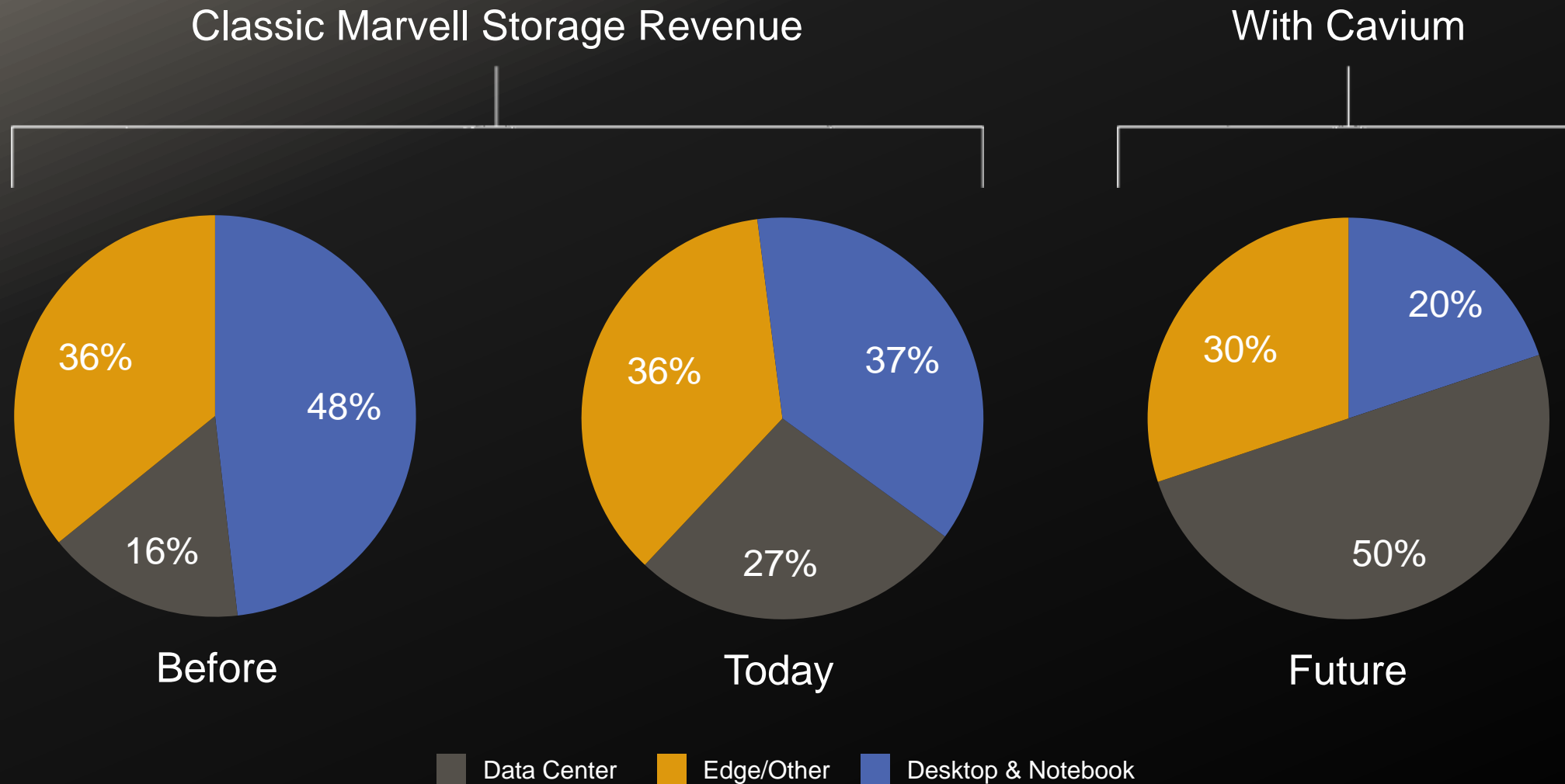
Classic Marvell Storage Revenue



■ Data Center ■ Edge/Other ■ Desktop & Notebook

Marvell estimates

# Pivoting to the Data Center



Marvell estimates



# Leading innovation in Fibre Channel



We are the market leader

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Leading the transition from  
32G → 64G → 128G

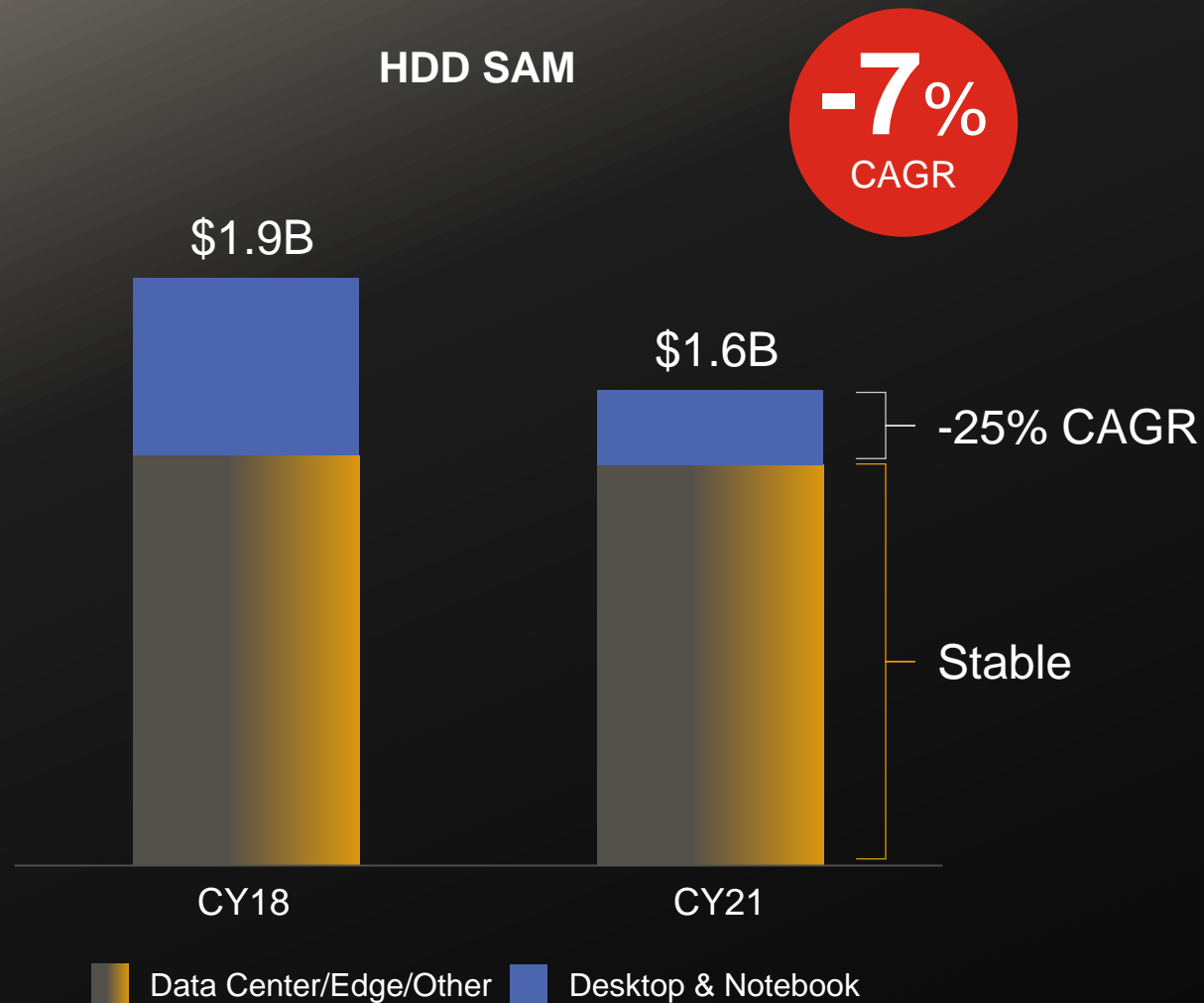
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Investing in inline security

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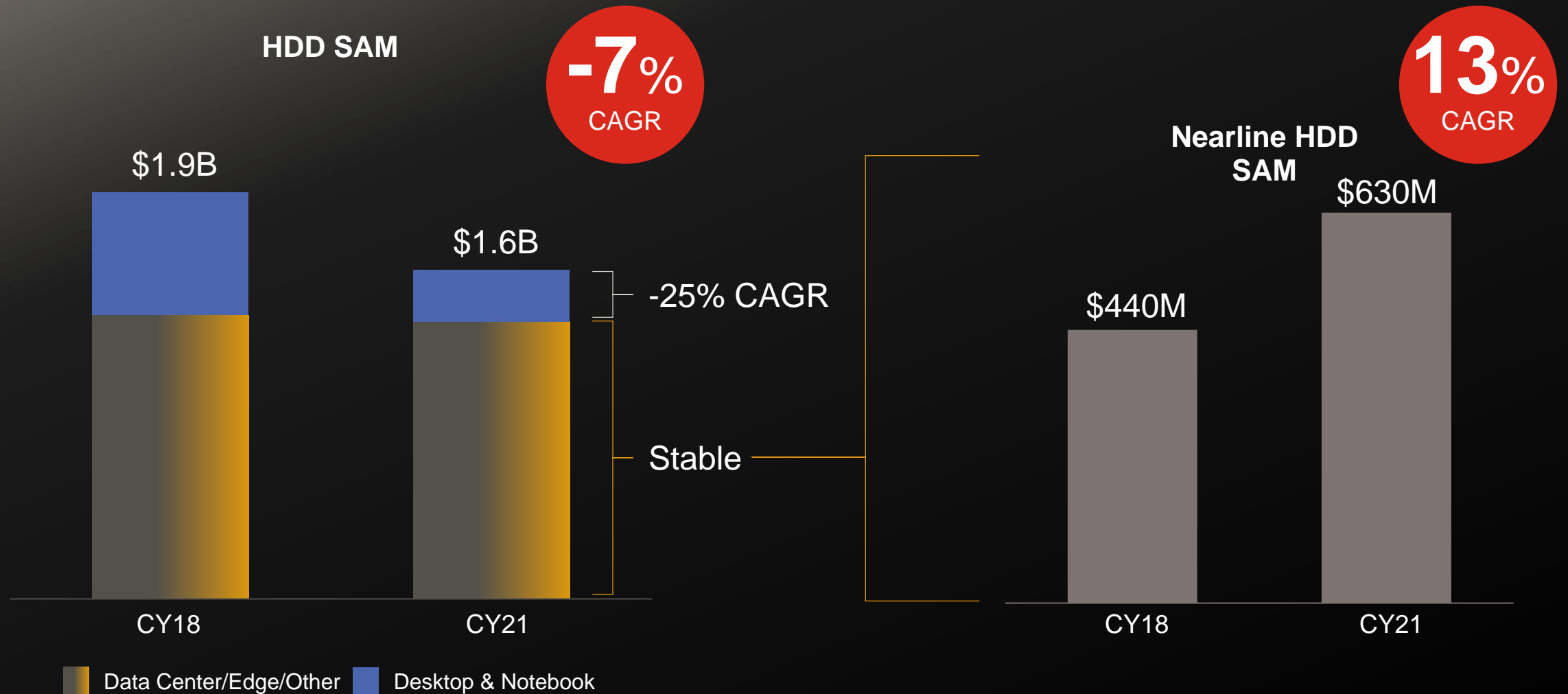
Enabling new use cases with NVMe over FC

# Not all HDD opportunities are created equal



Gartner and Marvell estimates

# Not all HDD opportunities are created equal

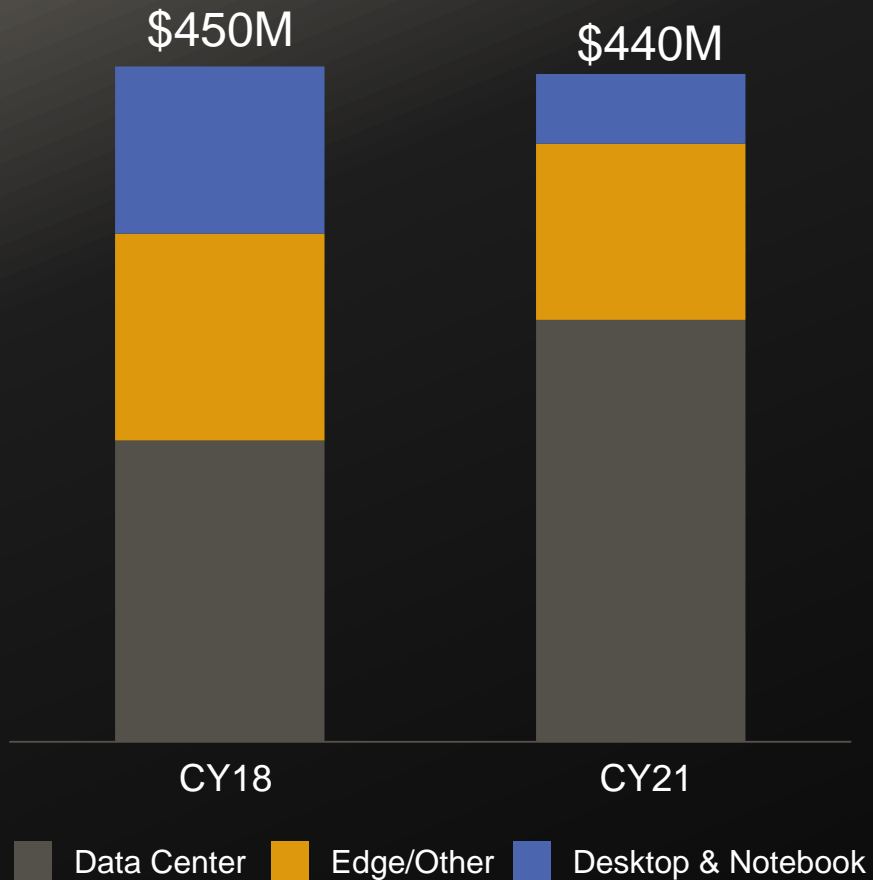


Gartner and Marvell estimates



# We are now providing HDD solutions

Preamp SAM

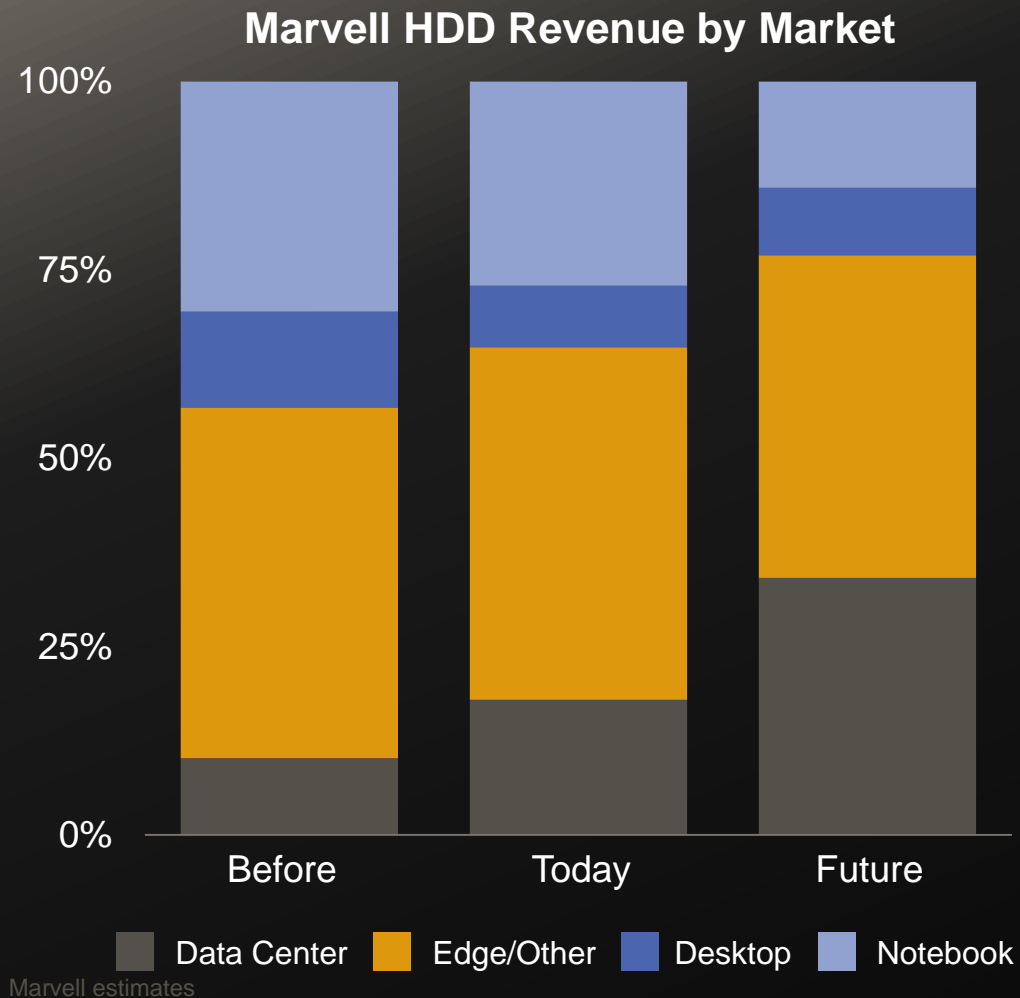


Gartner and Marvell estimates



- Unique market opportunity
- Expanding beyond controllers
- Marvell is shipping in volume

# Pivoting to infrastructure in HDD



- Notebook % declining with market
- Maintaining our share in Edge/Other
- Investing to lead in Data Center
- Preamps are kicking in



# Moving beyond SSD controllers to Flash solutions





# The Flash Storage market continues to evolve

HDD replacement



New form factors & interfaces



New architectures & business models



Optimized platform solutions



# Enabling Flash system innovations & flexibility: DIY model

SSD Controller



NAND Flash



Customized  
Firmware



- Custom features
- Optimized form factors
- New architectures
- Supply chain flexibility

# Marvell is disrupting new Flash platform solutions

## NEW FORM FACTORS (EDSFF, NF1, CUSTOM)

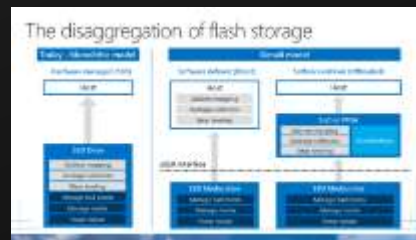


NVMe SSD Controllers

+

NVMe Aggregators

## DATA CENTER FLASH OPTIMIZATIONS (OPEN-CHANNEL & DENALI)



NVMe SSD Controllers

+

NVMe Accelerators

## ETHERNET BUNCH OF FLASH (EBOF)



NVMe SSD Controllers

+

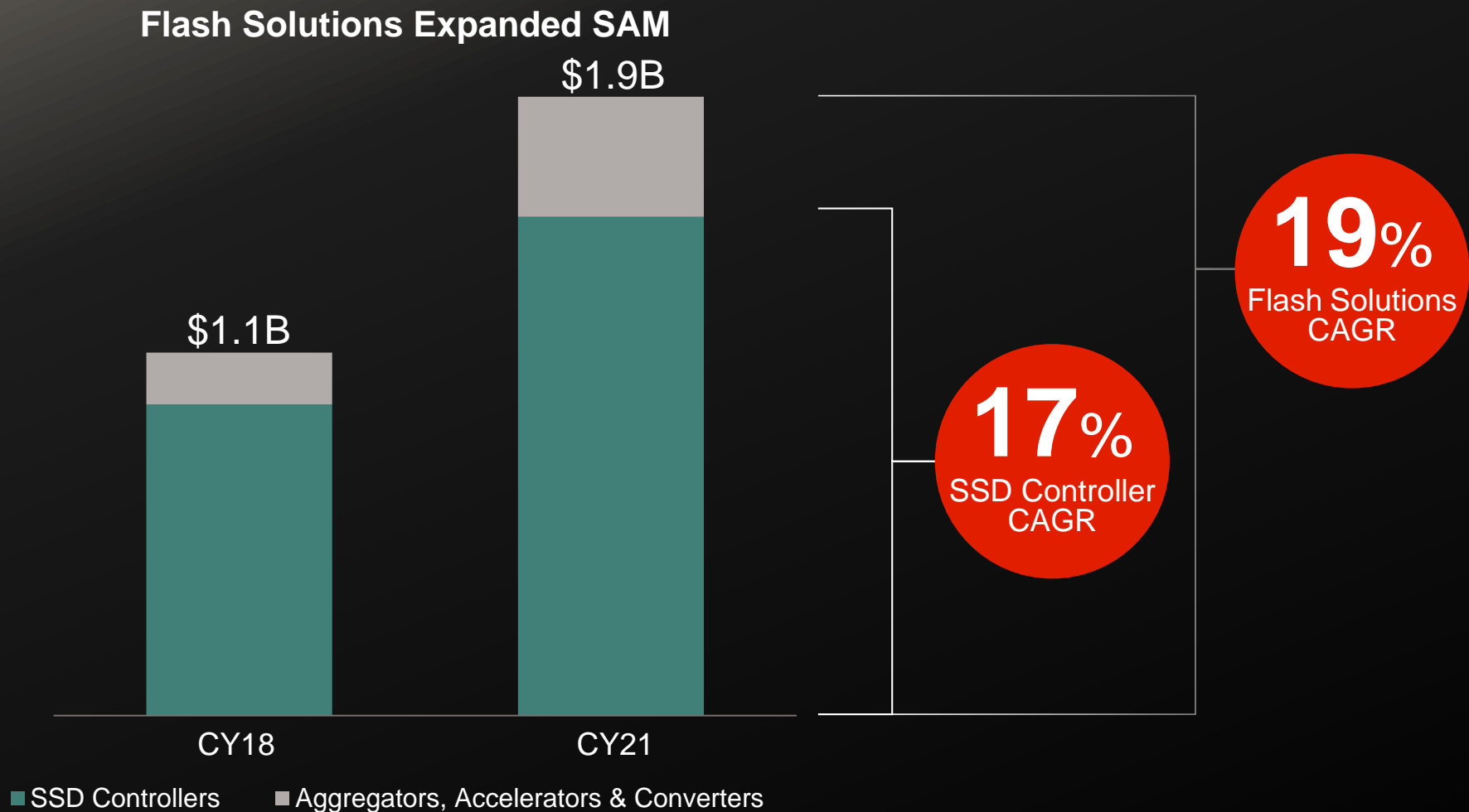
NVMe Converters

+

Ethernet Switches



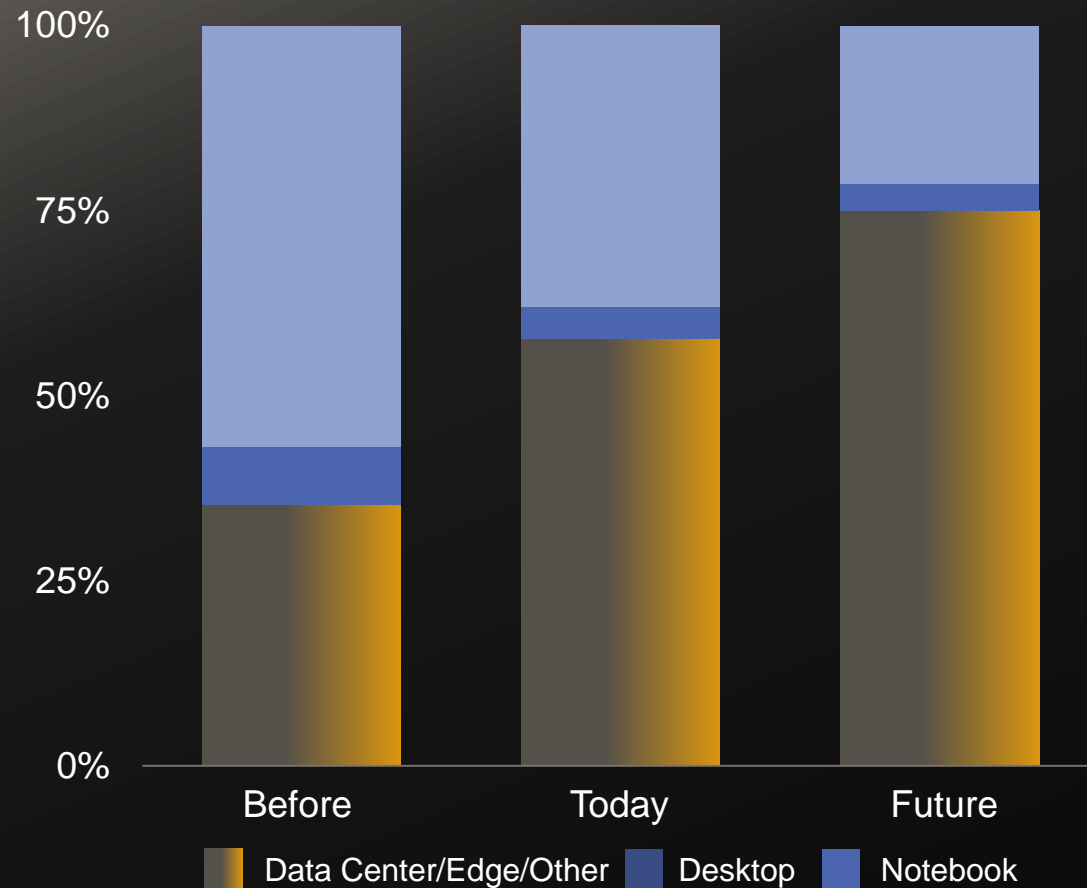
# New differentiating solutions expand our Flash SAM



Gartner and Marvell estimates

# Pivoting to infrastructure in Flash solutions

Marvell Flash Solutions Revenue by Market



Marvell estimates



- Non-PC % of revenue growing
- Shift to Data Center continues
- Solutions focus increases opportunity

# Positioned for steady growth

- 1 Leading from a position of strength
- 2 Shifting from PC to infrastructure
- 3 Pioneering new architectures
- 4 Expanding products to architecture solutions



# Networking the Future

RAGHIB HUSSAIN | EVP & CHIEF STRATEGY OFFICER

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# Volume of data is disrupting networking infrastructure



BY 2025

**75B** connected devices

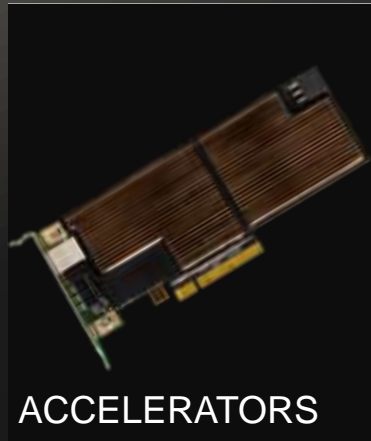
**163** zettabytes

**30%** critical

IDC Data Age 2025, Statista



# Requiring new computing models



Heterogeneity – one size does **not** fit all

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High performance/efficiency

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Low-power profiles

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End-to-end security



# Marvell has the broadest networking portfolio

## Processors



Baseband processors



Multi-core embedded processors



Security processors



Arm server processors

## Ethernet



Ethernet switches



PHYs



Ethernet adapters

## Wi-Fi



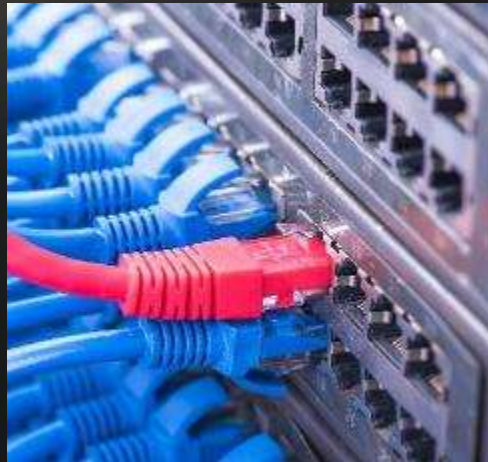
Wi-Fi access points



Wi-Fi clients

# Marvell is aligned to end market needs

ENTERPRISE



CARRIER



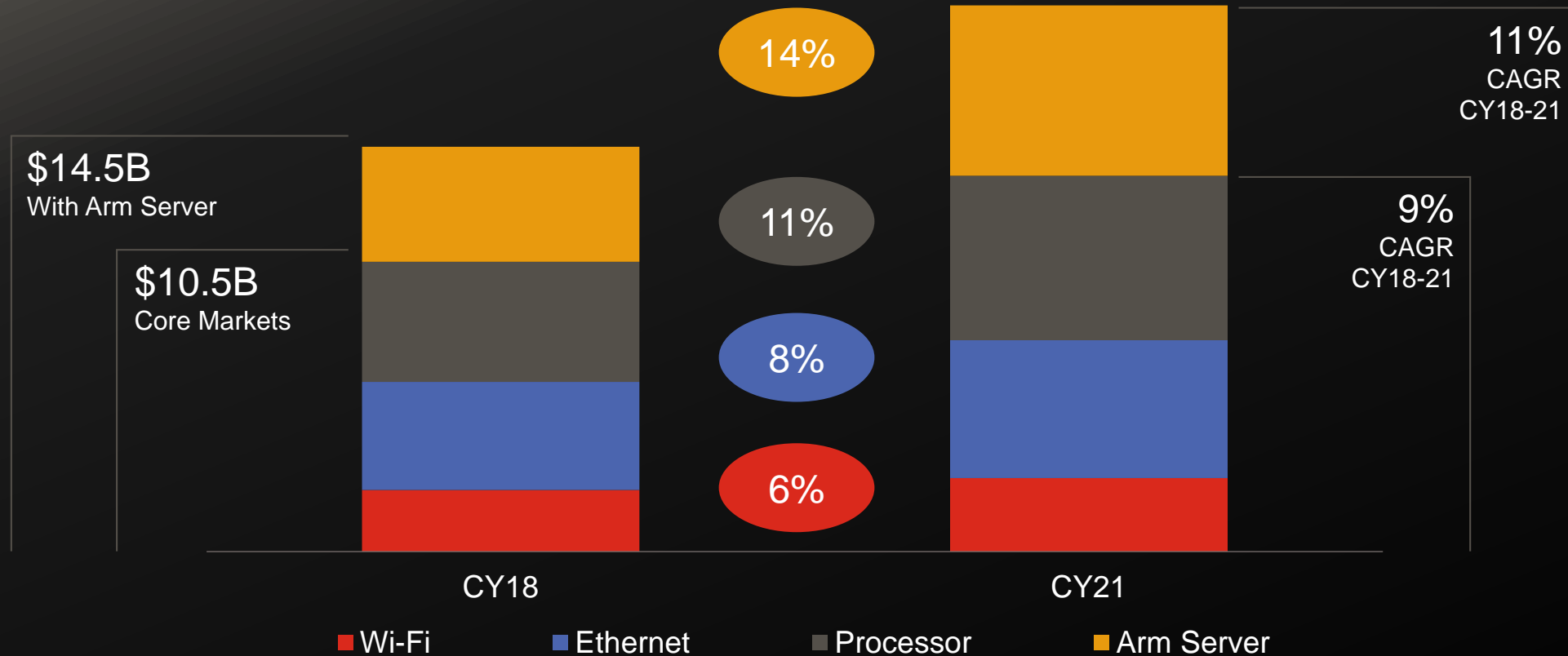
DATA CENTER



EDGE/OTHER



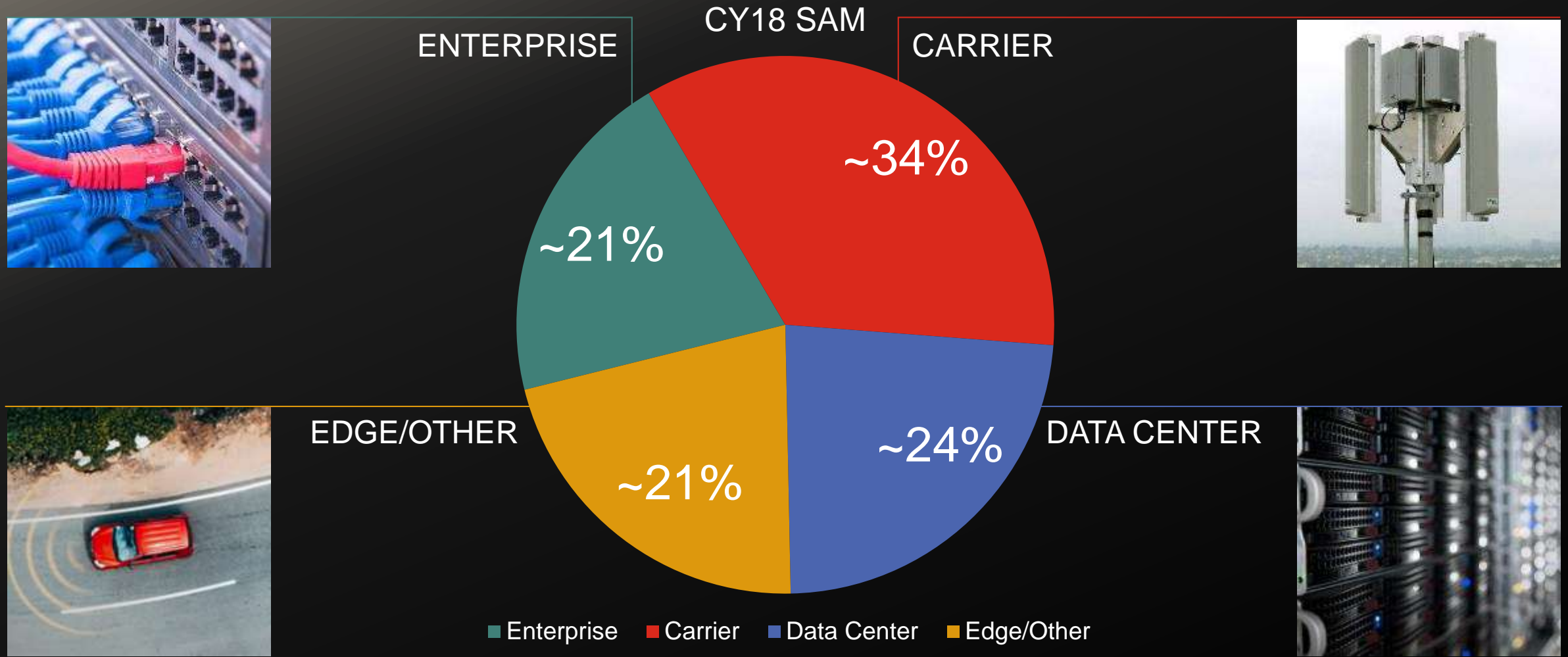
# A large and growing opportunity



ABI, Dell'Oro, Crehan, IDC and Marvell estimates



# Business diversity across a \$10.5B addressable market



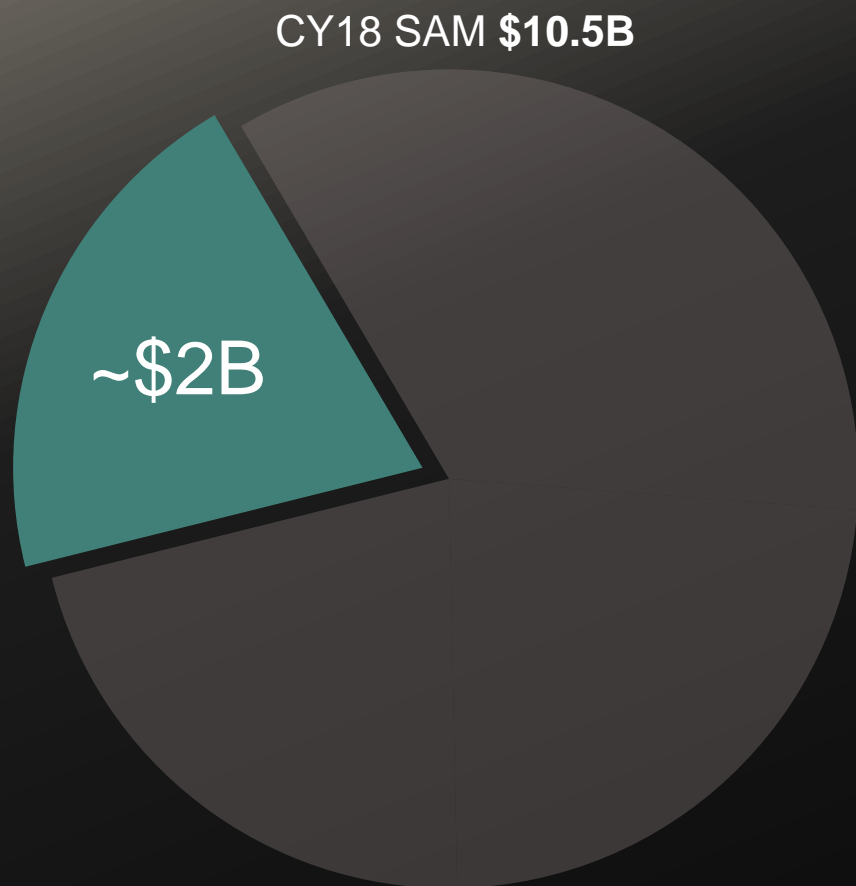
ABI, Dell'Oro, Crehan, IDC and Marvell estimates

# Enterprise

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# Well-positioned to grow in the Enterprise



Marvell has **~30%**  
of addressable Enterprise  
market today



Ethernet switches & PHYs



Multi-core embedded processors



Wi-Fi access points



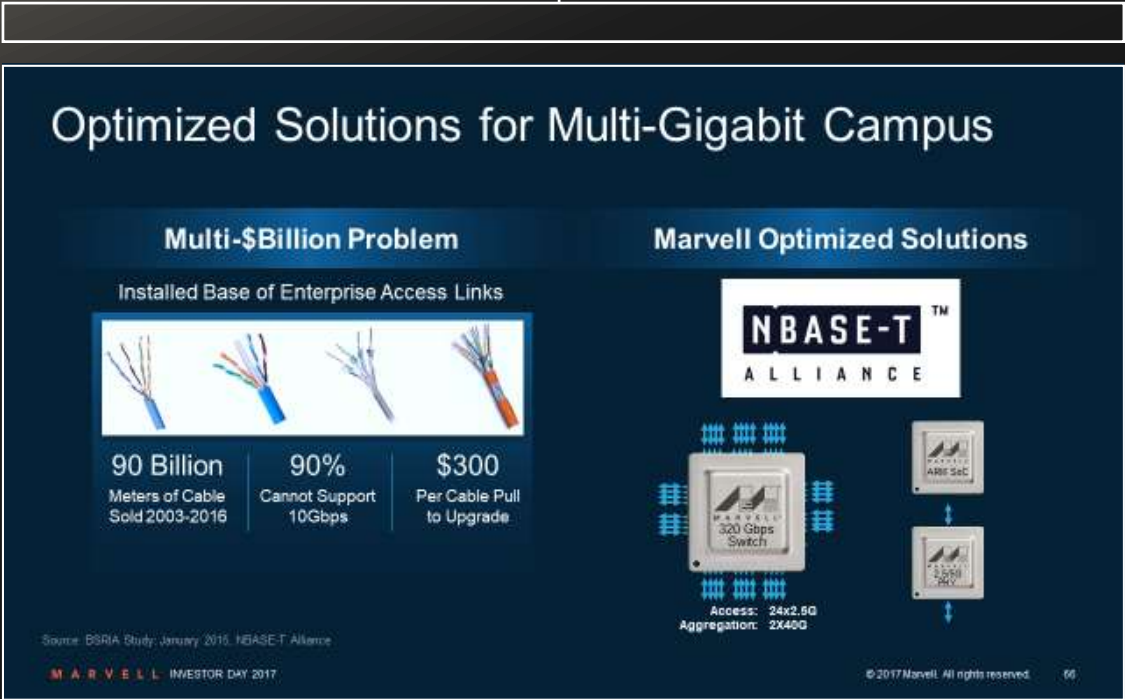
Security processors

ABI, Dell'Oro, Crehan, IDC and Marvell estimates



# Enterprise IT upgrade cycle is underway

## 2017 INVESTOR DAY



**89%** of companies expect their IT budgets to grow or stay steady in 2019

*Leading reasons*

**64%** upgrade outdated IT infrastructure

**56%** address security concerns

# Marvell serves the entire Enterprise

ACCESS

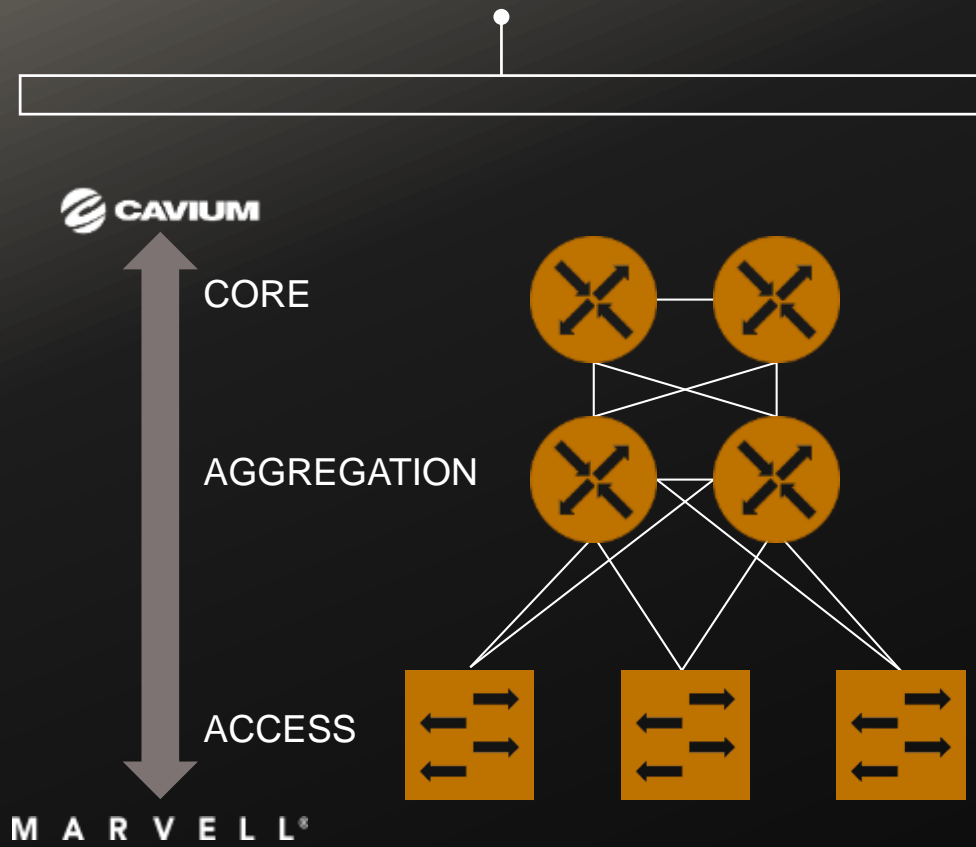
AGGREGATION

CORE

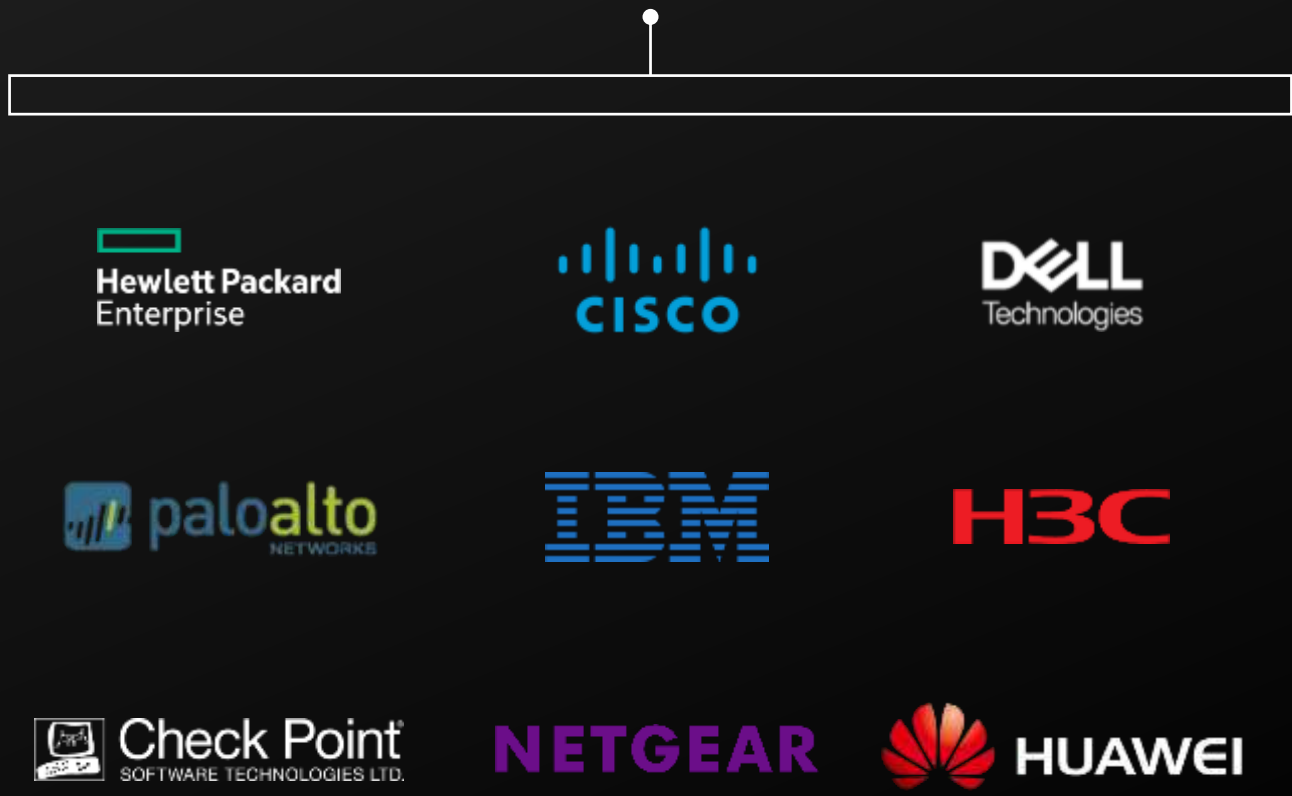


# Enterprise growth drivers for Marvell

## MOVE FURTHER INTO ENTERPRISE



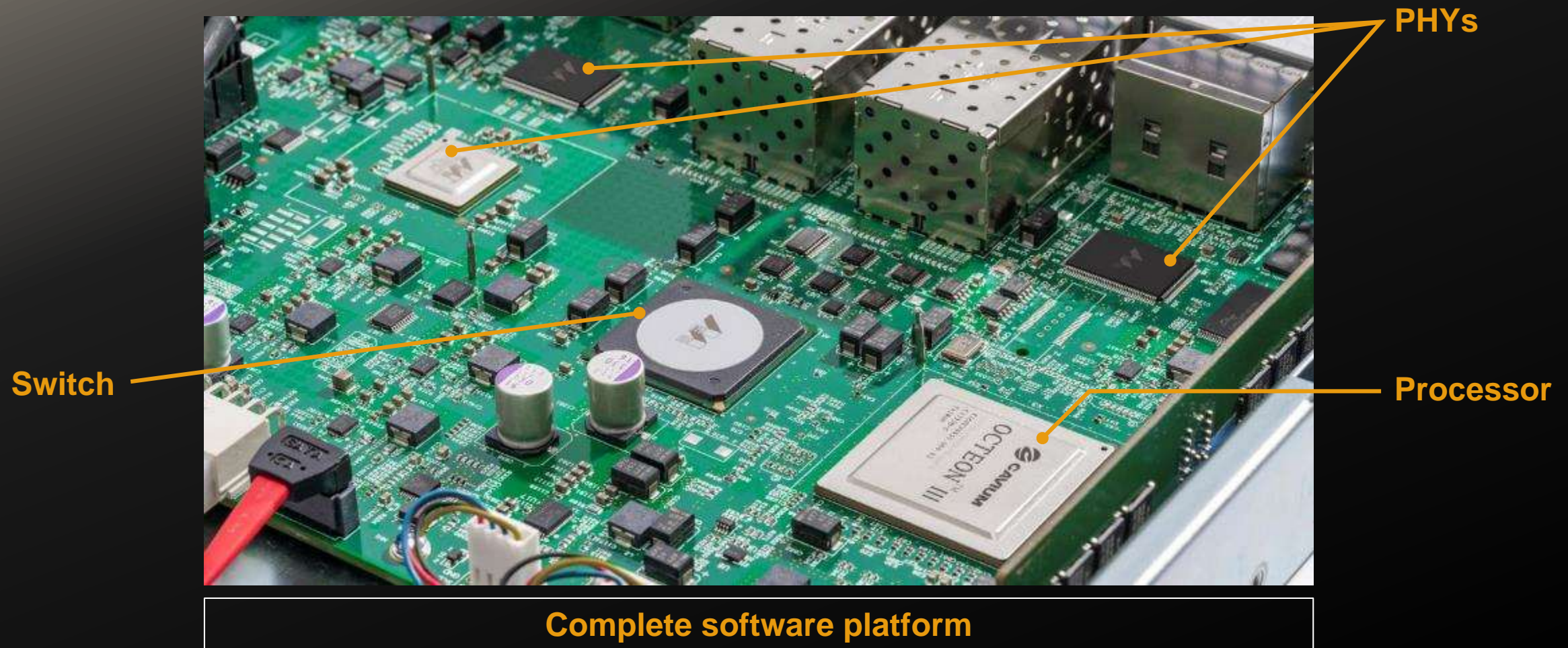
## GROW SHARE AT LEADING OEMs





# Complete network appliance solution

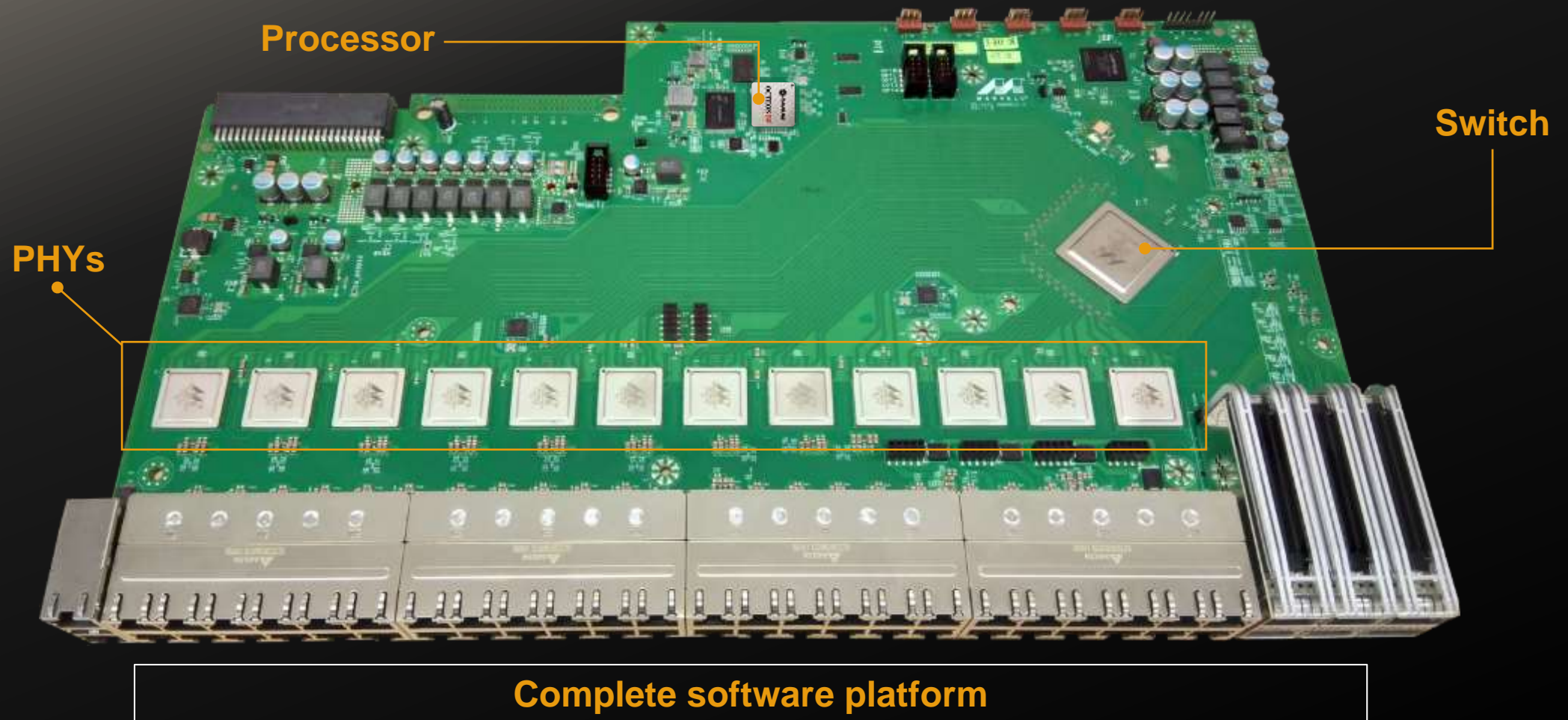
**FIREWALLS** | **SWITCHES** | **ROUTERS** | **SD-WANS**



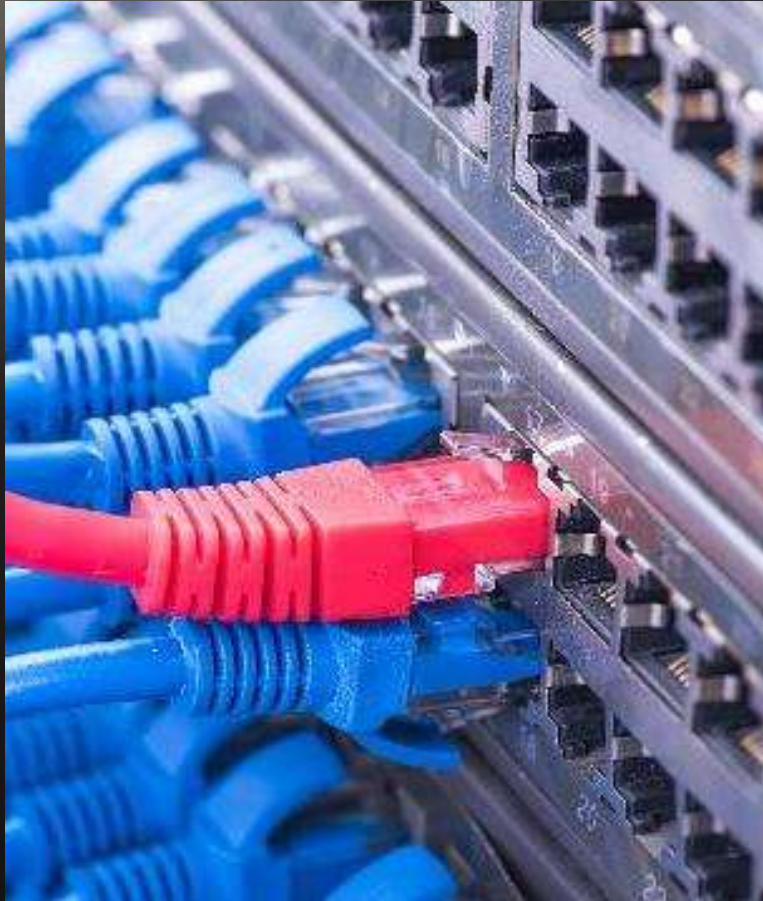


# Switching solutions optimized for Enterprise

ACCESS | AGGREGATION | CORE



# Positioned for growth in the Enterprise



Broadest product portfolio serving the entire network from access to the core

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Optimized for the Enterprise

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Multiple drivers for growth

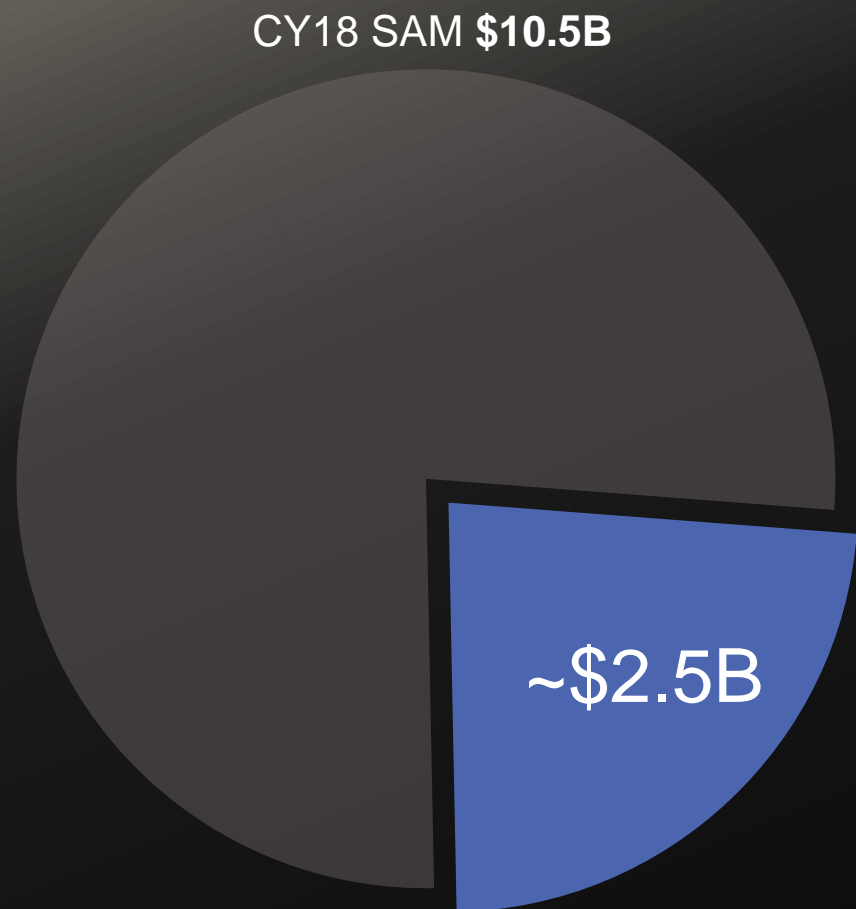
- Infrastructure upgrade cycle underway
- Expansion into aggregation and core
- Pull-through of other products
- Becoming a strategic partner



# Data Center

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# Opportunity for growth in Data Centers



Marvell has **~10%**  
of addressable Data  
Center market today



Security & offload processors



Ethernet Switches, PHYs, Adapters



Arm server processors

**+\$4B SAM**

ABI, Dell'Oro, Crehan, IDC and Marvell estimates



# Emerging compute architectures for the Data Center

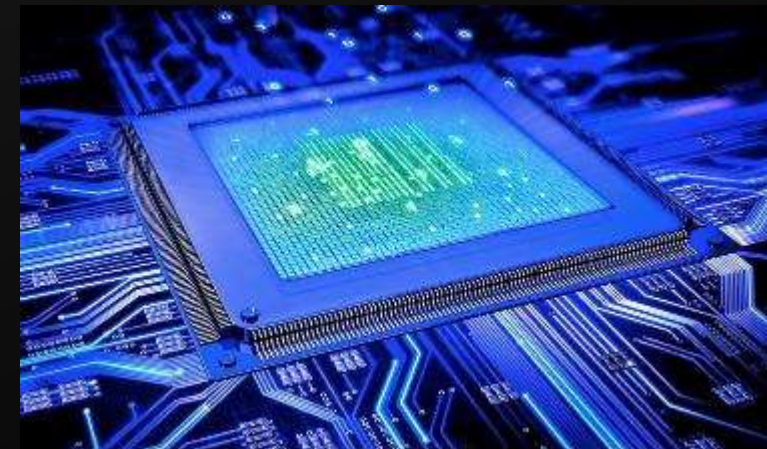
## SECURITY AND NETWORK OFFLOAD



## ARM SERVERS FOR CLOUD APPLICATIONS



## ARTIFICIAL INTELLIGENCE

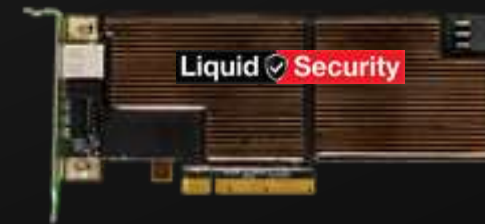




# Marvell is the leader in Data Center security & network offload

DEDICATED APPLIANCE  
(CHIPS AND ADAPTERS)

CLOUD SOLUTIONS  
(ADAPTERS)



# Liquid Security in deployment with cloud companies




Google Cloud

Blog Latest Stories Product News Topics

IDENTITY & SECURITY

## Introducing Cloud HSM beta for hardware crypto key security



Liquid Security

Google+ Facebook Twitter LinkedIn Email

aws

Contact Sales Support English My Account Create an AWS Account

Products Solutions Pricing Learn Partner Network AWS Marketplace Explore More

AWS CloudHSM Overview Features Pricing Getting Started Resources FAQs

## AWS CloudHSM

Managed hardware security module (HSM) on the AWS Cloud.

Get started with AWS CloudHSM

AWS CloudHSM is a cloud-based hardware security module (HSM) that enables you to easily generate and use your own encryption keys on the AWS Cloud. With CloudHSM, you can manage your own encryption keys using FIPS 140-2 Level 3 validated HSMs. CloudHSM offers you the flexibility to integrate with your applications using industry-standard APIs, such as PKCS#11, Java Cryptography Extensions (JCE), and Microsoft Cryptographic (CNG) libraries.

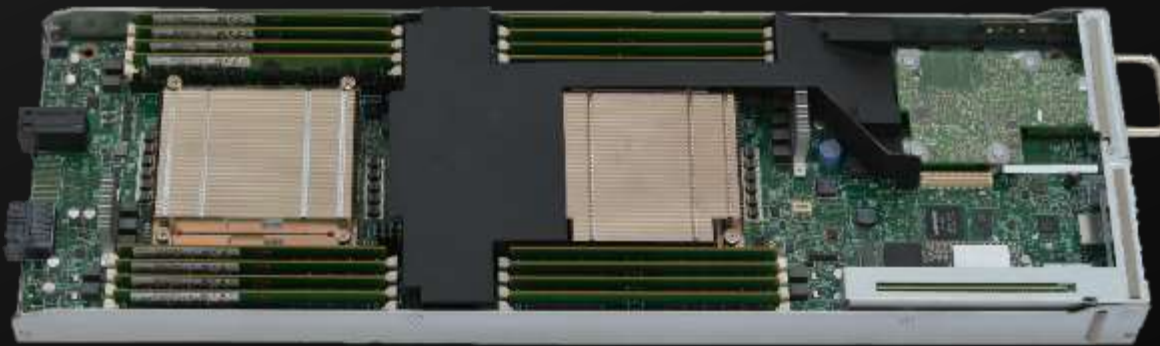
CloudHSM is standards-compliant and enables you to export all of your keys to most other commercially-available HSMs, subject to your configurations. It is a fully-managed service that automates time-consuming administrative tasks for you, such as hardware provisioning, software patching, high-availability.



Introducing AWS CloudHSM



# ThunderX2 – the first Xeon-class Arm server processor





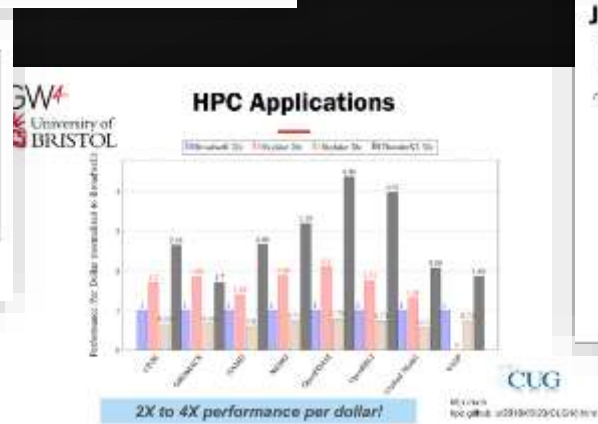
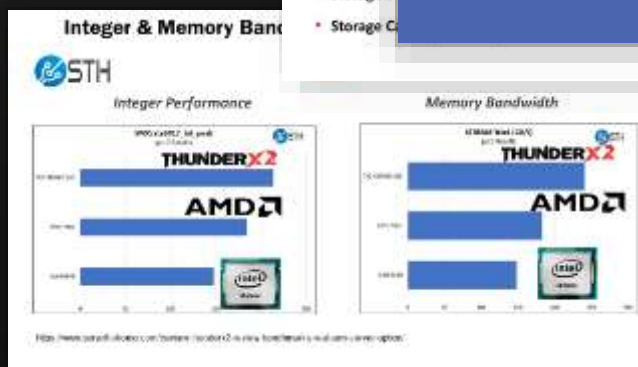
# ThunderX2 in the news



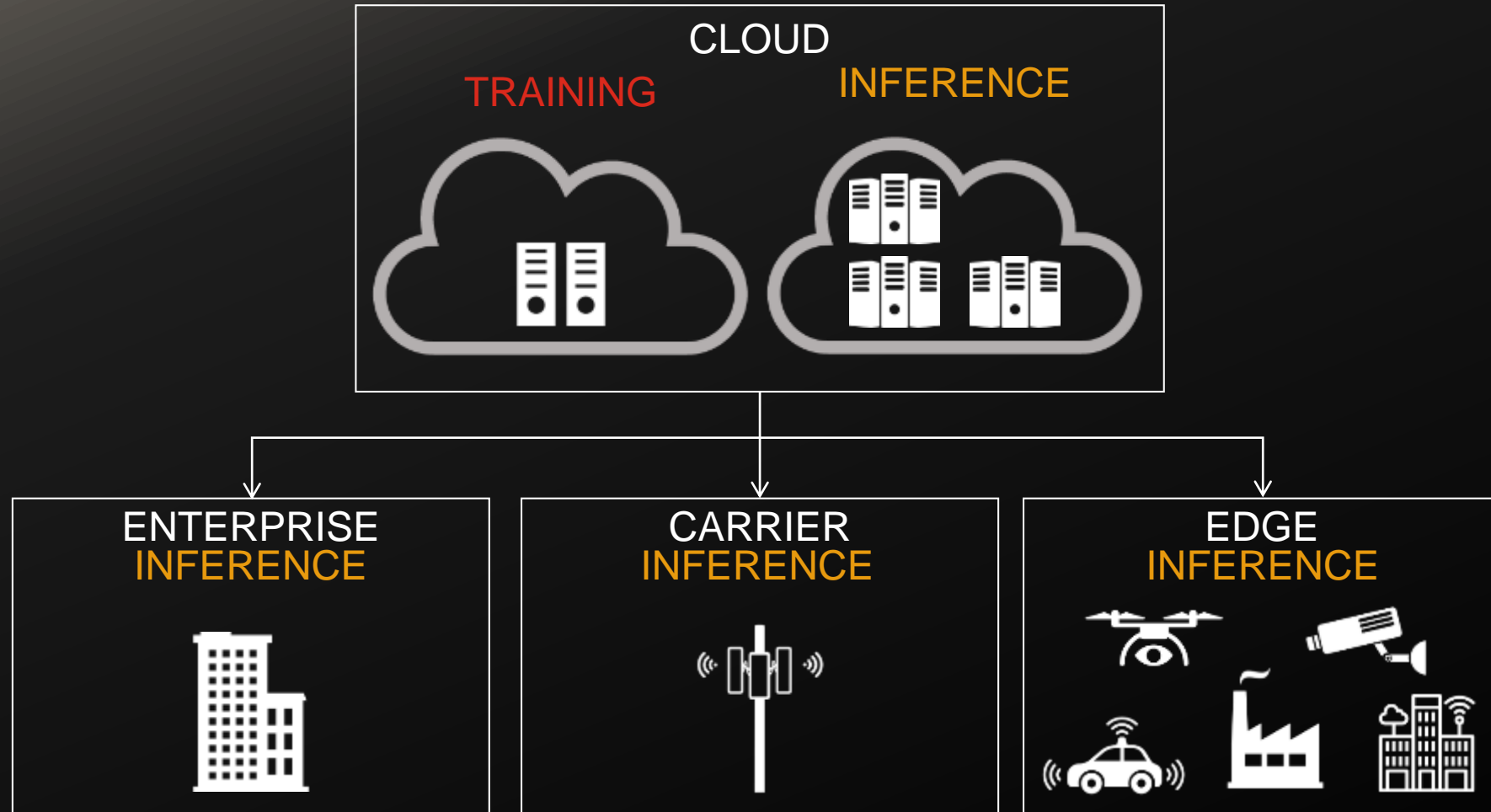
**ANANDTECH**

...“In short, ThunderX2 is the first SoC that is able to compete with Intel and AMD in the general purpose server CPU market. **And that is a pleasant surprise: at last, an Arm server solution that delivers!**”

John DeGalas, AnandTech

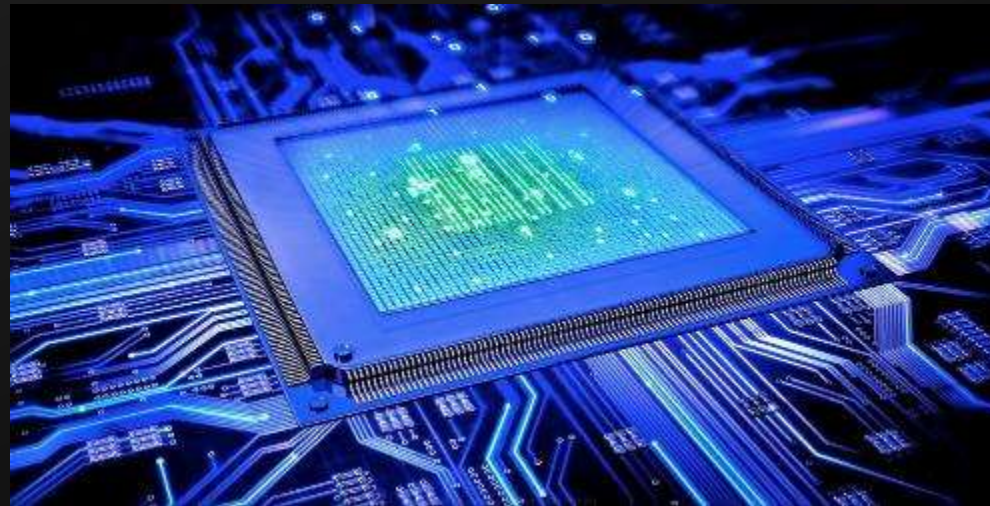


# Artificial Intelligence



# AI processors – Marvell's next frontier

## ARTIFICIAL INTELLIGENCE PROCESSOR



Small form  
factor

Performance  
efficiency

Low power

Programmability

Software  
ecosystem



# Growing momentum in AI inference ecosystem

The screenshot shows a Facebook post from the 'Code' group. The URL in the browser bar is <https://code.fb.com/ml-applications/glow-a-community-driven-approach-to-ai-infrastructure/>. The post features a diagram comparing 'ML INFERENCE ON A HARDWARE ACCELERATOR' using a 'CPU' versus a 'SOFTWARE COMPILER' and 'HARDWARE ACCELERATOR (INFERENCE)' using 'GLOW'. The 'GLOW' path is shown with a significantly higher 'SPEED' bar. The post is dated 'POSTED ON SEP 13, 2018 TO AI RESEARCH, ML APPLICATIONS' and is authored by 'VIJAY RAO' and 'NADAV ROTEM'. To the right, a 'Related Posts' section shows a post about 'Unsupervised machine translation' dated '08.31.2018' and a post about 'PyTorch 1.0' dated '05.02.2018'.

Code

Open Source Platforms Infrastructure Systems Physical Infrastructure Video Engineering & AR/VR Artificial Intelligence Watch Videos

ML INFERENCE ON A HARDWARE ACCELERATOR

SPEED CPU

SOFTWARE COMPILER GLOW

HARDWARE ACCELERATOR (INFERENCE) SPEED

POSTED ON SEP 13, 2018 TO AI RESEARCH, ML APPLICATIONS

## Glow: A community-driven approach to AI infrastructure

VIJAY RAO NADAV ROTEM

### Related Posts

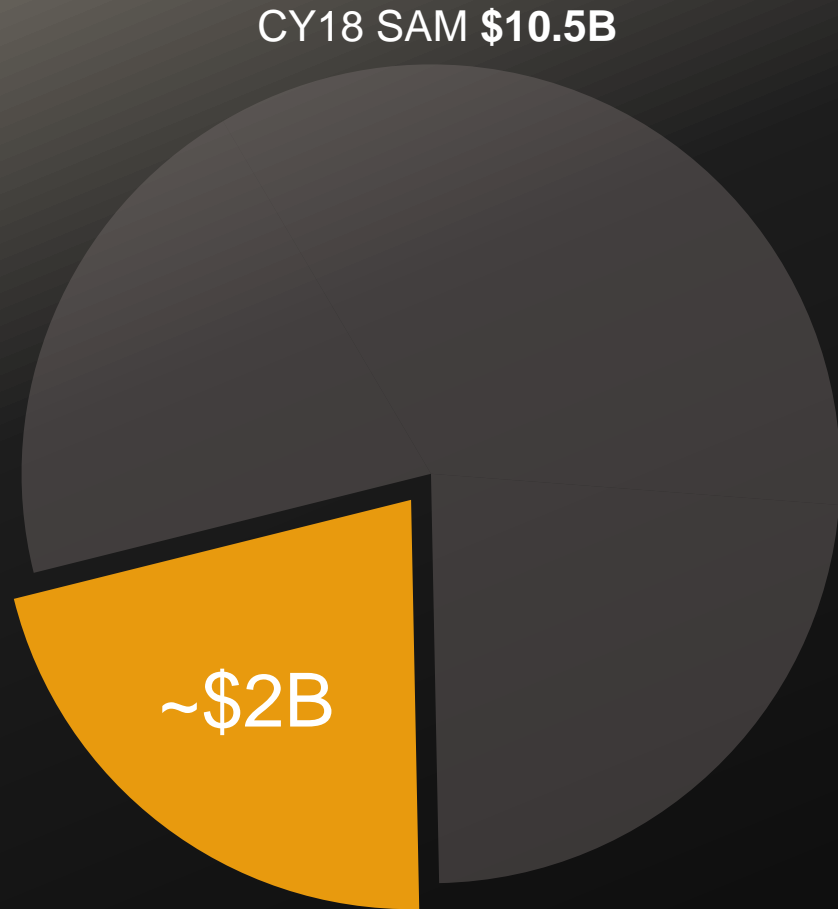
08.31.2018 Unsupervised machine translation: A novel approach to provide fast, accurate

05.02.2018 PyTorch 1.0 Announcing PyTorch 1.0 for both research and production

# Edge & Other

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# Edge & Other market opportunity



Marvell has **~15%**  
of addressable Edge  
& Other market today



Ethernet switches & PHYs



Embedded processors



Wi-Fi clients

ABI, Dell'Oro, Crehan, IDC and Marvell estimates



# What's included in Edge & Other

Automobiles



Surveillance



Printers



Cameras



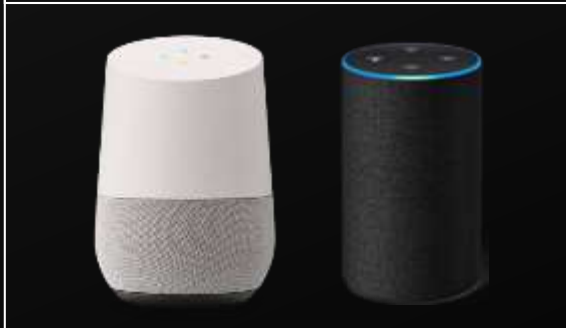
Gaming systems



Home gateways



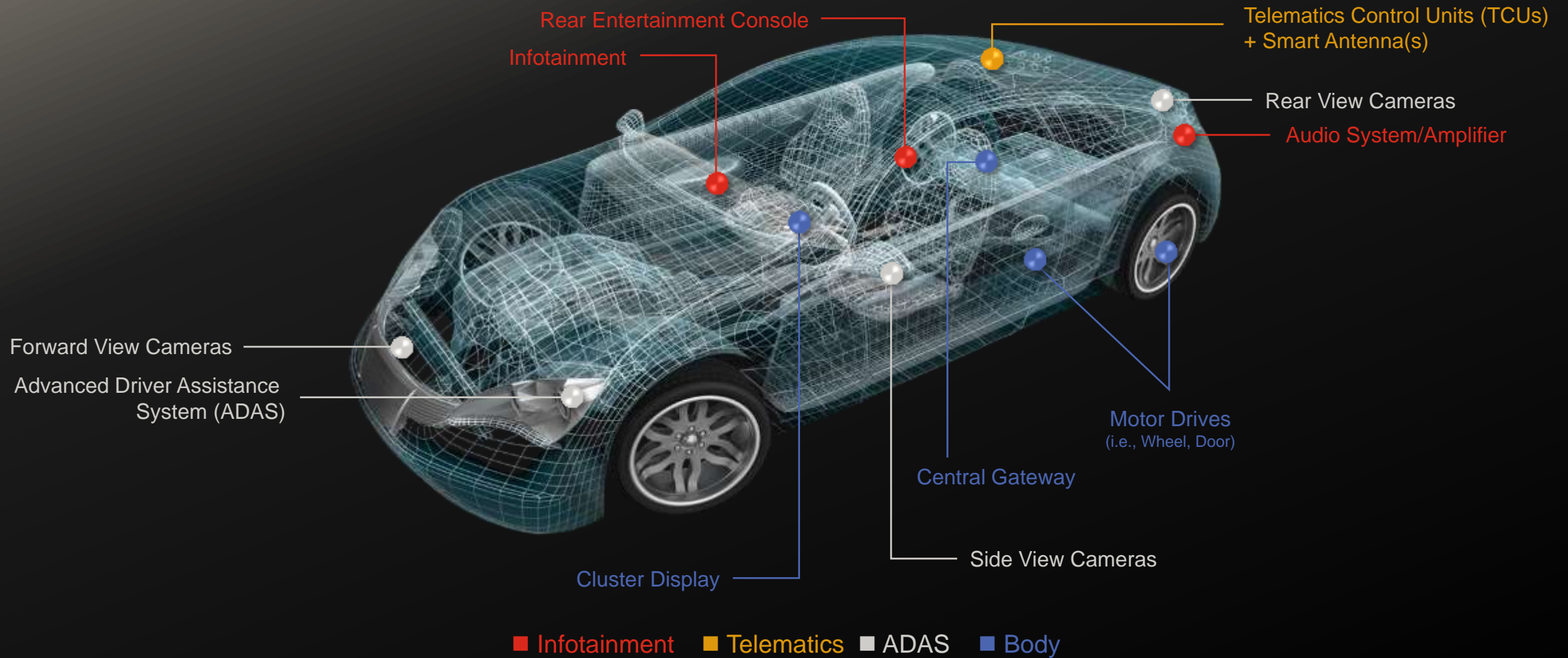
Smart assist



Set-top boxes



# Automobiles are becoming data centers on wheels



# Marvell is revolutionizing the in-car network

Secure Ethernet  
switches & PHYs



Wireless connectivity



Strong customer adoption



**BOSCH**

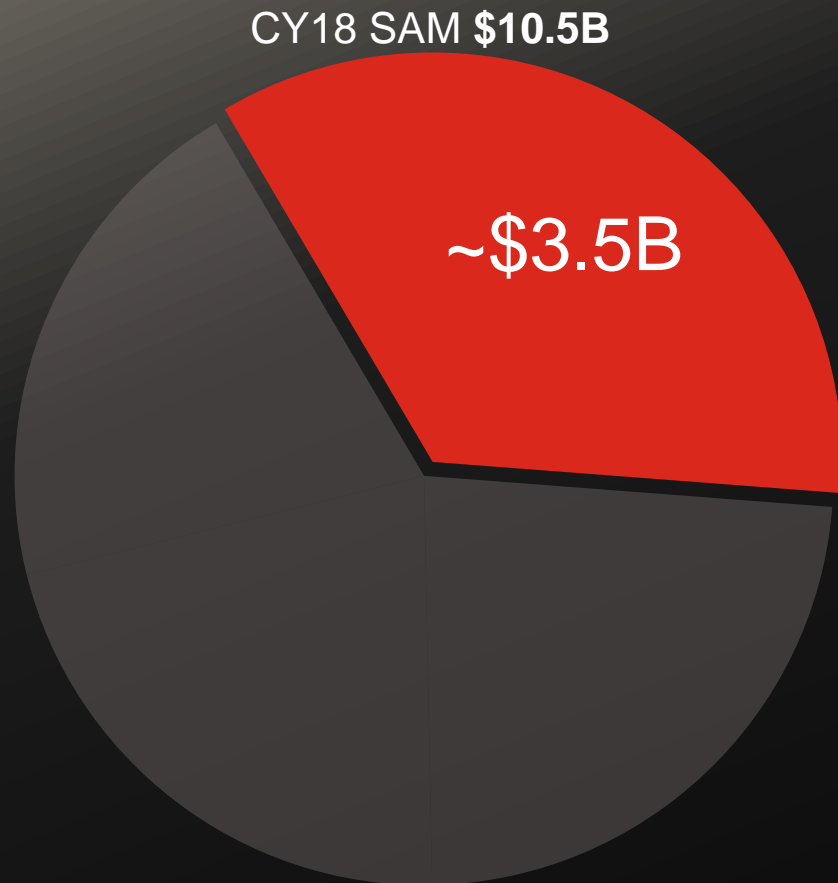




# Carrier

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# Large addressable Carrier market



Marvell has **~10%**  
of addressable Carrier  
market today



Baseband processors



Multi-core embedded processors



Ethernet switches & PHYs



Security processors

ABI, Dell'Oro, Crehan, IDC and Marvell estimates



# Core technology to advance Carrier infrastructure

Digital signal processing



Data plane acceleration



Multi-core scaling



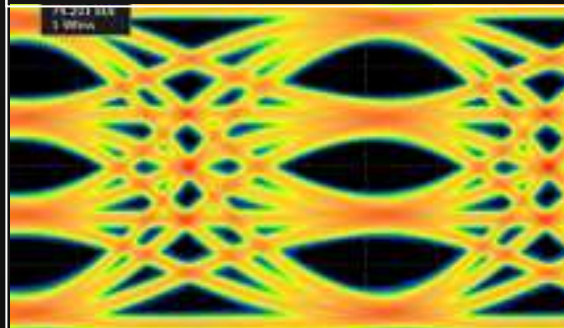
Arm SoC



Security



In-house SerDes



Ethernet



Software platforms





# Marvell powers a wide range of Carrier products



## WIRELESS



- eNodeB
- gNodeB
- EPC
- CRAN



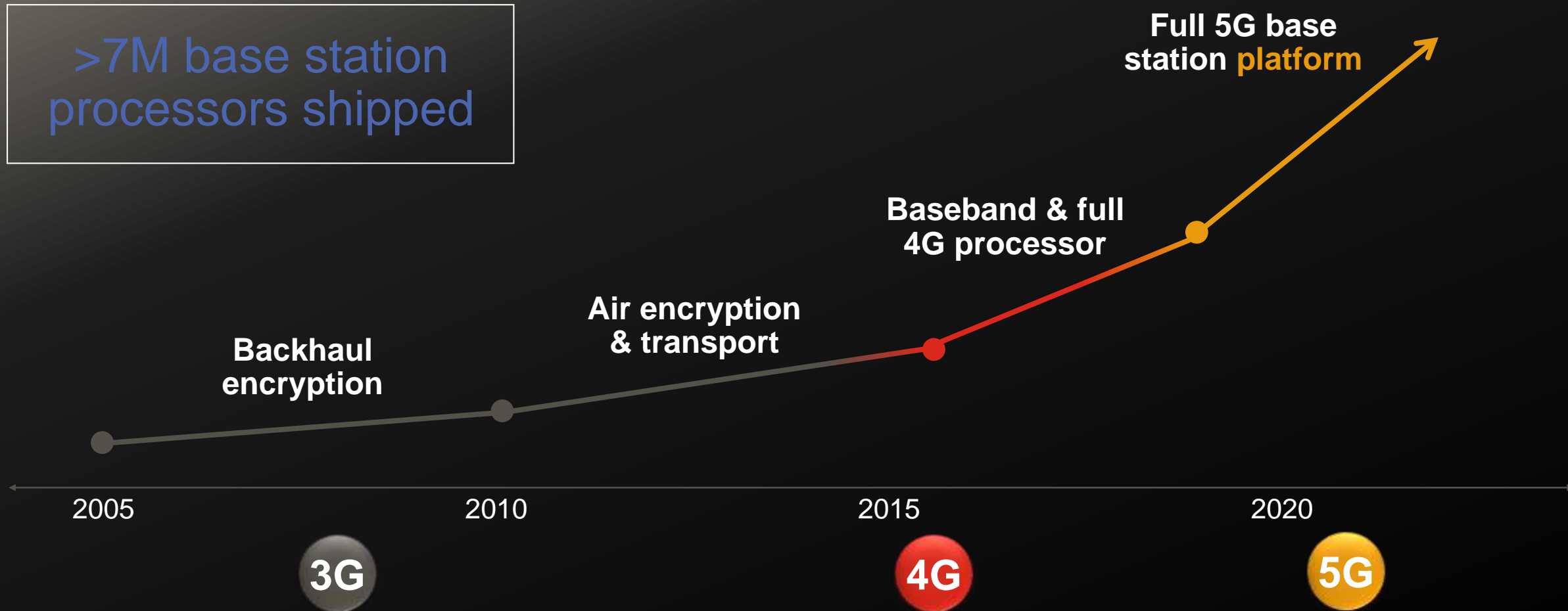
## WIRED



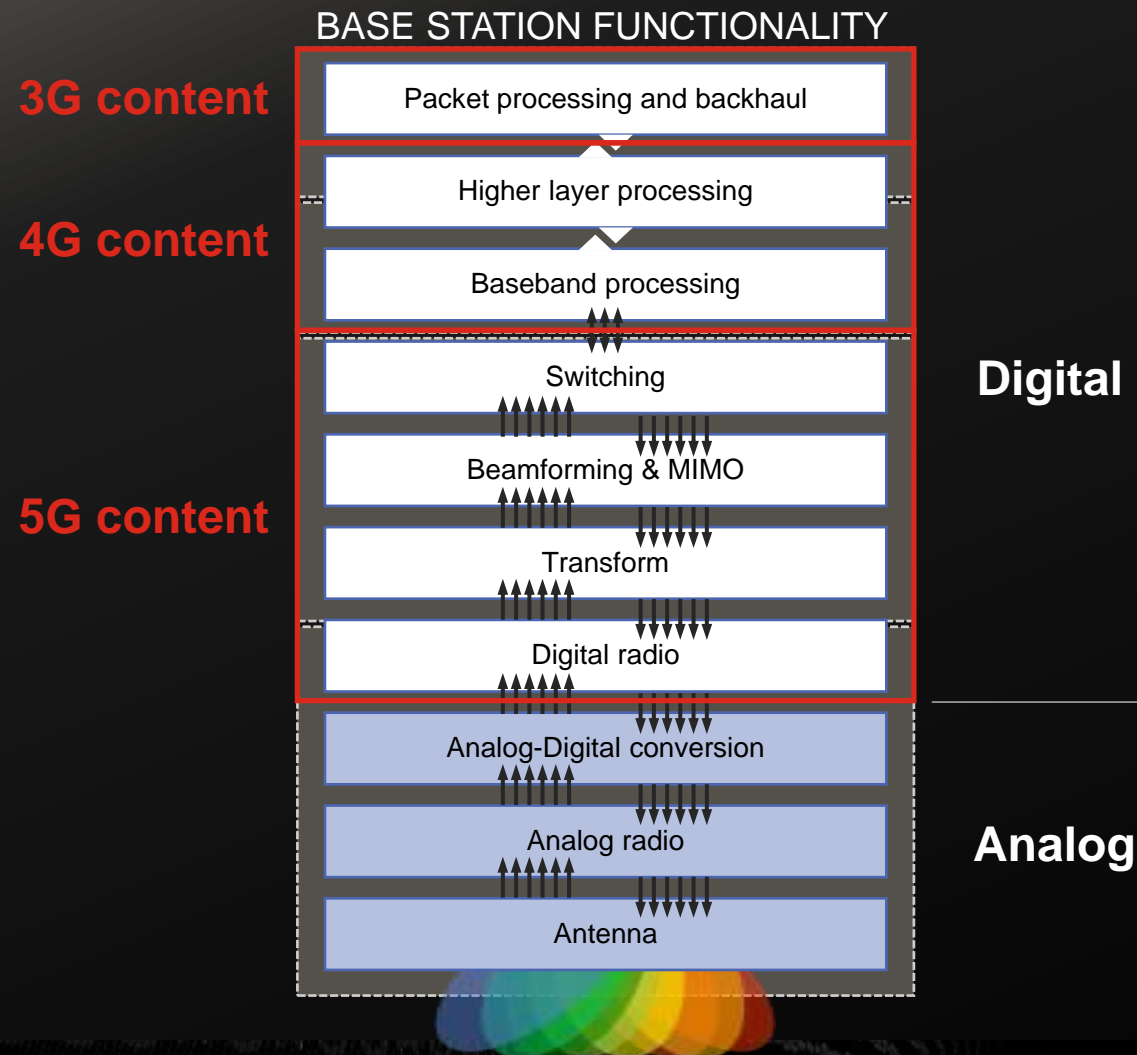
- Core Router
- Border Controller
- DSLAM
- CMTS
- GPON OLT

# Marvell has a growing position in Carrier infrastructure

>7M base station processors shipped



# Marvell provides the engine that makes 5G run





# Marvell has significantly more content in 5G base stations

4G<sup>LTE</sup>

Main Card



Line Card



5G

Main Card



Line Card



Line Card

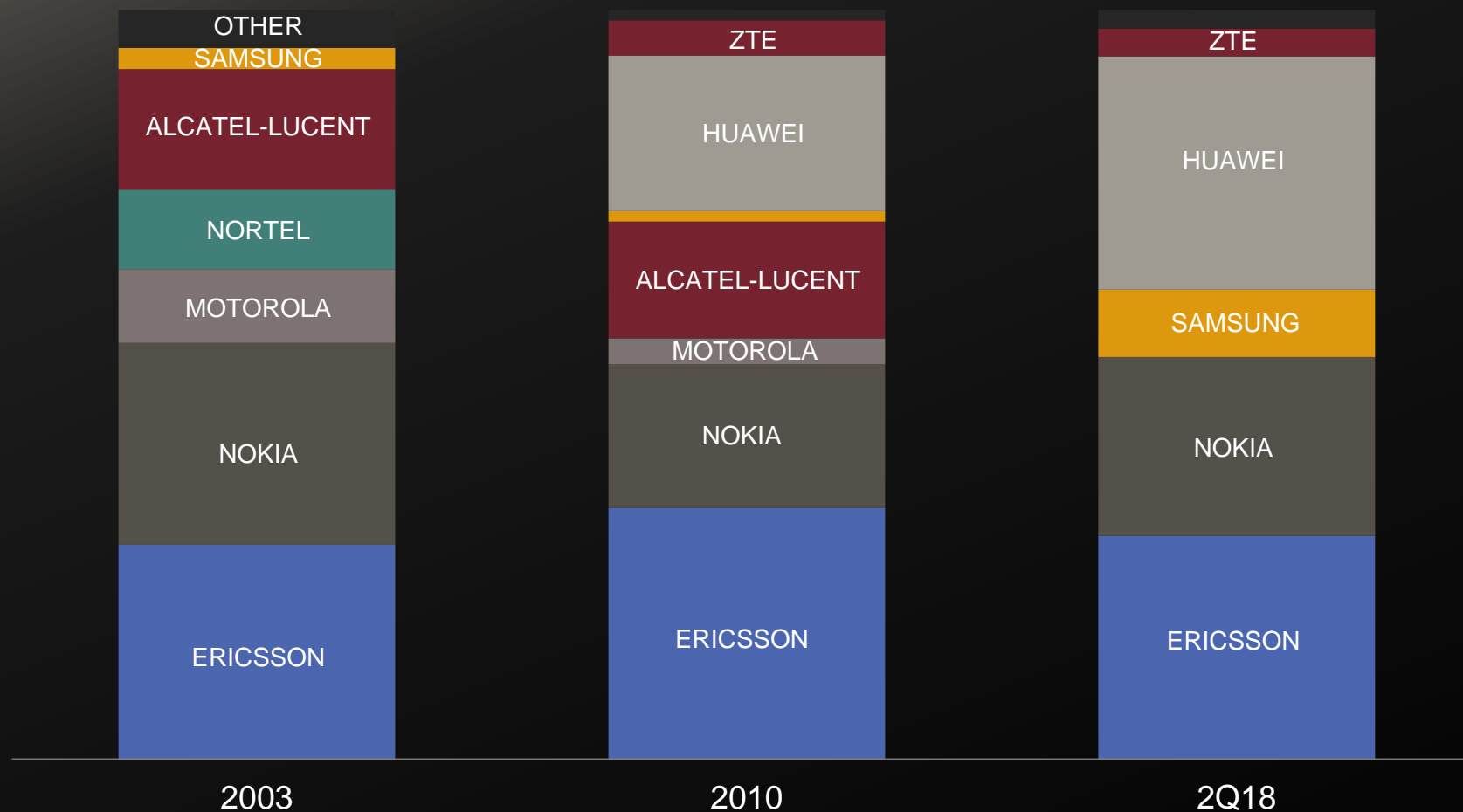


4X

\$ CONTENT

# Changing Carrier landscape

Worldwide RAN Infrastructure Market Share



Dell'Oro

# 5G is here

**verizon**

**SAMSUNG**

**January 3, 2018**

Verizon selects Samsung for 5G commercial launch

**T-Mobile** **ERICSSON**

**January 19, 2018**

T-Mobile US signs \$3.5 billion 5G deployment deal With Ericsson

**Sprint**

**SAMSUNG**

**February 26, 2018**

Sprint to deploy Samsung's new 5G-ready M-MIMO solutions to increase gigabit speeds & capacity

**T-Mobile** **NOKIA**

**July 30, 2018**

T-Mobile signs \$3.5 billion deal with Nokia for 5G technology

**AT&T**

**SAMSUNG**

**September 12, 2018**

AT&T 5G deal marks a first for Samsung in U.S.

**November 17, 2017**

China Mobile to Deploy 10,000 5G Base stations by 2020



中国移动通信  
CHINA MOBILE

Reliance



**SAMSUNG**

**February 28, 2017**

Reliance Jio to bring 5G to India with Samsung

**September 18, 2018**

SK Telecom taps Samsung, Ericsson, Nokia for 5G network deployment

**SAMSUNG**

**SK telecom**

**ERICSSON**

**NOKIA**

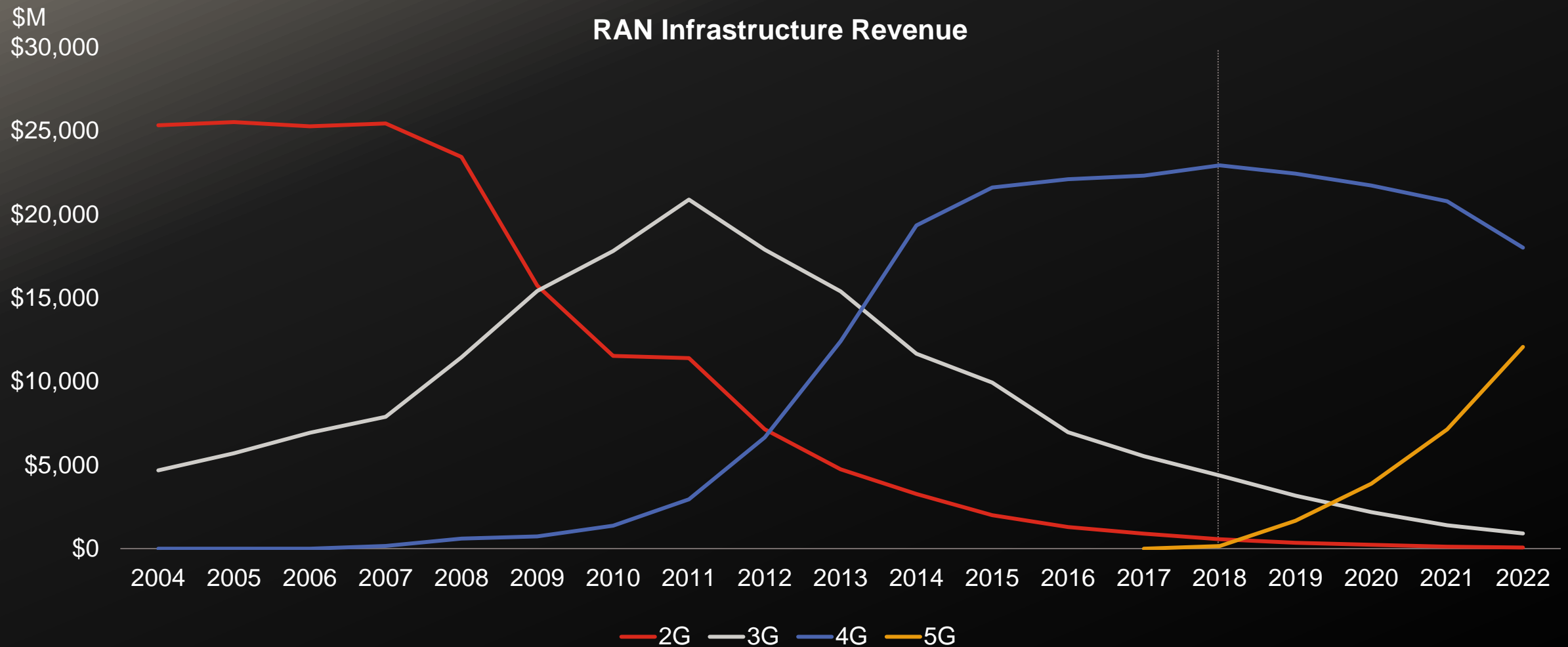
**NOKIA** **docomo**

**January 19, 2018**

NTT Docomo taps Nokia for Japan's 5G launch in 2020



# 5G is a great long-term business for Marvell



Dell'Oro

# 5G will be a major growth driver for Marvell



Proven track record in Carrier

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Full 5G base station platform

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4X \$ content increase

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Well-positioned to grow share

# Summary

- 1 Positioned for continued growth in Enterprise
- 2 Driving new compute models in the Data Center & Edge
- 3 Leading silicon supplier for 5G rollout
- 4 Investing in disruptive technology



# Driving Growth

TOM LAGATTA | EVP, SALES & MARKETING

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October 16, 2018

MARVELL® INVESTOR DAY 2018

# Aligning Sales and Marketing for success



## COVERAGE MAP

- Team
- Relationships
- Channel



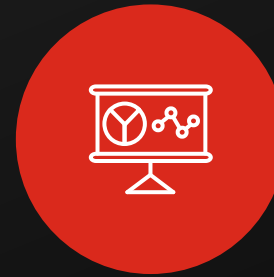
## SALES STRATEGY

- Analytics/Metrics
- Tools/Process
- Solution selling
- Hybrid



## ACCOUNT PENETRATION

- Maintained top accounts
- Grow new accounts
- Very healthy top 10
- Complementary top 10



## WORLD-CLASS MARKETING

- Digital marketing
- Website
- PR/trade show strategy
- BU coordination



## BUSINESS DEVELOPMENT

- Built auto BD
- Building service provider
- Cultivating strategic partnerships

# Sales integration status

- Created a complementary mix of talents from both companies
- Americas product cross-training complete – online for EMEA & Asia
- Tools and systems merging now
- Complete merger of pay plans and incentive structures Q1/FY20
- Hauled Murphy all over the globe



# The new Marvell – Company positioning

- Focused infrastructure powerhouse with the broadest portfolio
- A pragmatic, experienced partner for our valued customers
- Targeted IP deployed in customers' solutions – from ASIC to SP
- Experienced in moving, storing, processing and securing data
- Apply our IP to create next-gen learning machines

We think ahead, so our customers can too...

Last year...

If You Want to Catch Big Fish.....



You Have to Fish Where the Big Fish Are!

MARVELL INVESTOR DAY 2017

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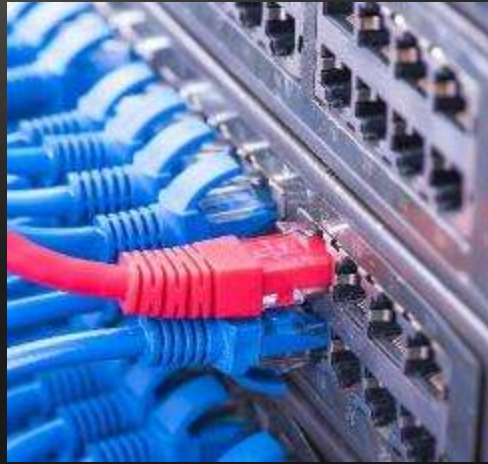
84



# Aligned to catch the big fish across our target markets

8 CUSTOMERS OVER \$100M | TOP ACCOUNTS ARE ALL DIRECT | INVESTING IN CHANNEL FOR FLEXIBILITY

## ENTERPRISE



## CARRIER



## DATA CENTER



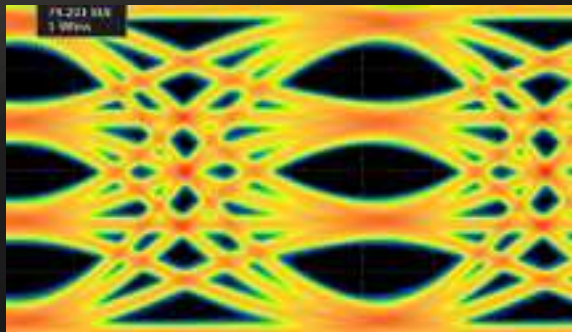
## EDGE/OTHER





# Transitioning from supplier to partner for the future

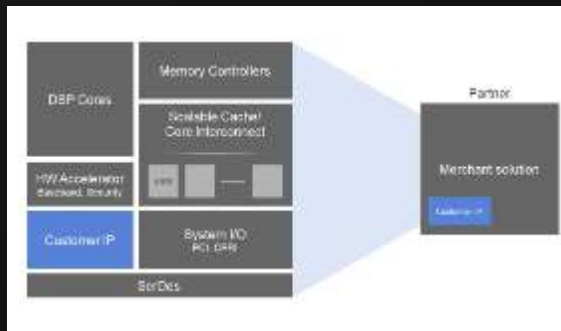
## IP PORTFOLIO



## COMPLETE PLATFORM



## BUSINESS MODELS



## FOCUS & SUPPORT



# Our platform enables cross-selling opportunities

## ENTERPRISE



## CARRIER



## DATA CENTER



## EDGE/OTHER

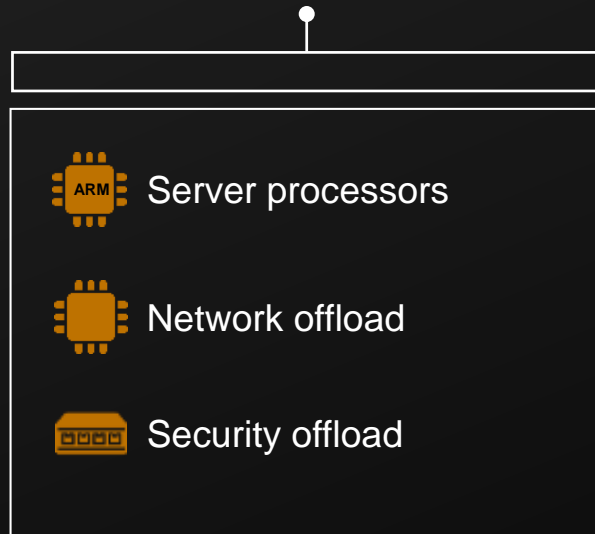


Processors  
Storage  
Networking  
Security  
Connectivity

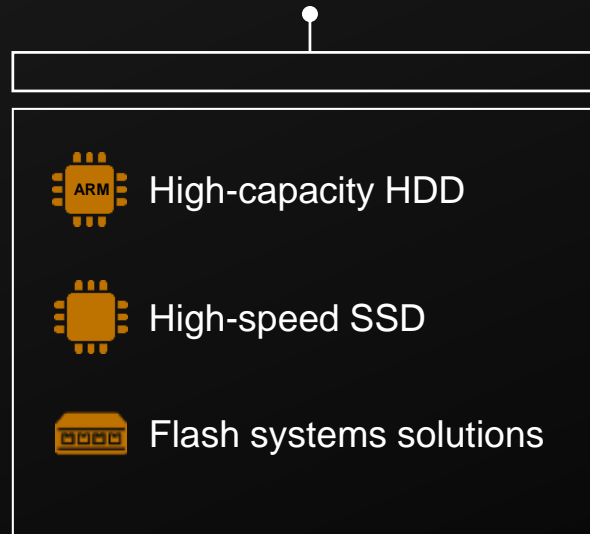
# Cross-selling our Data Center platform



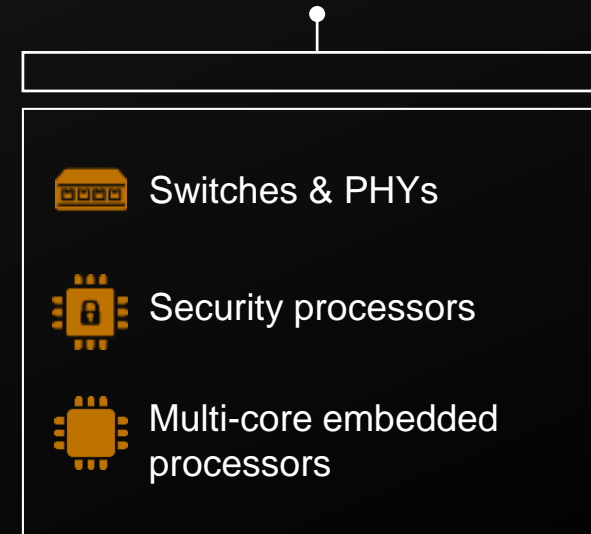
## SERVERS & SYSTEMS



## STORAGE



## NETWORKING

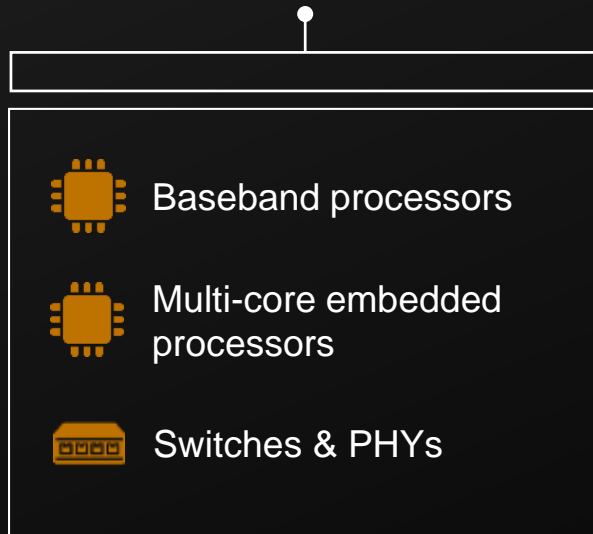




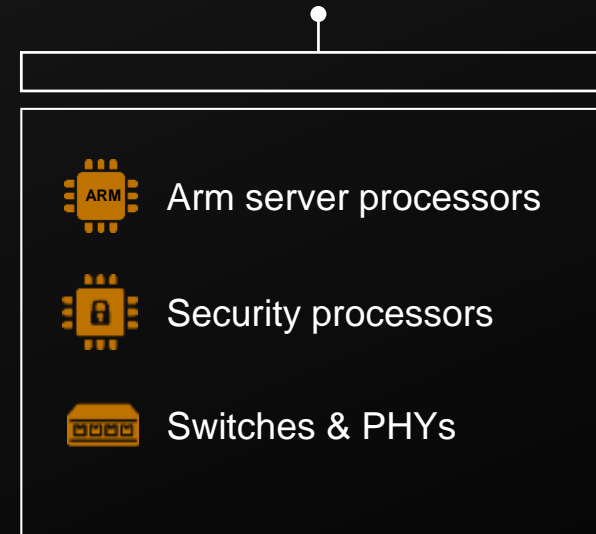
# Cross-selling our Carrier platform



## RAN SOLUTIONS



## CORE SOLUTIONS



# Cross-selling our Enterprise platform



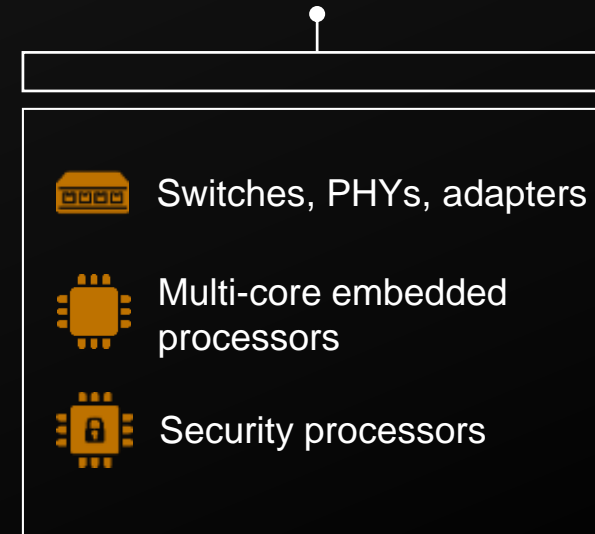
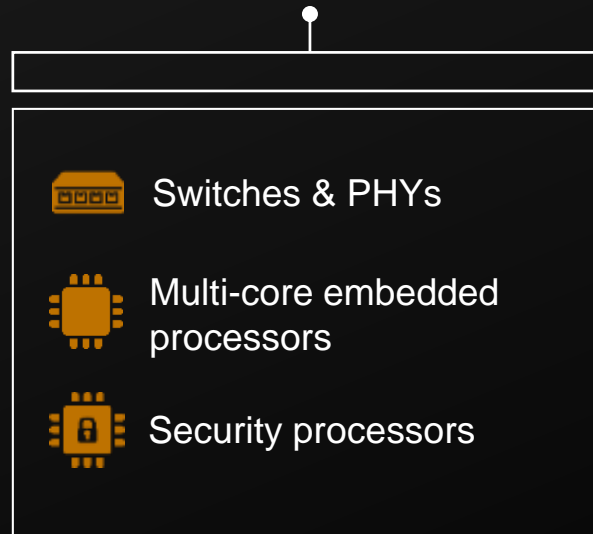
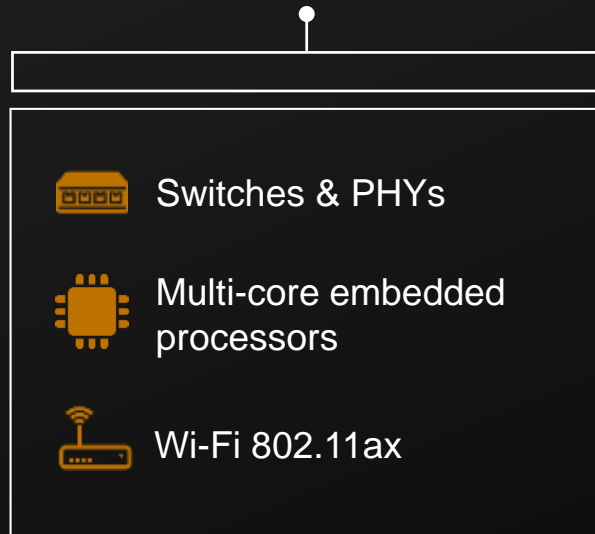
**ACCESS**



**AGGREGATION**



**CORE**



# Sales & Marketing are aligned to drive growth

- 1 We have been on a journey
- 2 Integration completed
- 3 Creating an infrastructure powerhouse
- 4 Portfolio creating leverage across markets
- 5 Our future's so bright, you gotta wear shades!

THE NEW MARVELL





# Creating Long-Term Shareholder Value

JEAN HU | CHIEF FINANCIAL OFFICER

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October 16, 2018

MARVELL® INVESTOR DAY 2018

# Powerful business model delivers long-term shareholder value

## Revenue growth

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Focused on growing infrastructure markets

Breadth and depth of product portfolio

Strong customer partnerships

## Margin expansion

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Technology differentiation & product mix

Economies of scale

Operational excellence

## Capital allocation

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Organic investment

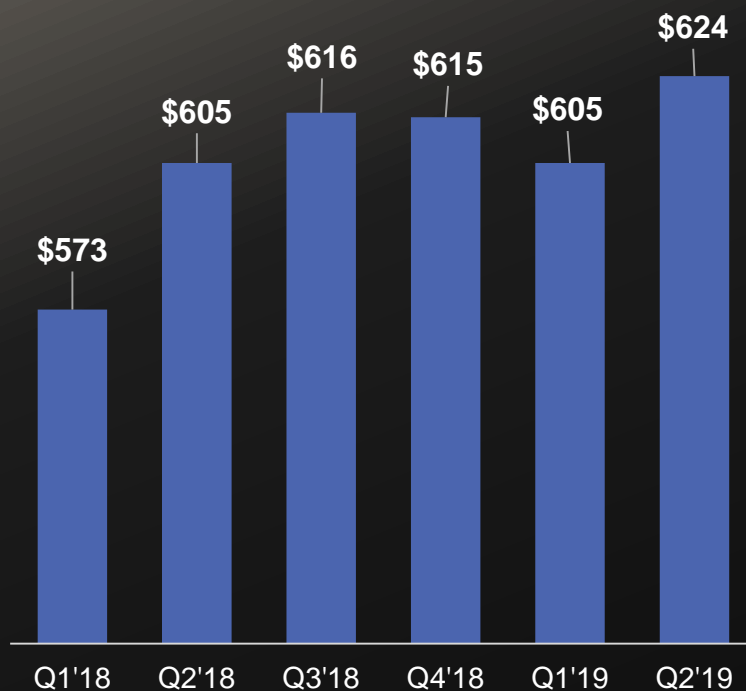
M&A

Return cash to shareholders

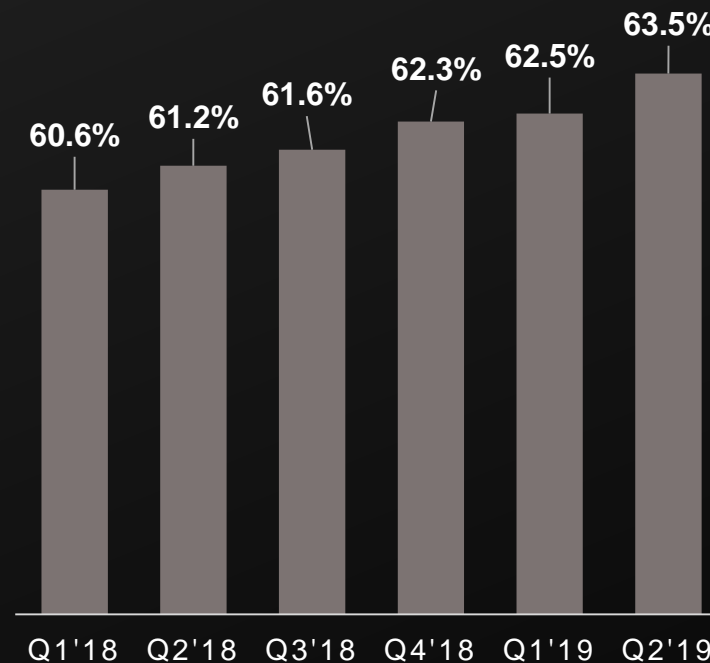
Focus on generating long-term growth and cash flow

# Strong execution on our financial model

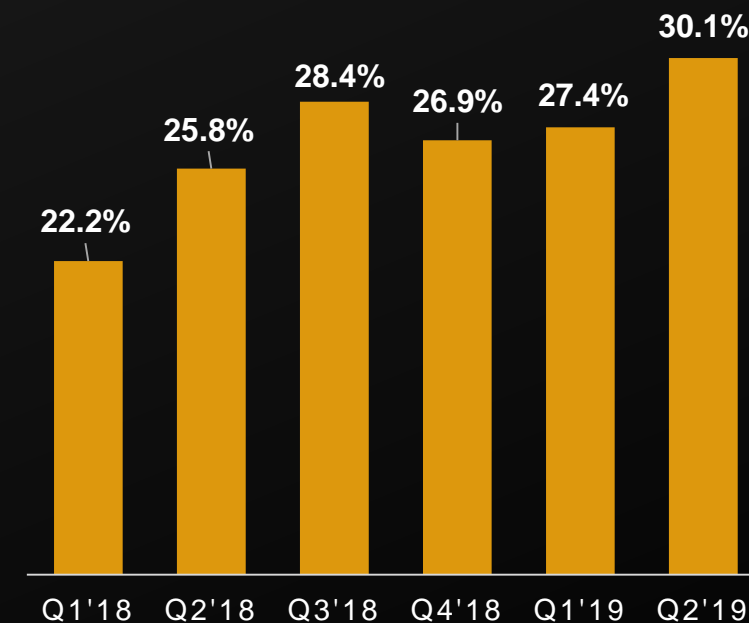
Revenue (\$M)



Non-GAAP Gross Margin %



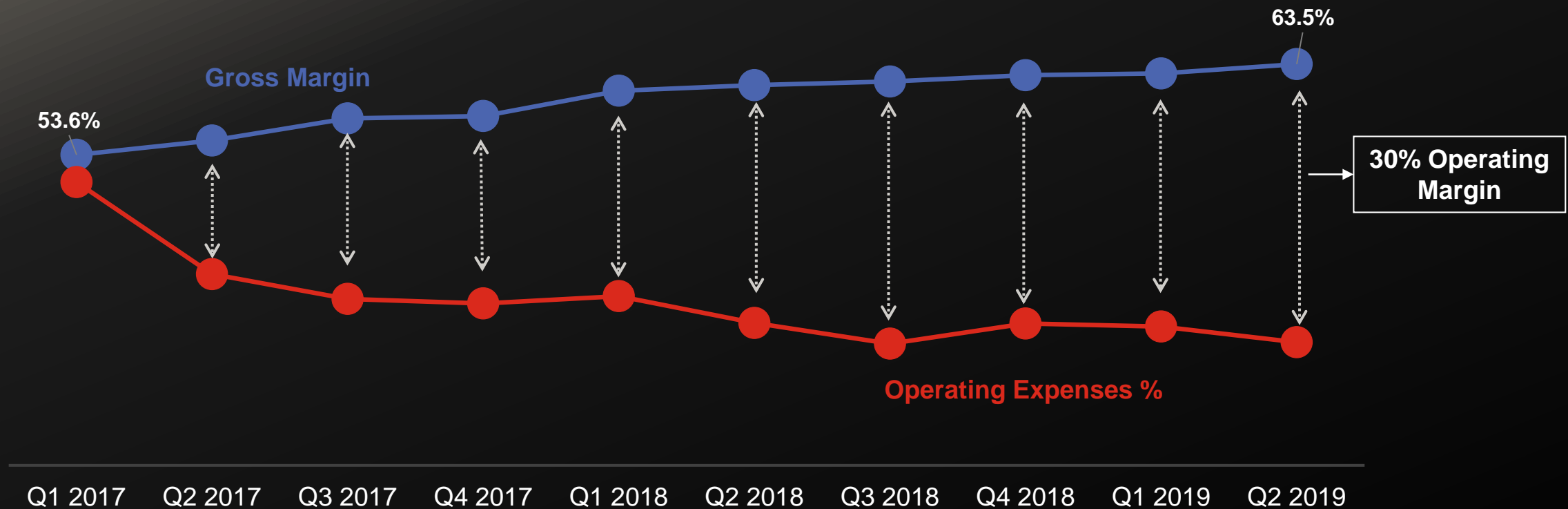
Non-GAAP Operating Margin %



Fiscal quarter financial results do not include the results of Cavium. Revenue, Gross Margin and Operating Margin are presented on a non-GAAP basis and exclude special items. A reconciliation can be found at the end of the presentation.



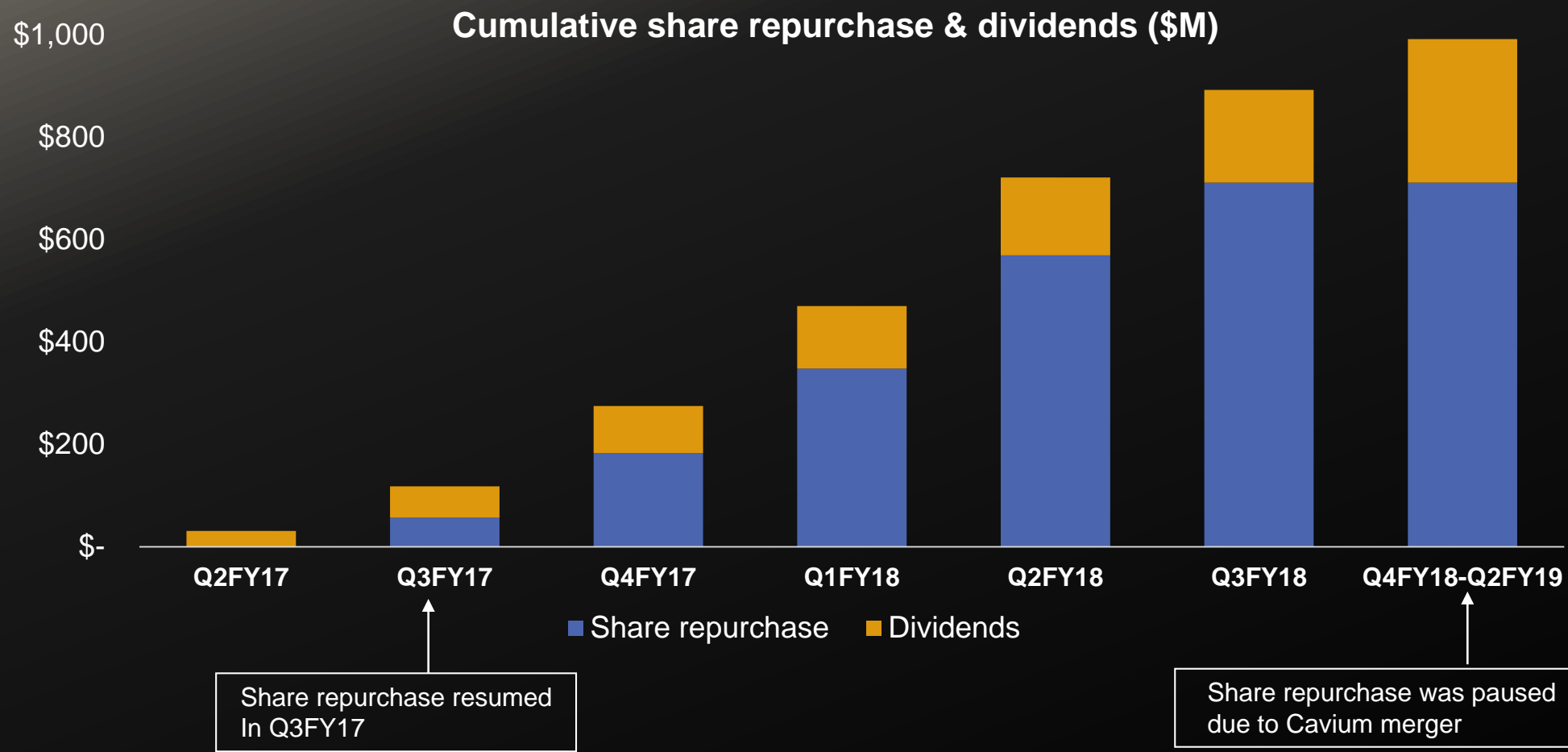
# Driving margin expansion and operating leverage



Gross margin and operating expenses % do not include Cavium and are presented on a non-GAAP basis and exclude special items. A reconciliation can be found at the end of the presentation.

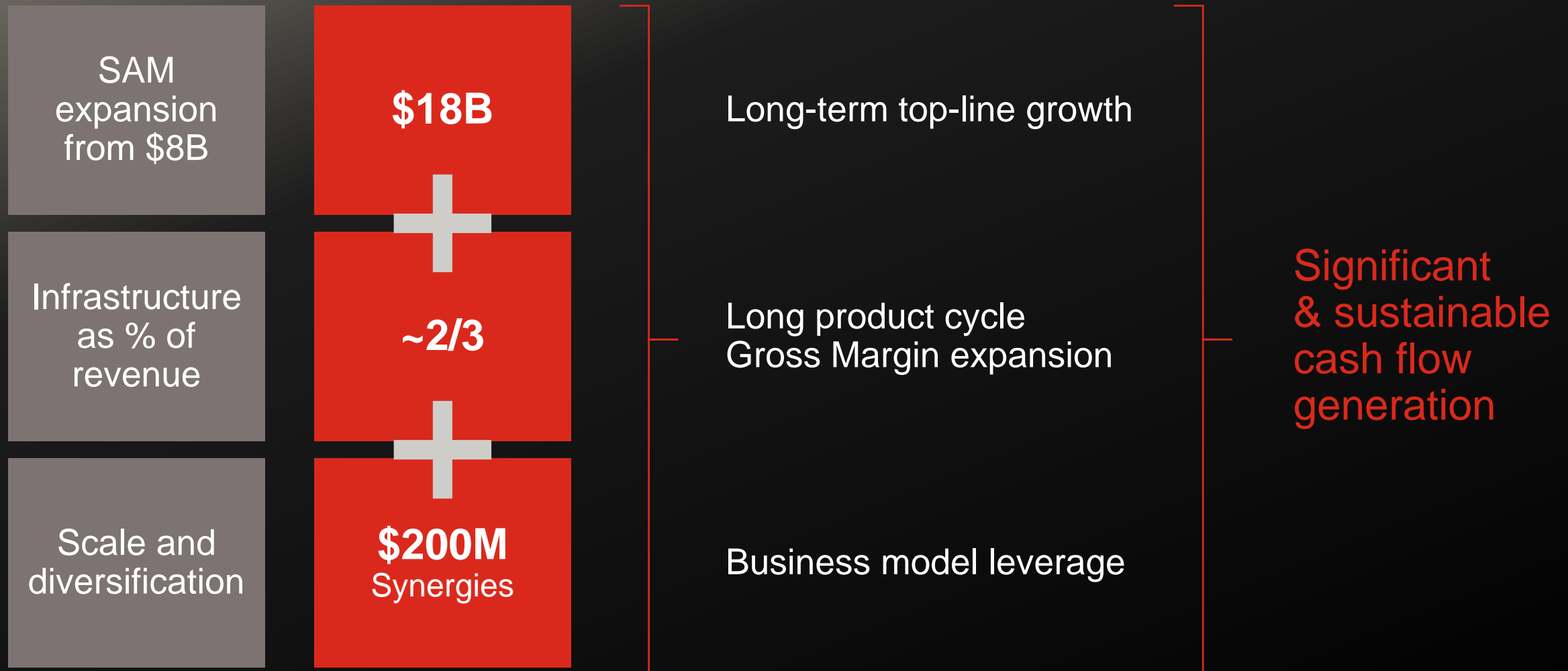
# Returned ~100% of free cash flow to shareholders

~\$1B CAPITAL RETURNS SINCE Q2FY17



Marvell 10Qs and 10-K

# Cavium merger strengthens our business model





# Focused on infrastructure market opportunities

Marvell long-term revenue CAGR: 6-8%



UP low single-digit

- Data Center opportunities
- Flash solutions



UP low teens

- Enterprise upgrade cycle
- 5G adoption with existing customers
- Data Center presence
- Moderate server processor revenue



Down high single-digit

- Printer and legacy products with long life

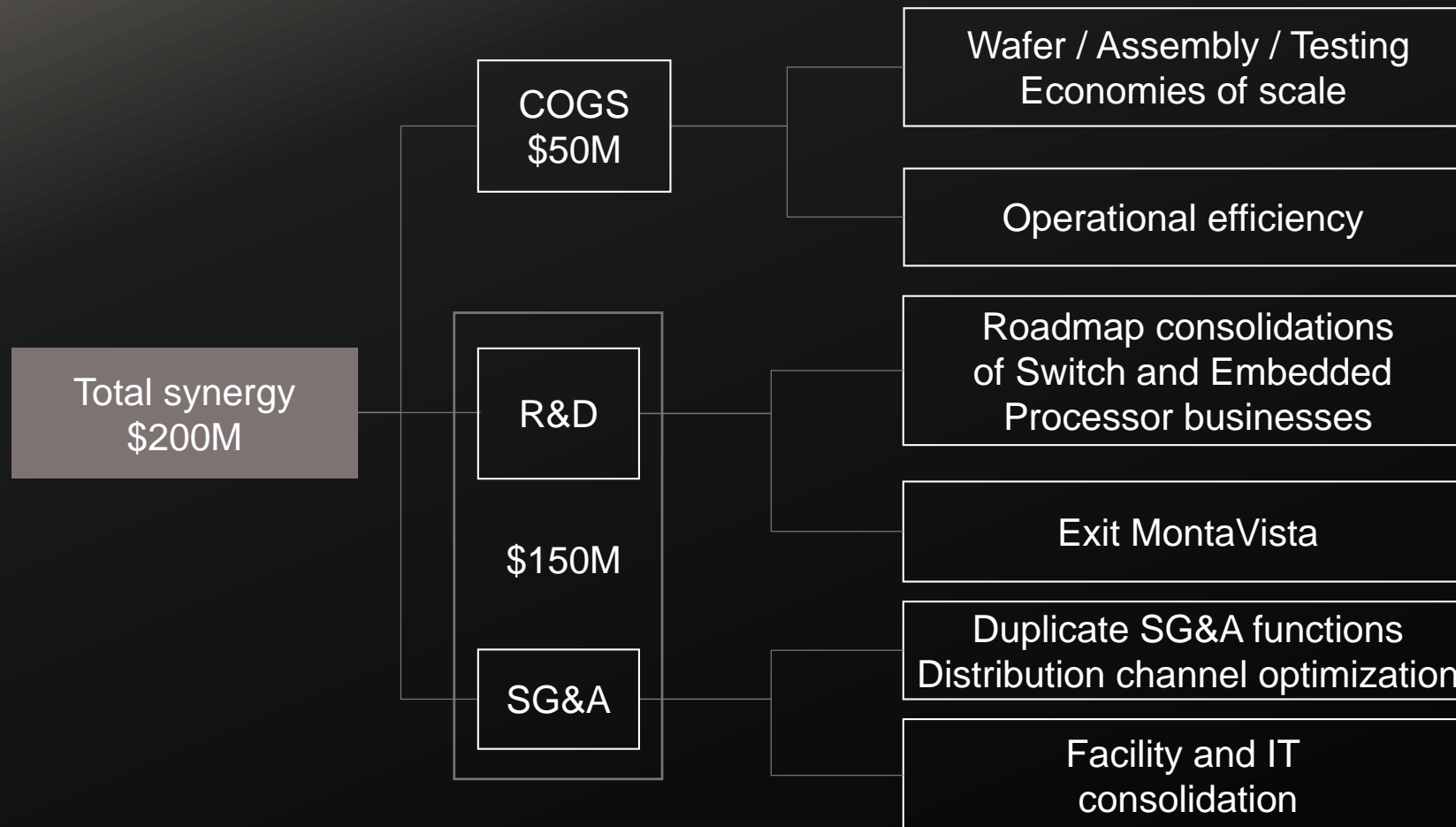
## UPSIDE

Revenue synergies

Additional 5G customer wins

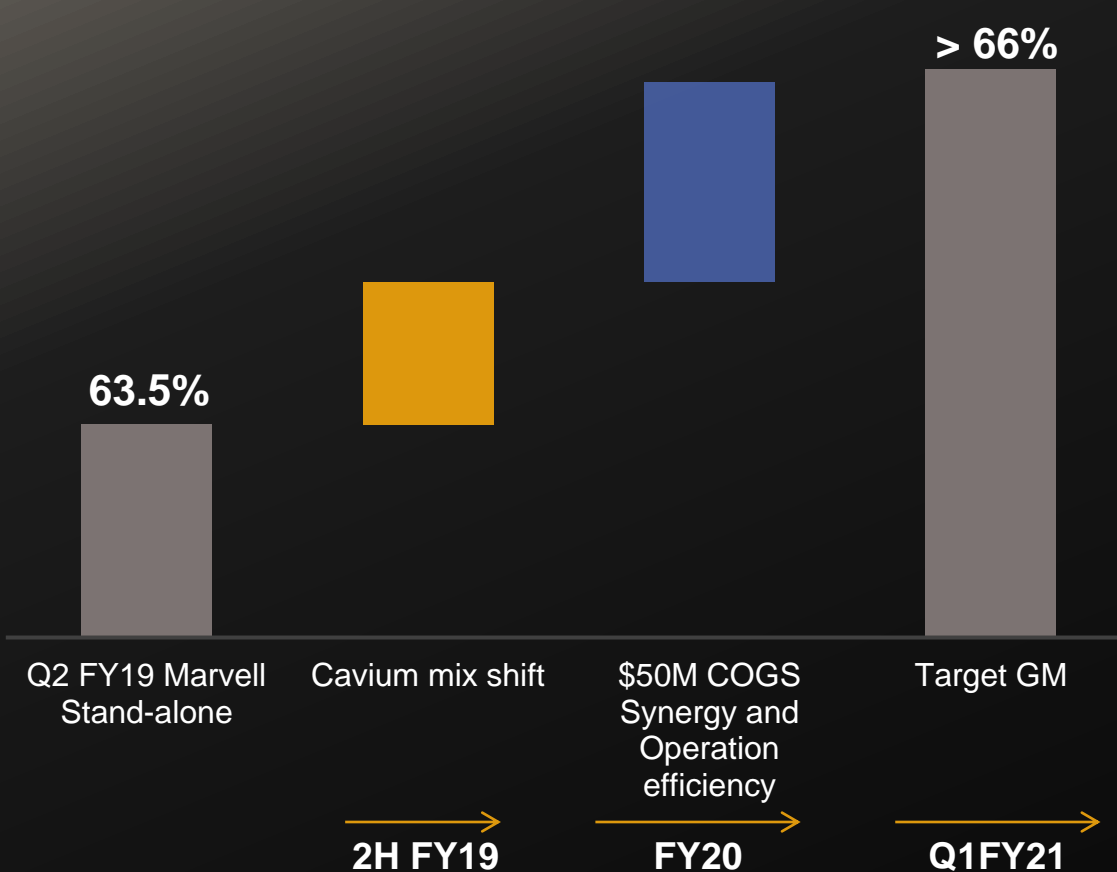
Hyper-scale Arm server adoption

# Raised synergy target to \$200M

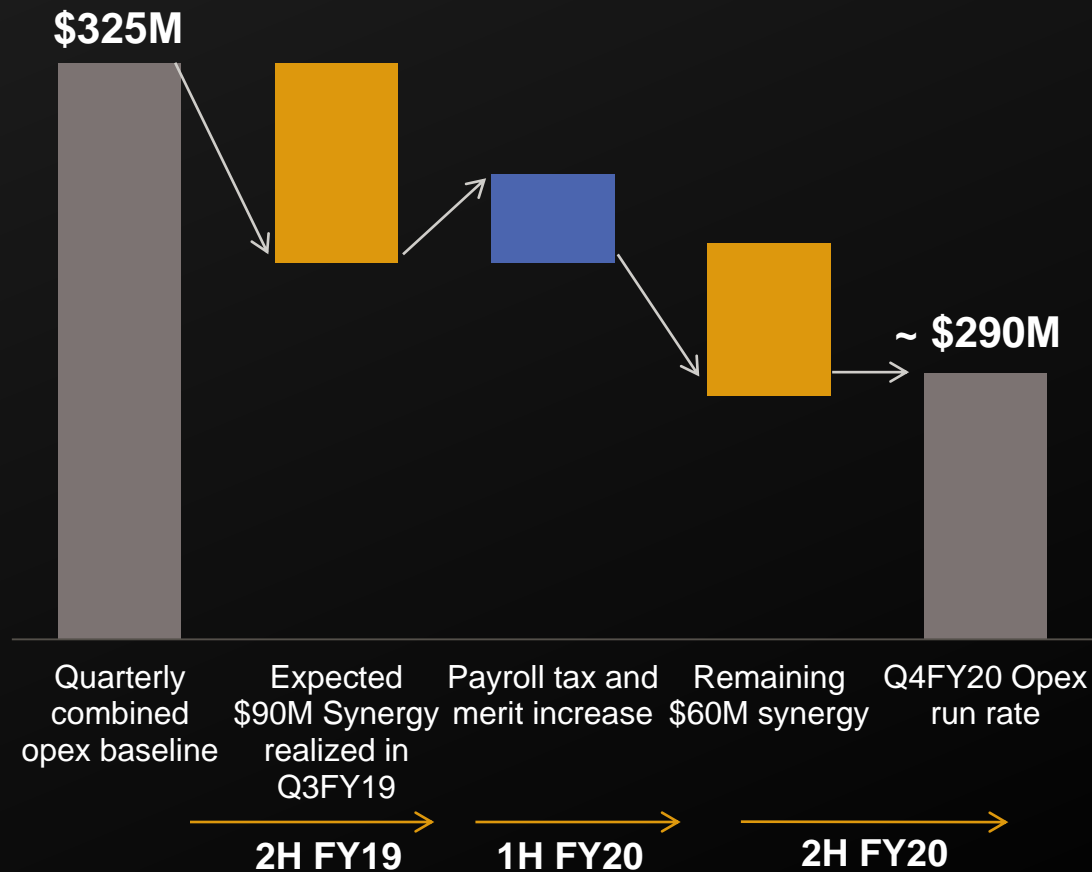


# Synergy execution timeline

## \$50M gross margin synergy and margin expansion



## Operating expense synergy plan



Disclaimer: Charts are not to scale, for illustration purposes only.



# Disciplined allocation of SG&A and R&D

Driving operational excellence...

**SG&A: 6-7% OF SALES**

- Rationalize sales coverage
- Leverage scale
- Streamline and optimize G&A
- Consolidate facility

...enabling growth investment

**R&D: 24-25% OF SALES**

- Established business: < target
- Growth business: > target
- Strategic investments: Create future growth opportunities

**Invest to deliver long-term profitable growth**

# Compelling long-term financial model

End of FY22 Non-GAAP*	Target model	Commentary
Revenue growth CAGR	6-8%	Storage: Low single-digit Networking: Low teens
GM%	>66%	Product mix, scale and \$50M synergy
R&D%	24-25%	Invest to drive long-term value creation
SG&A%	6-7%	Operational excellence
Operating margin %	>35%	Grow operating income faster than revenue
FCF%	>30%	~100% of non-GAAP net income

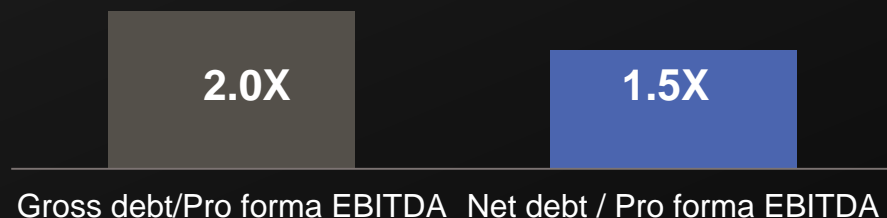
\*Revenue and financials represented on a non-GAAP basis. Assumes capex to be 2-3% sales.

# Capital structure supports long-term growth strategy

## AMPLE ACCESS TO LIQUIDITY

- Cash balance (Q2FY19) = \$524M
- Undrawn credit facility = \$500M
- Strong free cash flow

### Current leverage ratio



## KEY CREDIT OBJECTIVES

- Investment-grade credit rating
- Access to debt capital markets
- Strong financial flexibility
- Expect to pay down debt to achieve 1.5X gross debt leverage ratio within 12 months

Current leverage ratio is based on Q2FY19 balance sheet metrics and pro forma Marvell+Cavium EBITDA for LTM ending Q2FY19. \$524M cash includes cash on hand plus short term investments.



# Balanced capital allocation strategy

## INVEST IN BUSINESS

- Focus on disciplined organic investment to drive long-term revenue growth
- R&D as % of sales: 24-25%
- Strategic M&A

## SHAREHOLDER RETURNS

- Long-term target return: At least 50% of free cash flow to shareholders
- Return cash through dividend and share repurchase

Increased Share Repurchase Plan to \$1B

# Creating long-term shareholder value

- 1 Marvell is well-positioned in the growing infrastructure market
- 2 Powerful business model delivers long-term profitable growth and cash flow generation
- 3 Strong financial position and flexibility supporting growth and capital returns

MARVELL®

Thank you

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# Unaudited GAAP to Non-GAAP reconciliations (\$K)

Fiscal Quarter	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19
Fiscal Quarter ending:	Apr 30, 2016	Jul 30, 2016	Oct 29, 2016	Jan 28, 2017	Apr 29, 2017	Jul 29, 2017	Oct 28, 2017	Feb 3, 2018	May 5, 2018	Aug 4, 2018
GAAP Net income (loss)	\$(22,679)	\$51,305	\$72,616	\$(80,091)	\$106,621	\$165,259	\$200,188	\$48,763	\$128,612	\$6,759
Less: Income (loss) from discontinued operations	(15,387)	(11,161)	(10,557)	(16,563)	7,029	29,809	50,851	—	—	—
GAAP net income (loss) from continuing operations	(7,292)	62,466	83,173	(63,528)	99,592	135,450	149,337	48,763	128,612	6,759
(1) Cost of goods sold										
Share-based compensation	1,784	2,720	2,189	1,641	1,426	1,810	1,747	1,662	1,905	4,748
Amortization of acquired intangible assets	—	—	—	—	—	—	—	—	—	18,984
Other costs of goods sold	—	—	—	—	—	3,000	—	8,000	—	22,933
(2) Research and development:										
Share-based compensation	21,633	24,851	17,261	11,063	13,990	12,371	12,713	13,053	14,285	26,859
Other operating expenses	(49)	174	—	299	2,160	1,790	(268)	—	—	301
(3) Selling, general and administrative:										
Share-based compensation	(1,989)	5,508	5,780	8,958	6,323	7,186	6,179	6,662	7,662	41,816
Amortization and write-off of acquired intangible assets	2,298	2,299	2,299	1,480	1,071	1,065	1,076	358	—	6,955
Other operating expenses	1,291	(187)	—	16	143	(103)	388	10,579	15,252	27,928
(4) Restructuring and other exit related costs in Operating Expense	4,441	721	1,164	90,475	886	4,285	3,284	(3,205)	1,567	35,415
(5) Luna settlement and related charges in Operating Expense	—	—	—	—	—	—	—	74,385	—	—
(6) Interest and other (income) loss, net										
Restructuring related items	—	—	—	—	—	(3,085)	(2,286)	1,355	(1,512)	(121)
Issuance cost related to terminated standby loan	—	—	—	—	—	—	—	—	—	6,104
(7) Provision for income taxes:										
Tax-related adjustments	(1,071)	—	—	67,989	(64)	(10,298)	(398)	3,170	(3,098)	(36,720)
<b>Non-GAAP Net income from continuing operations</b>	<b>\$21,046</b>	<b>\$98,552</b>	<b>\$111,866</b>	<b>\$118,393</b>	<b>\$125,527</b>	<b>\$153,471</b>	<b>\$171,772</b>	<b>\$164,782</b>	<b>\$164,673</b>	<b>\$161,961</b>
<b>Non-GAAP Operating income</b>	<b>\$15,192</b>	<b>\$86,445</b>	<b>\$121,919</b>	<b>\$114,969</b>	<b>\$127,424</b>	<b>\$155,767</b>	<b>\$175,015</b>	<b>\$165,505</b>	<b>\$165,750</b>	<b>\$177,648</b>