

# INVESTOR DAY 2020

**October 8, 2020**  
**Virtual Event**



# Introduction

**Ashish Saran**

Vice President, Investor Relations

October 8, 2020

# Agenda

TOPIC	PRESENTER
Accelerating growth in 5G, cloud, and automotive	Matt Murphy President and CEO
Technology leadership	Sandeep Bharathi SVP of Central Engineering
Leading the way in data center storage	Dan Christman EVP of Storage Business Group
Networking leadership	Raghib Hussain, Chief Strategy Officer and EVP of Networking & Processors
Financial roadmap	Jean Hu Chief Financial Officer
Q&A session	All

# Forward-looking statements

- Except for statements of historical fact, this presentation contains forward-looking statements (within the meaning of the federal securities laws) including, but not limited to, statements related to market trends and to the company's business and operations, business opportunities, growth strategy and expectations, and financial targets and plans, 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.
- For 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 1, 2020 as filed with the SEC on August 28, 2020 and other factors detailed from time to time in Marvell's filings with the SEC. The forward-looking statements in this presentation speak only as of the date of this presentation and Marvell undertakes no obligation to revise or update publicly any forward-looking statements.



# Non-GAAP financial measures

- During this presentation, we may refer to certain financial measures on a U.S. 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>.

# Basis of presentation

## **Fiscal Year vs Calendar Year**

- Financial measures in this presentation correspond to Marvell's fiscal calendar
- Marvell's fiscal year is the 52- or 53-week period ending on the Saturday closest to January 31
- As an example, FY2020 refers to the period February 3, 2019 through February 1, 2020
- We may also refer to calendar years in presenting external market data

## **Revenue and addressable markets**

- Marvell report's revenue disaggregated in three broad product groups: Networking, Storage and Other
- During this presentation, we also provide additional information on revenue and addressable market trends by four end markets: Enterprise Networking, Carrier Infrastructure, Datacenter and Edge

# Data infrastructure (Video)



# Accelerating growth in 5G, cloud, and automotive

**Matt Murphy**

President & Chief Executive Officer

October 8, 2020



# Why data infrastructure?

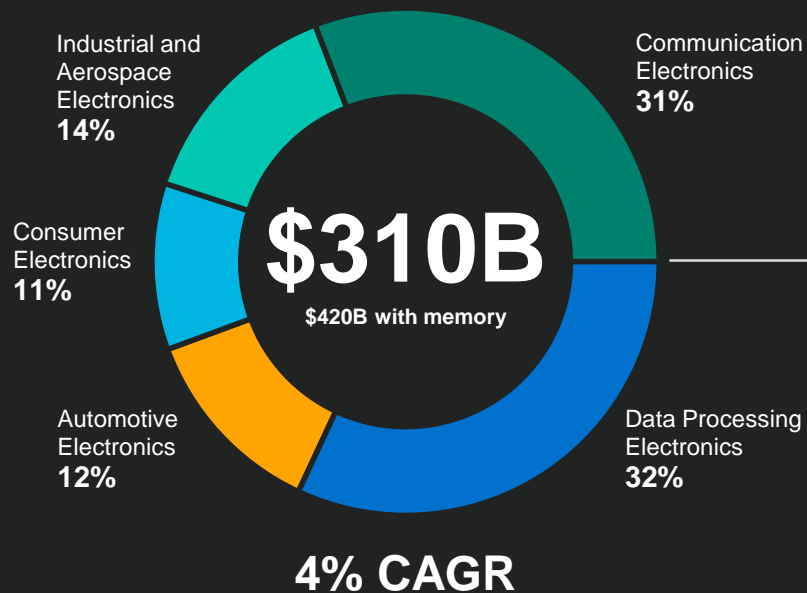
**>\$100B TAM**

**High growth**

**High barrier  
to entry**

# What is the data infrastructure market?

## WW Semi TAM



Consumer



Infrastructure



Consumer



Infrastructure



Source: Gartner, CY19

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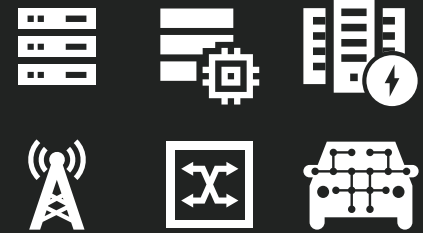
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# What is the data infrastructure market?

We cut the market a different way

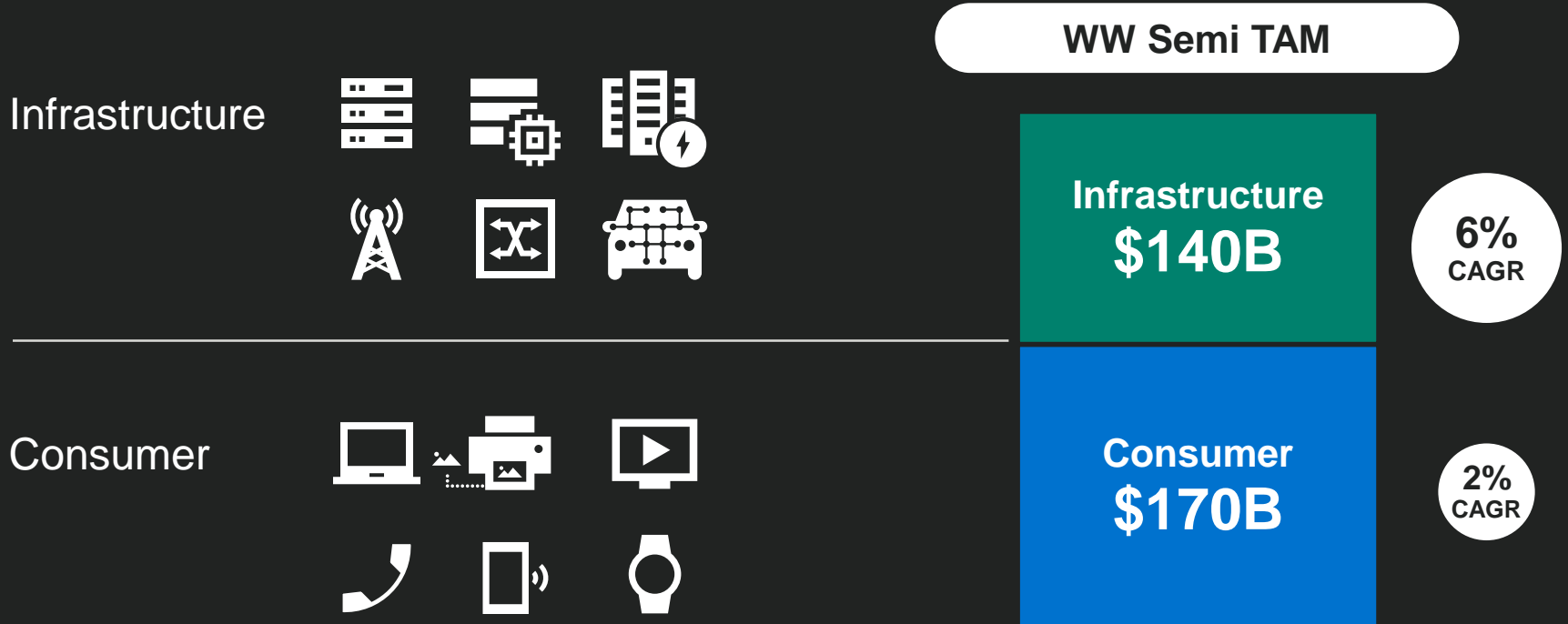
Infrastructure



Consumer



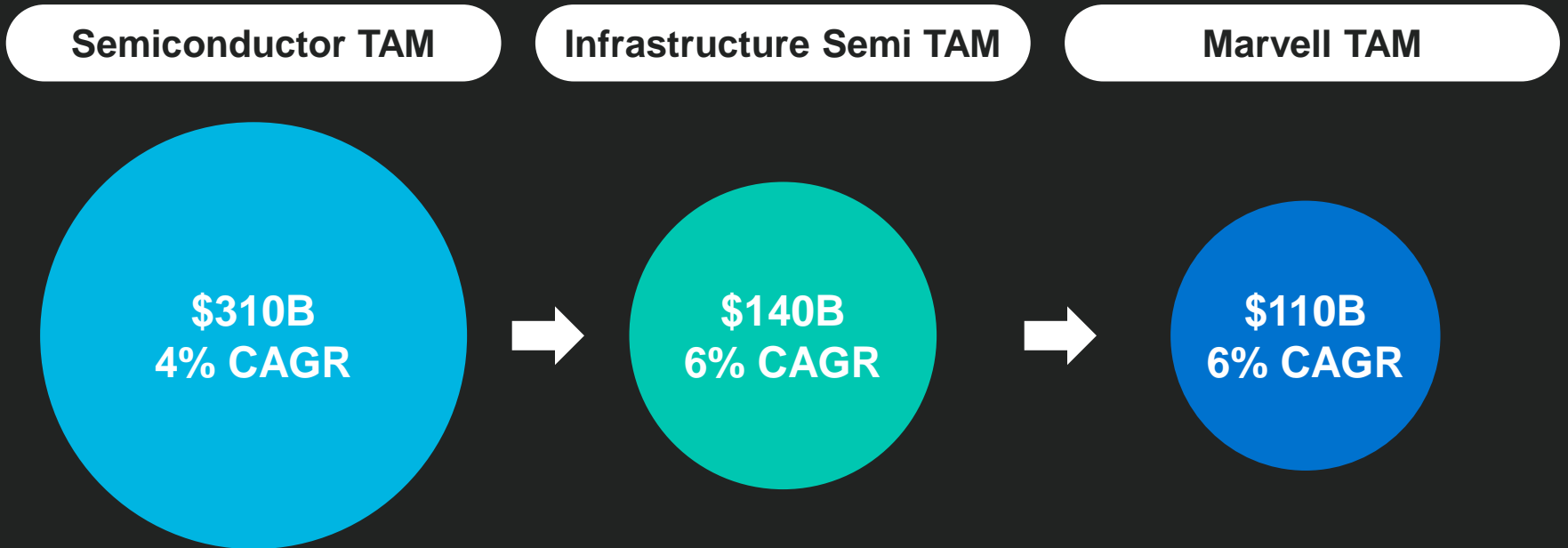
# What is the data infrastructure market?



Source: Gartner, CY19, Marvell estimates

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# The most exciting market in semiconductors



Source: Gartner, CY19, Marvell estimates

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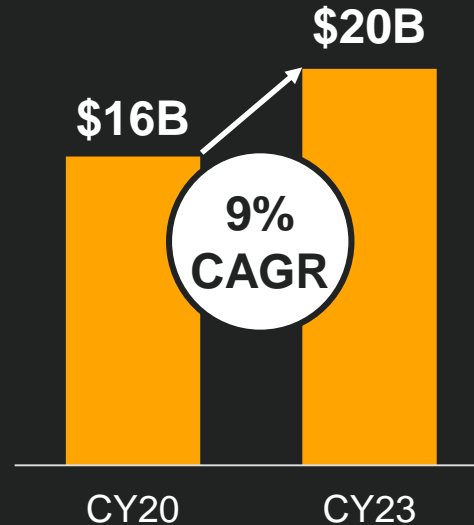


# The most exciting market in semiconductors

**Marvell TAM**

**\$110B**  
**6% CAGR**

**Marvell SAM**



Source: Gartner, CY19, Marvell estimates

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# 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.

# Transformation to one-stop full solutions provider

Storage | Networking

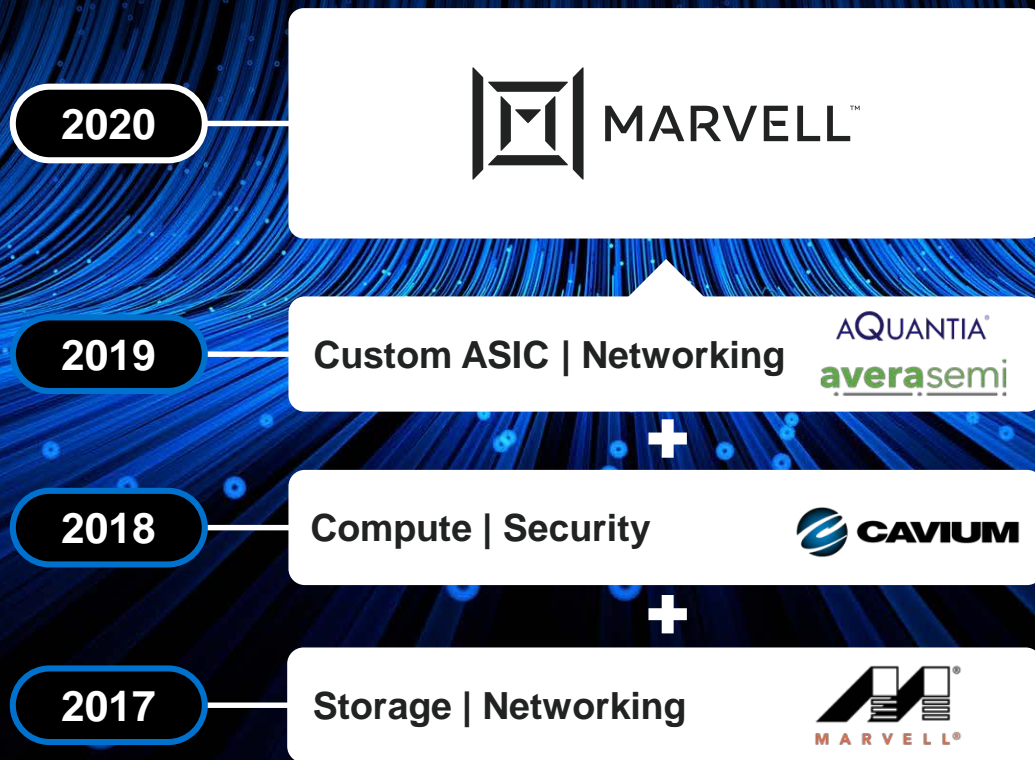


Divest non-core businesses

WiFi | LTE modem | Multimedia | G.hn



# Transformation to one-stop full solutions provider



# Leveraging technology platform across product lines

## Storage

### SSD and HDD controllers and accelerators



### Fibre Channel adapters



## Networking and compute

### Ethernet switches, PHYs and adapters



### Data processing units (DPUs)



### Automotive Ethernet

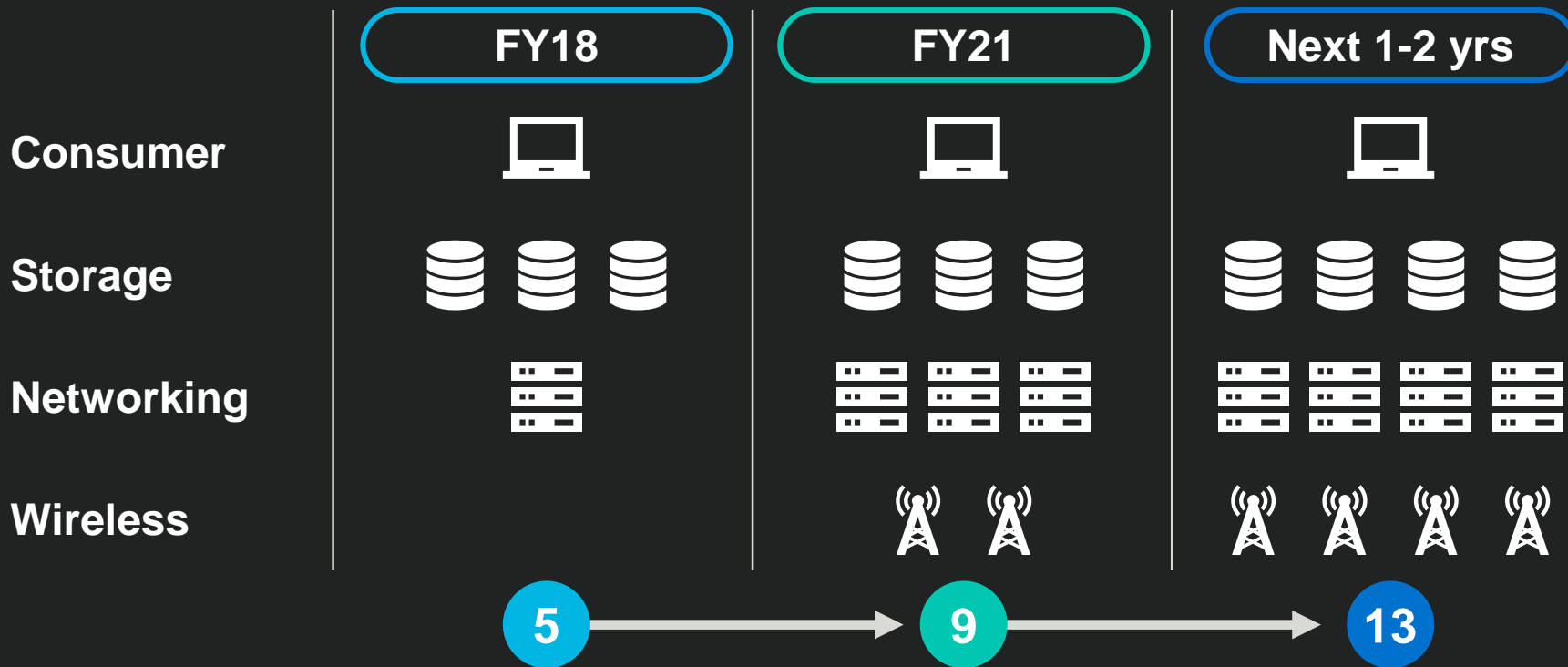


### Custom ASICs



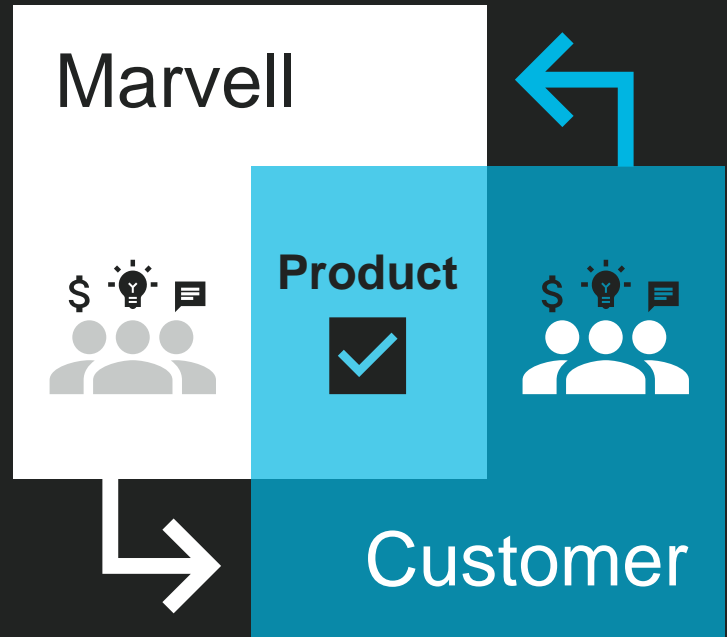


# Numerous \$100M+ accounts and growing



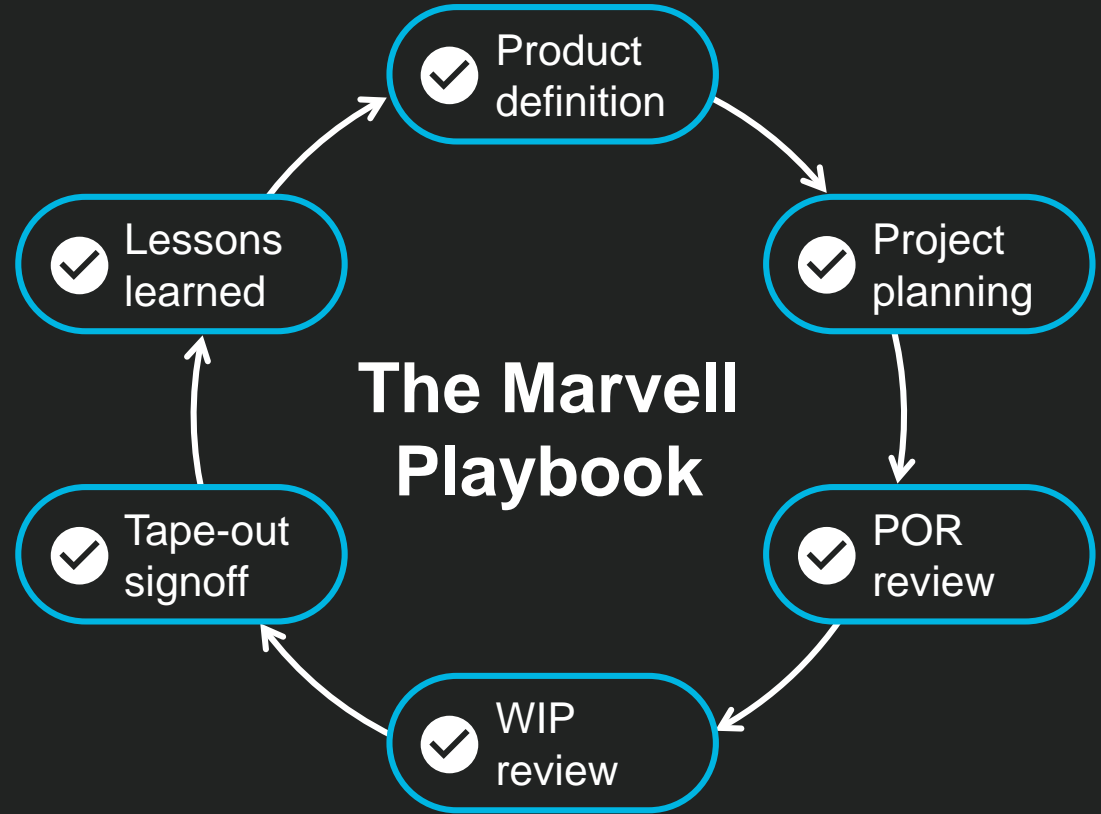
# Co-investing with customers

- All ASIC projects have NRE funding
- >1/3 of non-ASIC projects include NRE





“Execute with  
thoroughness  
and rigor”



# Our ESG journey



## Environmental

Reducing  
carbon footprint



## Social

Strong community  
support



## Governance

Strong board and  
shareholder focus

Joined UN  
Global Compact

Adopted SASB  
methodology



Essential technology, done right™

---

Across Marvell, our work and partnerships are based on four principles

## **Dynamic**

Combining perspectives to create the smartest paths

## **Attentive**

Listening, adapting and collaborating with nimble dexterity

## **Real**

Transparent, goal-oriented, and deliver what we promise

## **Tenacious**

Working shoulder-to-shoulder and leading the charge



# Accelerating growth in 5G, cloud, and automotive

Data  
infrastructure

Technology  
leadership



Customer  
partnerships

Growth from  
5G, cloud, auto

# Evolution to being 1<sup>st</sup> to market

Fast follower



Process leader



# Delivering a 5nm platform for portfolio-wide leadership



**40%**

Lower power



**30%**

Higher density

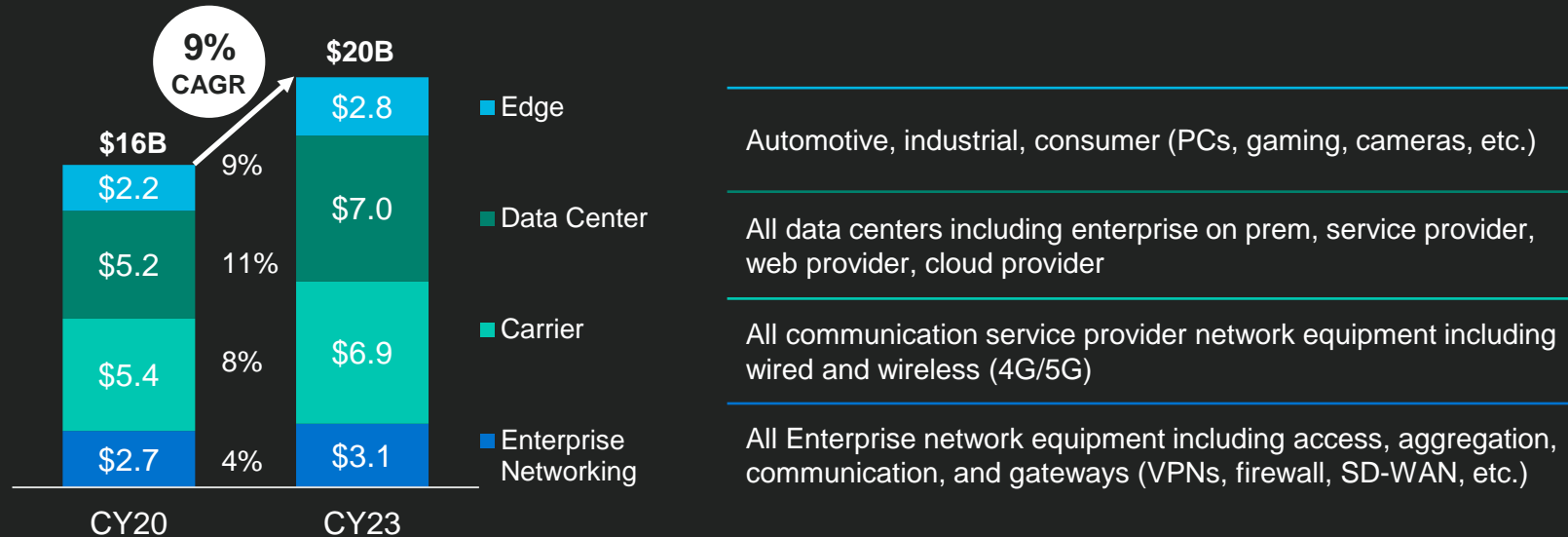


**+++**

Architecture  
and design

# Our opportunity by end market

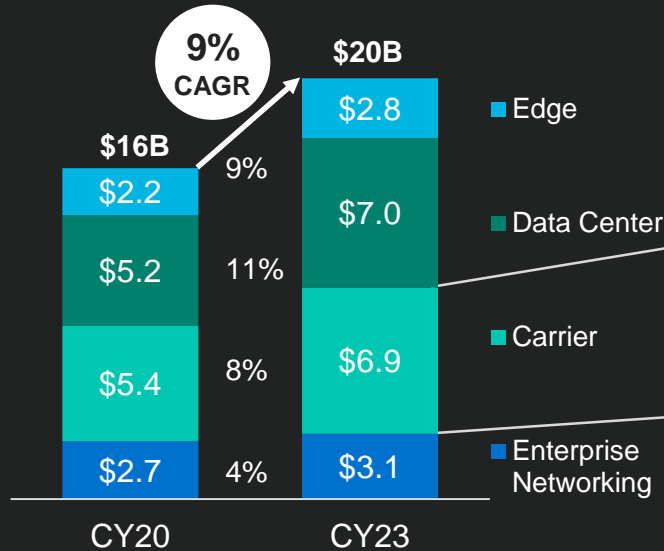
## Serviceable market by end market



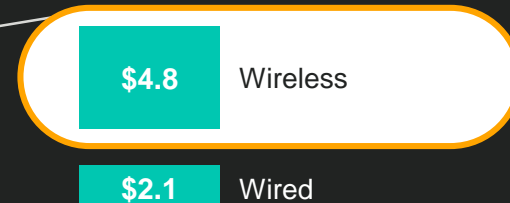
Source: Crehan, Dell'Oro, Forward Insights, Gartner, Linley Group, Strategy Analytics, Trend Focus and Marvell estimates

# Investing in high growth subsegments: 5G, cloud, auto

## Serviceable market by end market



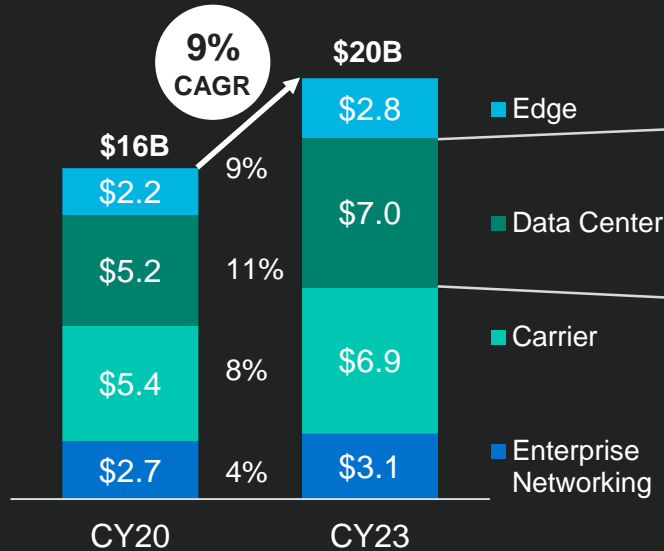
## Key high growth subsegments



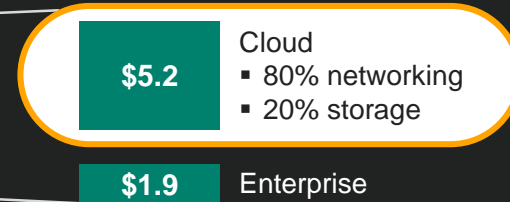
Source: Crehan, Dell'Oro, Forward Insights, Gartner, Linley Group, Strategy Analytics, Trend Focus and Marvell estimates  
 Industrial includes: Aerospace & defense, factories, smart cities

# Investing in high growth subsegments: 5G, cloud, auto

## Serviceable market by end market



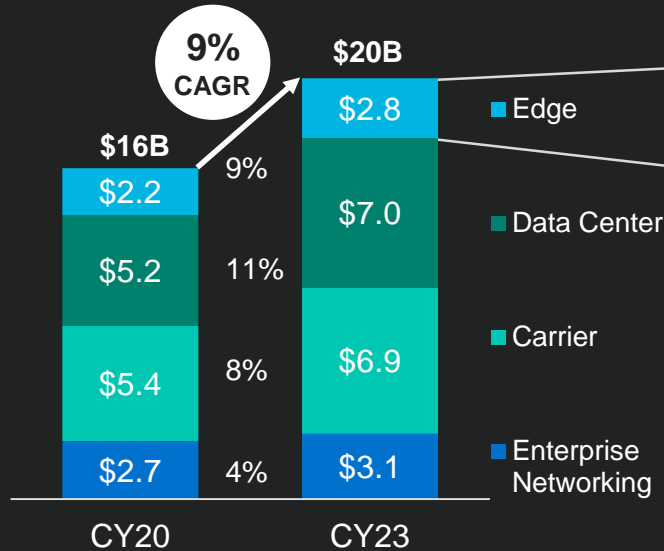
## Key high growth subsegments



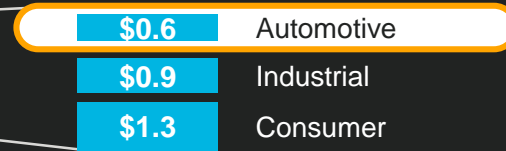
Source: Crehan, Dell'Oro, Forward Insights, Gartner, Linley Group, Strategy Analytics, Trend Focus and Marvell estimates  
 Industrial includes: Aerospace & defense, factories, smart cities

# Investing in high growth subsegments: 5G, cloud, auto

## Serviceable market by end market



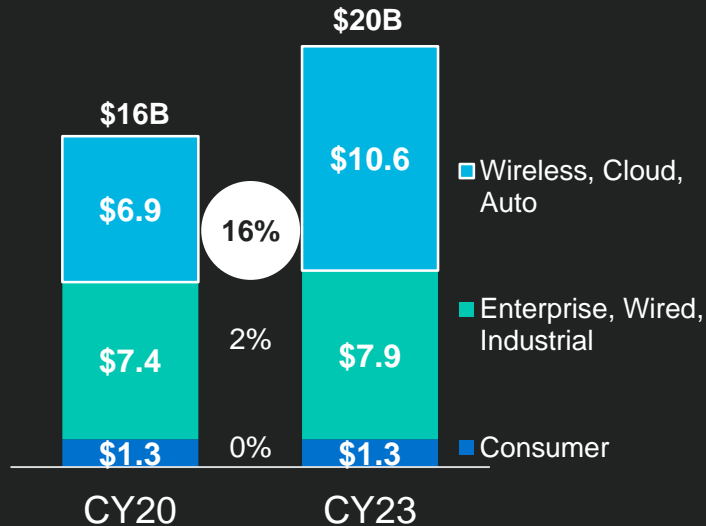
## Key high growth subsegments



Source: Crehan, Dell'Oro, Forward Insights, Gartner, Linley Group, Strategy Analytics, Trend Focus and Marvell estimates  
 Industrial includes: Aerospace & defense, factories, smart cities

# Our share and strategy for long term growth

## Growth segments



End Market	LTM Revenue	Growth Expectations
5G, cloud, auto	~ \$0.7B 10% share	~ 2X market growth
Enterprise, wired, industrial	~ \$1.5B 20% share	Faster than market
Consumer	~ \$0.6B 50% share	Flat

**Long term target 10-15%**

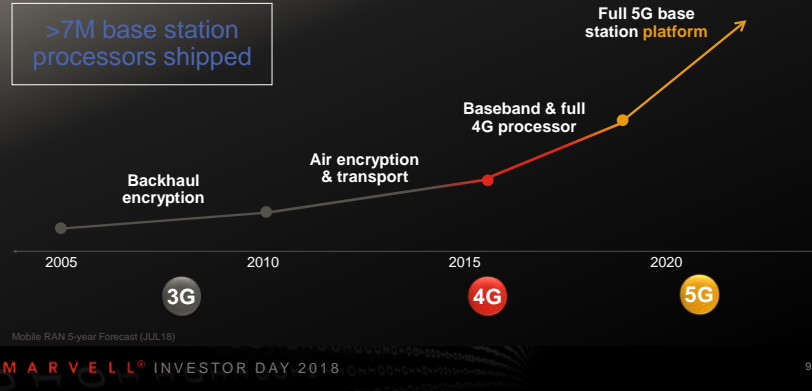


# Acceleration of 5G growth drivers

## Base case

Marvell has a growing position in Carrier infrastructure

>7M base station processors shipped



## Today

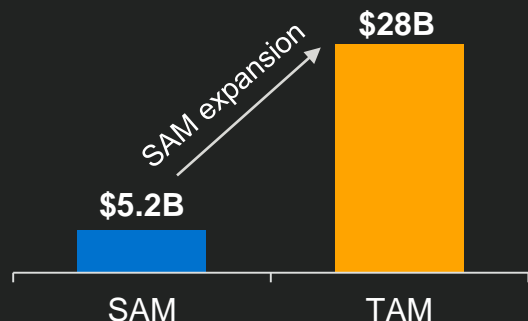
- Full platform at 2<sup>nd</sup> OEM
- Broader Ethernet adoption
- Larger radio head opportunity
- Massive MIMO adoption
- Tier 2 / regional OEM wins
- Potential market share shifts

**Significantly larger 5G opportunity**

# Breaking down our cloud data center opportunity

## Cloud opportunity

- Carrier and data center SAM similar
- Data center TAM much larger



## Cloud strategy

### Current position

- >10% company revenue today
- 50/50 storage & networking
- Both growing, networking much faster

### Storage drivers

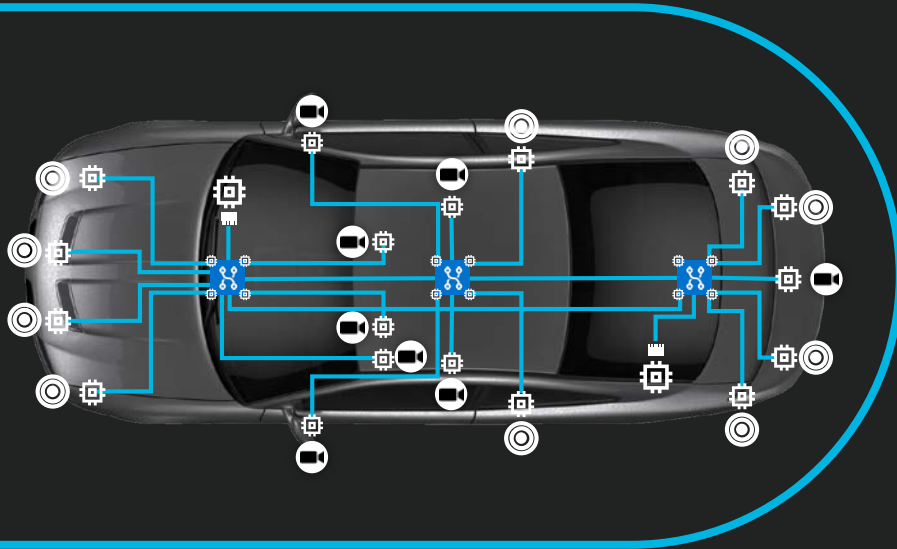
- DIY SSD strategy
- Nearline growth + preamp share

### Networking drivers

- DPU for network & security acceleration
- Custom and semi-custom ASIC
- Large SAM expansion opportunity

**Cloud revenue opportunity similar to 5G**

# Automotive Ethernet: the next >\$1 billion market for Marvell



Multi-billion \$ connectivity TAM now

- Migrating to Ethernet over time

Per car content from \$5 to \$50 today

- Growing to >\$100 with autonomous

Design wins at 24 OEMs

- Investing to be market leader

**Secured design wins to drive share to >1/3 of market**

# Accelerating growth in 5G, cloud, and automotive

## Data infrastructure

- \$110B TAM
- Secular growth
- Focused execution



# Accelerating growth in 5G, cloud, and automotive

- New \$100M+ customers
- Co-invest business model

## Customer partnerships



# Accelerating growth in 5G, cloud, and automotive



## Technology leadership

- 5nm technology platform
- Fast follower to leader

# Accelerating growth in 5G, cloud, and automotive



- 5G accelerating
- Cloud momentum
- \$1B auto Ethernet

Growth from  
5G, cloud, auto

# Accelerating growth in 5G, cloud, and automotive

Data  
infrastructure

Technology  
leadership



Customer  
partnerships

Growth from  
5G, cloud, auto





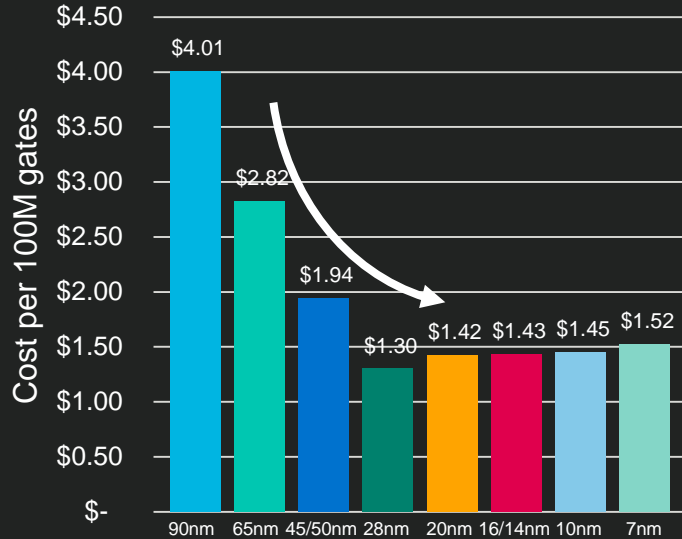
Thank You

# Technology Leadership

**Sandeep Bharathi**  
SVP Central Engineering  
October 8, 2020

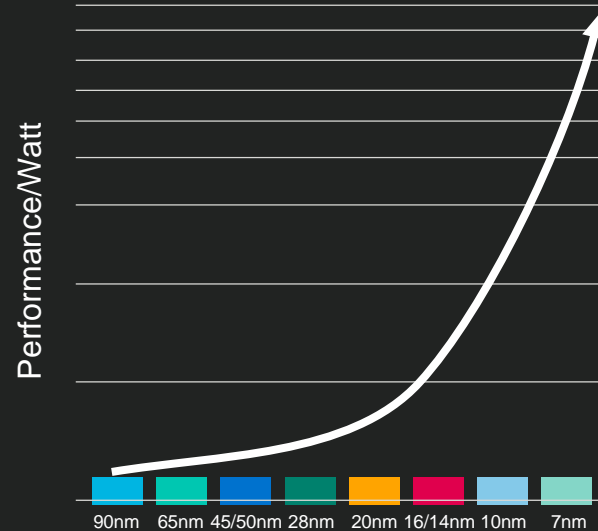
# Moore's law slowing down...

Gate cost trend



# Demand for computational performance continues

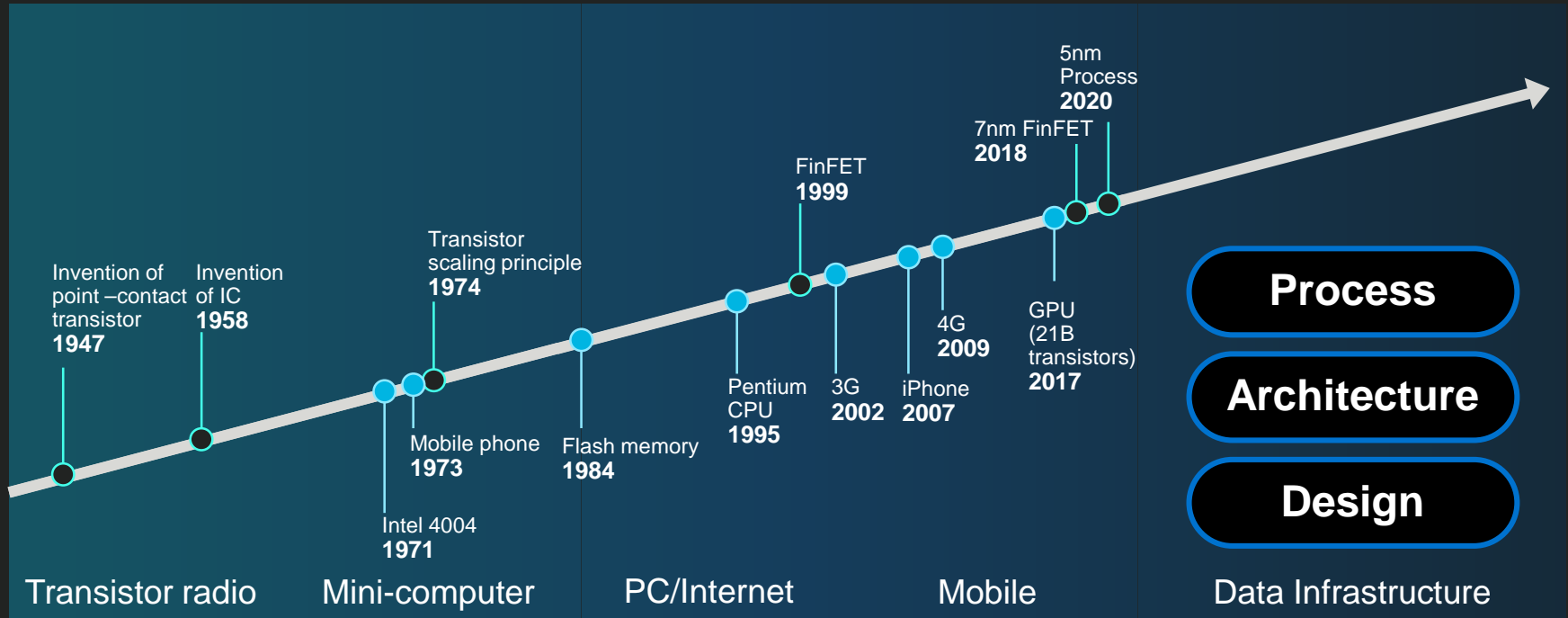
Performance/Power trend



**High performance and low power needs latest process**

Source: International Business Strategies, Inc.

# It's all about the platform!



**Platform focus delivers the highest performance/watt**

Source: TSMC and Marvell

# Migrating to advanced geometry is imperative

## Process

Advanced features  
with greater integration

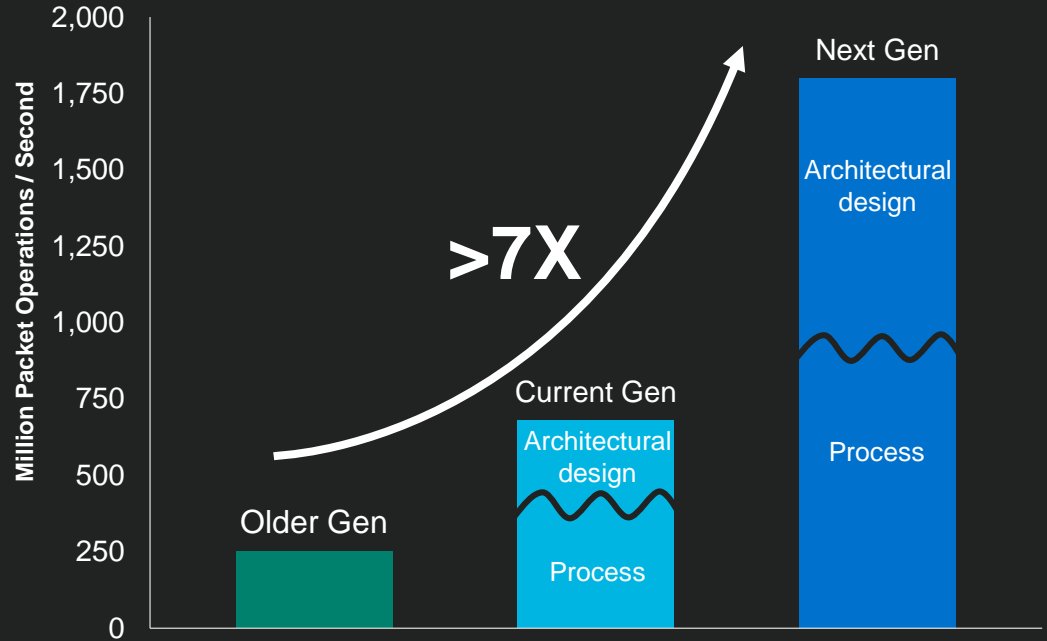
## Architecture

Deliver higher  
performance

## Design

Deliver lower power

OCTEON DPU Performance  
(@ same power)



# Evolution to platform leadership



Led with architecture and design

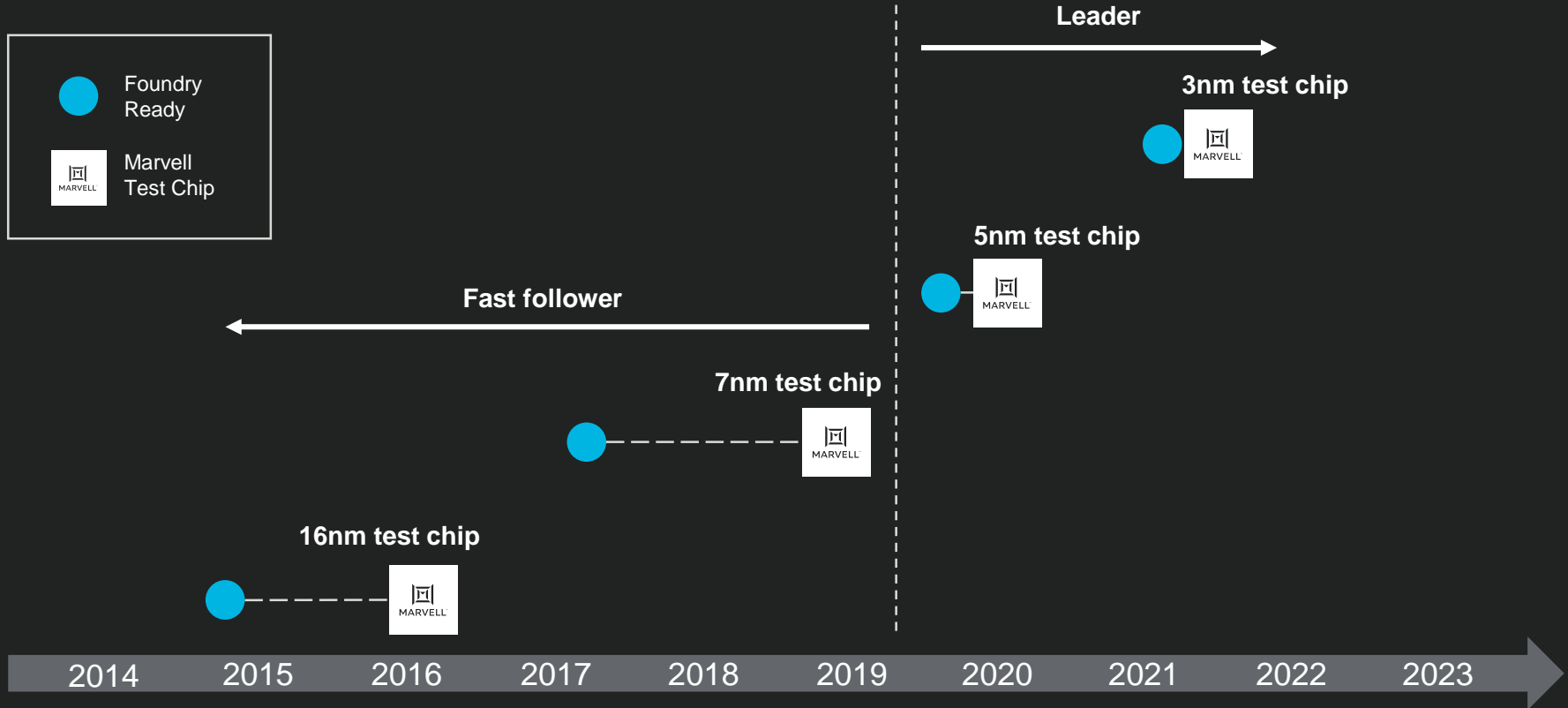
# Achieved scale and expertise



Lead with process technology, architecture, design

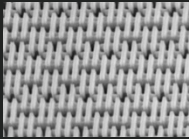


# Process: from fast follower to leader

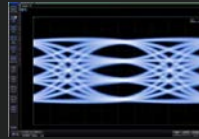


# Key platform features for leading-edge process success

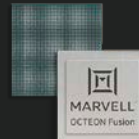
## Leadership technology and design platform



Access to leading edge process



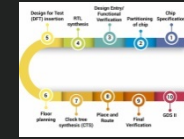
Analog and Digital IP



Advanced packaging



Test prototype



Development Flow

## Collaboration with industry ecosystem partners

Foundry | EDA SW | Wafer/Chip Test and Assembly | External IP Portfolio | Supply chain

**Scale enables delivery of a complex technology platform**

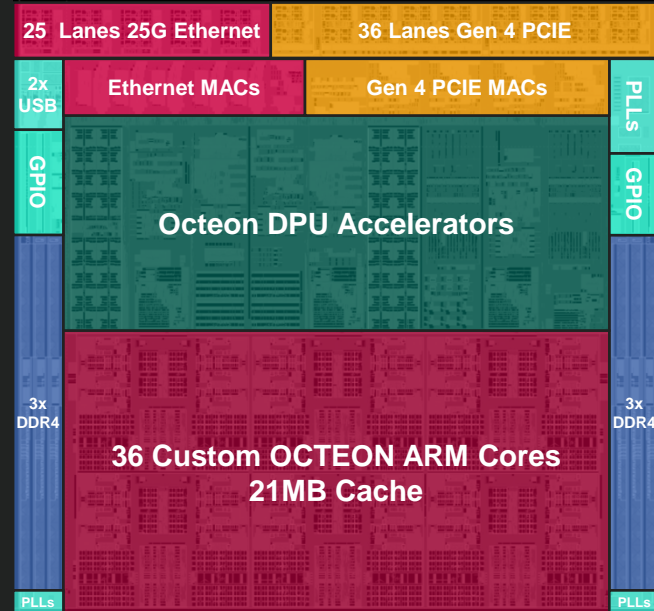
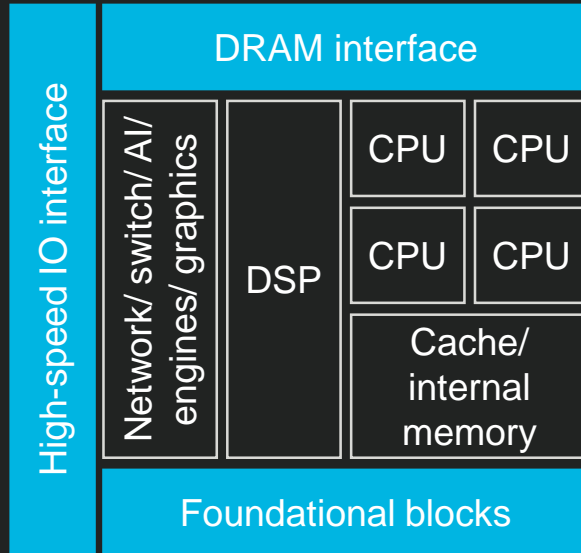
# Being first matters!

**First mover  
advantage**

**Incumbency**

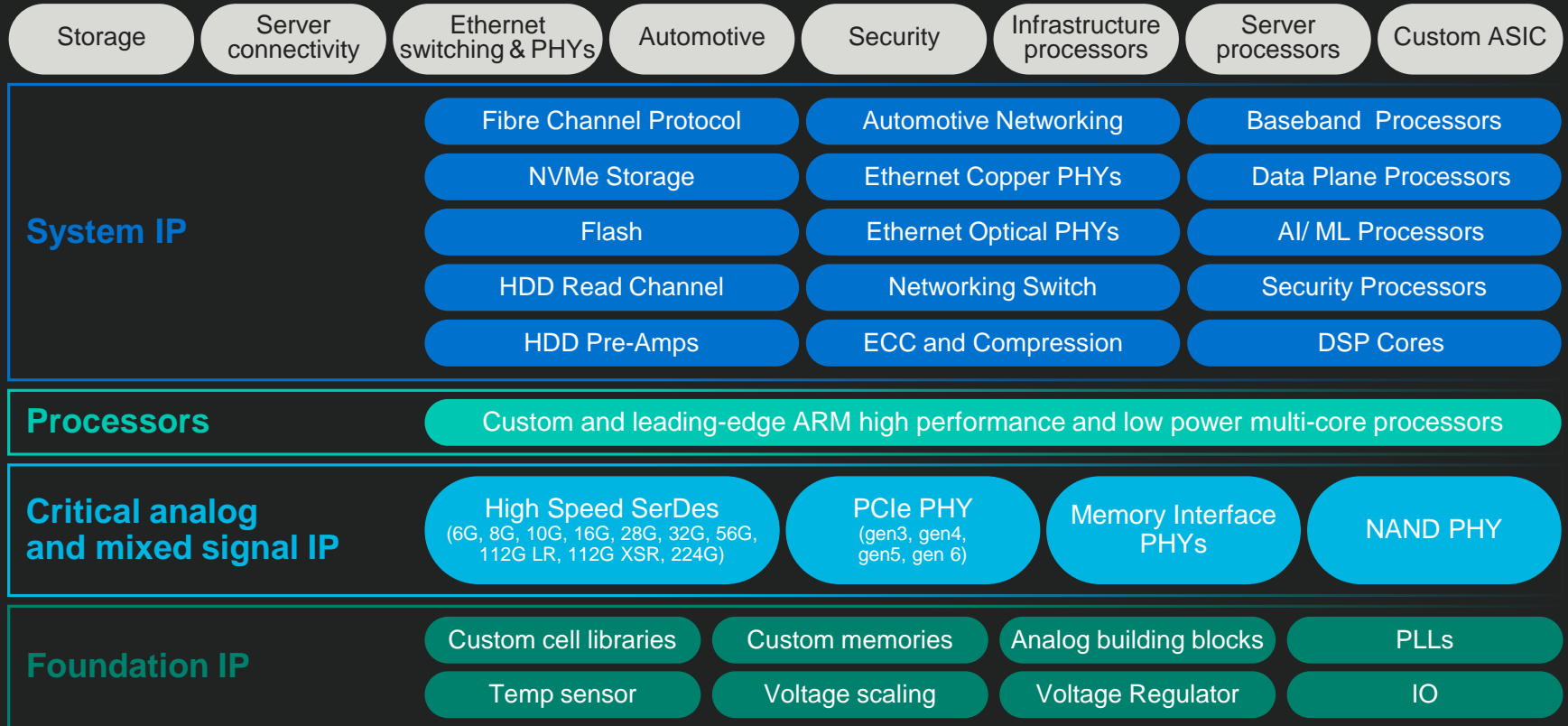
**Market share**

# Anatomy of a modern SoC



Multi-core processor

# Marvell's comprehensive IP infrastructure portfolio



# Data movement challenge

**SerDes** – fundamental building block

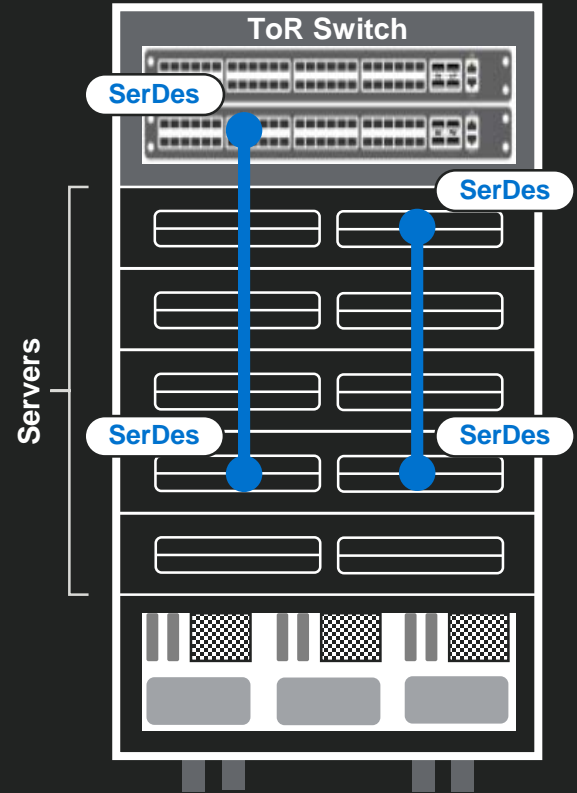
Different data rates

28G

56G

112G

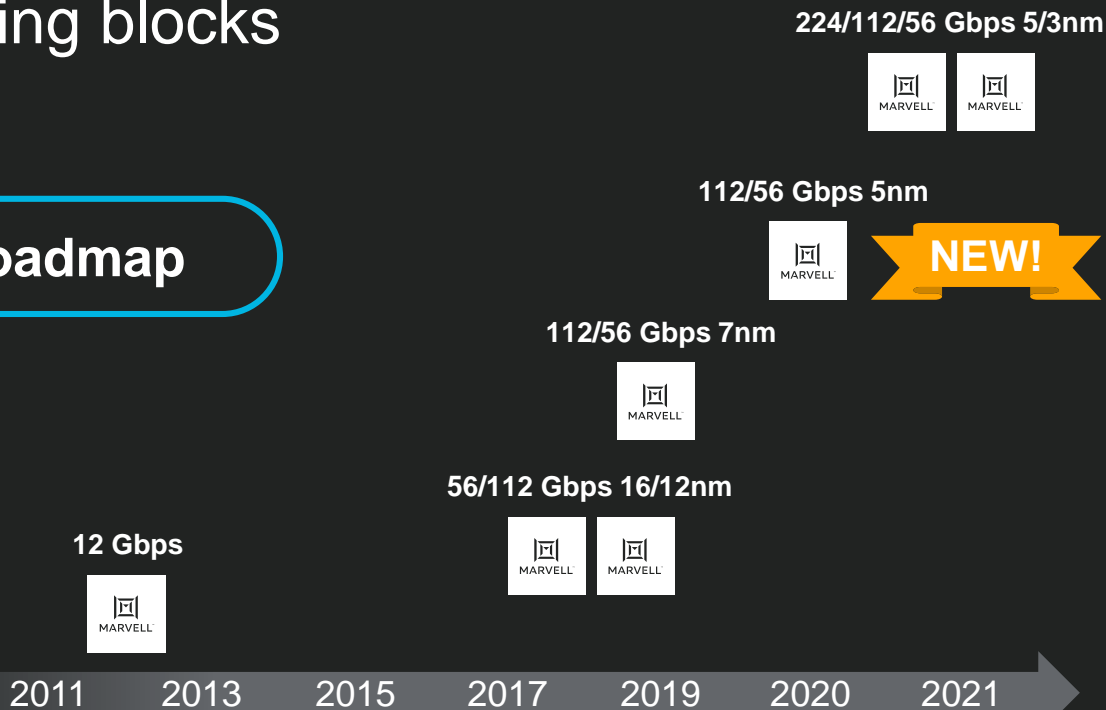
224G



# Design and IP

Critical SerDes building blocks  
at the leading-edge

## Advanced SerDes roadmap



# Marvell is uniquely positioned to lead

- 1** Being first matters – leads to market share
- 2** Best-in-class technology platform including process, architecture and design
- 3** Scale and leverage the platform to address the data infrastructure market





Thank You



# Leading the way in data center storage

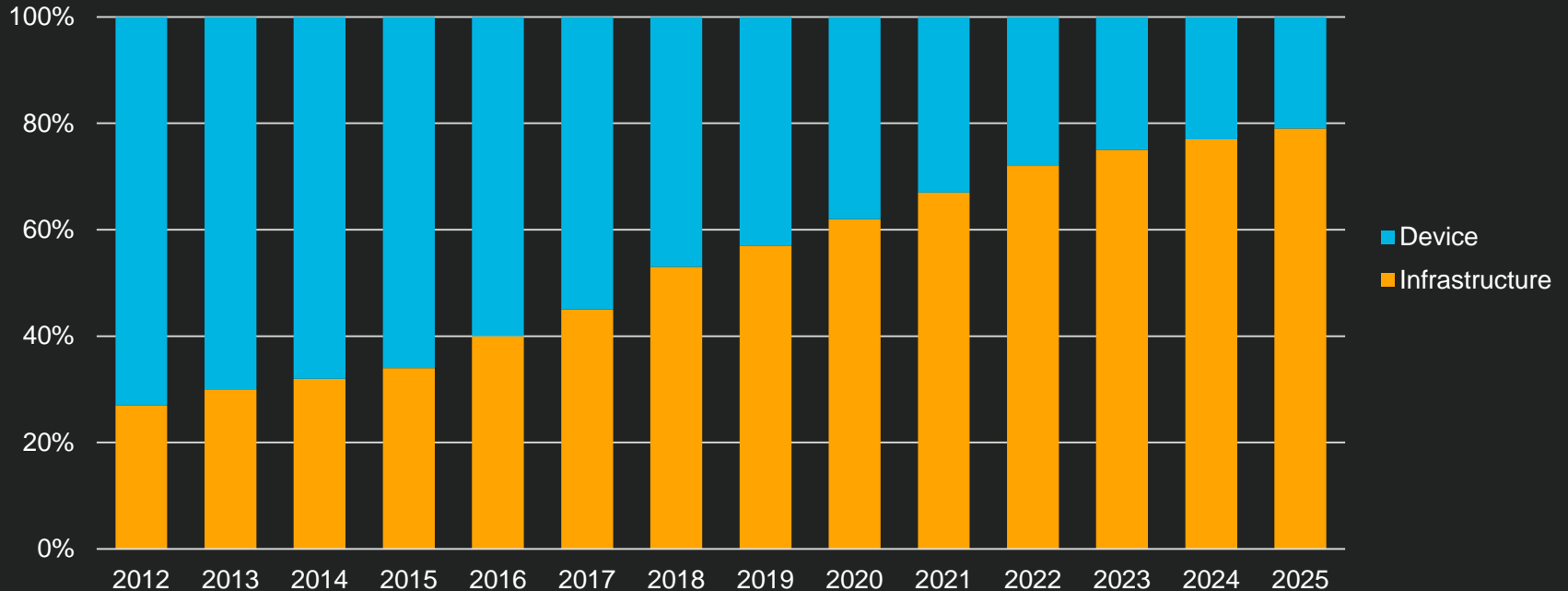
**Dan Christman**

EVP, Storage Business Group

October 8, 2020

# The data center is the epicenter for storage

## Data continues to move from devices to infrastructure



Source: Seagate/IDC Rethink Data Report, 2020

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# Key focus areas for data center storage

**Performance**

**Capacity**

**Security**

**Efficiency**



# Marvell's storage franchise

## Flash solutions



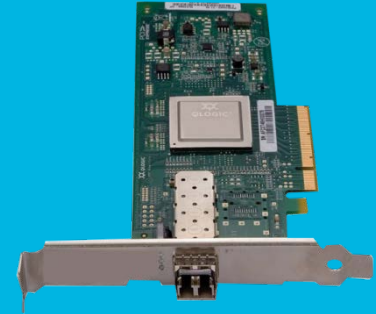
SSD controllers  
Storage accelerators

## HDD solutions



HDD controllers  
Preamps

## Fibre Channel



Fibre Channel adapters

# Uniquely positioned in data center storage

**Storage  
leadership**

**Customer  
intimacy**

**Process and  
IP excellence**

**Flexible  
business model**

# Leading the way in SSD

## Storage leadership

- Leading SSD market share
- Scale to cover all swim lanes
- Data center focus

## Process and IP excellence

- Host interface PHYs (NVMe)
- Advanced process nodes
- Leverage Marvell technology

## Customer intimacy

- Multi-generation designs
- Key NAND partnerships
- System OEM relationships

## Flexible business model

- Merchant and custom solutions
- Flexible firmware engagements
- Pioneer of DIY SSD

# Let's talk **DIY** – **Do It Yourself** SSDs

## Black box SSD



## DIY SSD

Standard or customized controller



Multiple NAND sources



KIOXIA



SAMSUNG



Customized firmware





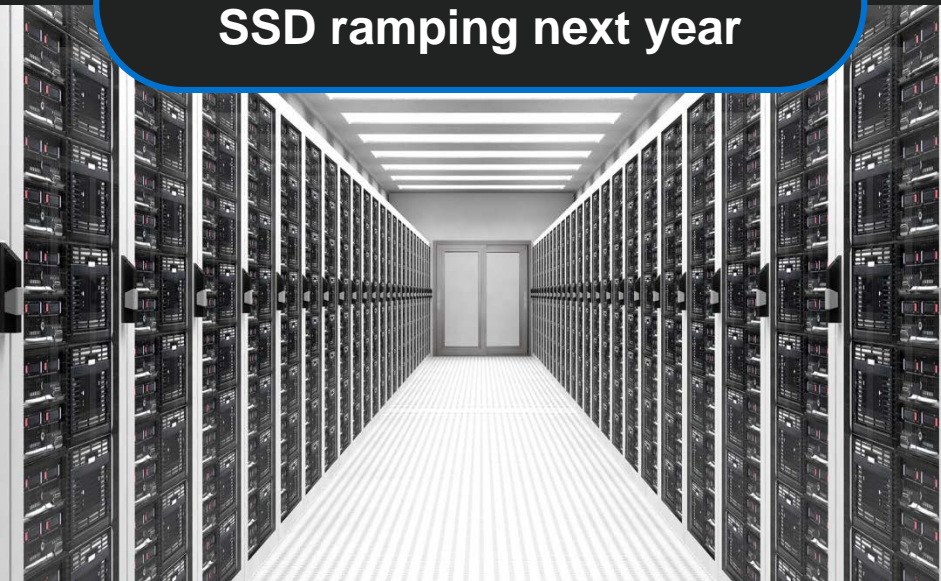
# Marvell is the leader in DIY SSD

**NEW!**

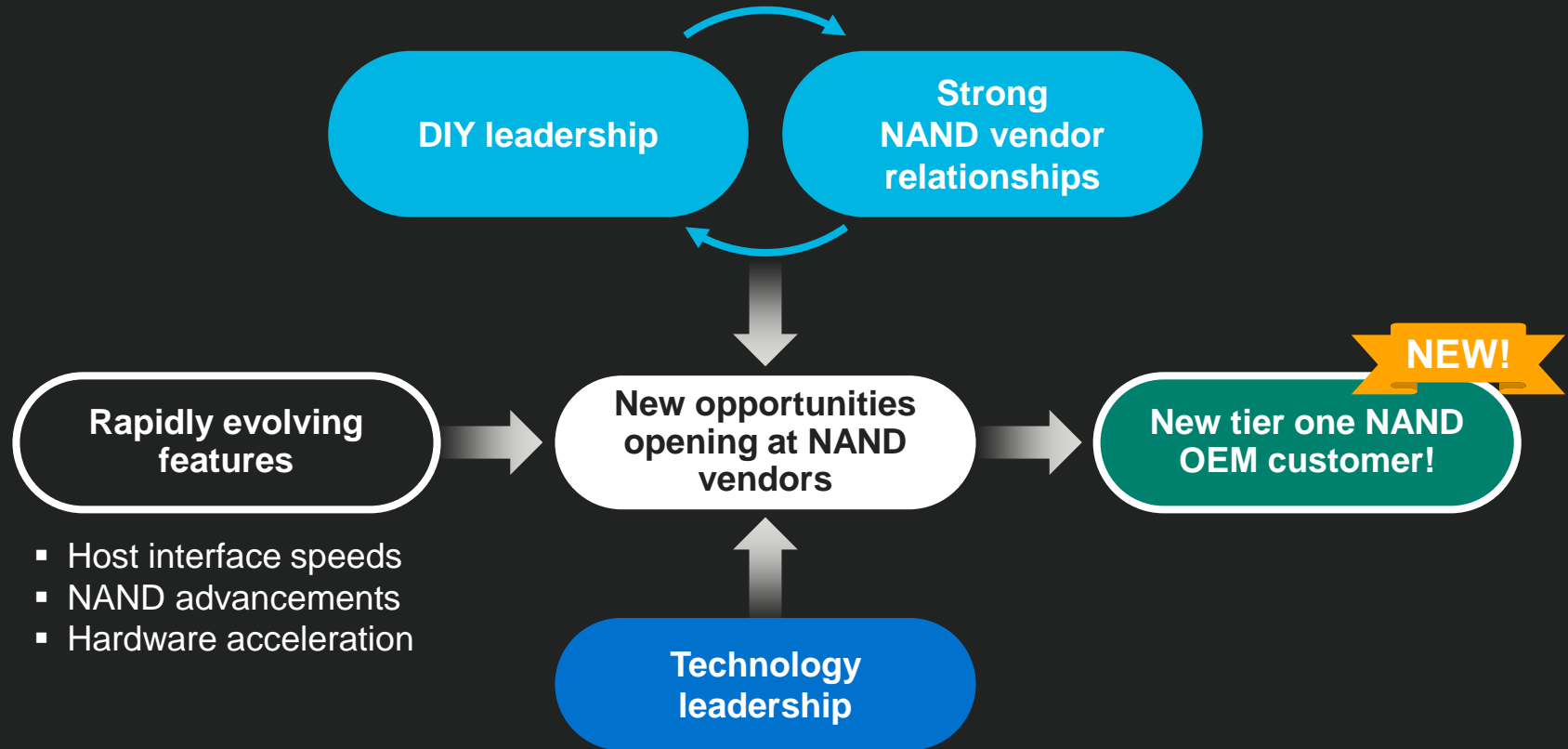
**Edge DIY SSD now  
in volume production**



**New cloud data center DIY  
SSD ramping next year**

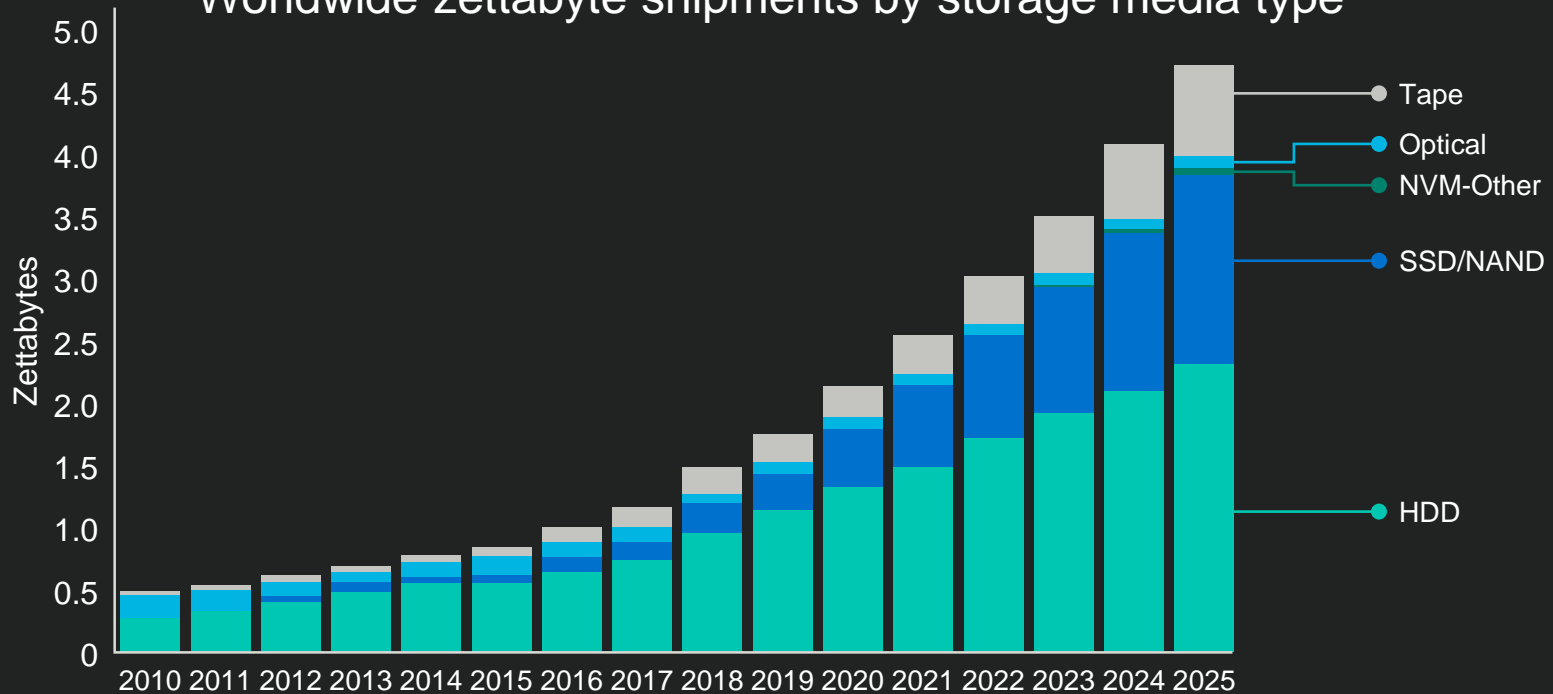


# Our SSD growth strategy



# A closer look at where the data is being stored

## Worldwide zettabyte shipments by storage media type

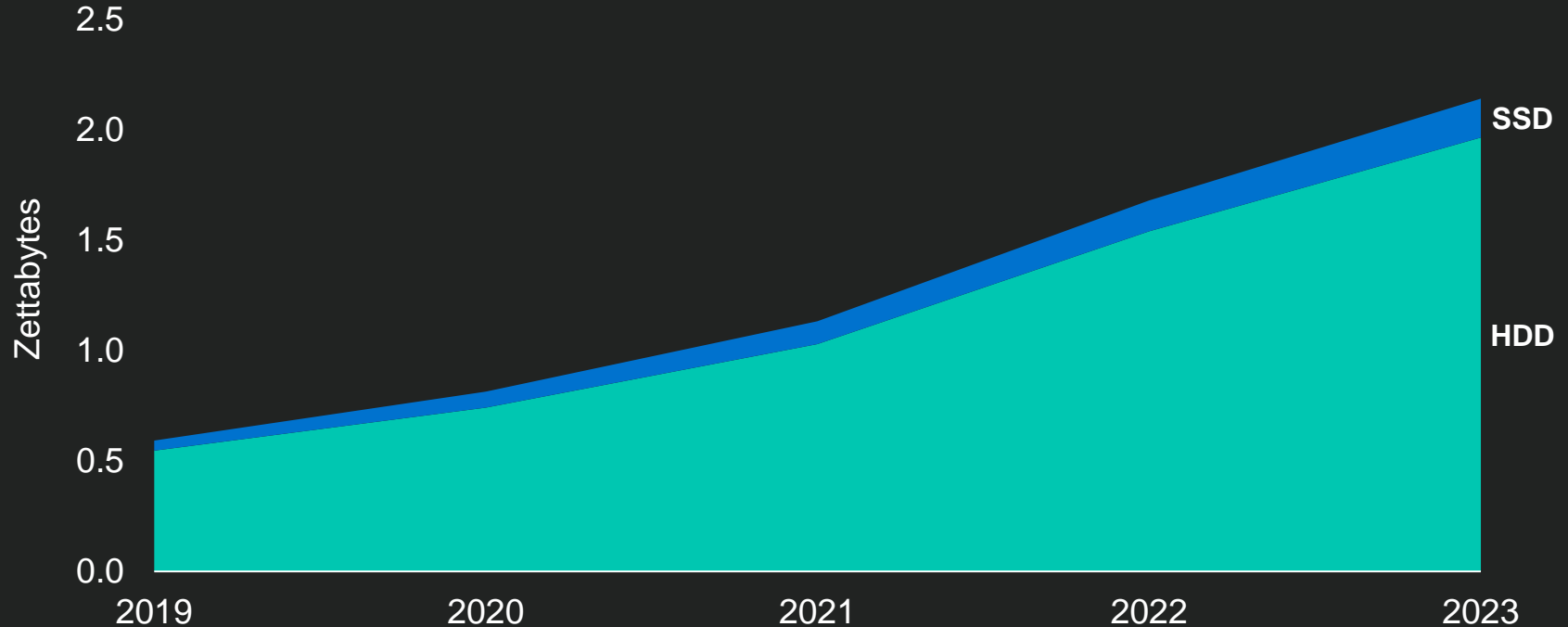


Source: Marvell market research based on Seagate/IDC Data Age 2025 Report, 2018

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# HDD provides the **capacity** for the data center

SSD provides the **performance**

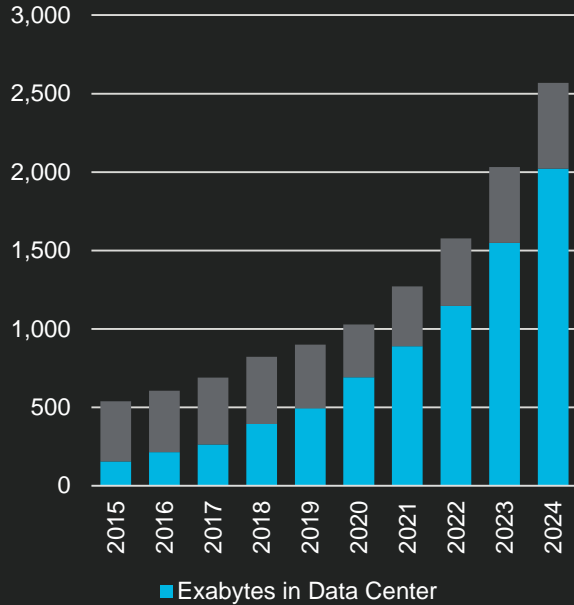


Source: Marvell market research based on Trendfocus and Gartner

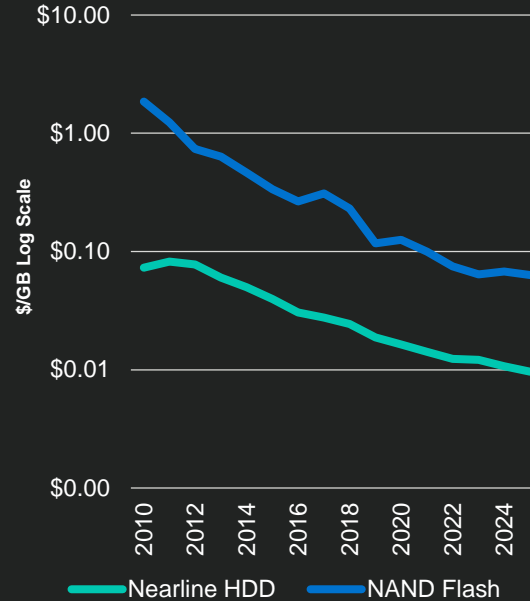
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# The data center is a growth opportunity for HDD

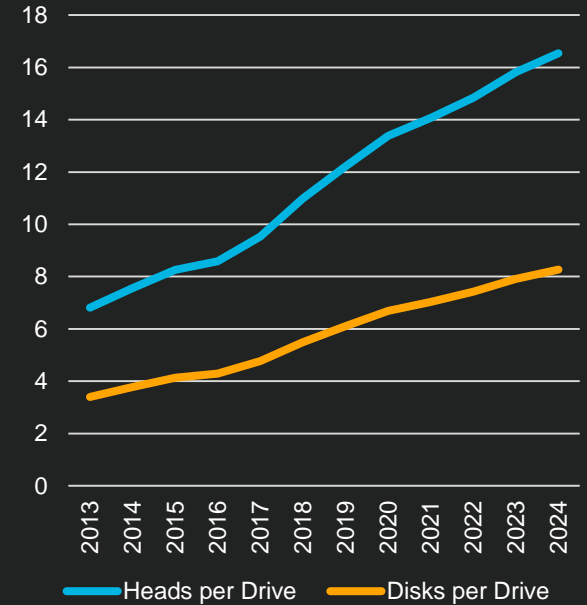
**Total HDD exabytes shifting to data center**



**Maintaining \$/GB advantage**



**More heads/disks driving content growth in preamps**

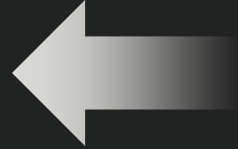


Source: Marvell market research based on Trendfocus and Gartner  
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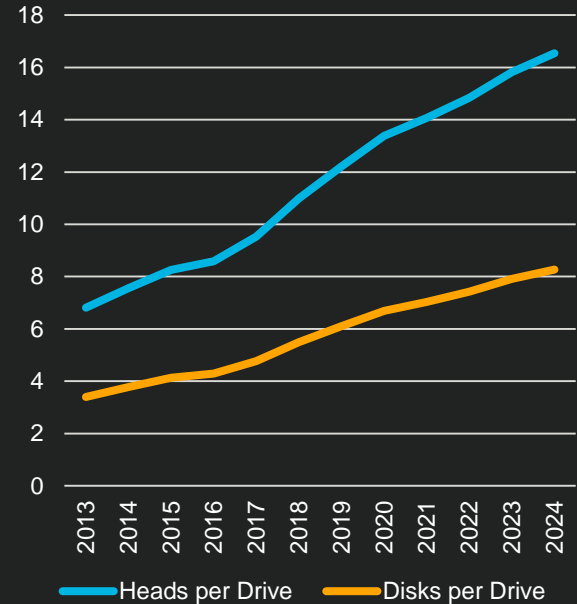
# The data center is a growth opportunity for HDD

## The preamp opportunity

- \$400M+ overall preamp SAM
- Preamps scale with heads & disks
- Now started shipping
- Targeting >30% share of market



### More heads/disks driving content growth in preamps



# HDD innovations are enabling capacity growth

Marvell **read channel** and **preamp** technologies enable new architectures to grow capacity & maintain \$/GB advantage



Extending conventional recording

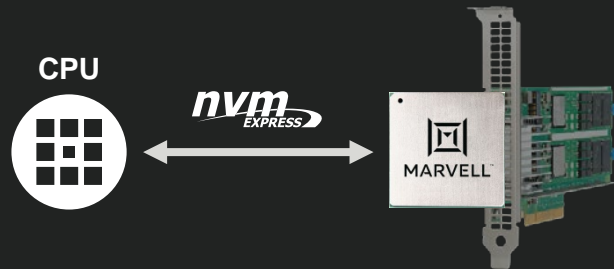
Adding more platters

Enabling energy-assist recording

# Data center storage **acceleration** in the server



**Offload the CPU!**



**NEW!**

Launched



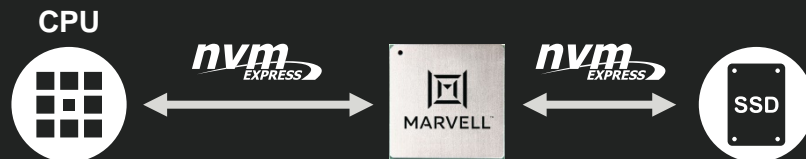
Hewlett Packard  
Enterprise

**Native NVMe RAID boot accelerator**

**Virtualized storage accelerator**

**NEW!**

Initial deployments  
In Q4 FY21

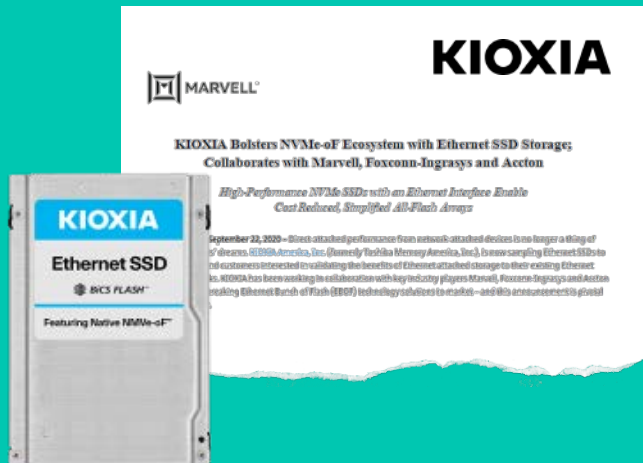


New cloud  
data center  
customer



# Extending flash storage scalability with Ethernet

## Ethernet SSD



Announced by Kioxia  
September 2020

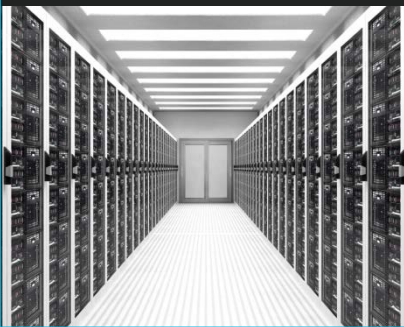
## Ethernet Bunch of Flash



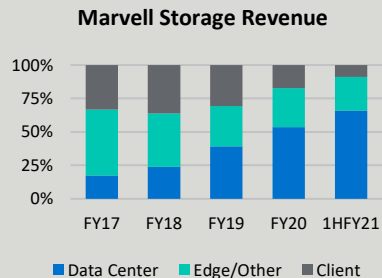
POCs under evaluation  
at multiple customers

# Summary

The data center is the largest & most important storage market



We continue to execute on our pivot to the data center



We have multiple vectors driving future growth

DIY SSD

NAND OEM sockets

Nearline HDD/Preamps

Storage accelerators

Targeting 30 - 35% share of \$1B+ cloud storage SAM





Thank You

# Networking Leadership

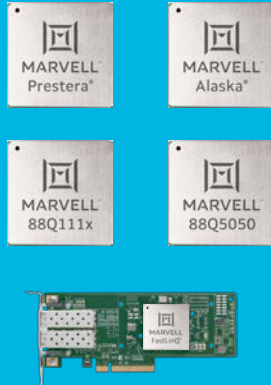
**Raghib Hussain**

Chief Strategy Officer and EVP of Networking & Processors

October 8, 2020

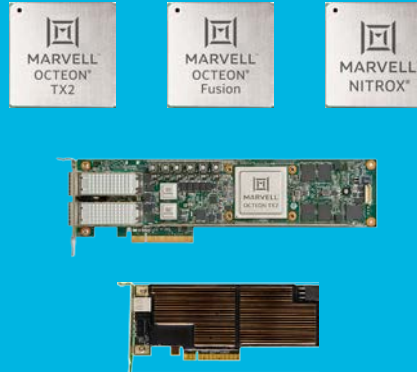
# Networking and compute product lines

## Networking



Ethernet switches, PHYs,  
and adapters

## Compute



Data processing units (DPUs)

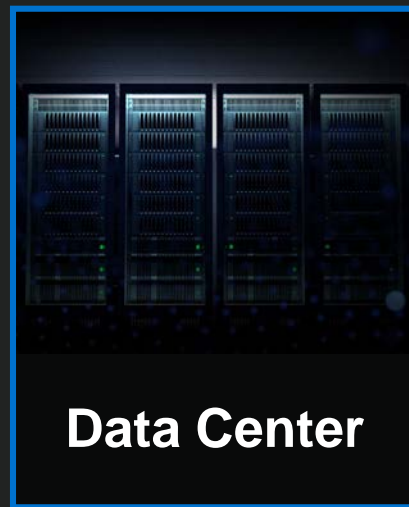
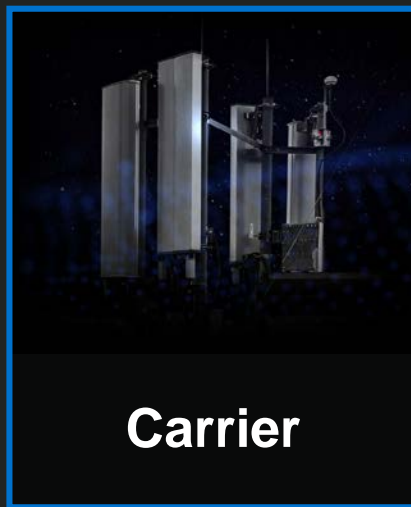
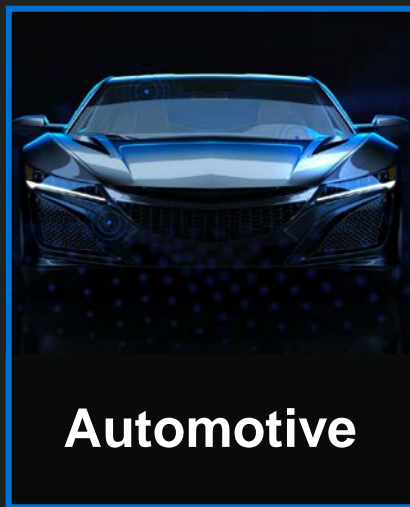
## Custom ASICs



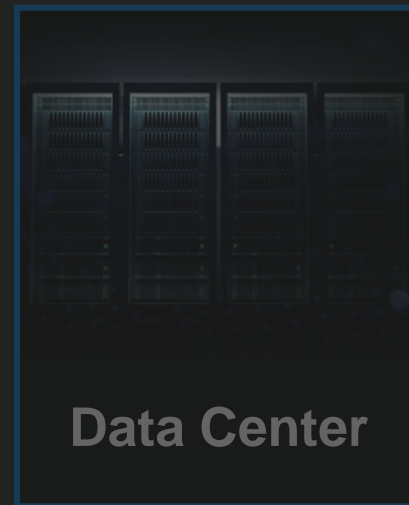
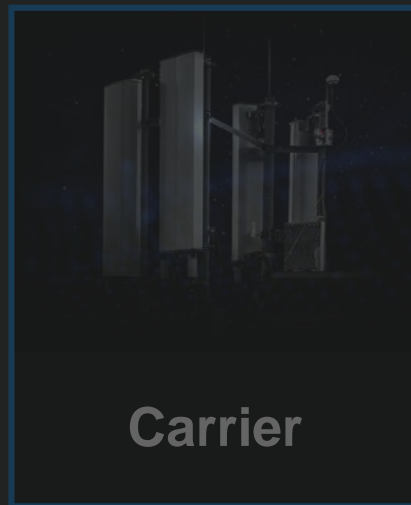
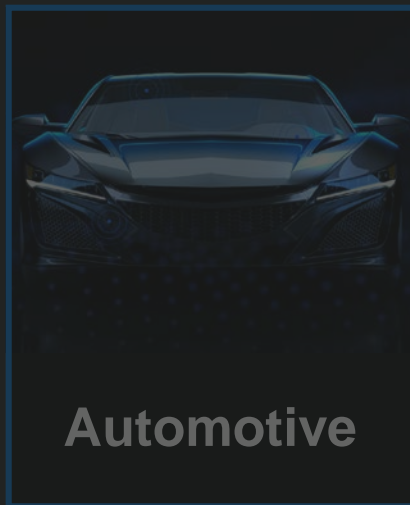
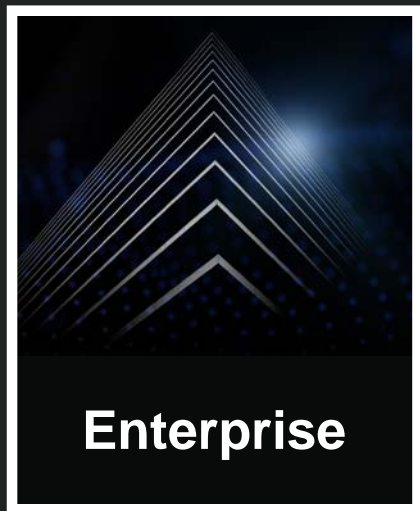
5G, AI, networking,  
and data center



# Networking and compute end markets



# Networking and compute end markets



# Traditional enterprise



**Connecting offices**

# Today's enterprise



**Connecting people  
and resources**



# The borderless enterprise



**Retail | Healthcare | Energy / Industrial | Virtual Events | Hospitality**

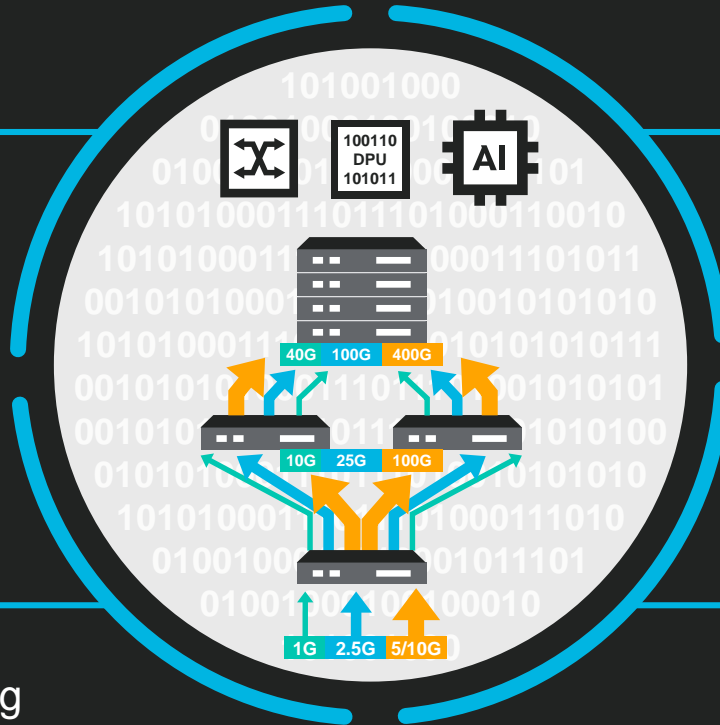
# What does the borderless enterprise need?

## Visibility

Line-rate telemetry  
Anomaly detection

## Intelligence

Flow-aware processing  
Smart traffic engineering



## Zero-trust

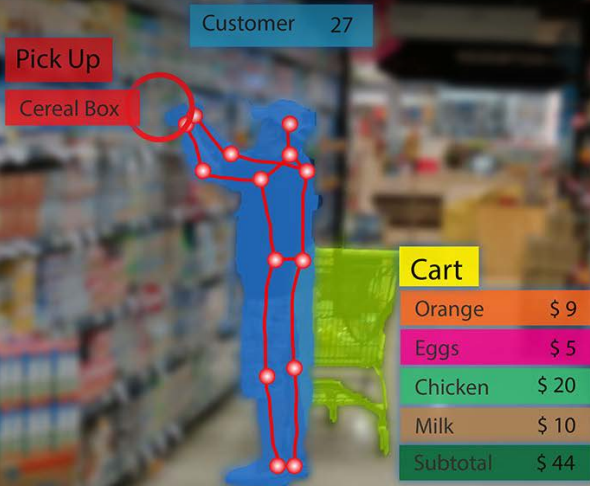
Secure boot,  
MACsec, IPsec

## End-to-end performance

Modular architecture  
Inline programmability

# Case study: Just-walk-out retail

NEW!



## Drove new requirements

- Extensive telemetry
- Advanced analytics
- Traffic management
- Security scheme/policy

**Enabled by Marvell's feature rich switch, PHY, and processor**

# Refreshed enterprise networking portfolio

22 new products, all in the last 18 months

New Ethernet products							
		SWITCH		PHY		PROCESSOR	
<b>Core and data center</b> 25-400 Gbps	Presteria 128x100G 32x400G	Presteria 80x25/50G	Alaska C MACSec PHY 2x400G	Alaska C MACSec PHY 16x50G	OCTEON CN98xx 200Gbps	OCTEON CN96xx 100 Gbps	
			Alaska C PHY 8x100G Serial			OCTEON CN92xx 50 Gbps	
<b>Aggregation</b> 10-25 Gbps	Presteria 24x25G	Presteria 48x25G	Alaska C Gearbox 100G	Alaska C Gearbox 40G	OCTEON CN9131 25 Gbps	OCTEON CN9132 25 Gbps	
			Alaska C MACSec PHY 16x25G	Alaska C Optical PHY 8x25G/10G			
<b>Access</b> 1-10 Gbps	Presteria 48x5G 24x10G		Alaska M PHY 8x2.5/5G	Alaska M PHY 8x2.5/5/10G	OCTEON CN9130 10 Gbps		
	Presteria 24/48x1G	Presteria 24/48x2.5G					

# Momentum in enterprise networking – switch / PHY

## Existing customer

- New design win
- Ported network OS to Marvell silicon



**NEW!**

**NEW!**

## New customer

- Full Marvell switch/PHY platform



**Full access to broader platform, driving share gain**

# Momentum in enterprise networking – compute

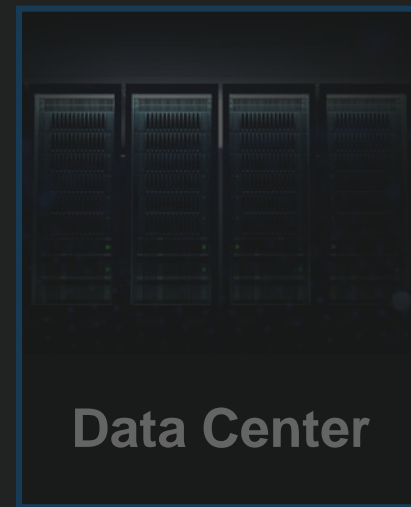
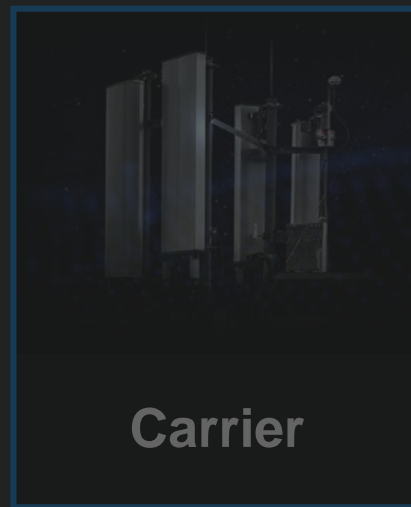
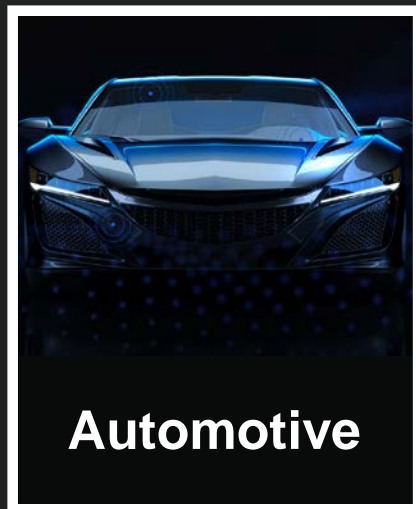
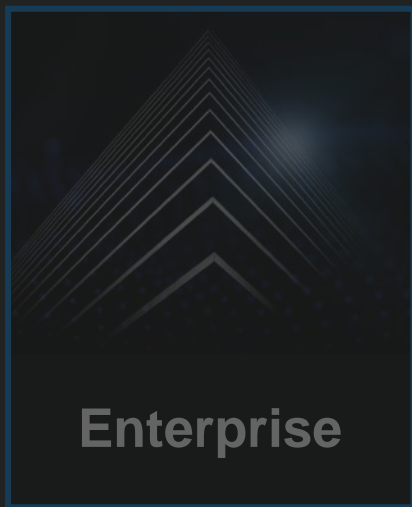


**NEW!**

- New platform win for OCTEON
- Enterprise router family at Tier 1
- Migrating from x86

**Share gain with 5nm OCTEON family**


# Networking and compute end markets



# Evolution of the car



Inefficient and non-scalable



Fully integrated system and OTA upgradeable

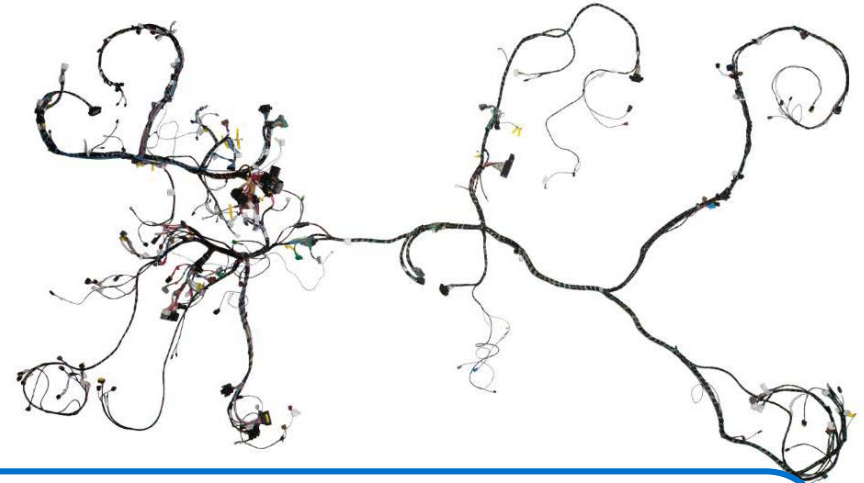
**One day every car will be a smart car,  
just like every phone became a smartphone**



# The network of a smart car

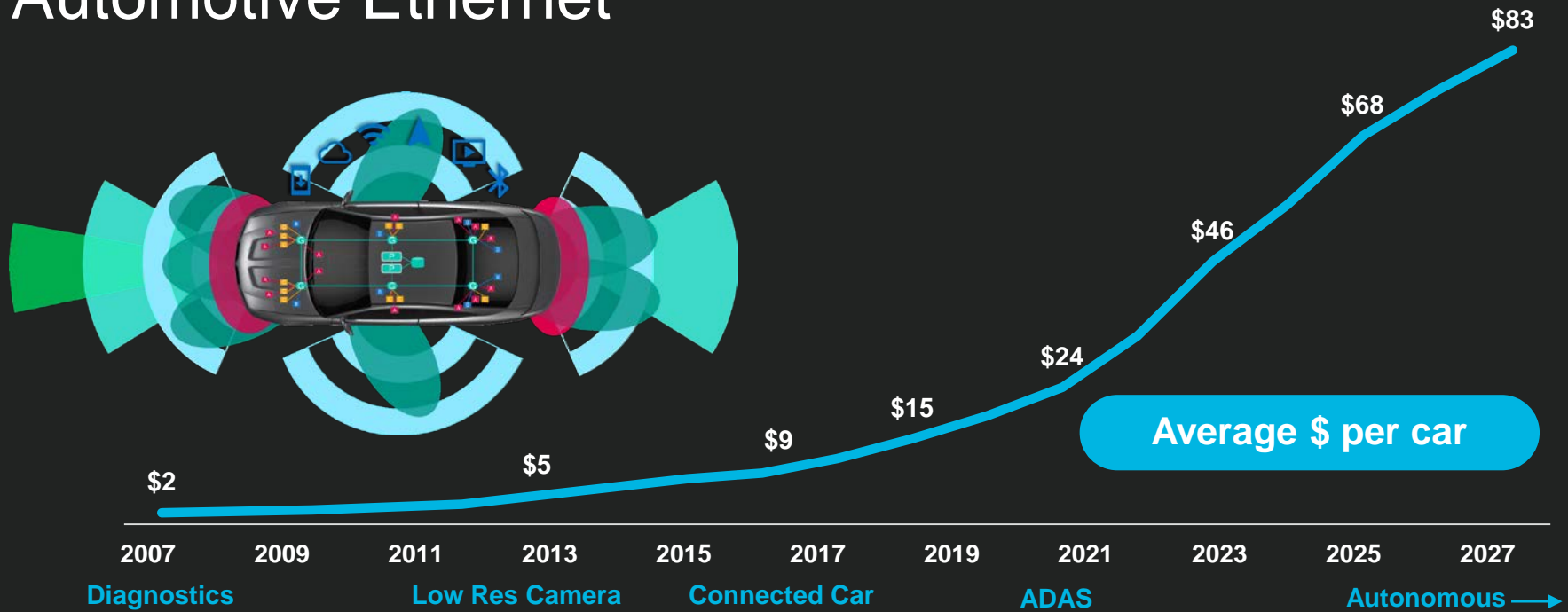
Point to point, rigid, expensive

Networked, secure, scalable, intelligent



Ethernet is the future

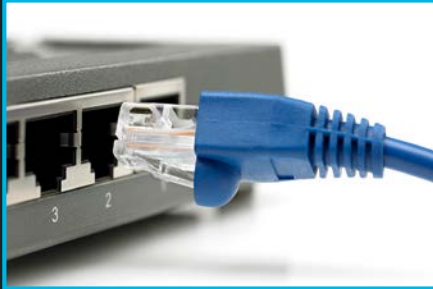
# Automotive Ethernet



**The next >\$1B opportunity for Marvell**

Source: Strategy Analytics Automotive Infotainment & Telematics System June 2020, Marvell estimates

# Marvell investing to be #1 in automotive Ethernet



## Ethernet

- 25+ years of Ethernet switch/PHY experience
- SerDes design expertise
- 100Mb to 25Gb secure switches/PHYs

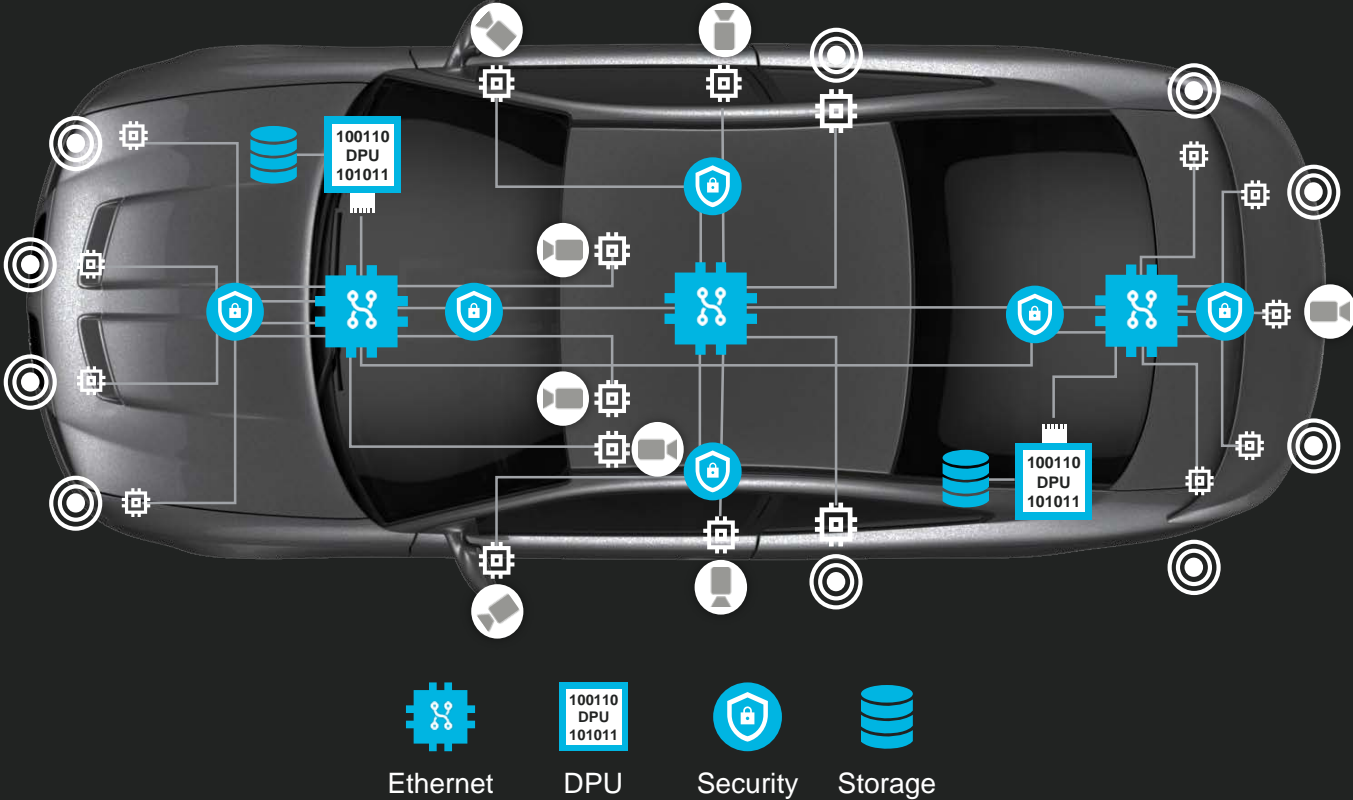


## Automotive grade reliability

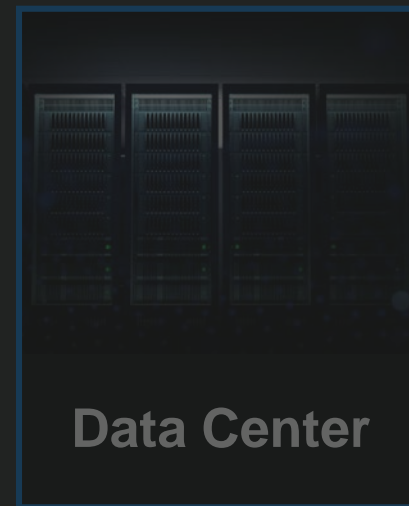
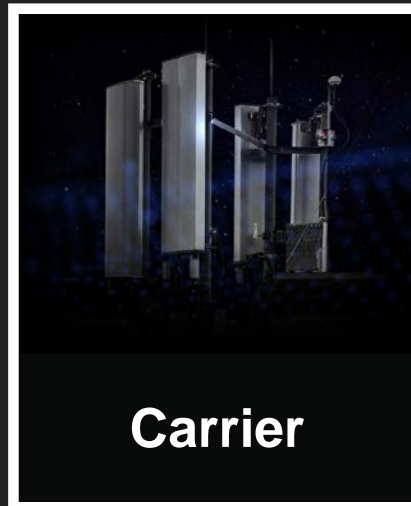
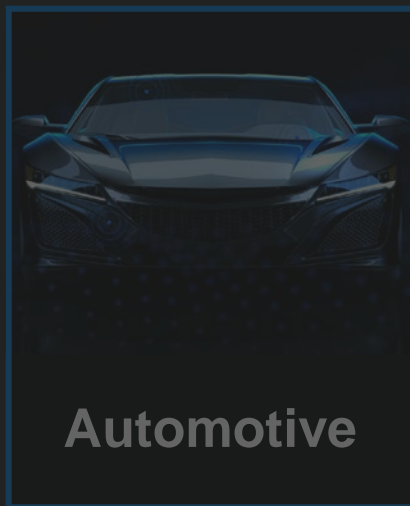
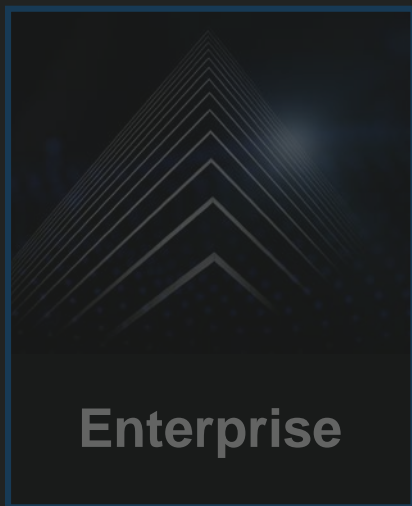
- Only silicon company with CISPR25 lab on-campus
- ASPICE-compliant switch software

**Design wins at 24 OEMs: 7 out of top 10**

# SAM expansion: compute, security, and storage



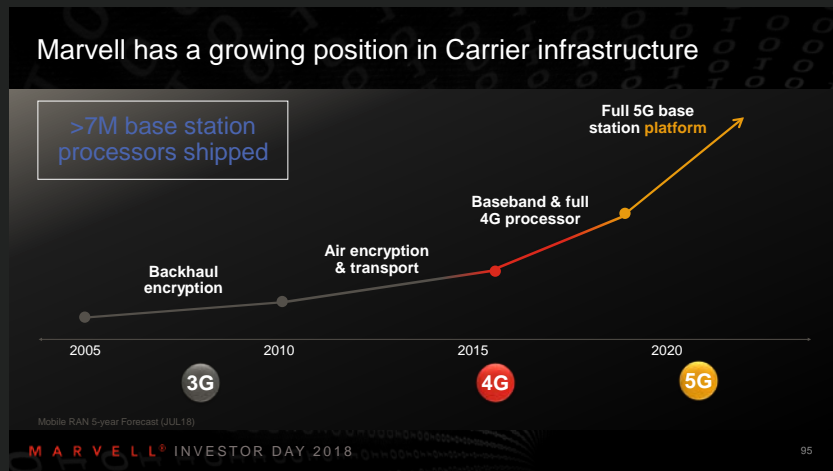
# Networking and compute end markets



# Our progress in 5G

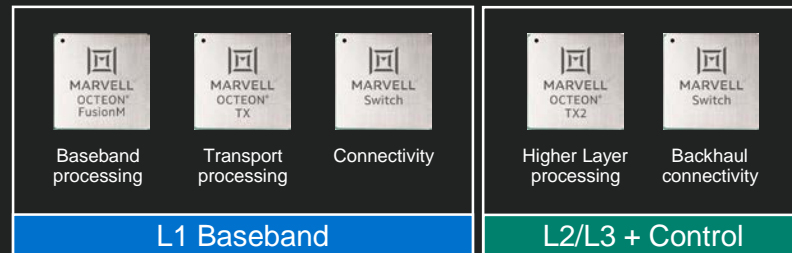
2018

Current

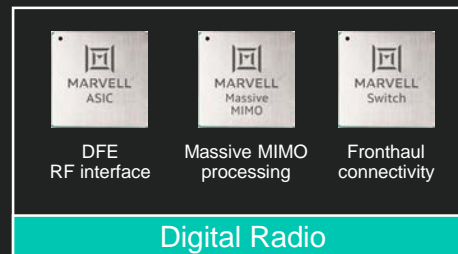


## Base station (Digital unit)

## Central unit



## Radio unit



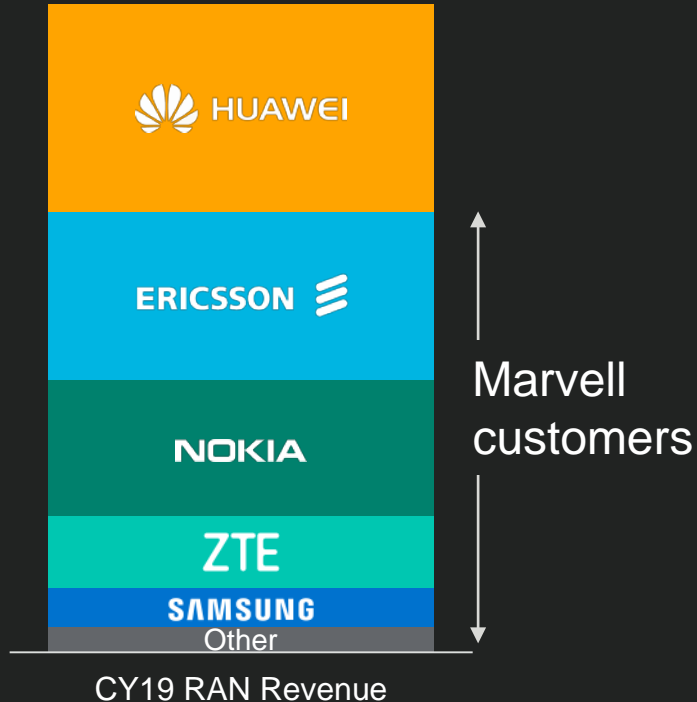
SAMSUNG

NOKIA

ERICSSON

ZTE 中兴

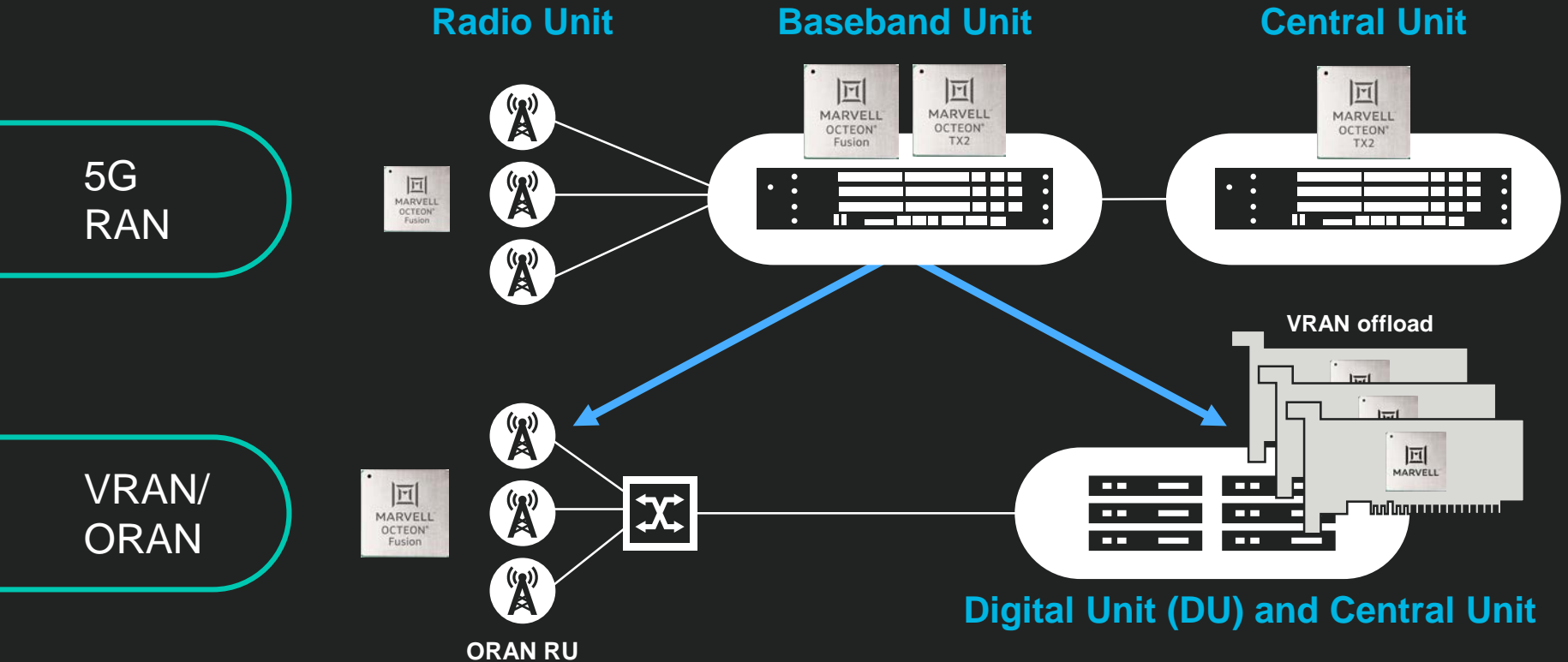
# Growing momentum in 5G



- Full platform at 2nd OEM
- Broader Ethernet adoption
- Larger radio head opportunity
- Massive MIMO adoption
- Tier 2 / regional OEM wins
- Potential market share shifts

Source: Dell'Oro Mobile RAN Quarterly Report, 4Q19, Marvell estimates

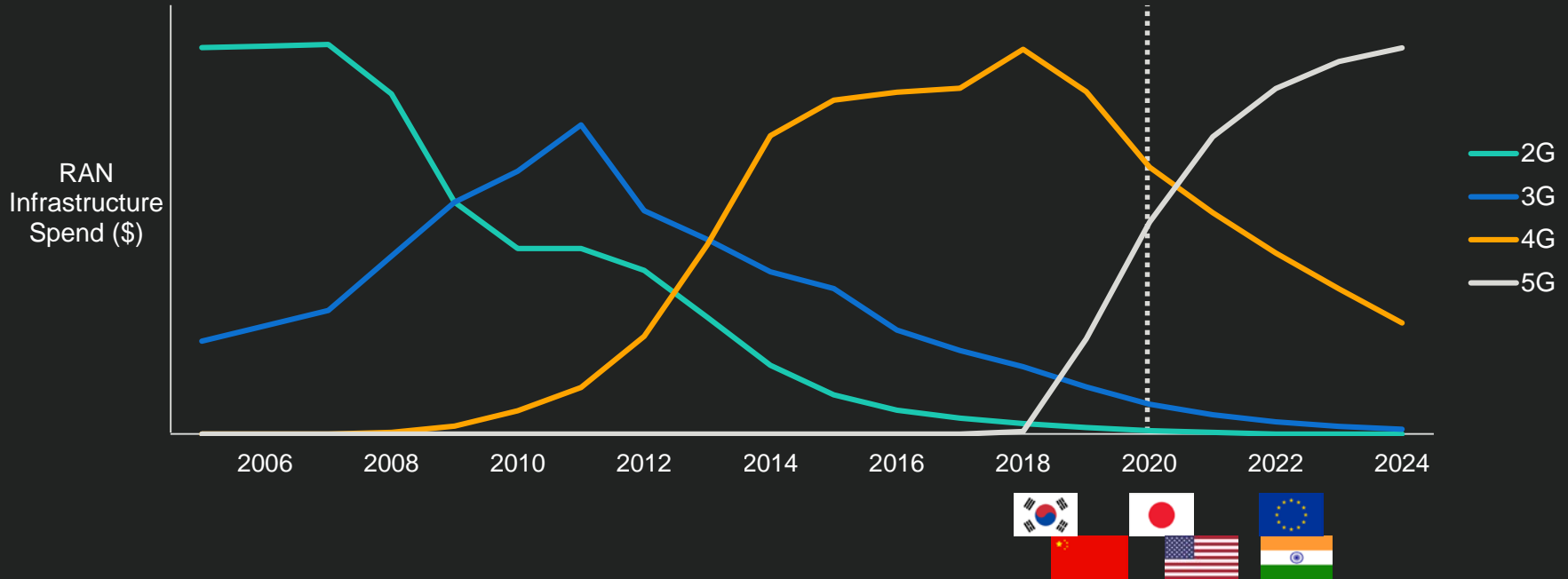
# Purpose-built OCTEON for all RAN architectures





# 5G ramping: long lifecycle ahead

## Multi-decade product lifecycles

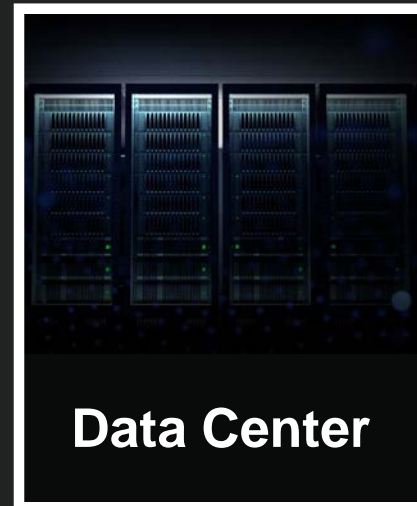
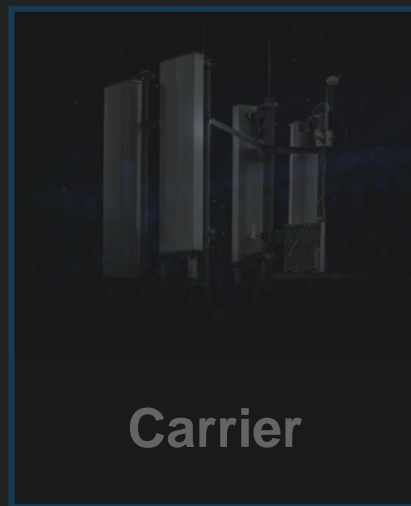
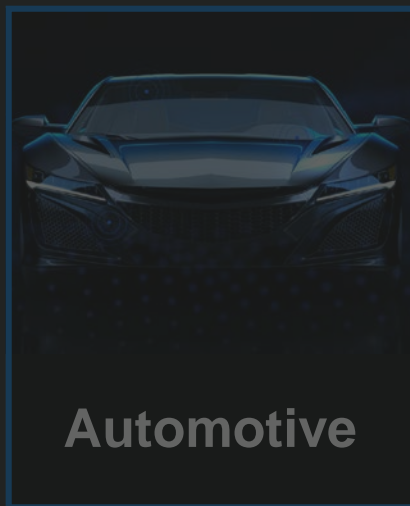
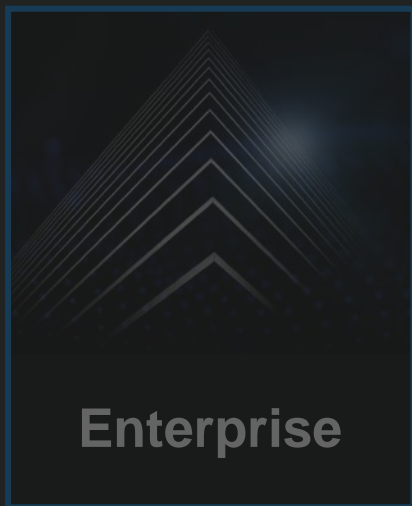


Source: Dell'Oro Mobile RAN Forecast Report, July 2020, Marvell estimates

The background of the slide features several tall, grey 5G network towers or antennas. In the foreground, there are numerous blue lines that curve across the bottom of the frame, suggesting data flow or network connectivity. The overall color scheme is dark blue and black, with white text.

# 5G now an even bigger growth driver for Marvell

# Networking and compute end markets

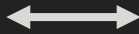


# Evolution of data center

## Traditional: dedicated appliances



Powered by  
**OCTEON**

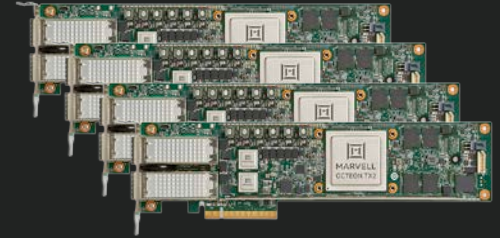


- Firewall
- VPN
- Load balancer

## Cloud: distributed in servers



Powered by  
**OCTEON**



- Network and security offloaded

# The evolution of compute

Application processing



**CPU**

- Email
- CRM
- Database

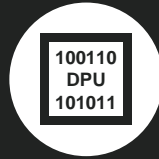
Parallel processing



**GPU**

- Graphics
- AI
- Blockchain

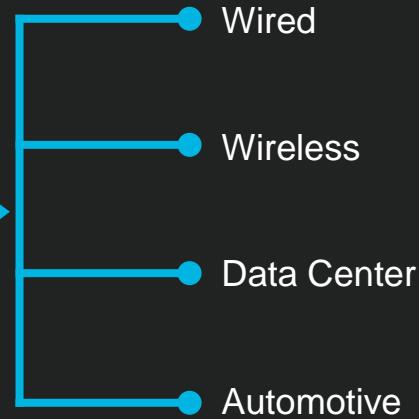
Data processing



**DPU**

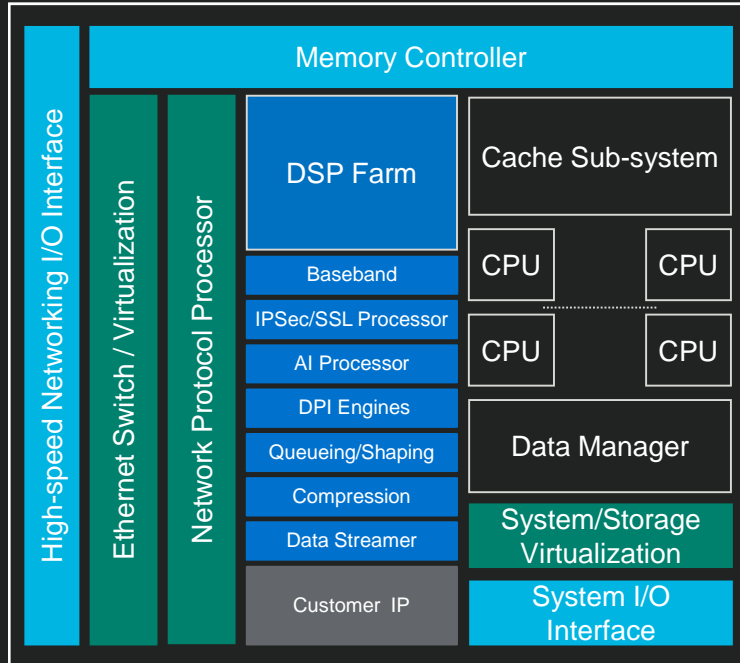
OCTEON  
since 2005

- Network protocols
- Traffic management
- Virtual switching
- Security processing
- Root of trust
- Storage virtualization
- Compression



Multiple end markets for  
**DPU**

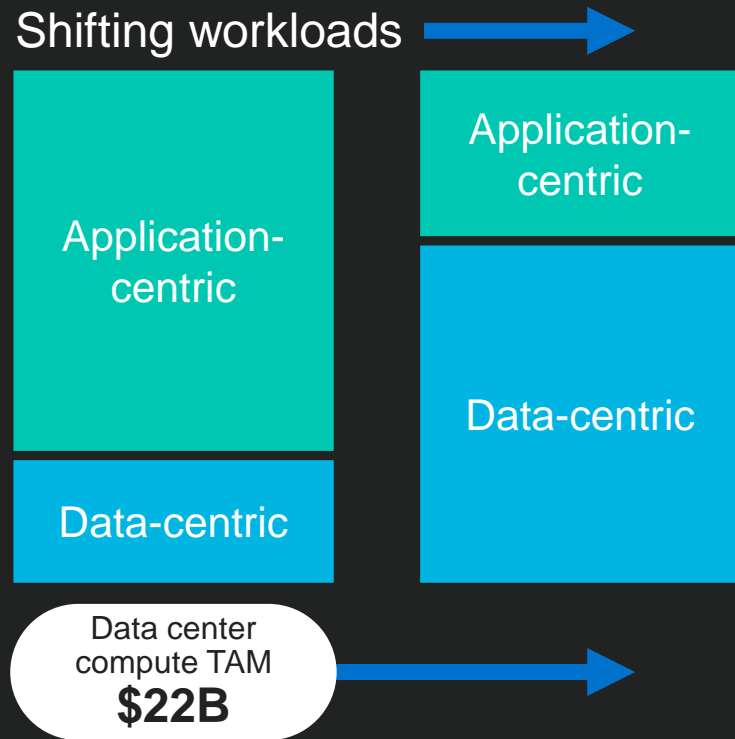
# Architecture of DPU



## OCTEON-based DPU's differentiated IP:

- Optimized network protocol processing hardware engines
- Line-rate security processing engines
- Hardware-based performance scaling engines
- High performance scalable on-chip network

# Cloud: DPU market expansion



## DPU applications

- SmartNIC
- Security
- Video transcoding
- Storage virtualization
- vRAN DU offload

# Large cloud data center opportunity

## Current growth drivers



- DPU wins at 4 tier 1
- ASIC designs ramping



- Networking & compute cloud SAM >\$4B in FY24
- Targeting 10-15% market share

## SAM expansion



- Shifting workloads
  - CPU → DPU



- Increasing demand for custom silicon:
  - Scale
  - Unique workloads
  - Resources



# Comprehensive ASIC development platform

## Process

5nm process now;  
leadership process  
roadmap

## Architecture

Data infrastructure  
critical IP and  
system expertise

## Design

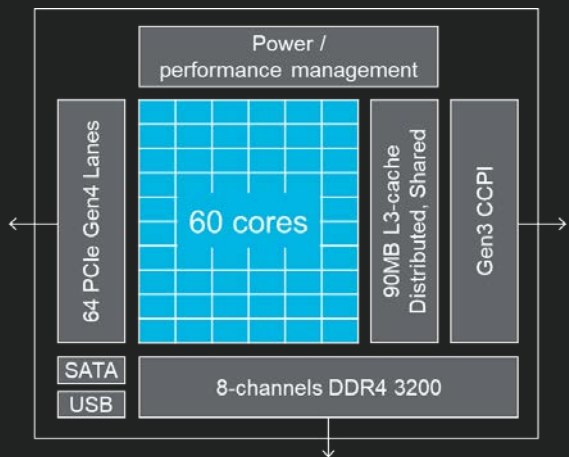
Leading-edge SOC  
and custom chip  
design expertise

>25 years

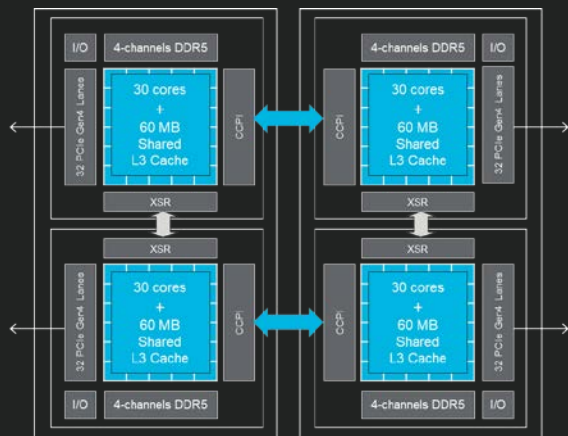
> 2000 ASIC Designs

**Marvell is the ideal partner for cloud customers**

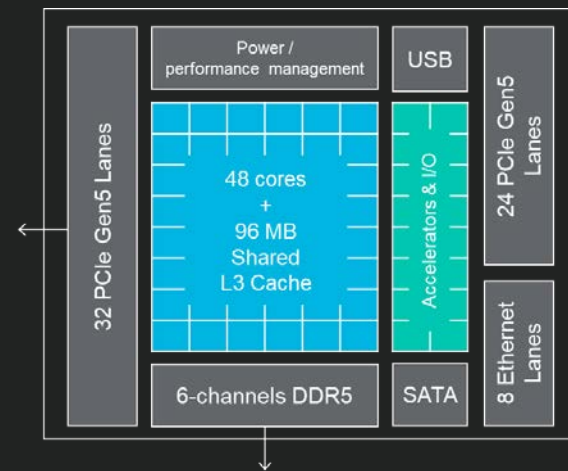
# Example: custom Arm server processor



Low-end



Multi-die multi-socket

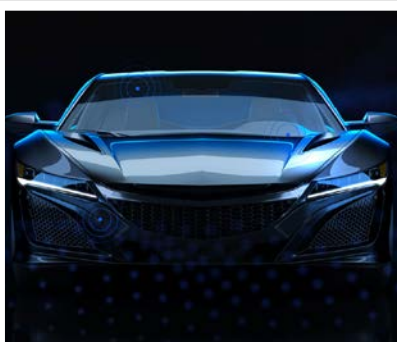


Integrated SoC



## **Enterprise**

Borderless →  
share gain



## **Automotive**

Investing to lead  
in next \$1B  
Ethernet market



## **Carrier**

Acceleration  
in 5G



## **Data Center**

DPU and ASIC in  
cloud driving large  
revenue growth



Thank You



# Financial Roadmap

**Jean Hu**

Chief Financial Officer

October 8, 2020

# The path to creating long-term value

## Accelerating revenue growth

Attractive SAM growth

Technology and product leadership

Share gain

## Growing earnings & FCF faster than revenue

Strong gross margin

Operational efficiency

Technology and operating leverage

## Disciplined capital allocation

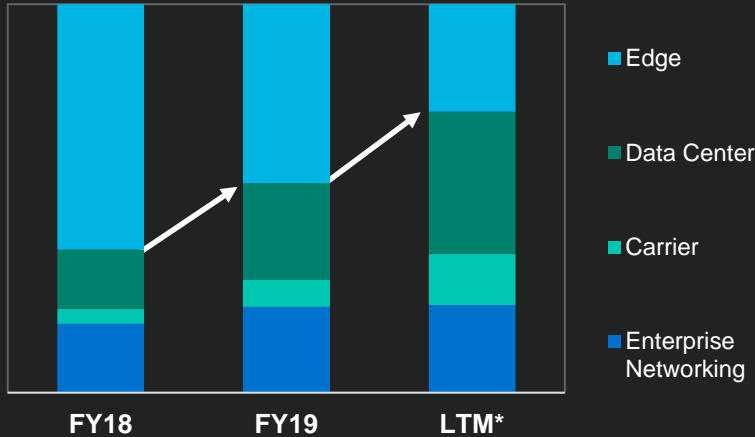
Organic investment

M&A

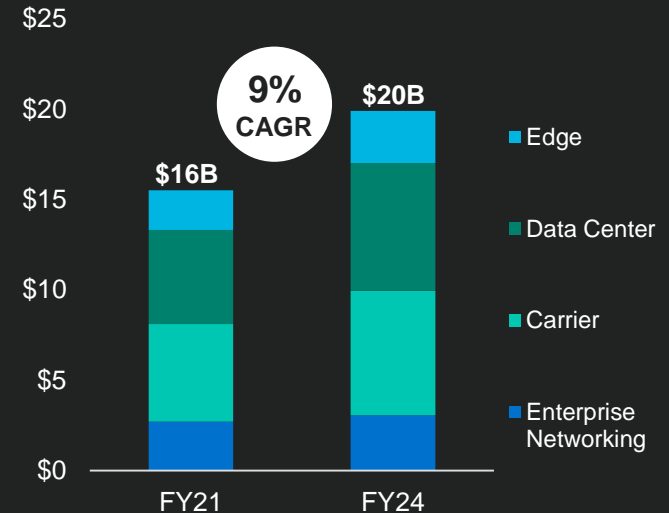
Shareholder returns

# Evolving the portfolio to serve attractive end-markets

## Revenue by end-market



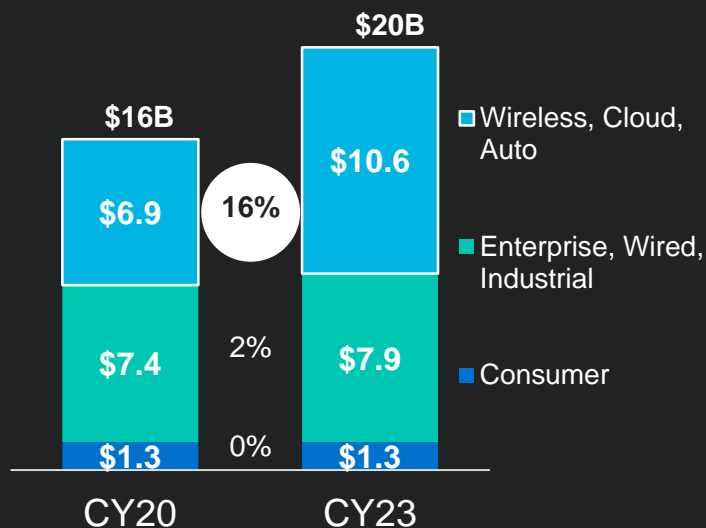
## Serviceable market by end-market



\*LTM: Q2FY20 – Q2FY21

# Our share and strategy for long-term growth

## Growth segments



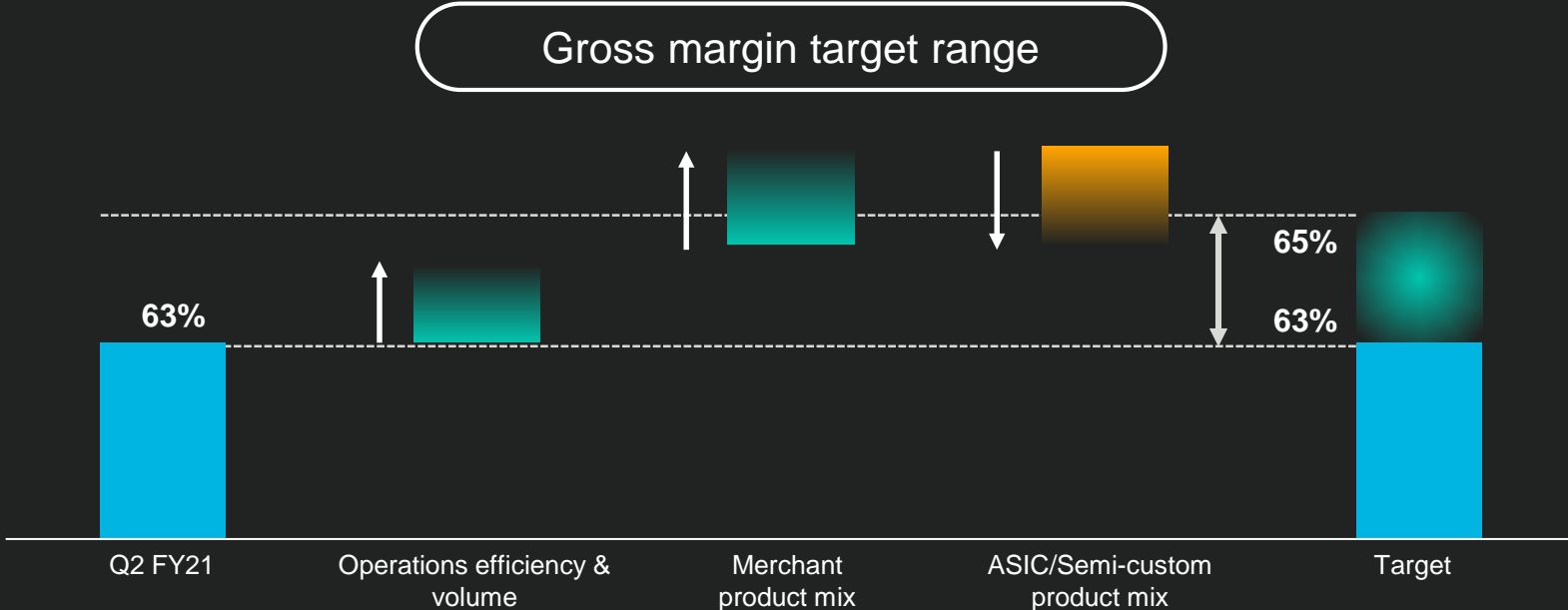
End-market	LTM revenue	Growth expectations
5G, Cloud, Auto	~ \$0.7B 10% share	~ 2X market growth
Enterprise, Wired, Industrial	~ \$1.5B 20% share	Faster than market
Consumer	~ \$0.6B 50% share	Flat
<b>Long-term target</b>		<b>10-15%</b>

Source: Crehan, Dell'Oro, Forward Insights, Gartner, Linley Group, Strategy Analytics, Trend Focus and Marvell estimates

LTM: Q3FY20-Q2FY21



# Maintaining strong gross margin while growing revenue



Notes: Gross margin refers to Marvell non-GAAP Gross Margin. Chart is not to scale, for illustration purposes only.

# Driving operating leverage

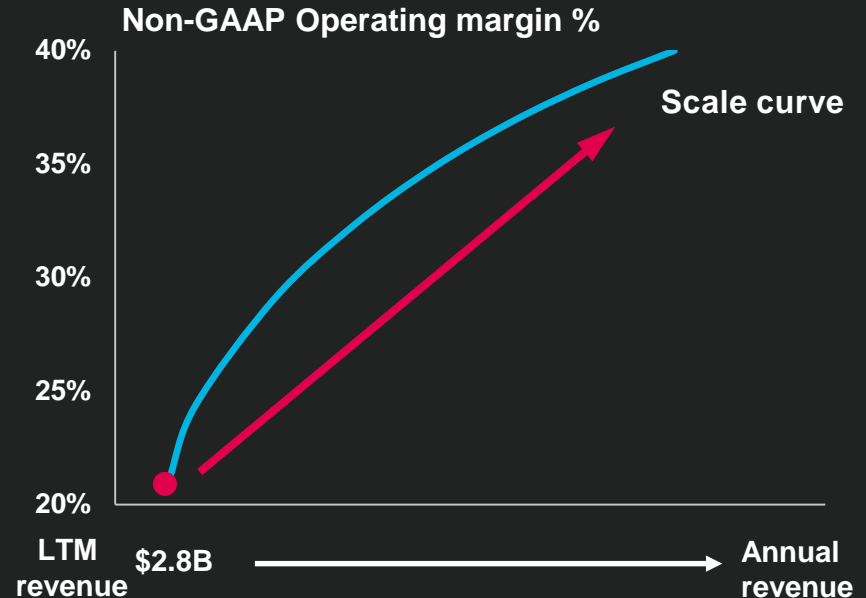
Manage Non-GAAP opex  
annual increase ~ 3%

## Operational efficiency

- Focused R&D investments
- Execution discipline
- Headcount geo mix

## Technology and operating leverage

- IP reuse across the company
- Customer funding for R&D



Revenue growth >> Opex growth = Significant operating leverage

# Long-term non-GAAP financial target

<b>Revenue growth</b>	10 - 15% CAGR	Attractive end-markets and share gains
<b>Gross margin</b>	63 - 65%	Improve & maintain strong gross margin
<b>Operating expenses</b>	28 - 30%	Invest for growth
<b>Operating margin %</b>	> 35%	Strong operating leverage
<b>FCF%</b>	> 30%	Efficient cash conversion

Note: For our non-GAAP long term target model, we have not provided a reconciliation to the corresponding GAAP measures because certain items that impact these measures are uncertain or out of our control or cannot be reasonably predicted. Accordingly, a reconciliation of these non-GAAP financial measures to the corresponding GAAP measures is not available without unreasonable effort.

# Capital allocation priorities remain unchanged

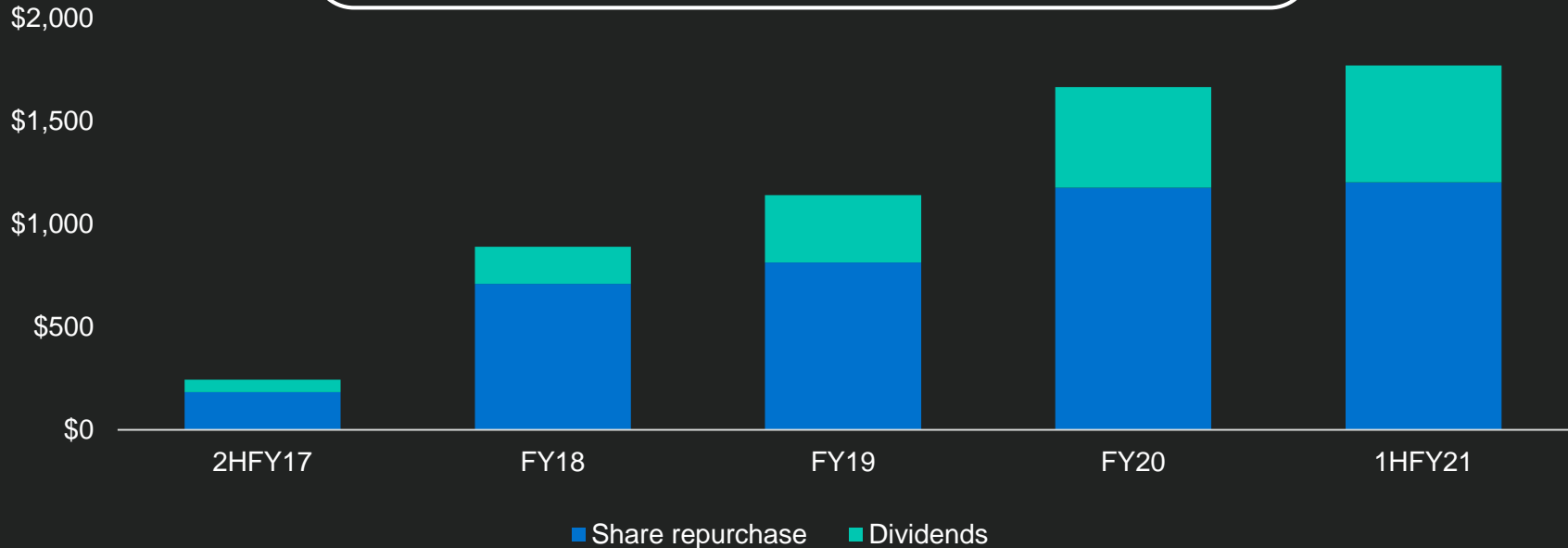
1 Investment		FY20
Organic investment	Invest in IP and product development	\$1.2B*
Acquisitions Aquantia and Avera	Strengthen portfolio and expand SAM	\$1.1B 3X sales multiple
Divestiture WiFi	Highest ROI	\$1.7B 6X sales multiple
2 Returns to shareholders (>50% of FCF)		
Share repurchase	Prioritize share repurchase	\$364M
Dividend	Maintain current level	\$160M

Focus on  
**ROIC**

# Capital returns to shareholders

\$1.8B, ~110% FCF since Q3FY17

Cumulative share repurchase and dividends (\$M)



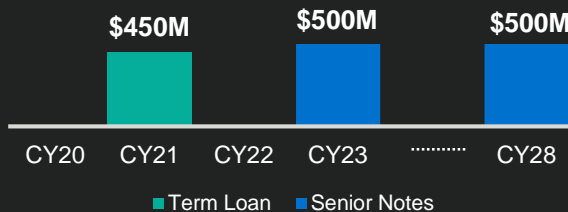
Marvell 10Qs and 10-K

# Financial flexibility supports growth strategy

## Balance sheet strength

- Cash balance (Q2FY21) = \$832M
- Undrawn credit facility = \$500M

### Debt maturity schedule



## Financial flexibility

- Strong free cash flow generation
- Investment grade credit rating
- Near term plan
  - Paying down term loan
  - Gross leverage ratio <1.5 exiting FY21

# Key takeaways

- 1 Outgrowing the attractive end-markets we serve
- 2 Expanding earnings faster than revenue growth to capture value
- 3 Disciplined capital allocation funds LT growth strategy and shareholder returns



Thank You



# Appendix

The background features a series of vibrant blue light trails that originate from the bottom left and sweep across the frame towards the top right. These trails are composed of numerous thin, parallel lines that create a sense of motion and depth. Interspersed among these lines are small, glowing particles in various shades of blue and cyan, some appearing as simple dots while others have a more complex, multi-layered structure. The overall effect is a dynamic and futuristic visual.

# Reconciliation of Q2FY21 GAAP to Non-GAAP Gross Margin %

	<u>Q2FY21</u>
<b>GAAP gross margin</b>	<b>49.4%</b>
Special items:	
Share-based compensation	0.6%
Amortization of acquired intangible	11.7%
Other cost of goods sold	1.6%
Total special items	<u>13.9%</u>
<b>Non-GAAP gross margin</b>	<b><u>63.3%</u></b>

## Reconciliation of Q3FY20 – Q2FY21 GAAP to Non-GAAP operating margin %

	<u>Q3FY20</u>	<u>Q4FY20</u>	<u>Q1FY21</u>	<u>Q2FY21</u>
<b>GAAP operating margin</b>	<b>-9.3%</b>	<b>-16.0%</b>	<b>-13.8%</b>	<b>-20.8%</b>
Other cost of goods sold	0.7%	7.3%	2.7%	1.6%
Share-based compensation	10.2%	7.4%	8.6%	8.6%
Restructuring related charges	2.2%	2.5%	3.1%	16.6%
Amortization of acquired intangible assets	14.0%	16.0%	16.3%	15.3%
Other operating expenses	3.0%	2.4%	2.7%	1.1%
<b>Non-GAAP operating margin</b>	<b>20.8%</b>	<b>19.6%</b>	<b>19.6%</b>	<b>22.4%</b>

# Reconciliation of FY20 GAAP to Non-GAAP Operating Expenses

	Recon (in Thousands)	Recon (in Billions)
<b>Total GAAP operating expenses</b>	1,600,299	1.6
Special items:		
Share-based compensation	(229,050)	(0.2)
Restructuring related charges	(55,328)	(0.1)
Amortization of acquired intangible assets	(88,515)	(0.1)
Litigation settlement	-	-
Other operating expenses	(63,361)	(0.1)
Total special items	(436,254)	(0.4)
<b>Total non-GAAP operating expenses</b>	<b>1,164,045</b>	<b>1.2</b>



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