MARVELL

Industry’s First 112G 5nm SerDes

Bringing it into the infrastructure mainstream

November 17, 2020

Overview

Company founded
1995

FY20 revenue
$2.7B

Employees
5,000+

Patents worldwide
10,000+

Located in **Santa Clara, CA**
R&D centers in **US, Israel, India, Germany, China**

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.

Marvell offers

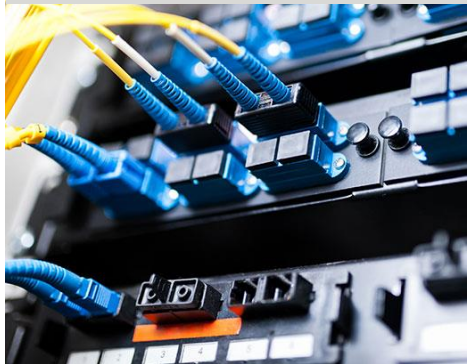
the most complete data infrastructure portfolio

Processors
#1 in baseband and data plane processors

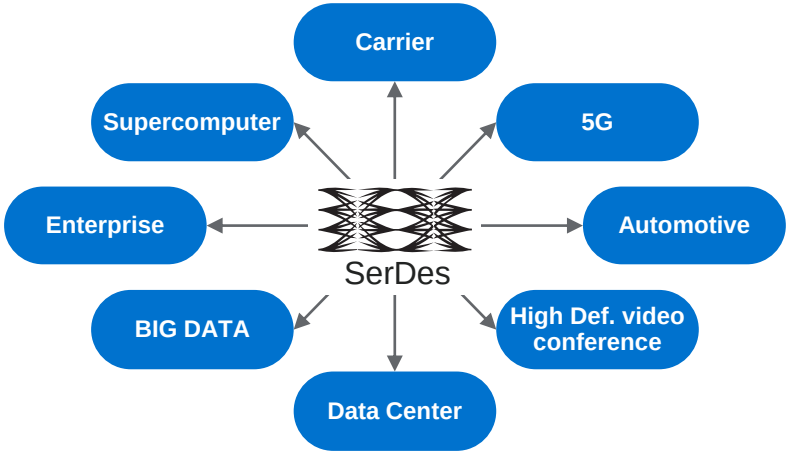
Storage
#1 in HDD and SSD controllers, Fibre Channel

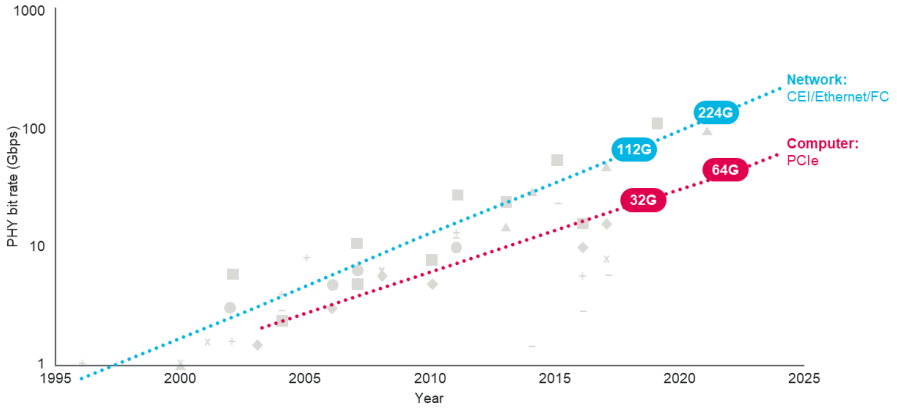
Networking
#2 in Switches and PHYs

Security
#1 in security processors



Eliminating infrastructure bandwidth bottlenecks

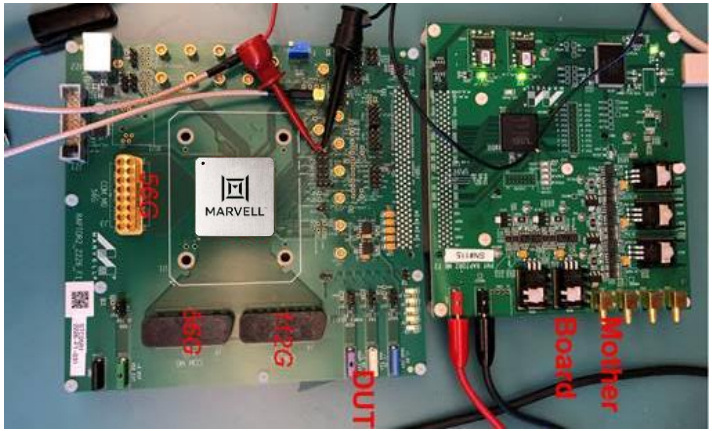


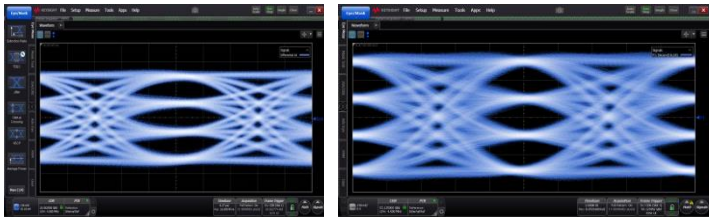


Marvell 112G +TSMC N5P

5nm 112Gbps SerDes hardware results

- Marvell leading the industry in 5nm 112G readiness
- Industry-leading performance demonstrated in hardware
- Performance to enable real world systems
- Massive integration of 112G underway in products

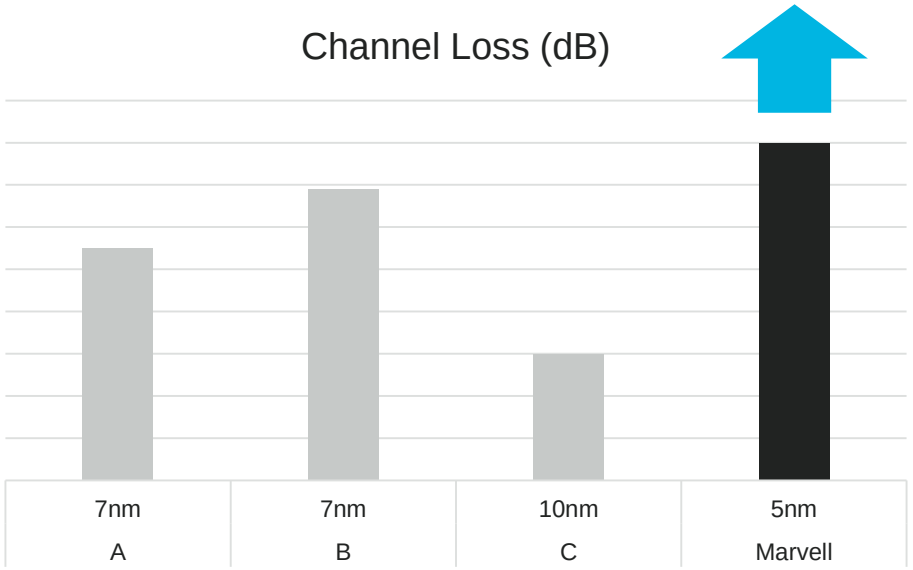




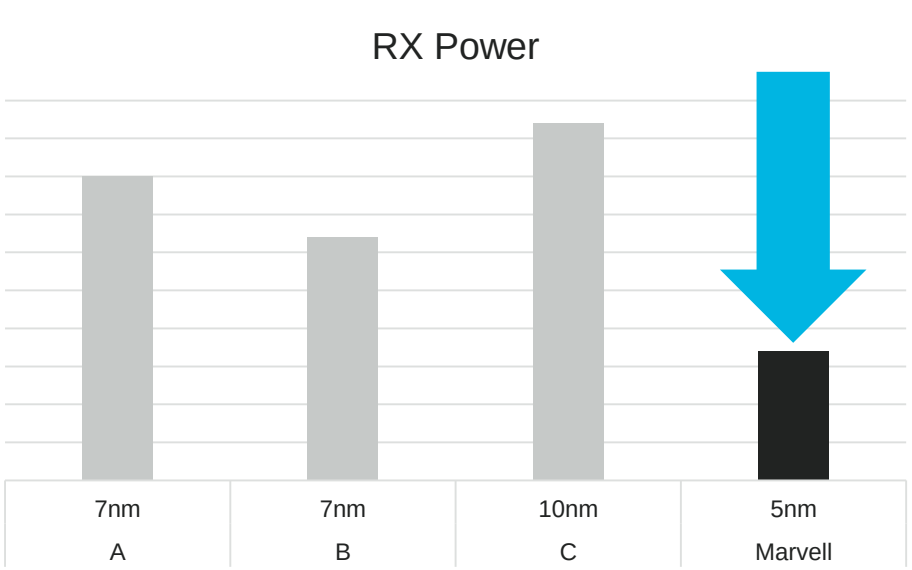
64G core capable of >40 dB 112G core capable of >40 dB

Marvell 5nm 112G comparison to published works

Industry Leading Performance



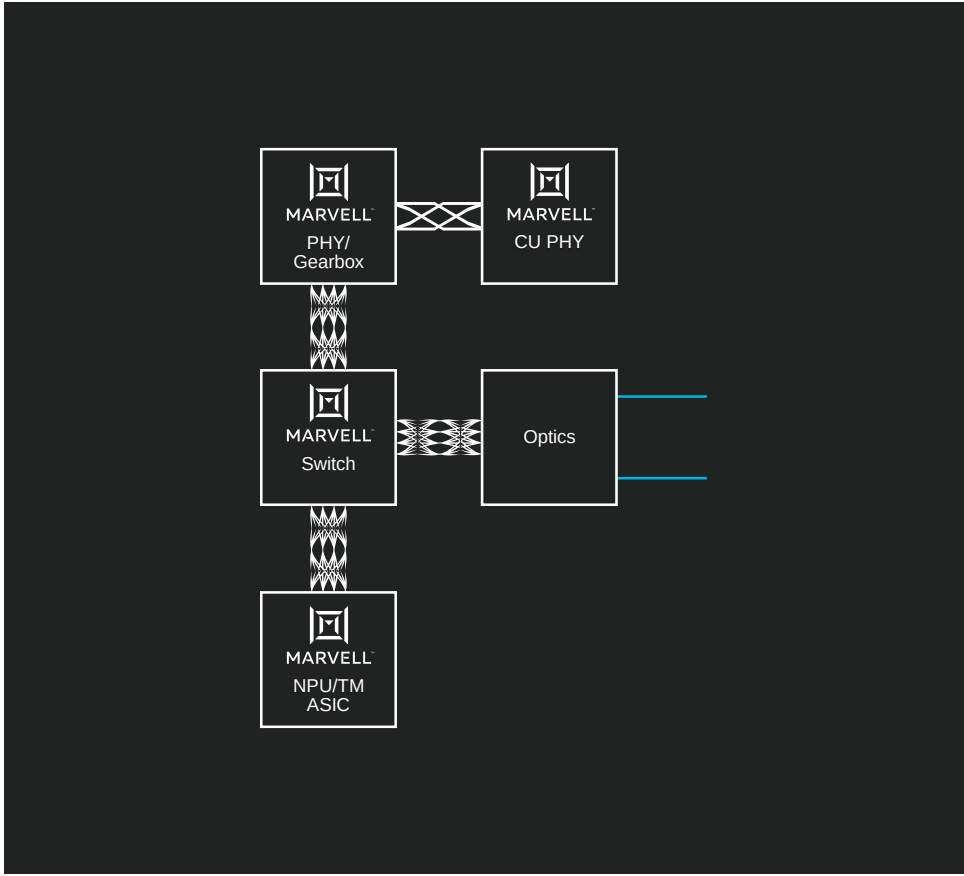
Much Lower Power



Source: ISSCC 2020, 2019 Symposium on VLSI Circuits and internal Marvell tests

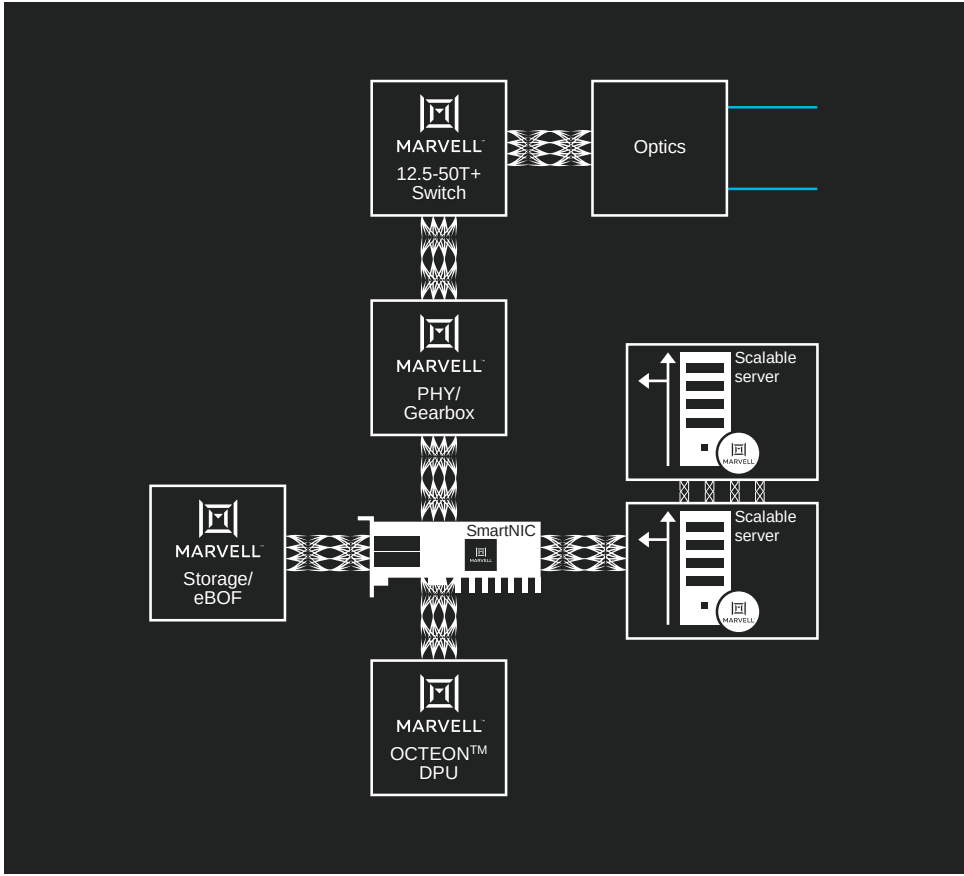
Marvell 112G → own the network

- Marvell products can be used to build the whole system
- Build as an ASIC, assemble from existing products, or integrate on package



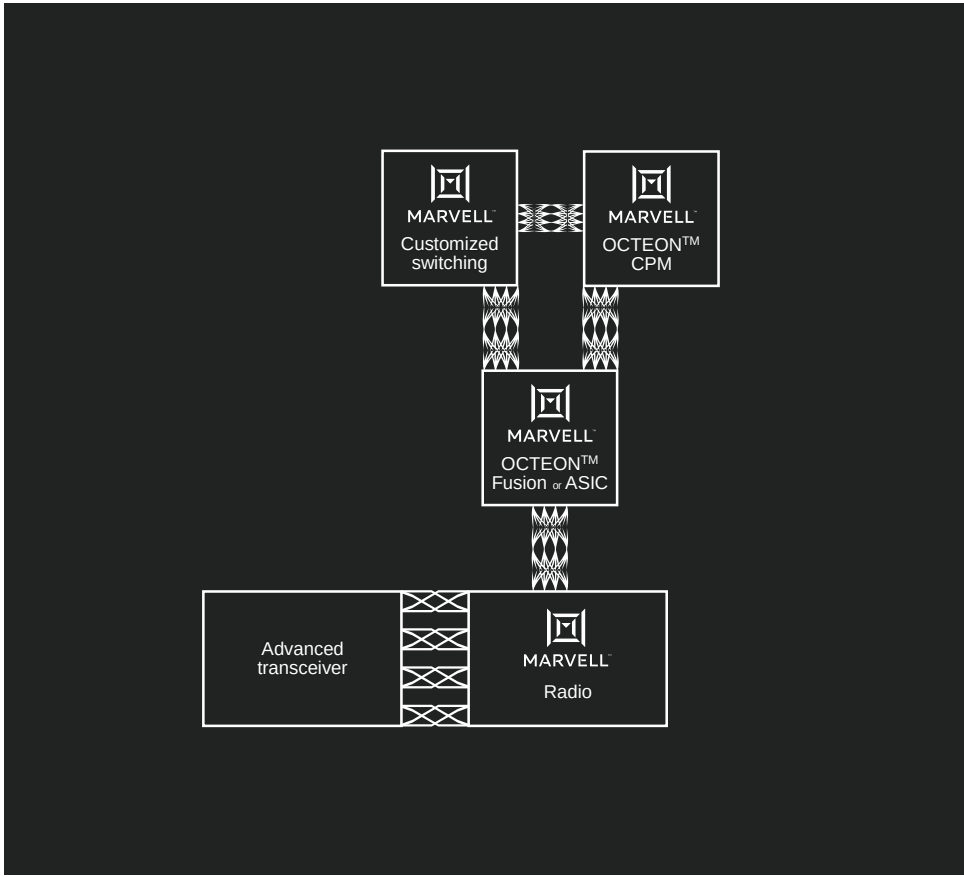
Marvell 112G → own the data center

- Marvell products can be used to build the whole system
- Build as an ASIC, assemble from existing products, or integrate on package



Marvell 112G → own the airwaves

- Marvell products can be used to build the whole system
- Build as an ASIC, assemble from existing products, or integrate on package



Key takeaways

1. Leading the industry with 112G verified hardware in 5nm
2. Demonstrating industry-leading performance and 25% power reduction vs 7nm
3. Enables 2x interconnect speed in mainstream infrastructure applications
4. Standard products and ASICs leveraging 5nm 112G already in development
5. End-to-end interoperable data infrastructure portfolio of standard products and ASICs

Essential technology, done right™