



Marvell Expands Borderless Enterprise Portfolio with Industry-Leading Octal Scalable mGig PHY Family

November 19, 2020

Most complete data infrastructure portfolio

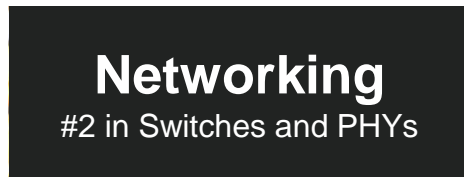
Semiconductor solutions that
move, store, process, secure
the world's data faster and
more reliably than anyone else



Processors
#1 in baseband and
data plane processors



Storage
#1 in HDD and SSD
controllers, Fibre Channel



Networking
#2 in Switches and PHYs

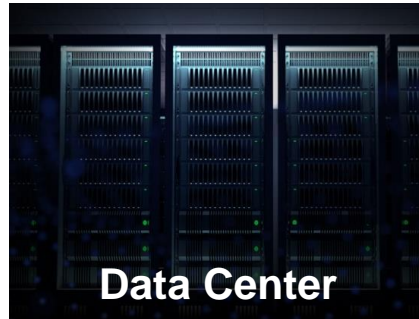
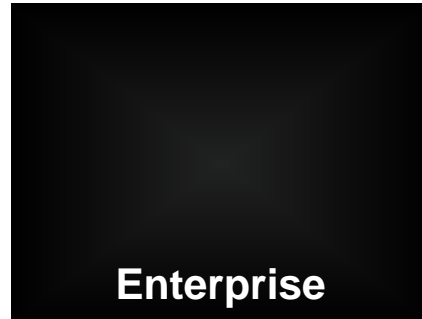
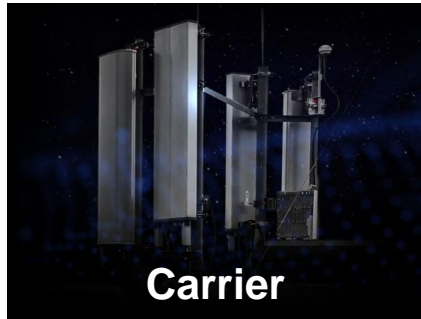


Security
#1 in security processors

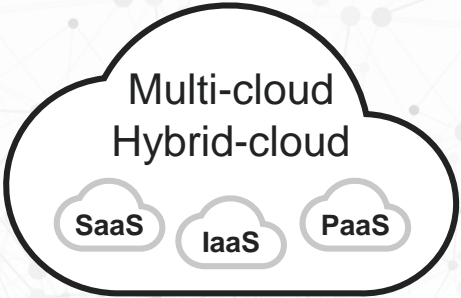
Networking, done right

20 years of customer-driven innovation and leadership

#1 in Access Switching | #1 in scalable mGig PHYs



Borderless Enterprise



Branch offices



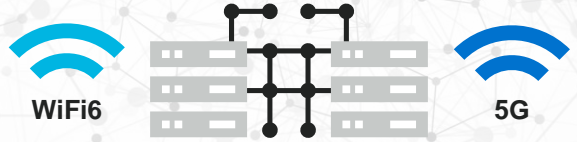
Enterprise campus



Regional data centers



Remote workers



Edge compute



IoT

End-to-end enterprise portfolio



Visibility

Actionable Analytics



Aggregation and Core Prestera® Switches

25/50/100GE Optical PHYs



Performance

Service Assurance
Resilient Bandwidth

Security

Zero-Trust Access
MACsec Encryption



Premium Access Prestera Switches

10GE Alaska® Copper PHYs



Intelligence

AI Enablement
Smart Services

mGig Access Prestera Switches

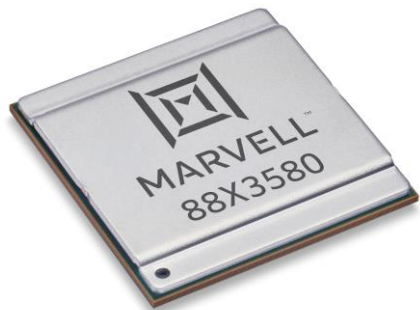
2.5/5GE Alaska Copper PHYs

GE Access Prestera Switches

1GE Alaska Copper PHYs



Introducing Marvell new Octal PHY

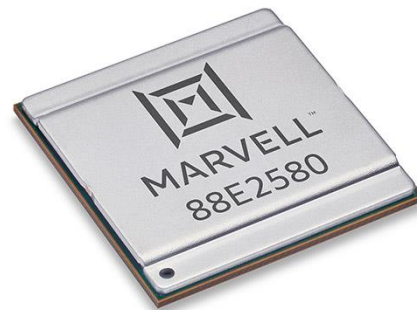


Octal scalable

Alaska mGig-10G copper PHY

Six speed

10M/100M/1G/2.5G/5G/10G



Octal scalable

Alaska mGig-5G copper PHY

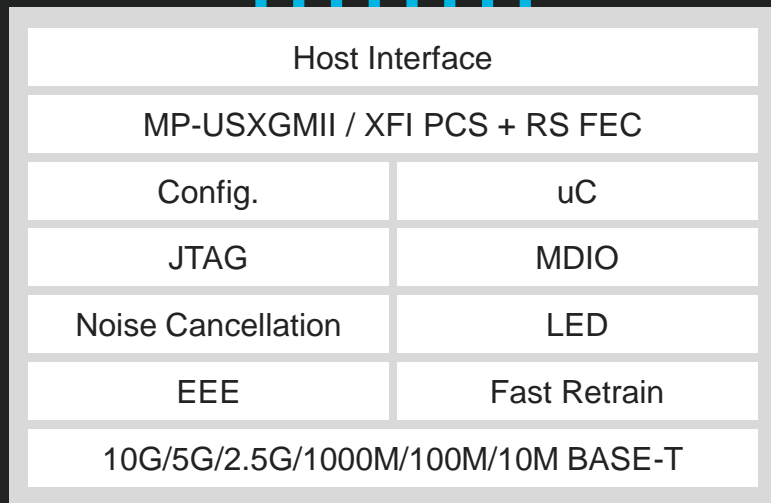
Five speed

10M/100M/1G/2.5G/5G

Alaska 88X3580

Octal-Port Scalable mGig-10G

Octal USXGMII / XFI / 5GBASE-R / 2500BASE-X / SGMII
20G-DXGMII / QXGMII / OXGMII
10G-QXGMII



Octal 10GBASE-T/NBASE-T

Target Applications

- High-density switches

Key Features

- Scalable mGig-10G with Six speeds support: 10M/100M/1G/2.5G/5G/10G
- 2.5G/5G operation to 100m over Cat5e
- 10G operation to 100m over Cat6A
- Surveillance Camera Mode >500m at 100Mbps
- 20G MP-USXGMII with RS-FEC
- Octal 2.5G with 20G-OXGMII and Port Expander
- Energy Efficient Ethernet (EEE)
- VCT Cable Tester
- 1 or 2-step 1588 PTP and SyncE support
- Dual Media Fiber/Copper support
- Advance Noise Cancellation with CMS
- Fully compliant to IEEE 802.3bz and NBASE-T

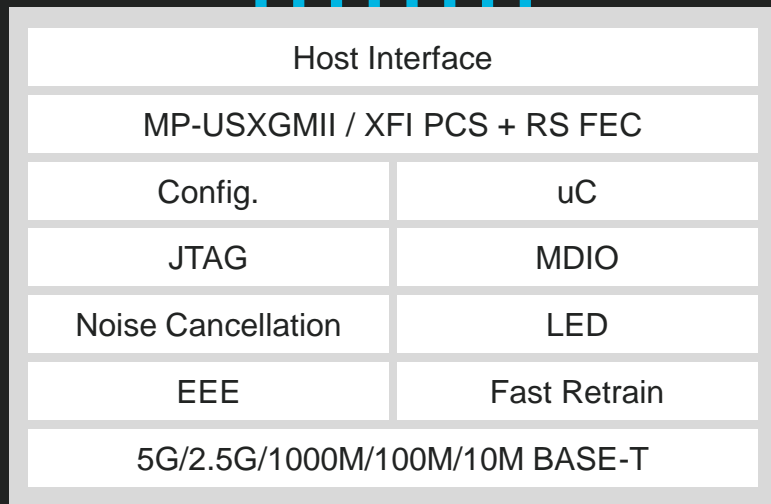
17mm x 17mm BGA Package

- 0.8mm ball pitch

Alaska 88E2580

Octal-Port Scalable mGig-5G

Octal USXGMII / XFI / 5GBASE-R / 2500BASE-X / SGMII
20G-QXGMII / OXGMII
10G-QXGMII



Octal 2.5/5G NBASE-T

Target Applications

- High-density switches

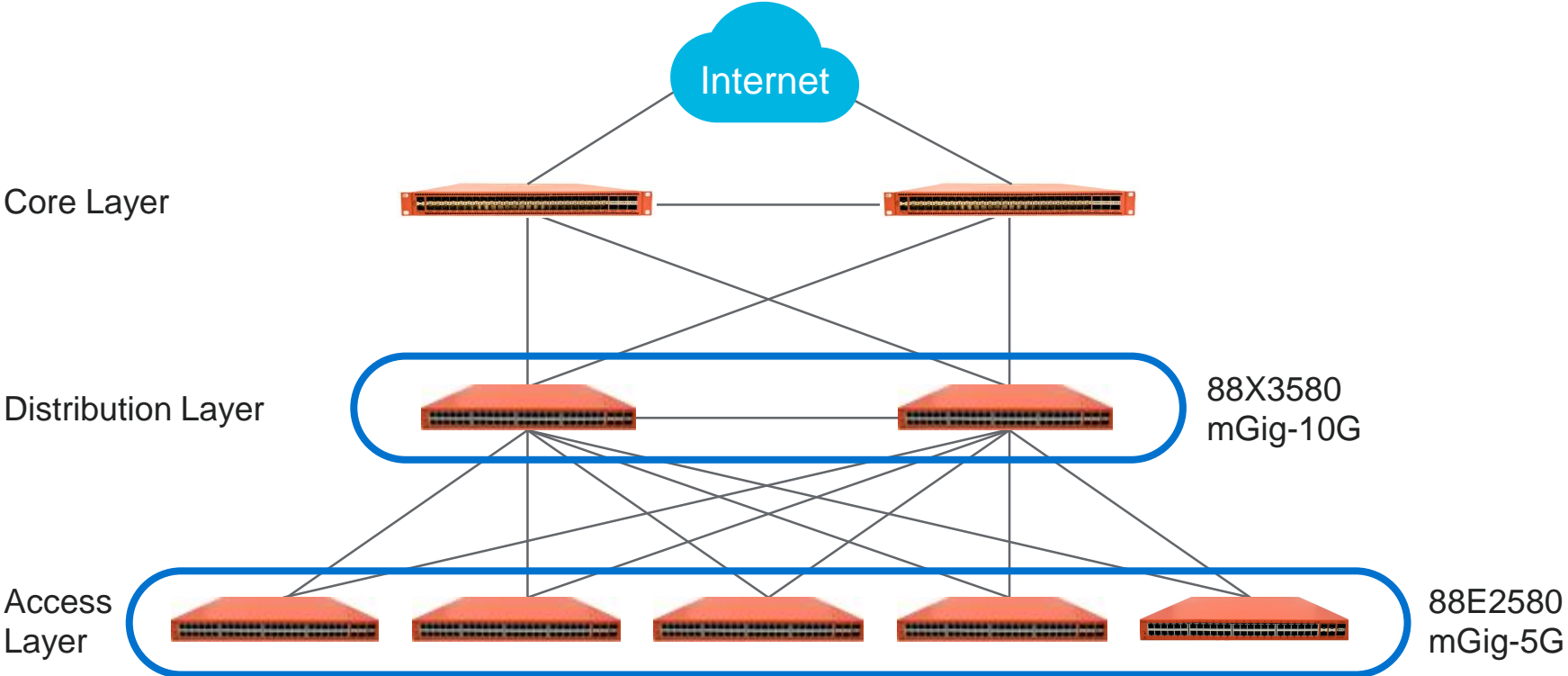
Key Features

- Scalable mGig-5G with Five speeds support: 10M/100M/1G/2.5G/5G
- 2.5G/5G operation to 100m over Cat5e
- Surveillance Camera Mode >500m @100Mbps
- 20G MP-USXGMII with RS-FEC
- Octal 2.5G with 20G-OXGMII
- Energy Efficient Ethernet (EEE)
- VCT Cable Tester
- 1 or 2-step 1588 PTP and SyncE support
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- Advance Noise Cancellation with CMS
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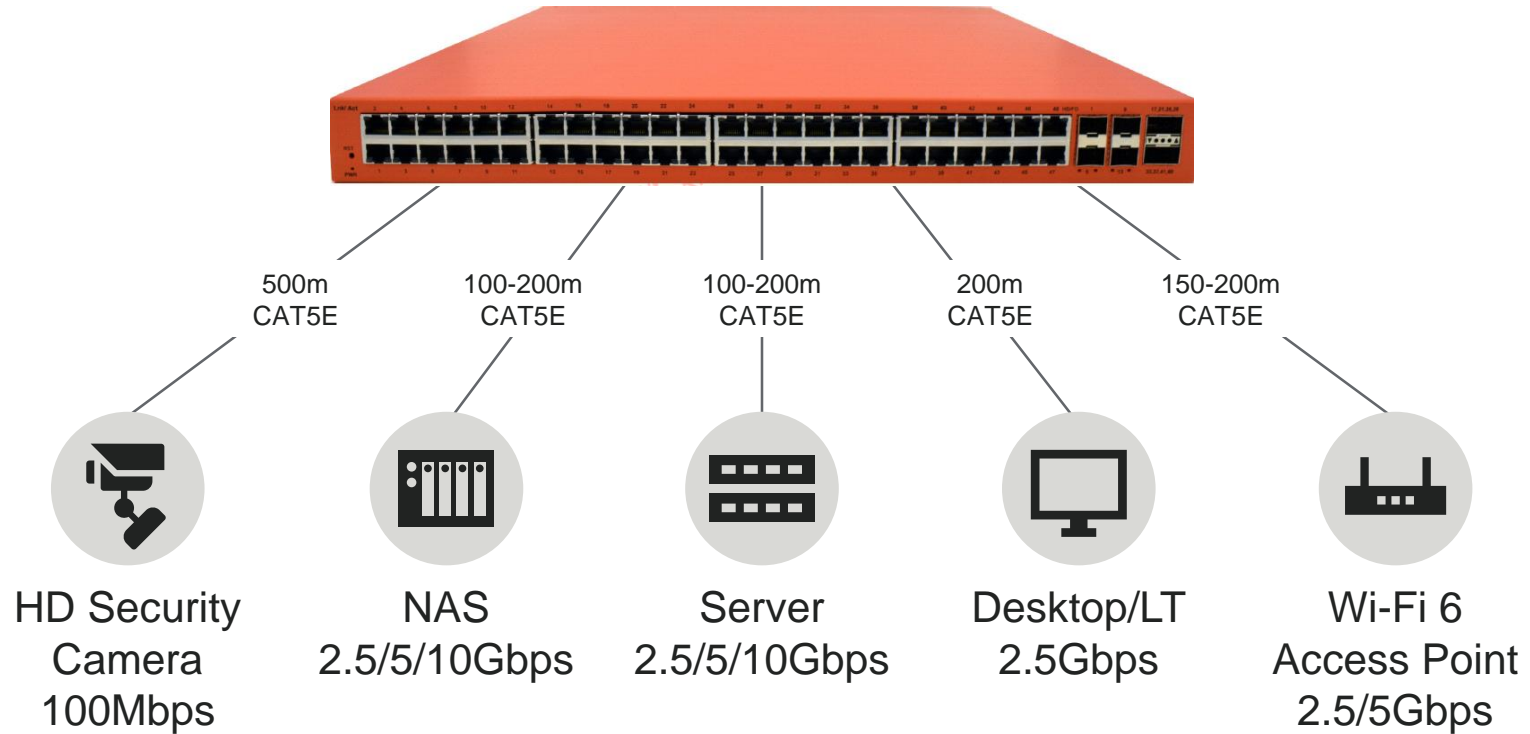
17mm x 17mm BGA Package

- 0.8mm ball pitch

Enterprise network hierarchy



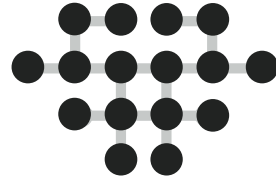
mGig access switch use case



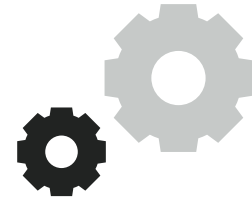
Octal port advantages



RBOM cost

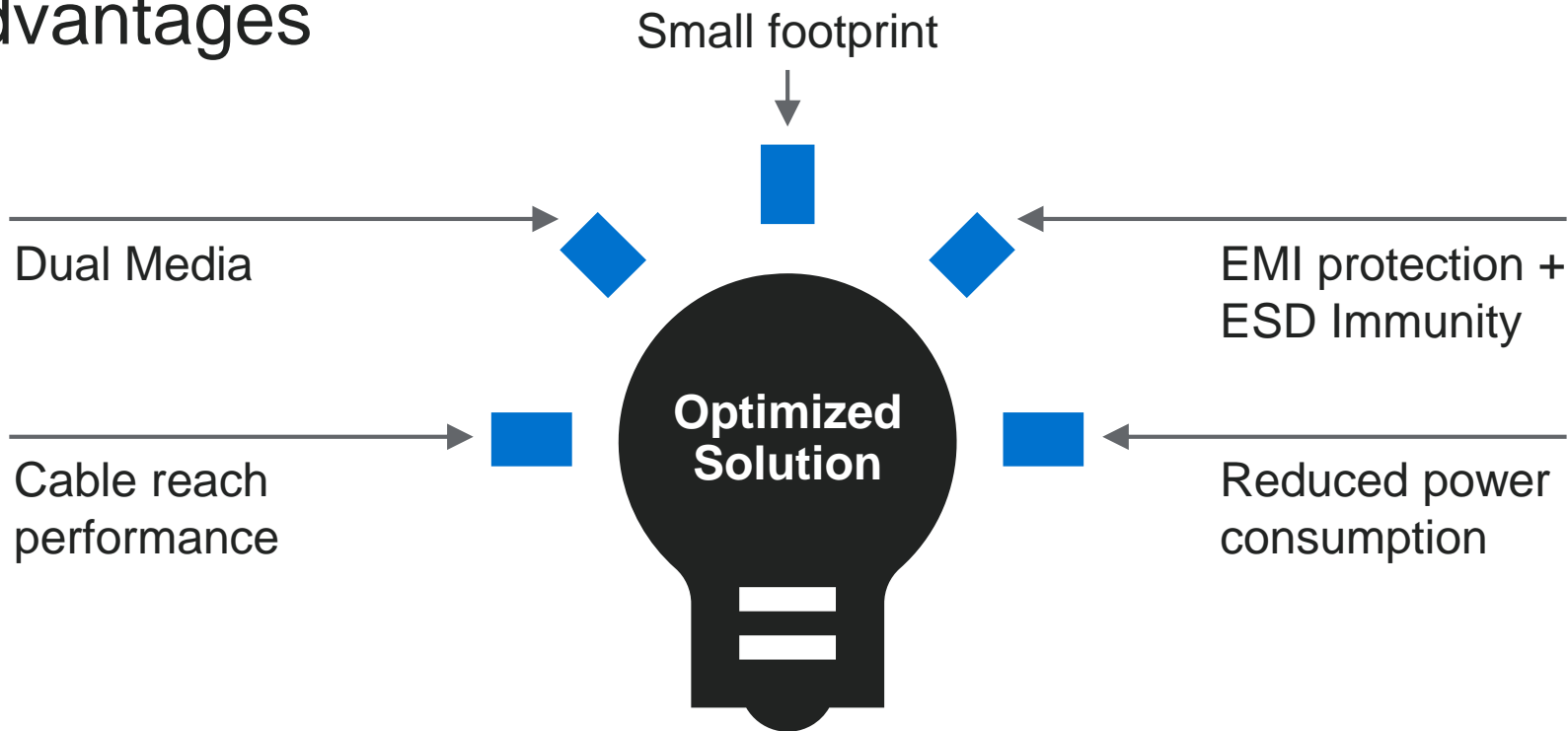


Complexity



Maintenance

X3580/E2580 advantages



Executive summary

- 1 Industry-leading borderless enterprise networking portfolio
- 2 Speed – mGig-10G and mGig-5G Ethernet in support of Wi-Fi 6 and 5G deployment
- 3 Cable Performance – Coverage, Cost, Simplify the network
- 4 Security – complete boot via Presteria secure boot mechanism
- 5 Software compatible with Marvell mGig PHY family



Essential technology, done right™