Marvell Expands Borderless Enterprise Portfolio With Industry-Leading Octal Scalable MGig PHY Family

High performance, low power PHYs enable optimized infrastructure for emerging mobility and cloud applications

SANTA CLARA, Calif., Nov. 19, 2020 /PRNewswire/ -- Marvell (NASDAQ: MRVL) today introduced its second-generation Alaska ® Octal Scalable mGig PHY family, bringing industry-leading performance, cable reach, low power and speed to enterprise networking infrastructure. The mGig PHYs are the newest additions to Marvell's borderless enterprise portfolio, a comprehensive set of Prestera® switches and Alaska PHYs architected to address the specific requirements as emerging mobility and cloud applications extend the boundaries of the traditional campus environment. Designed to optimize borderless enterprise access and aggregation switching, the new PHY family offers a clear upgrade path to multi-Gigabit (mGig) technology.

Together with the previously released access, aggregation and core Prestera Ethernet switches and Alaska PHYs, the new devices are part of Marvell's Scalable mGig Solutions that incorporate 10G, 5G and 2.5G capabilities and provide a seamless and flexible upgrade from 1Gb Ethernet. The Octal mGig-10G 88X3580, a 10G PHY transceiver and the Octal mGig-5G 88E2580, a 2.5/5G PHY transceiver both exceed IEEE cable reach requirements, optimizing the number of access switch deployments and simplifying campus networking. The PHYs are the industry's first Octal 10G and 2.5/5G devices manufactured in 12nm FinFET advanced process technology, providing lower power consumption by up to 10% compared to the previous product generation.

The new Octal mGig PHYs are Marvell's first optimized, low power dissipation, low footprint Octal 10M/100M/1G/2.5G/5G/10GBASE-T Ethernet transceivers with IEEE 1588v2 PTP support. Key features include:

- Long cable reach performance: Exceeds IEEE standard requirements, 10-20% improvement compared with Marvell's previous generation Octal solution.
- Low power consumption: The X3580 provides approximately 10% power reduction compared with Marvell's previous generation Octal solution.
- Enhanced ESD/surge immunity
- Enhanced EMI protection
- Full Speed range (10M/100M/1G/2.5G/5G/10G)
- Small footprint package (17mm x 17mm)
- Dual media support (Optical and BASE-T)
- USXGMII and legacy host interfaces (XFI, 5GBASE-R, 2500BASE-X, SGMII)

"Our new Octal mGig PHY family is designed to enable and accelerate emerging mobility and cloud applications by addressing the demand for bandwidth speed flexibility and lower power consumption," said Achyut Shah, vice president and general manager of the PHY BU at Marvell. "Together with our Prestera switches, the new high-density PHY devices offer an optimized performance and BOM cost solution. These make them ideal for mGig switch access use cases such as HD security cameras and Wi-Fi 6 access points including those for remote deployment beyond building structured wiring."

"Emerging mobility and cloud applications are extending the boundaries of the traditional campus environment and driving new requirements such as extended reach and lower power consumption. MGig speeds are needed to enable the support of higher bandwidth deployments such as Wi-Fi 6 access point uplinks," said Sameh Boujelbene, senior research director, Dell'Oro Group. "The new Alaska Octal Scalable mGig PHYs from Marvell are the latest additions to its borderless enterprise portfolio and help address those requirements."

Marvell's Octal mGig PHY family is part of the industry's most complete networking portfolio optimized for the borderless enterprise. The portfolio includes Marvell's unified Prestera Ethernet switch and Alaska PHY solution set and is architected from the ground up with insightful telemetry, flow-aware intelligence, scalable performance and advanced integrated security technologies that set the bar in switching. With a complete line of GE, 2.5GE, 5GE, 10GE, 25GE, 100GE and 400GE platforms, the portfolio is designed to fit a variety of network architectures at different speeds, densities and scales at small, medium and large enterprise IT organizations.

Availability
The 88X3580 and 88E2580 Octal PHY devices are available now for sampling.

For more information about Marvell's new Octal Scalable mGig PHY family, please visit the Marvell Ethernet PHY page.

About Marvell

To deliver the data infrastructure technology that connects the world, we're building solutions on the most powerful foundation: our partnerships with our customers. Trusted by the world's leading technology companies for 25 years, we move, store, process and secure the world's data with semiconductor solutions designed for our customers' current needs and future ambitions. Through a process of deep collaboration and transparency, we're ultimately changing the way tomorrow's enterprise, cloud, automotive, and carrier architectures transform—for the better.

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