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Marvell Introduces Carrier-Optimized Ethernet Access and Edge Switches

Newest Additions to the Prestera Switch Family Deliver Innovative Telemetry, Intelligence and Security to Enable High-Performance 5G and 400GE Metro Optical Transport Services

SANTA CLARA, Calif., Dec. 8, 2020 /PRNewswire/ -- Marvell (NASDAQ: MRVL) today introduced its new Prestera® DX 7300 series of Ethernet switches, designed to intelligently enable secure and efficient data movement throughout carrier access and metro networks. With 5G deployments already rolling out, network operators are tasked with accelerating their path to transformation as the combined demands of 5G and IoT traffic drive a shift in network infrastructure. To meet ever-increasing bandwidth demands, metro networks are also seeing a move to pluggable 400GE coherent optics, which enables the carrier and data center edge with high-capacity, long-reach connectivity directly from an Ethernet switch. In order to address the stringent and emerging requirements of 5G carrier and 400GE metro optical networks, the low-power, small footprint Prestera DX 7300 switches incorporate accurate time-sensitive features, integrated MACsec and advanced processing functionality, and support port speeds up to 400Gbps.

Innovative radio access network (RAN) disaggregation and virtualization solutions depend on the network's ability to deliver high-performance deterministic connectivity for fronthaul streams within ubiquitous and flexible Ethernet-bridged networks. To support the new RAN deployment models for radio access fronthaul applications, the Prestera DX 7300 family integrates highly accurate time synchronization, 802.1CM Time-Sensitive-Network (TSN) for fronthaul, network slicing and native eCPRI-aware processing. The switches are part of Marvell's open radio access network (open RAN) and virtualized radio access network (vRAN) platform solutions, also announced today.

Ever-increasing processing demands in the metro data center are driving the need for high-bandwidth data movement at an economical cost. The Prestera DX 7300 series of switches integrate 56Gbps SerDes, high-capacity MACsec and advanced processing that can be matched with pluggable 400G-ZR optical modules. This functionality enables system manufacturers to develop solutions for multi-access edge computing (MEC) and data center interconnect (DCI) applications that benefit from traffic efficiency, openness and the optimized cost structure of packet Ethernet networks.

"As 5G brings rigorous data protection and performance demands to the transport network, the infrastructure has to meet the requirements for secured communications at higher speeds and data rates to support emerging use cases," said Guy Azrad, general manager and senior vice president of Switching at Marvell. "Our newest Prestera family offers the most secured switching solution with the high-speed interfaces needed to fulfill 5G potential at the industry's lowest power and footprint available today."

"The emerging carrier solutions spanning edge, metro data center and 5G depend on strong and scalable network performance and security," said Alan Weckel, founder and technology analyst, 650 Group. "Marvell's new switch family is designed to innovate and strengthen the new cloud-native architectures, delivering scale and capabilities to address the increased demand for this technology."

The Prestera DX 7300 devices are Marvell's third generation of its highly successful carrier Ethernet switch family, with tens of millions of ports shipped to date to over 100 existing customers. The portfolio is comprised of three cutting-edge Prestera Ethernet switches that scale port speeds from 1Gbps to 400Gbps with bandwidth ranging from 300Gbps to 1.6Tbps. The newest switch additions continue the product line's legacy of versatility, delivering low-power and small footprint flexibility that enable the development of cost-effective solutions tailored to deployment-specific needs.

Powered by a modern Marvell Software Development Kit (SDK), the Prestera DX 7300 switches share a set of common application programming interfaces (APIs) with other Marvell switching products. This interoperability is designed to simplify the development effort and accelerate system introduction. Marvell brings strong support of a rich ecosystem of open-source and commercial networking software solutions. The solutions, which include Marvell's own turnkey networking software stack, provide a comprehensive platform of options from original device manufacturers (ODMs).

Key Features

Marvell's Prestera DX 7300 switching family is built with flexibility and feature richness to fulfill the emerging and wide variety of carrier 5G, edge, access and metro use cases.

- ITU-T G.8273.2 Class C PTP/SyncE, Time Sensitive Networking (802.1CM) compliance for precise 5G timing
- Advanced security with secure boot and integrated 802.1ae 256b MACsec engines for Layer2 data encryption
- Segment Routing (SRV6) for advanced traffic engineering and service chaining
- Enhanced network telemetry and intelligence for actionable metadata exports
- 56Gbps PAM4 SerDes supporting port speeds up to 400Gbps
- Flexible I/O speeds 1G/2.5/5/10/25/50/100/400G

Availability
The Prestera DX 7300 series of switches are available now.

For more information about the new Prestera DX 7300 family, please visit the Marvell Carrier Switching web 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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