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Marvell Launches Breakthrough End-to-End Solutions for 5G Infrastructure Deployments

Introduces Unparalleled Silicon Platform Spanning Radio, Edge and Core Networking Applications at Mobile World Congress

BARCELONA and SANTA CLARA, Calif., Feb. 25, 2019 /PRNewswire/ -- Marvell (NASDAQ: MRVL), a leader in infrastructure semiconductor solutions, today announced a highly flexible end-to-end optimized 5G platform specifically tailored to exceed OEM design demands, accelerate development of 5G New Radio (5G NR) systems and, ultimately, speed global carrier deployments.

Marvell's market position in wireless networking technology has grown with each successive generation of wireless standards. Today, Marvell-powered 3/4G solutions provide cellular coverage to over a billion people worldwide. In 5G, Marvell offers complete silicon platforms that enable all aspects of the digital processing domain.

Marvell Out Front: Building the Networks of the Future

Seamless, high-speed and secure connectivity is critical between the edge and core as wireless base stations, micro cells, connected cars, smart cities and robotic factories are all becoming increasingly intelligent and unleashing new, revolutionary 5G usage cases.

Initial deployments of 5G NR have been dominated by FPGA-based solutions that are high in cost and power consumption with lower subscriber capacity. Large scale 5G networks require entirely new, highly integrated system architectures, spanning the network's radio, edge and core. To ensure end-to-end, secure and instantaneous interoperability, at optimized cost and power, Marvell is leveraging decades of integration expertise with an unparalleled portfolio of baseband DSPs, Arm multi-core SoCs, purpose-built hardware accelerators, Ethernet connectivity engines and system-level security solutions. In addition, 5G deployment models require flexibility to implement various system-level architectures adopted by operators around the world: some will be application-specific like fixed wireless while others will incorporate various levels of split RAN architectures and core network virtualization. Instead of implementing per use specific ASICs, the Marvell 5G platform enables operators to rapidly develop systems that can be adapted according to the architectural needs of end deployment and use cases.

"Marvell is uniquely empowering our network infrastructure customer base to accelerate their 5G systems via our highly integrated solutions," said Raghib Hussain, chief strategy officer and executive vice president of the Network and Processors Group at Marvell Semiconductor, Inc. "Specifically, our 5G Ready portfolio is an order of magnitude better in terms of performance, power efficiency and overall implementation cost versus unoptimized

field programmable pre-5G architectures. In short, the depth and breadth of Marvell's technology offers OEMs the flexibility to tailor their infrastructure solutions to specific carriers and global end markets."

"As an innovator in merchant silicon base station solutions, Marvell is well-positioned to capitalize on 5G infrastructure deployments given the demonstrated strength of their existing portfolio coupled with their latest more highly integrated product launches," said Caroline Gabriel, research director and co-founder, Rethink Technology Research. "They offer a unique, highly flexible system-level platform. Further, we think 2019 will prove to be the knee of the curve for Marvell as carriers commence exciting 5G services globally."

Marvell's End-to-End 5G Ready Portfolio:

In highly distributed, ultra-low latency networks, decisions are increasingly made autonomously at the edge versus the core. Marvell is at the forefront via multi-access edge computing solutions with advanced application processors, secure switches and PHY technologies for edge analytics, threat detection and autonomous decision making. Marvell's 5G NR Platform includes:

Radio Access SoCs: The award-winning OCTEON Fusion-M product line is optimized for cost/power and programmable with a 3GPP protocol stack split and massive MIMO capabilities. Marvell's SoCs set the performance benchmark for both LTE-A and 5G NR, with multiple deployments through key industry partners.

Transport/EPC Core Processors: Multi-core OCTEON processors power the transport layer of over 10 million base stations around the world today. This rich and field proven heritage allows Marvell to offer differentiated products that are optimized to address the most demanding use cases of 5G NR. Marvell's scalable data-plane acceleration makes its embedded processors ideal for 5G Core/EPC applications at the heart of the network as well. As the industry migrates to virtualized and hierarchical topologies, Marvell uniquely offers a single unified architecture for both transport and EPC core.

Ethernet Networking: As a leading supplier of ethernet switches and physical layer devices, Marvell has extended its system-level expertise to encompass switches and PHYs in carrier infrastructure networks. Marvell Prestera switches contain hierarchical traffic management required for demanding mobile infrastructure environments. In addition, Marvell's differentiated switching solutions allow advanced flow identification and access control to enable user-level security.

Wi-Fi Connectivity: Marvell is ramping high volume production of industry-leading 8x8 and 4x4 Wi-Fi 6 solutions. The company's robust, fully certifiable and complete 802.11ax engines include full MU-MIMO and OFDMA uplink and downlink, multi-gigabit peak speeds, precision location, cloud management, best-in-class beamforming and integrated Bluetooth 5 technology. With broad NPU support and flexible configuration options, Marvell's carrier-grade connectivity solutions are gaining design win traction across major carriers worldwide.

ThunderX2 Arm-based Server: With increasing emphasis on NFV and cloud deployments, Marvell has introduced workload optimized ThunderX2 server processors to augment and enhance its 5G portfolio. These highly innovative solutions will be pivotal in the deployment of next generation carrier networks. The migration of traditional functions such as PDCP into the cloud are perfectly suited to Marvell's ThunderX2 architecture.

To learn more about our network infrastructure solutions, please visit www.marvell.com/solutions/carrier/.

About Marvell

Marvell first revolutionized the digital storage industry by moving information at speeds never thought possible. Today, that same breakthrough innovation remains at the heart of the company's storage, processing, networking, security and connectivity solutions. With leading intellectual property and deep system-level knowledge, Marvell's semiconductor solutions continue to transform the enterprise, cloud, automotive, industrial, and consumer markets. To learn more, visit: https://www.marvell.com/

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