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Microchip Accelerates Machine Learning and Hyperscale Computing Infrastructure with the World's First PCI Express® 5.0 Switches

Switchtec™ PFX PCIe Gen 5 high performance switches double the data rate of PCIe Gen 4.0 solutions while delivering ultra-low latency and advanced diagnostics

CHANDLER, Ariz., Feb. 02, 2021 (GLOBE NEWSWIRE) -- Applications such as data analytics, autonomous-driving and medical diagnostics are driving extraordinary demands for machine learning and hyperscale compute infrastructure. To meet these demands, Microchip Technology Inc. **(Nasdaq: MCHP)** today announced the world's first PCI Express (PCIe) 5.0 switch solutions — the **Switchtec PFX PCIe 5.0 family** — doubling the interconnect performance for dense compute, high speed networking and NVM Express® (NVMe®) storage. Together with the XpressConnect™ retimers, Microchip is the industry's only supplier of both PCIe Gen 5 switches and PCIe Gen 5 retimer products, delivering a complete portfolio of PCIe Gen 5 infrastructure solutions with proven interoperability.

"Accelerators, graphic processing units (GPUs), central processing units (CPUs) and high-speed network adapters continue to drive the need for higher performance PCIe infrastructure. Microchip's introduction of the world's first PCIe 5.0 switch doubles the PCIe Gen 4 interconnect link rates to 32 GT/s to support the most demanding next-generation machine learning platforms," said Andrew Dieckmann, associate vice president of marketing and applications engineering for Microchip's data center solutions business unit. "Coupled with our XpressConnect family of PCIe 5.0 and Compute Express Link™ (CXL™) 1.1/2.0 retimers, Microchip offers the industry's broadest portfolio of PCIe Gen 5 infrastructure solutions with the lowest latency and end-to-end interoperability."

The Switchtec PFX PCIe 5.0 switch family comprises high density, high reliability switches supporting 28 lanes to 100 lanes and up to 48 non-transparent bridges (NTBs). The Switchtec technology devices support high reliability capabilities, including hot-and surprise-plug as well as secure boot authentication. With PCIe 5.0 data rates of 32 GT/s, signal integrity and complex system topologies pose significant development and debug challenges. To accelerate time-to-market, the Switchtec PFX PCIe 5.0 switch provides a comprehensive suite of debug and diagnostic features including sophisticated internal PCIe analyzers supporting Transaction Layer Packet (TLP) generation and analysis and on-chip non-obtrusive SerDes eye capture capabilities. Rapid system bring-up and debug is further supported with ChipLink — an intuitive graphical user interface (GUI) based device configuration and topology viewer that provides full access to the PFX PCIe switch's registers, counters, diagnostics and forensic capture capabilities.

“Intel’s upcoming Sapphire Rapids Xeon processors will implement PCI Express 5.0 and Compute Express Link running up to 32.0 GT/s to deliver the low-latency and high-bandwidth I/O solutions our customers need to deploy,” said Dr. Debendra Das Sharma, Intel fellow and director of I/O technology and standards. “We are pleased to see Microchip’s PCIe 5.0 switch and retimer investment strengthen the ecosystem and drive broader deployment of PCIe 5.0 and CXL enabled solutions.”

Development Tools
Microchip has released a full set of design-in collateral, reference designs, evaluation boards and tools to support customers building systems that take advantage of the high-bandwidth of PCIe 5.0.

In addition to PCIe technology, Microchip also provides data center infrastructure builders worldwide with total system solutions including RAID over NVMe, storage, memory, timing and synchronization systems, stand-alone secure boot, secure firmware and authentication, wireless products, touch-enabled displays to configure and monitor data center equipment and predictive fan controls.

Availability
The Switchtec PFX PCIe 5.0 family of switches are sampling now to qualified customers. For additional information, contact a Microchip sales representative.

Resources
High-res image available through Flickr or editorial contact (feel free to publish):

- Application image: **https://www.flickr.com/photos/microchiptechnology/50808286076**

About Microchip Technology
Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control solutions. Its easy-to-use development tools and comprehensive product portfolio enable customers to create optimal designs which reduce risk while lowering total system cost and time to market. The company’s solutions serve more than 120,000 customers across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support along with dependable delivery and quality. For more information, visit the Microchip website at **www.microchip.com**.

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