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Next-Generation Family of Ethernet Switches Features Time Sensitive Networking and Scalable Port Bandwidths from 46 Gbps to 102 Gbps

Microchip's LAN9694, LAN9696 and LAN9698 devices are integrated with High-availability Seamless Redundancy (HSR) and Parallel Redundancy Protocol (PRP) for ease of design

CHANDLER, Ariz., Jan. 16, 2024 (GLOBE NEWSWIRE) -- The growth of the industrial automation market encompasses innovative technologies like Machine Learning (ML) and robotic systems. Embedded solutions with deterministic communication are essential for industrial automation applications to control, monitor and process data. To provide designers with a reliable and robust network solution with deterministic communication, Microchip Technology **(Nasdaq: MCHP)** today announces its next-generation of **LAN969x Ethernet switches** with Time Sensitive Networking (TSN), scalable bandwidths from 46 Gbps to 102 Gbps and a powerful 1 GHz single-core Arm® Cortex®-A53 CPU.

For applications that require greater redundancy, the LAN969x Ethernet switches can be configured with High-availability Seamless Redundancy (HSR) and Parallel Redundancy Protocol (PRP). HSR and PRP are hardware protocols that provide zero-loss redundancy in Ethernet networks. The LAN969x Ethernet switches support multiple HSR and PRP Redundancy Box (RedBox) instances that can operate in parallel and in series, as well as at Ethernet port speeds from 10 Mbps to 10 Gbps.

The LAN969x can implement a QuadBox, which is a function that connects two HSR networks to each other. This feature is particularly useful in applications where high reliability and zero downtime are critical. Alternative solutions that implement a QuadBox typically require multiple different components that can drive up design complexity and system costs.

"Prior to the introduction of Microchip's LAN969x Ethernet switches, customers who wanted to implement TSN and HSR/PRP features required multiple ICs. Microchip's new LAN969x solution is a single chip that can reduce the number of components and system level costs," said Charles Forni, vice president of Microchip's USB and networking business unit. "These devices are also supported with our VSC6817SDK IStaX Linux® application software package that can enable designers to quickly bring products to market."

The LAN969x Ethernet switches are highly configurable with options of up to 30 ports. The Ethernet ports support multiple interfaces including RGMII, SGMII, QSGMII, USGMII, and USXGMII. The LAN969x family targets secure and safety-critical applications where high-port-count 10M/100M/1G/2.5G/10G switching links are required.

The LAN969x family is available with security add-ons such as secure boot and secure firmware execution based on the customer's root-of-trust manufacturing process. Security is provided through Ternary Content Addressable Memory (TCAM)-based frame processing using a Versatile Content Aware Processor (VCAP), Arm Trusted Firmware methodology for fast secure boot, crypto libraries and hardware security accelerators for boot and code encryption, and one-time programmable immutable key storage.

The new family of LAN969x mid-range Ethernet switches rounds out Microchip's portfolio of TSN switches. The SparX-5i family supports up to 64 ports and 200 Gbps of switching bandwidth, while the LAN9662 and LAN9668 support from 4 to 8 ports and 4 to 11 Gbps of switch bandwidth.

Development Tools

The LAN969x family of Ethernet switches is supported by the **EV23X71A Evaluation Board**. Other resources include the **IStaX VSC6817SDK Linux Application Software Package** to support TSN standards and HSR/PRP redundancy.

Pricing and Availability

The LAN9694, LAN9696 and LAN9698 are available for purchase now. For additional information and to purchase, contact a Microchip sales representative, authorized worldwide distributor or visit Microchip's Purchasing and Client Services website, **www.microchipdirect.com**.

Resources

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

- Application image: **www.flickr.com/photos/microchiptechnology/53378056933/sizes/l**

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