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Advancing Zonal Architecture with 10BASE-T1S Endpoints for Smarter Remote Connectivity

Microchip's LAN866x 10BASE-T1S endpoint devices help eliminate the need to write software for network nodes

CHANDLER, Ariz., Nov. 12, 2025 (GLOBE NEWSWIRE) -- As the automotive industry transitions to zonal architectures for in-vehicle networking, designers face increasing challenges in connecting a growing number of sensors and actuators. Traditional approaches often rely on microcontrollers and custom software for each network node, resulting in greater system complexity, higher costs and longer development cycles. To overcome these obstacles, Microchip Technology **(Nasdaq: MCHP)** introduces its **LAN866x family of 10BASE-T1S endpoint devices** with Remote Control Protocol (RCP), extending Ethernet connectivity to the very edge of in-vehicle networks and enabling the vision of Software Defined Vehicles (SDVs).

The LAN866x endpoints are designed to simplify network integration by serving as bridges that translate Ethernet packets directly to local digital interfaces. Unlike conventional solutions, these endpoints are designed to be software-less, reducing the need for node-specific software programming, streamlining silicon usage and physical footprint. With support for standard-based RCP protocols, the endpoints enable centralized control of edge nodes for data streaming and device management. By utilizing a 10BASE-T1S multidrop topology, this solution supports an all-Ethernet, zonal architecture that helps reduce cabling, software integration and cost.

By removing the need for software development at every node, the LAN866x endpoints are designed to reduce both hardware and engineering costs, accelerate deployment timelines and simplify system architecture. The endpoints are well-suited for critical automotive applications such as lighting—covering interior, front and rear headlamps, as well as audio systems and a wide range of control functions. In these applications, the endpoints provide direct bridging of Ethernet data to local digital interfaces controlling LED drivers for lighting, transmitting audio data to and from microphones and speakers, as well as controlling sensors and actuators over the network.

"With the addition of these RCP endpoint devices, Microchip's Single Pair Ethernet product line empowers designers to realize a true all-Ethernet architecture for Software-Defined Vehicles," said Charlie Forni, corporate vice president of Microchip's networking and communications business unit. "We are committed to delivering innovative solutions and supporting our customers with global technical expertise, comprehensive documentation and development tools to further reduce design complexity and help them bring vehicles to market faster."

Microchip's Single Pair Ethernet (SPE) solutions provide a broad range of transceivers, bridges, switches and development tools that enable reliable, high-speed data transmission over a single twisted pair cable, supporting 10BASE-T1S, 100BASE-T1, 1000BASE-T1 and higher speed grade standards. These solutions are designed to simplify wiring, reduce costs and streamline Ethernet connectivity for automotive, industrial and building automation applications, while ensuring interoperability and scalability. For more information about Microchip's SPE solutions, visit the **web page** and its automotive Ethernet solutions **web page**.

Pricing and Availability

The LAN866x family is available in limited sampling. To learn more, please **contact a Microchip sales representative**.

Resources

High-res images available through Flickr or editorial contact (feel free to publish):
• Application image: **www.flickr.com/photos/microchiptechnology/54843898599/sizes/l**

About Microchip Technology:
Microchip Technology Inc. is a broadline supplier of semiconductors committed to making innovative design easier through total system solutions that address critical challenges at the intersection of emerging technologies and durable end markets. Its easy-to-use development tools and comprehensive product portfolio supports customers throughout the design process, from concept to completion. Headquartered in Chandler, Arizona, Microchip offers outstanding technical support and delivers solutions across the industrial, automotive, consumer, aerospace and defense, communications and computing markets. For more information, visit the Microchip website at **www.microchip.com**.

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