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Expanded Single Pair Ethernet Portfolio with 100BASE-T1 and 1000BASE-T1 PHY Transceivers for Network Interoperability

Microchip's LAN887x PHYs offer extended reach up to 40m and are designed to be compliant with industry standards

CHANDLER, Ariz., Aug. 19, 2024 (GLOBE NEWSWIRE) -- The automotive and industrial markets are widely adopting Single Pair Ethernet (SPE) solutions for network connectivity because of the system level benefits of reducing cost, weight and cable complexity. SPE, with its proven performance and reliability in automotive applications, is now also being deployed in other segments like avionics, robotics and automation. For exceptional flexibility and interoperability, Microchip Technology (**Nasdaq: MCHP**) today announces it has expanded its SPE solutions with its family of [LAN887x Ethernet PHY transceivers](#) supporting 100 Mbps to 1000 Mbps using 1000BASE-T1 network speeds and cable lengths up to 40m for extended reach.

For interoperability across industries, Microchip's LAN887x PHYs are designed to be fully compliant with IEEE® 802.3bp for the 1000BASE-T1 specification and IEEE 802bw-2015 for the 100BASE-T1 specification. Microchip has collaborated with the University of New Hampshire InterOperability Laboratory (UNH-IOL) to create the development test platform for 1000BASE-T1 conformance. For many automotive and industrial applications that operate in harsh environments and need to withstand extreme temperatures, these devices are also designed to be ISO 26262 functional safety ready with ASIL B classification.

These devices provide advanced diagnostics including cable fault detection, signal quality indicator, link down and errors, built in self-test, and temperature and voltage monitoring for increased reliability. To provide flexibility with varying connectivity requirements across end applications, the LAN887x PHYs support Type A operation with cable lengths up to 15m and Type B operation to support extended cable lengths of up to 40m. Both operation types include four inline connectors.

The LAN887x is a low-power solution with EtherGREEN™ technology for increased energy efficiency. The OPEN Alliance TC10 Sleep and Wakeup feature provides additional power savings with a maximum of 16 µA standby power consumption, which extends operating time in battery applications. An optional integrated linear regulator can optimize BOM costs by reducing the number of components in the design.

"Our comprehensive solutions, which include PHY transceivers, bridge devices, switches and development boards, make it easier for designers to implement Single Pair Ethernet technology into their designs," said Charles Forni, vice president of Microchip's USB and networking business unit. "The low-power sleep, extended cable reach features and functional safety support make our LAN887x devices versatile and robust solutions to support our customers' expanding networking needs."

The LAN887x PHYs are compatible with Microchip's broad portfolio of microcontrollers (MCUs), microprocessors (MPUs), System-on-Chip (SoC) devices and Ethernet switches. Microchip offers a growing range of SPE solutions including PHYs, controllers and switches to support data transmission speeds from 10 Mbps to 1000 Mbps. To learn more about Microchip's SPE solutions, visit the [website](#).

Development Tools

The LAN887x family of PHY transceivers is supported by comprehensive hardware evaluation platforms; Type A and Type B media converter kits, SFP (SGMII), USB and PCIe[®] plug-in boards and Linux[®] software drivers.

Pricing and Availability

The LAN8870, LAN8871 and LAN8872 are now available in production quantities. 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/53850439796/sizes/l

About Microchip Technology:

Microchip Technology Inc. is a leading provider of smart, connected and secure embedded control and processing 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 approximately 123,000 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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