October 29, 2026

Microchip Brings EtherCAT® and TSN Networking Solutions to its Power-Efficient PolarFire® FPGA Platform

Industrial edge networking stack enables real-time communications for AI automation, robotics and Industry 4.0 applications

CHANDLER, Ariz., Oct. 29, 2026 (GLOBE NEWSWIRE) -- As industrial systems evolve to support AI-enabled automation, robotics and intelligent edge computing, developers need to deliver deterministic, real-time networking while minimizing power consumption, maintaining security and reducing system complexity. To address these challenges, Microchip Technology **(Nasdaq: MCHP)** has expanded its industrial edge networking solution stack with EtherCAT® and Time-Sensitive Networking (TSN) capabilities on PolarFire® devices. Beckhoff® Automation GmbH EtherCAT IP is compatible with both PolarFire® FPGA and SoC devices and Microchip TSN IP is supported on PolarFire FPGA SoCs. These enhancements expand Microchip's growing portfolio of FPGA solution stacks which combine hardware, IP, development tools and reference designs to accelerate development across industrial networking, AI, machine learning and security-focused applications.

"Industrial networks are becoming more intelligent, distributed and data driven as AI moves closer to the edge," said Shakeel Peera, vice president of Microchip's FPGA business unit. "By adding EtherCAT and TSN capabilities to our power-efficient PolarFire platform, we're providing developers with the deterministic networking technologies needed to build highly responsive, scalable systems for industrial and embedded networking applications."

Beckhoff EtherCAT IP supports EtherCAT connectivity at 10/100/1000 Mbps and Microchip’s TSN solution enables deterministic 1 Gbps Ethernet using IEEE 802.1 Time-Sensitive Networking standards. Together, these technologies help developers build scalable industrial networks with predictable communication performance and interoperability across connected devices.

Built on power-efficient PolarFire FPGAs and SoCs, the industrial edge networking solution stack delivers real-time processing with high reliability and energy efficiency. PolarFire devices feature a secure, non-volatile architecture that enables instant-on operation and supports integrated security features such as secure boot and anti-tamper protection. The flexible FPGA fabric enables EtherCAT and TSN integration while supporting scalable customization for evolving industrial network architectures.

Target applications include motion control, industrial robotics, embedded vision, factory automation, autonomous mobile robots, automotive systems, smart infrastructure and aerospace and defense platforms. PolarFire FPGA and SoC industrial networking solutions are supported by Microchip’s Libero® SoC design suite, IP cores and reference designs, as well as the Dual-Port Gigabit Ethernet FMC card (ETH-DC-DUALGBE) and PolarFire® SoC

Video Kit (MPFS250-VIDEO-KIT) for rapid evaluation and prototyping. Visit the website to learn more about Microchip's full portfolio of **FPGA devices**.

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

- Application image: **https://www.flickr.com/gp/microchiptechnology/76v8P3CuKo**

About Microchip Technology:
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