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Microchip Introduces Fully Integrated Precise Time Scale System

Enables Nations to Operate an Independent Time Scale Back-up to GNSS to Protect Critical Infrastructure

CHANDLER, Ariz., May 19, 2022 (GLOBE NEWSWIRE) -- The strength of a nation's infrastructure is increasingly dependent on the accuracy of time. With pervasive cybersecurity threats to Global Navigation Satellite Systems (GNSS), utilizing an alternative time system is a matter of national security. To address this need, Microchip Technology Inc. (**Nasdaq: MCHP**) today announces its Precise Time Scale System, a world-class timing system that is traceable to Universal Coordinated Time (UTC) and not dependent on GNSS—providing nations, institutions, critical infrastructure operators and scientific labs with complete control over the time source that their infrastructure depends on.

The Precise Time Scale System (PTSS) is a fully integrated system capable of providing timing accuracies comparable to the world's best national laboratories. The core products integrated into the PTSS are:

- **SyncSystem 4380A Time Scale Edition** generates an autonomous time scale derived from combining several highly accurate independent clocks with a multi-channel instrument for measuring and comparing clock performance.
- **Time Scale Orchestrator** is a software platform providing a unified view with a built-in database that integrates the management, monitoring, alarming, and reporting functions of the individual products that form the time scale system.
- **5071A Cesium Clock Primary Frequency Standard and MHM 2020 Active Hydrogen Maser** are Microchip's atomic clocks which provide accurate and stable frequencies that are continuously measured against each other to compute and generate the ensemble time scale frequency.

The Precise Time Scale System integrates the new portfolio of time scale products into a turnkey solution, available in a single rack and guaranteed by a complete Factory Acceptance Test (FAT) that exceeds the most stringent requirements. The PTSS offers nations the ability to independently and efficiently operate their own time scale system—aligned to UTC as calculated by the Bureau International des Poids et Measure (BIPM)—within the borders of their country. Microchip's SyncServer® S600/S650 and TimeProvider® 4100 time servers are integrated into the system to provide Trusted Time™ to critical infrastructure using both Network Time Protocol (NTP) and Precision Time Protocol (PTP).

"Microchip's Precise Time Scale System provides a high-quality back-up or alternative to GNSS as a source of time, which can be distributed through eLoran, IEEE 1588 over fiber, two-way time transfer, and other methods," said Randy Brudzinski, vice president,

Microchip's frequency and time systems business unit. "By implementing an autonomous time source, a nation can control and leverage time as a utility to safeguard critical infrastructure including its transportation, financial sector, communications and power utilities."

Alternatively, for customers constructing their own time scale systems, Microchip's time scale products can be purchased individually to provide core time scale functions, such as clock measurement and clock ensemble generation, along with system management, monitoring and performance reporting. This system modularity allows timekeepers the ability to procure the system over time as budgets permit and technology evolves.

Availability

The Precise Time Scale System is a custom solution designed to customer requirements and consists of four core products including the SyncSystem 4380A Time Scale Edition, Time Scale Orchestrator, 5071A Cesium Clock Primary Frequency Standard and MHM 2020 Hydrogen Active Masers. For additional information or to purchase, contact a Microchip sales representative.

Resources

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

- Application image: www.flickr.com/photos/microchiptechnology/52050784838/sizes/l/

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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