July 30, 2020

Microchip Introduces First Time and Frequency Instrument with Embedded Global Positioning System (GPS) M-Code Receiver

New SyncServer S650 M-Code secures military communication systems, radar and networks reliant on GPS signals

CHANDLER, Ariz., July 30, 2020 (GLOBE NEWSWIRE) -- Threats from intentional jamming and spoofing of U.S. Global Positioning System (GPS) signals, as well as cybersecurity risks to critical infrastructure, demonstrate the need for powerful and secure time and frequency systems that ensure continuing operability and performance. Microchip Technology Inc. **(Nasdaq: MCHP)** today announced that its **SyncServer S650 M-Code** time server has received approval from the U.S. Air Force GPS Directorate of the Los Angeles Air Force Base for use in support of military communication systems, radars and networks.

M-Code, an encrypted military signal broadcasted in GPS frequency bands, is required by congressional mandate for mission critical Department of Defense (DoD) applications in hostile environments. Microchip's SyncServer S650 M-Code equipped time and frequency server provides a secure, accurate, flexible platform for synchronizing mission-critical electronic systems and instrumentation. For DoD programs requiring jam-resistant, encrypted time and frequency signals from the GPS military M-Code Precise Positioning Service (PPS), the SyncServer S650 M-Code is a secure time and frequency instrument with a fully integrated M-code GPS receiver.

"As the first time and frequency instrument enabling DoD compliance for M-Code-based GPS systems, this technology demonstrates Microchip's continuing commitment and investment in the security of time and frequency systems," said Randy Brudzinski, vice president, Frequency and Timing Solutions business unit. "This time server represents a new level of security hardening built on Microchip's proven commercial SyncServer S650 time server that provides extreme timing accuracy, security and flexibility."

The SyncServer S650 M-Code equipped time and frequency instrument is a rack mounted server device that synchronizes to the atomic clocks aboard GPS satellites via M-Code. The S650 M-Code leverages new technology to provide enhanced anti-jamming protection and further hardening against spoofing, providing greater accuracy, and improving operator ease-of-use for key loading.

Harder to jam than commercial CA-Code GPS, M-Code provides a more secure signal than the commercial CA-Code or SAASM P(Y) signal, with greater accuracy. The instrument also is easier for operators to load crypto keys.

The SyncServer S650 M-Code can utilize Microchip's FlexPort™ technology for multiport, user definable output signal configurations for Inter-Range Instrumentation Group (IRIG) timecodes, pulses and a variety of signal types essential for military communication, radars and network system synchronization. This is coupled with Microchip's NTP Reflector™ technology for robust security, accuracy and reliability of network-based time services such as Network Time Protocol (NTP) and Precision Time Protocol (PTP). Other features include:

- Four standard GbE ports, all with patented NTP hardware time stamping, with two additional 10 GbE ports optional
- Contains most popular timing signal inputs/outputs standard in the base timing I/O module (IRIG B, 10 MHz, 1PPS)
- Web-based management with high security cipher suite
- Rubidium atomic clock or OCXO oscillator upgrades
- Superior 10 MHz low phase noise options

Microchip has been delivering the SyncServer S650 to synchronize business critical and mission critical operations, across all industry segments, since its commercial introduction in 2016.

Support
The SyncServer S650 M-Code is supported by Microchip technical support.

Availability
Microchip's SyncServer S650 M-Code is available now for orders. Contact a Microchip sales representative for information including pricing and delivery or visit Microchip's product portfolio website for more details.

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

- Application image**:** **https://www.flickr.com/photos/microchiptechnology/50163013838/**
- Product Image: **https://www.flickr.com/photos/microchiptechnology/50163561306/**

About Microchip Technology
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Source: Microchip Technology Inc.