

SkyWire™ Technology From Microchip Makes It Easier to Align and Compare Clocks Within Nanoseconds Across Geographic Locations

To protect critical infrastructure systems, SkyWire™ technology enables highly scalable and precise time traceability to metrology labs

CHANDLER, Ariz., Oct. 15, 2025 (GLOBE NEWSWIRE) -- Network clocks are the backbone of critical infrastructure operations, with the precise alignment of clocks becoming increasingly important for data centers, power utilities, wireless and wireline networks and financial institutions. For critical infrastructure operators to deploy timing architectures with reliability and resiliency, their clocks and timing references must be measured and verified to an authoritative time source such as Coordinated Universal Time (UTC). Microchip Technology (**Nasdaq: MCHP**) today announces its new [SkyWire™ technology](#), a time measurement tool embedded in the BlueSky™ Firewall 2200, that is designed to measure, align and verify time to within nanoseconds even when clocks are long distances apart.

With the BlueSky GNSS Firewall 2200 and SkyWire technology, geographically dispersed timing systems can be compared to each other and compared to the time scale systems deployed at metrology labs within nanoseconds. Measurement of clock alignment and traceability to this level has typically only been done between metrology labs and scientific institutes. With Microchip's solution, critical timing networks for air traffic control, transportation, public utilities and financial services can achieve alignment within nanoseconds between its clocks to protect their infrastructure no matter where the clocks are located.

"To ensure timing systems are delivering to stringent accuracy requirements, it's important to measure and verify in an independent manner relative to UTC as managed by national laboratories and traceable to the Bureau International Poids et Mesures (BIPM)," said Randy Brudzinski, corporate vice president of Microchip's frequency and timing systems business unit. "With the new SkyWire technology solution, we're making UTC more widely accessible so that large deployments of clocks can be independently measured and verified against each other across long distances."

The concept originated as an extension to the National Institute of Standards and Technology's (NIST's) pre-existing service called Time Measurement and Analysis Service (TMAS), which is utilized by entities that are required to maintain an accurate local time standard. The BlueSky GNSS Firewall 2200 with SkyWire technology provides a Commercial Off-The-Shelf (COTS) product to enable critical infrastructure operators to connect with the **NIST TMAS Data Service** for large-volume clock deployments.

“At NIST, our goal is to enable the most accurate time to support our country’s infrastructure,” said, Andrew Novick, engineer at NIST. “Our TMAS Data Service in conjunction with commercial hardware, provides a scalable solution for anyone who needs traceable and accurate timing.”

Nations around the globe can replicate this solution using Microchip’s SkyWire technology capabilities within its TimePictra[®] software suite, which delivers similar features and functionality as that provided by the NIST TMAS Data Service. Metrology labs, government agencies and enterprises worldwide can deploy TimePictra software suite and the BlueSky GNSS Firewall 2200 with SkyWire technology and have their own end-to-end solution for traceable time measurement, alignment and verification.

With over 75 years of timing experience, Microchip offers a comprehensive clock and timing portfolio. The company’s frequency and timing products range from small plug-in timing server cards to multi-rack national time scale systems. As a primary contributor to the world’s time, Microchip’s timing solutions are trusted, reliable and resilient. For more information, visit Microchip’s Clock and Timing Systems [web page](#).

Development Tools

The [TimePictra[®]](#) software suite provides customers with support to deploy BlueSky GNSS Firewalls at scale.

Pricing and Availability

The BlueSky Firewall 2200 with SkyWire technology is now available for purchase. For additional information and to purchase contact a Microchip [sales representative or authorized worldwide distributor](#).

Resources

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

- PR image: www.flickr.com/photos/microchiptechnology/54704433399/sizes/l
- Application image: www.flickr.com/photos/microchiptechnology/54703371432/sizes/l

About Microchip Technology:

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Source: Microchip Technology Inc.