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Microchip releases [MAC-SA5X](#), enhancing its [Miniature Atomic Clock \(MAC\)](#) technology to deliver wider temperature range and rapid warm-up time

As reliance on precise frequency and timing increases due to the Global Navigation Satellite System (GNSS) enabling 5G communication networks, data centers and other mission critical infrastructure, smaller size and high-performance atomic clock technology has become essential to support both military and commercial applications. To meet demand for a small footprint atomic clock, Microchip has announced the industry's highest performance atomic clock for its size and power. **Press Release:** [here](#).



[Executive Order on Strengthening National Resilience through Responsible Use of Positioning, Navigation, and Timing Services](#)

"Because of the widespread adoption of PNT services, the disruption or manipulation of these services has the potential to adversely affect the national and economic security of the United States. To strengthen national resilience, the Federal Government must foster the responsible use of PNT services by critical infrastructure owners and operators."
Quoted from: [Executive Order](#) dated February 12, 2020 from www.whitehouse.gov

Learn How [BlueSky GNSS Firewall](#) protects against GNSS vulnerabilities to meet the Executive Order for responsible use of PNT services today!

[Introducing IGM Plus and IGM 3.0](#)

New [IGM Plus models \(1100j, 1100x, 1100o\)](#) feature a new GNSS receiver adding support for Galileo and QZSS constellations as well as a new SC-cut mini OCXO improving holdover



Boost Your PTP Capacity for LTE Expansion and 5G Growth

LTE networks continue to expand even as mobile operators are readying for the coming 5G wave. The [TimeProvider 5000 PTP Grandmaster](#) is widely deployed in LTE networks, and was originally dimensioned to support up to 1000 PTP client devices per system. As LTE networks grow, many TimeProvider 5000 systems are approaching their full capacity limits.

The good news is that you can now double the PTP capacity of an installed TimeProvider 5000 system with a simple capacity license Installation. **Details:** [TimeProvider 5000](#)



Protecting Phase over long distance – the need for Virtual PRTC

5G mobile providers, cable operators and utility providers all know they must ensure phase delivery, protection and synchronization even when the Global Navigation Satellite System (GNSS) is offline, jammed or spoofed.

capabilities for time keeping.

For existing IGM customers, a new version 3.0 software release is now available. Version 3.0 provides key software capabilities such as increased scalability for PTP clients bringing the maximum from 32 to 60 clients, as well as support for IPv6 OAM (to complement the existing support of IPv6 for PTP traffic). Customers with existing IGM units can easily upgrade from 2.x to 3.0 if under software maintenance.

More Information: [Datasheet Universal IGM 1100i](#)

Microchip Blog: NTP Time Servers - Is it IRIG or iRig? No Matter, Innovations are Happening with Both

Invariably, things change. Profound I know, but even in the world of the venerable IRIG timecode there is a new search engine contender, iRig. Granted, a new guitar interface adapter for your smart phone app is a far cry from a waveform used to synchronize instrumentation, but even in IRIG there are revolutionary changes...[Read the entire blog HERE](#)
~Paul Skoog, Sr Product Manager

Own an old network time server? Beware!

Network time servers are easy to forget you own and maintain as they become an IP address that faithfully responds to NTP requests for time. Unfortunately, they're also network appliances and must be kept secure from the constant discovery and evolution of vulnerabilities, or more specifically, Common Vulnerabilities and Exposures (CVE).

To assure SyncServer S600/S650 models are secure and hardened, we constantly stay up to date on mitigating all known CVEs. We accomplish this through our [software support program](#). However, if you operate an obsolete SyncServer S200/S300 model, beware that these are not being updated and we encourage you to upgrade to the far

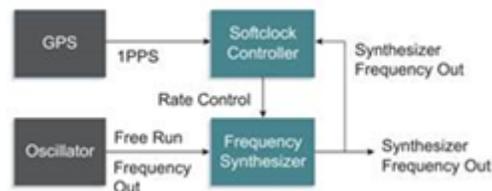
To accomplish this, the Microchip [TimeProvider 4100 precision timing grandmaster version 2.0](#) release features a unique high-performance boundary clock (HP BC) capability to leverage virtual PRTC protection. Virtual PRTC provides the ability to design a redundant precise time distribution architecture for phase protection over an optical network.



Microchip's vPRTC multi-domain architecture is a cost-effective solution providing a high-performance, redundant, sub-5 nanosecond distribution of precise time over regional and national networks. [More Information](#)

SyncServer S650 Leverages Latest Tech for Amazing Timing Results

The [SyncServer S650](#) implements superior, and patented, multifactor software-based algorithms and direct digital frequency synthesis in place of old-school varactor oscillator steering techniques.



[Learn all about the SyncServer Timing Architecture in this easy-to-read application note](#)

SyncSystem 4380A with Multi-Channel Measurement Modules

Known for its high-performance signal distribution, the [SyncSystem 4380A](#) can now be configured for high resolution signal measurements. Microchip's SyncSystem 4380A can now be equipped with the 4382A Phase Measurement and 4393A Time Interval

superior S600 Series. For operators of the old S200/S300 models, we do want to encourage you to keep track of known CVEs in those models, including new ones recently discovered and added to the [NIST National Vulnerability Database](#). You can also view recent CVEs in the February 2020 SyncServer Security Bulletin posted to [my.microsemi.com](#).

Technology Brief: Active Hydrogen Maser - In Depth

Expanding upon the heritage of the world's most widely installed active Hydrogen Maser, the [Microchip MHM-2020](#) has enhanced the unique Auto-Tune design of the MHM-2010 by re-engineering the electronics and software to attain even better stability.

[Read the entire Technology Product Brief Today.](#)



Counter modules to deliver a flexible, multi-channel measurement system that is ideal for high resolution applications.
[See all the new advanced capabilities: Data Sheet](#)

