Timing & Synchronization

Enterprise Network Time Servers

Timing and Synchronization

Timing and synchronization are indispensable in our increasingly digital, networked world. Precise, accurate time enables virtually all infrastructures such as data centers, wired and wireless communications, financial exchanges, industrial networks, smart powergrid, and other secure communications. Wireless networks, for example, rely on highly accurate timing and synchronization for smooth cell-to-cell transfers of the mass of voice, video and mobile data deluging the networks daily. Precise timing is similarly vital for financial networks processing billions of dollars in transactions daily.

Achieving highly accurate precision time is no easy feat from a technological perspective, so it's important to find a resource you can trust. Our end-to-end timing solutions generate, distribute, and apply precise time for multiple industries, including communications, aerospace/defense, IT infrastructure, financial services, industrial and more. Microchip customers range from communications service providers and network equipment manufacturers to governments and their suppliers worldwide.

Leveraging Microchip's advanced portfolio of timing technologies, services, and solutions, we enable our customers to build more reliable networks and systems supporting today's precise timing standards, including:

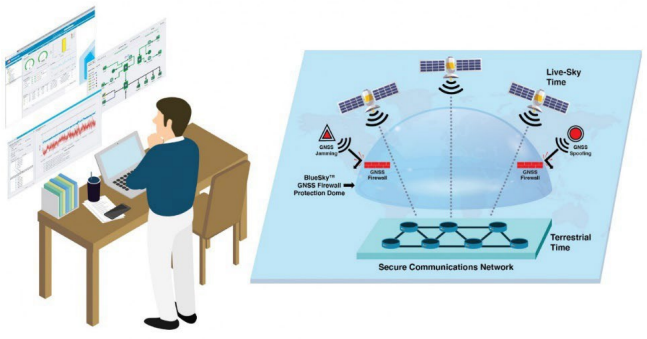
- GPS-based timing
- IEEE 1588 Precision Time Protocol (PTP)
- Network Time Protocol (NTP)
- Synchronous Ethernet (SyncE) and
- Data-over-Cable Service Interface Specifications (DOCSIS) timing

Updates to GPS Data Validation Rules

Microchip is continuously tracking GPS signal activity.

Microchip's worldwide deployment of atomic clocks and GPS systems are used as a reference frame to continuously analyze GPS data for changes including spoofing threats, jamming attacks, multipath signal interference, atmospheric activity and any other effect that degrades GPS performance.

Unified Management of "Terrestrial Time" and "Live-Sky Time" Sources to Enable Resilient Timing for Critical Infrastructure



Network Time Server / NTP Server

Microchip's SyncServer S6xx Series NTP Server / Network Time Server family provides accurate and reliable time and synchronization services, with unprecedented flexibility. The SyncServer S600 GPS/GNSS, Stratum 1 network time server also includes the security-hardened NTP ReflectorTM Technology, which is a real-time, hardware-based NTP packet identification and time stamping engine.

Product	Product Photo	Product Features
SyncServer S600		• Ultra-High Bandwidth NTP Servers • Four standard GbE Ports all with patented NTP hardware timestamping • Galileo/GLONASS/BeiDou/SBAS/QZSS option • Web based management with high security cipher suite • Built-in DoS detection and protection • Two 10 GbE SFP+ Ports Option • MiFID II ready • DISA/DoDIN Approved Product
SyncServer S80		• Fully Ruggedized and Integrated GPS/GLONASS receiver, NTP Server & PoE Network Interface • 100 nanosecond time stamp accuracy • 500 NTP time stamps per second (1000 optional) • Stationary or moving platforms (auto or sea borne)
Timing Audit Server		• Monitored machines reliably and individually identified • Time Synchronized regularly and accurately with a knowntime source • Vital information easily retrievable • Concise and complete audit reports • Integrates with existing network management systems
Domain Time II		• Comprehensive Time Client, Server, & Management Software for Precise Time Synchronization across network • Enables management of complete network time systemfrom a single workstation • Adaptable Time Hierarchy automatically adjusts to changein network assuring clients access to correct time • Detailed event logging for Time Auditing Purpose • Support for NTP and IEEE 1588 (PTP - Default Profile)

Support

Microchip is committed to supporting its customers in developing products faster and more efficiently. We maintain a worldwide network of field applications engineers and technical support ready to provide product and system assistance. For more information, please visit www.microchip.com:

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- Evaluation samples of any Microchip device: www.microchip.com/sample
- Knowledge base and peer help: www.microchip.com/forums
- Sales and Global Distribution: www.microchip.com/sales

Training

If additional training interests you, Microchip offers several resources including in-depth technical training and referencematerial, self-paced tutorials and significant online resources.

- Overview of Technical Training Resources: www.microchip.com/training
- MASTERs Conferences: www.microchip.com/masters
- Developer Help Website: www.microchip.com/developerhelp
- Technical Training Centers: www.microchip.com/seminars

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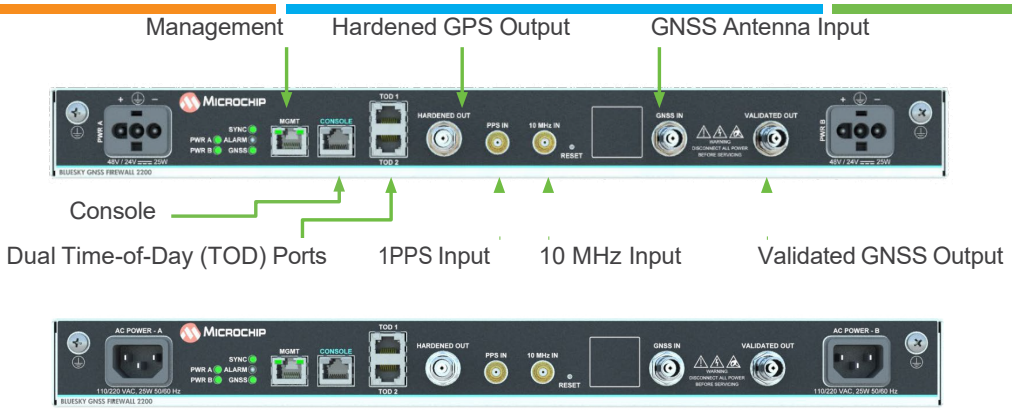

Services

Microchip provides a wide range of services. With over 40 years of designing timing systems for mission-critical applications, Microchip has comprehensive support resources available to ensure that customers are able to use all of the available features.

For additional information, please register through the online support portal at my.microsemi.com. A broad collection of information is available through the portal and Microchip will keep you informed of important updates once you have reigstered

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