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:

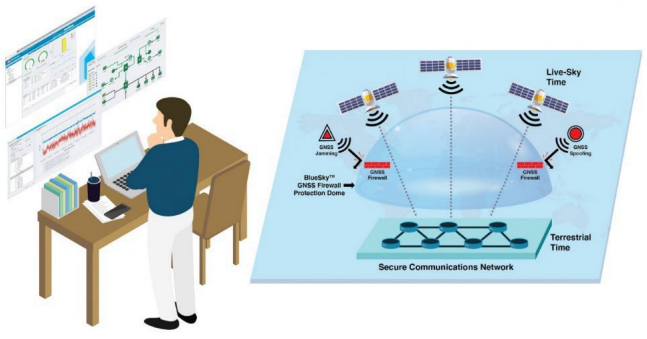
- GPS-based timing
- IEEE 1588 Precision Time Protocol (PTP)
- Network Time Protocol (NTP)
- Synchronous Ethernet (SyncE) and
- Data-over-Cable Service Interface Specifications (DOCSIS) timing

Updates to GPS Data Validation Rules

Microchip is continuously tracking GPS signal activity.

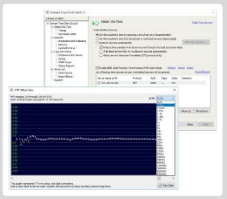
Microchip's worldwide deployment of atomic clocks and GPS systems are used as a reference frame to continuously analyze GPS data for changes including spoofing threats, jamming attacks, multipath signal interference, atmospheric activity and any other effect that degrades GPS performance.

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 • Security-hardened NTP Reflector with firewall protection • DISA/DoDIN Approved Product
Domain Time II Synchronization Software		• 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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Training

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

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