SyncServer S80

Ruggedized and Secure Network Time Server

SIA NEW PRODUCT SHOWCASE

WINNER

Network Support Solutions

Microsemi: SyncServer S80

2018 ISC WEST

Key Features

- Security-hardened Stratum 1 NTP server
- Fully ruggedized and integrated GPS/GLONASS receiver, NTP server, and PoE network interface
- Secure Microsemi NTP Reflector™ technology
- 100-nanosecond time stamp accuracy
- 500 NTP requests per second standard, 1000 optional
- Hardware-based time stamps
- Modern GbE interface with IPv4/IPv6/SNMP/DHCP support
- Stationary or moving platforms
- Mounting hardware included

Key Applications

- Ideal for physical security networks isolated from the Internet that need accurate time stamps
- GbE PoE for easy installation and integration with existing physical security networks
- NTP Reflector technology for secure NTP operations compared to vulnerable open-source-based NTP servers
- Environmentally hardened for all weather installations

Ruggedized Stratum 1 NTP Server

The Microsemi SyncServer S80 is a fully integrated GPS/GLONASS antenna, receiver, NTP server, and PoE interface that easily integrates into existing PoE infrastructure to immediately be the source of accurate, secure, and reliable time stamps for all network connected devices. Network isolated physical security systems benefit as the ruggedized Stratum 1 network time server is ideal for time-synchronizing IP security cameras, access control devices, and digital/network video recorders. SyncServer S80 is also suitable for synchronizing the time on small enterprise networks.

Security Hardened

For robust and secure NTP operations, SyncServer S80 is equipped with the Microsemi security-hardened NTP Reflector™ technology with 100% hardware-based NTP packet processing. Unlike other NTP servers that use the open-source NTP daemon with its documented vulnerabilities, NTP Reflector also works as a CPU-protecting firewall, with bandwidth filtering and limiting of all non-NTP traffic. NTP packet processing is capable of 500 NTP requests per second, and optionally 1000 NTP requests per second, all the while protecting the CPU from excessive NTP request loading that negatively affects time stamp accuracy, reduces the availability of time stamps, and increases susceptibility to CPU freezing or system reset. NTP Reflector supports the NTP mode 3 client requests for time. All time stamps are accurate to 100 nanoseconds to UTC, keeping network elements precisely synchronized and ensuring high-integrity time stamps for video records and log files.

Modern Reliability

SyncServer S80 represents the latest in NTP Stratum 1 time server technology. By fully integrating the GPS/GLONASS receiver, antenna, and time server in a single unit, the mean time between failure is more than 40 years. Coupled with the GbE network interface, SNMP notifications, DHCP, and IPv4/IPv6 support, a user can expect a long and useful life from SyncServer S80 as the surrounding network environment changes over time.

Physical Security Network Ready

Whether the physical security network is stationary or moving, SyncServer S80 is ready for plug-and-play delivery of accurate and secure NTP time stamps. Both static and dynamic modes are available to accommodate fixed land-based installations or mobile applications such as seaborne or land mobile. The PoE interface makes SyncServer S80 ready to plug into the nearest PoE switch or midspan. A few simple commands are all that are needed to configure SyncServer S80 for set-and-forget NTP network timing services.

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Specifications

GPS Receiver/Time Accuracy

- 72-channel GPS/GLONASS receiver, time traceable to UTC
- <100 nanoseconds RMS to UTC (USNO)
- Operational modes
  - Static: Fixed location, non-moving
  - Dynamic: Automotive (altitude ≤6000 m, speed ≤60 miles/hour)
    Sea (altitude ≤500 m, speed ≤45 miles/hour)

NTP Server Performance

- 500 NTP requests per second, optionally 1000 NTP requests per second.
- Stratum 1 through GPS: Overall server time stamp accuracy of <100 nanoseconds RMS to UTC (USNO).
- All NTP time stamps are hardware-based and have real-time hardware compensation for internal asymmetric delays. The accuracy is measured at the network interface. NTP is UTC timescale by definition.

Network Protocols

- NTP v3/v4 mode 3 NTP client time requests
- CLI over SSHv2
- SNMP v2/v3 (traps only)
- DHCP
- IPv4/IPv6
- All non-NTP packets are provided to the CPU on a filtered, bandwidth-limited basis.

Mechanical

- Size — Diameter: 6 in. (15.24 cm)
  Height: 6 in. (15.24 cm)
- Connector — RJ-45 1000BASE-T
- Power — PoE Class 3 input, <12.5 W
- Installation — Pole mount on roof, wall, outdoor fixtures
- Directives: LVD 2014/35/EU, EMC 2014/30/EU, Safety 2006/95/EU, RTT&E 2014/53/EU
- Safety certifications: UL60950-1/CSA C22.2, IEC60950-1:2005(2nded)/AM 1:2009/AM 2:2013, EN60950-1: 2ed. 2006/A11:2009/A1:2010/A12:2011/A2:2013

Environmental

- Storage ETSI 300 019-2-1/T1.2, –40 °C to 85 °C
- Transportation ETSI 300 019-2-2/T2.3, –40 °C to 85 °C
- Operational ETS 300 019-2-4/T4.1E Class 4M3, –40 °C to 70 °C
- Humidity <5% to 100% with condensation
- Seismic Zone 4 Level, salt fog exposure, IP66 compliant, and flammability rating of 5VB

Electromagnetic Compliance EMC

EN 300386 v1.6.1; CISPR 32: 2012, Class B limits; CISPR 24: 2010; EN 55032: 2012/AC2013, Class B limits; EN 55024: 2010; FCC Title 47 Part 15, ICES-003, AS/NZS, Class B limits; VCCI V-3/2015.04/V-4/2012.04, Class B limits; KN 55032/35, Class B limits; K.20; BSMI

Product Includes

SyncServer S80 NTP server with outdoor PoE connector, mounting mast, mounting bracket, clamps, nuts, and washers. One-year hardware warranty.

Ordering Information

- SyncServer S80: 090-15200-080, UPC 040232683602
- Optional 1000 NTP requests per second: 920-15201-081
- Outdoor PoE Surge Protector: PD-OUT/SP11
- Shipping container size: 21.375” × 13.75” × 11.125”
  54.29 cm × 34.93 cm × 28.26 cm
- Shipping weight: 9 lbs. (4.08 kg)

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