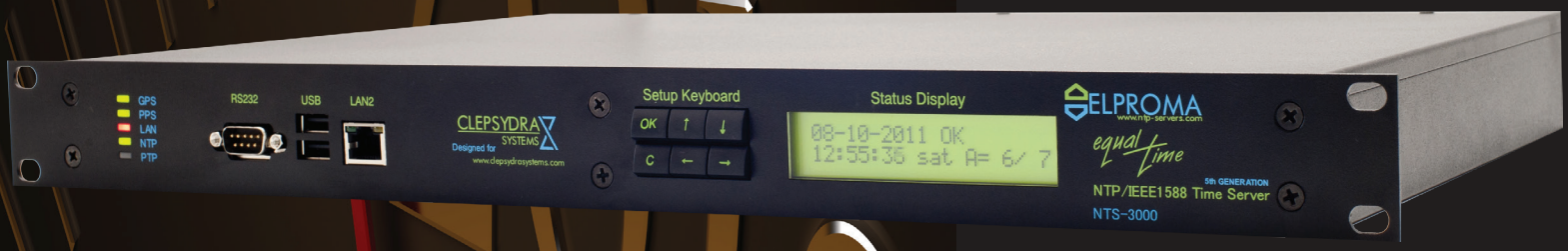
MY2018

NTS-3000

NTP/PTP IEEE1588 Network Time Server

- UTC from GNSS & DCF77*
- SERVER NTP STRATUM-1
- GRANDMASTER PTP/IEEE1588



- 2x LAN w/ PoE (RJ45)
- 1PPS in (BNC)
- NTP rfc5905-5909 (rfc1305)
- PTP IEEE1588 (software PTPd)
- 2x (redundant) ANT inputs
- Local & TAI Time support
- SBAS (EGNOS WAAS) support
- RS232/485 & USB interface
- SNMP v2,v3 & MIB2 agent
- RADIUS client*
- MD5, RSA, DSA, SSL security
- NTP authentication
- remote configuration: HTTP, HTTPS, TELNET, SSH
- -55C/-67F antenna available*
- Dual* (redundant) PWR supply
- OCXO* holdover (option)

ELPROMA

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* extra feature requiring additional hardware and/or software firmware upgrade

NTS-3000 delivers time directly to LAN network using NTP PTPv2 IEEE1588 protocols. It is equipped with 2 independent Ethernet 10/100Mbps. The GNSS is a standard UTC reference time. Server is equipped with 2 independent GNSS receiver inputs ANT1 & 2. Therefore it can support independent satellite receivers too. Built-in quartz RTC clock guarantees time for limited short period of missing GNSS signals. Extra OCXO feature is available to provide robust holdover* synchronization. Both ANT1/ANT2 interfaces can be switched to output mode emulating GNSS NMEA signals with 1PPS-out. Server can be synchronized to external clocks using 1PPS-in and rs232 (ToD) interface.

NTS-3000 is STRATUM-1, PTP/IEEE1588 GRANDMASTER supporting software stamps. It offers accuracy of µs on LAN. Server supports leap second, synchronizes UTC time monotonously (jump-free) and can simultaneously serve up to 100,000 NTP clients.

Firmware basis on FreeBSD UNIX. It includes best stable IP stack. Unit has natural air cooling system without fans. This fact makes unit long life. Server uptime is counted in years of continuous working 24/7. It is manufactured since2001 and it is regularly hardware & software updated to keep state of the art functionality and cyber-security.

Redundant Synchronization

- 2x RJ45 (ANT1, ANT2) rs485 w/1PPS:
  - GPS L1 (1575,42MHz)
  - GLONASS L1 (1598,06-1605,38MHz)
  - GALILEO L1 (1575,42MHz)
  - BEIDOU L1 (1561,09-1575,42MHz)
  - DCF77* (extra feature - Central Europe only)
- 1x PPS-in BNC (50 Ohm)

Network Time Protocol (NTP v2,v3,v4 & SNTP) supported

• RFC1305 • RFC1119 • RFC5905 • RFC5906 • RFC5907 • RFC1769 • RFC2030

I/O

- 2x LAN Ethernet 10/100 Base-T (RJ45)
- 2x Antenna INPUT or OUTPUT (RJ45)
- 1x 1PPS-in BNC (50 Ohm)
- 1x RS232C (D-SUB9)
- 2x USB 2.0 (for firmware upload)

Remote configuration

- SNMP (v1,2,3) •MIB 2 •RADIUS •HTTP •HTTPS •SSH •TELNET •NTPQ/NTPDC IEC*61850(networking)

Antenna & MultiSAT receiver

- 32-170 channel MultiSAT receiver w/ built-in FQ converter
- 700m [2300ft] UTP cat. 5 or 1.4kM [4500ft] STP cat 5 (no need to use amplifiers)
- RS485 (std) or Fiber Optic*

Time Accuracy

- MultisSAT GNSS receiver: better than 15ns
- LAN (NTP & PTP/IEEE1588): better than 10us
- VLAN (NTP & PTP/IEEE1588): better than 100us
- Internet NTP: better then 100ms

Mechanical/environmental

- Size: 484 x 300 x 44,4 mm (rack'19 1U)
- Power: 110/230 VAC (max 1A) w/ 2x PoE - redundant power supply option is available
- Operating temperature: 0°C to +50°C
- Storage temperature: -40°C to +80°C
- Humidity: up to 95%

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* extra feature