


# NTS-5000

## Network Time Synchronization & document time stamping



- Time Server NTP/SNTP
- TSP Time Stamping
- GPS primary time
- DCF77 time backup\*
- Build-in RUBIDIUM & OCXO
- IRIG-B in/out
- IBM Sysplex in/out
- PLL/FLL technology
- 1PPS , 10MHz support
- RS232/USB interface
- max. 10,000 clients
- 2xLAN (IPv6)
- SNMP MIB2 agent
- RADIUS client\*
- MD5, RSA, DSA, SSL security
- NTP authentication
- remote configuration:  
HTTP, HTTPS, TELNET, SSH
- Microsoft® Windows® compatible  
MAC®, CISCO®, UNIX® ready

 ELPROMA



NTS-5000 delivers time directly to LAN network using NTP protocol. It is equipped with two independent Ethernet ports working with TCP/IP protocol (IPv4, IPv6). Satellite GPS signal is the standard server time pattern, but UTC time can be simultaneously drawn from other sources including DCF77\*, Galileo\*\*, external cesium beam such as 5071A or other external satellite receivers: Egnos\*\*\*, Glonass\*\*\* and Waas \*\*\*. For this purpose, NTS-5000 has a number of extra synchronizing ports including 1PPS, IRIG-B, IBM Sysplex and RS232C. The server is equipped with two A/B antennas, each receiving a number of GPS, Galileo\*\* and DCF77\* signals simultaneously; all time sources work in a fully redundant mode. Built-in double oscillators RUBIDIUM and OCXO guarantee correct time keeping up to one year of work when both antennas are missing. A true novelty is an option to create cascade NTS servers where one can simulate an antenna for the other. This functionality enables time synchronization of secured LANs with official time NTP servers available publicly online in Internet and the development of secured LAN systems for remote time auditing and control. NTS-5000 synchronizes time monotonously (jump-free) and can simultaneously serve up to 10,000 NTP/SNTP customers.

#### **Redundant Input Synchronization Sources:**

2x Antenna : GPS, RF AM\* backup (DCF77\* for Central Europe)  
RUBIDIUM oscillator, OCXO oscillator, 1PPS, IRIG-B (122), RTC quartz clock,  
3x NTP backup servers, IBM Sysplex  
All with time accuracy better than 10ms on LAN

#### **Redundant Output Synchronization Sources:**

2x Antenna (GPS) NMEA emulation, 1PPS, 10MHz, IRIG-B, IBM Sysplex

#### **Supported OS (NTP/SNTP Clients):**

all UNIX systems including: IBM AIX , HP/UX, Linux, Free BSD, CISCO routers, Novell Netware (incl. version 3, 4, 5, 6), Microsoft Windows 95/98/Me/NT/2000/2003/XP/Vista (both Server and Workstation versions)

#### **Remote configuration:**

ntpq/ntpdc, SNMP (v2, v3\*) Enterprise MIB 2, RADIUS, HTTP, HTTPS, SSH, TELNET

#### **Time Protocol supported:**

NTP (RFC 1305), SNTP (RFC 2030), TSP (RFC 3161), IBM SYSPLEX

**Long life:** NTS-5000 unit has natural cooling system (no fan or ventilators)

**I/O:** 2x LAN Ethernet 10/100 (RJ45), 1x RS232C\*, 1PPS (BNC), IRIG-B\* (BNC), IBM Mainframe SYSPLEX (via RS232C/DSUB9)

#### **Mechanical/environmental:**

Size: 484 x 300 x 88,8 mm

Power: 85-264 VAC (max 1A), 47-440Hz incl. EMI filter

EN55022, FCC, CCIPR22, VDE0878PT3 – ClassB

Operating temperature: 0° C to +50° C

Storage temperature: -40° C to +85° C

Humidity: up to 95%

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\* extra feature requiring additional hardware