TIME & FREQUENCY SOLUTIONS
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NTP80 Elite

Triple-Port Network Time Server

The NTP80 Elite provides highly accurate yet economic time distribution over local area networks (LAN) using Network Time Protocol (NTP), the industry-standard means of time distribution over discrete networks.

NTP80 Elite

- Stand-alone unit or with 19" rack-mountable panel
- Sync, Status & Power LEDs
- Choice of oscillator accuracy: TCXO or OCXO
- Gigabit Ethernet capability

Features

- Economic triple-port stratum 1 Network Time Server
- Can act as both host and server in peer-to-peer mode
- Capable of synchronising up to 3 discrete networks independently
- Gigabit Ethernet capability
- Client system accuracy to within 50 µs*
- Precision timing circuits ensure stability in event of synchronisation signal interruption.
- Configuration and alarm reporting capabilities using Simple Network Management Protocol (SNMP)
- 1pps & timecode output
- Supports up to 1500 clients

Input Synchronisation Options

- Satellite (GPS, GLONASS or BEIDOU) via Active or Long Distance Antenna System
- Analogue timecode, e.g. IRIG-B, AFNOR NFS-87500 (see over for full list)
- NTP (Peer-to-Peer)
- LF (MSF, DCF-77, etc)

** Accuracy subject to Reference Clock and network conditions*

Applications

The NTP80 Elite provides a cost-effective way of providing time from a trusted source, which is critical in many organisations such as airports, railways, financial institutions, telecommunications companies, etc.

Enterprise/Corporate Networks

Any business using devices on a network can benefit from using the NTP80 Elite - not only can it use a selection of highly accurate, trusted time sources, it is easily integrated into internal systems thus eliminating network security issues that arise from using external time source e.g. from the internet.

Rail

The ability to operate in peer-to-peer mode means that the NTP80 Elite is especially useful as a sub-master clock in rail applications.

Key Benefits:

- Accurate & reliable time data from a trusted source
- Control over configuration via web browser
- Synchronisation between users - eradicates discrepancies
- System time stamping (e.g. for e-commerce transactions, e-mail sent & receive, etc) is accurate
- Automatic systems procedures, such as backups, occur at the correct time and in the correct order

NTP80 Elite Specifications

Connections

The unit provides three discrete RJ45 connections to separate 10/100/1000BASE-T networks.

The synchronisation source input is connected via a 50 BNC socket.

1pps output is also supplied on a BNC connector (female) at a level of 5 volts

A RS232/RS422/RS485 serial port for configuration and as optional serial time code output

Interface Standards

- NTP Version 3 [RFC 1305],NTP Version 4 [RFC5905] Also SNTP compatible
- SNMP Enterprise MIB (RFC1155, RFC1157, RFC1213)
- Daytime Protocol (RFC867), Time Protocol (RFC 868)
- Ethernet/IEEE802.3
- Ipv4 (IPv6-ready)
- UDP/IP
- ICMP

Network Configuration

Configuration of network parameters including IP Address, Sub-net Mask, Gateway Address, SNMP Trap Address, and SNMP Read/Write community names is via web-browser. All such details are stored in non-volatile memory.

User specific network parameters can be factory configured upon request.

Same user port available for upgrade of flash code for newer versions or additional options.

Physical (stand-alone unit)

Size: 170mm W x 142mm D x 34mm H
Weight: 600g
Power: 90-264VAC 47-63Hz utilising transformer plug supplied) or PoE+

Environment (Operation & Storage):

Temperature: -5°C to +50°C
Humidity: up to 95% RH (non-condensing)
EMC: CE compliant

Input Synchronisation Options

Satellite

GPS Time Accuracy (signal available): ±100 nanoseconds from UTC
A GPS Active Antenna is supplied as standard
Upgrade option: compatible with Long Distance GPS Antenna for use with cat5/5e/6 cable.
N.B. GPS/GLONASS & GPS/BEIDOU] also available - please contact Sales Team

Timecode

Formats accepted: IRIG-B, IRIG-E, XR3, 2137, NASA36, AFNOR NFS-87500
Time Accuracy: ±1 millisecond from received time

Low Frequency

Signals available: MSF, DCF-77 & WWVB

Frequency Stability:

Oscillator		Stability per °C	Performance while disciplined Averaging Time						Holdover accuracy at constsnt temperature after loss of reference		
									Time	Frequency	
Option	Description		1s	10s	100s	1000s	10000s	1 day	1 day	1 day	3 days
01	TCXO	$1.5x10^{-8}$	$2x10^{-9}$	$5x10^{-10}$	$5x10^{-10}$	$5x10^{-10}$	$6x10^{-11}$	$1x10^{-12}$	<2 ms	$<2.0x10^{-8}$	$<3.0x10^{-8}$
02	OCXO	$1.2x10^{-10}$	$3x10^{-10}$	$3x10^{-10}$	$4x10^{-10}$	$4x10^{-10}$	$5x10^{-11}$	$1x10^{-12}$	<60 µs	$2x10^{-9}$	$<4x10^{-9}$

N.B. Option 1 TCXO supplied as standard unless otherwise specified

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