

NTP80 Plus

Rack Mounted Triple-Port Network Time Server

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

NTP80 Plus is the rack mounted version of the NTP80:

- Full rack mounted chassis design
- Front panel includes alphanumeric display;
- Oscillator options include Rubidium



Features

- Economic Multi-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
- SFP cage connector for alternative media e.g. fibre optic
- Client system accuracy to within 50 μ s*
- Precision timing circuits ensure stability in event of synchronisation signal interruption.
- Configuration and alarm reporting capabilities using Simple Network Management Protocol (SNMP)
- 1pps output

Input Synchronisation Options

- Satellite (GPS, GLONASS or BEIDOU) via Active or Head-end Antenna
- Analogue timecode, e.g. IRIG-B, AFNOR NFS-87500
- NTP (Peer-to-Peer)
- LF (MSF, DCF-77, etc)

* Accuracy subject to Reference Clock and network conditions

A trusted time source is critical in many organisations such as airports, railways, financial institutions, telecommunications companies, etc. but can also figure highly on the scale of importance in other industries.

Having no trusted time source is a weak point in business security, making it more difficult to be protected against fraud, hacking, internal and external disputes, and has a direct effect on efficiency and therefore profitability.

Time information is available from the Internet, but this means allowing data to travel through your firewall, increasing the potential risk of hackers or viruses obtaining access into your network. Also, there are few or no guarantees that the information being provided is accurate or reliable.

System Benefits:

- Accurate & reliable time data from a trusted source
- Control over configuration via web browser
- Synchronicity 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 PLUS SPECIFICATIONS

Module Connections

- The unit provides two discrete RJ45 connections for separate 10/100/1000BASE-T networks.
- An SFP cage socket is also supplied. [NB - SFP module is not supplied as standard].
- The synchronisation source input is connected via a 50Ω 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 or front-panel keyboard. 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

Size: 19 inch rack mounting 1U high 200mm deep
 Weight: 3kg
 Power: 90-264VAC 50-60Hz Load 20W (typical) subject to oscillator
 Connection via 3 pin IEC plug
 Display: 2 rows by 40 character LCD. Character height 5mm
 Keyboard: 5 button keyboard for equipment configuration & control.

Environment (Operation & Storage)

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

GPS Receiver Option

Time Accuracy (signal available): ±100 nanoseconds from UTC
 Antenna (datasheet upon request): A GPS Active Antenna is supplied as standard
 Upgrade option for long distance between antenna and unit: Head-end Antenna compatible with cat5/5e/6 cable

Timecode Receiver Option

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

Frequency Stability:

Oscillator		Stability Per °C	Performance while disciplined						Holdover Accuracy at constant temperature after loss of reference		
			Averaging Time						Time	Frequency	
Option	Description		1s	10s	100s	1000s	10000s	1day	1day	1day	3days
01	TCXO	1.5x10 ⁻⁸	2x10 ⁻⁹	5x10 ⁻¹⁰	5x10 ⁻¹⁰	5x10 ⁻¹⁰	6x10 ⁻¹¹	1x10 ⁻¹²	<2ms	<2.0x10 ⁻⁸	<3.0x10 ⁻⁸
02	OCXO	1.2x10 ⁻¹⁰	3x10 ⁻¹⁰	3x10 ⁻¹⁰	4x10 ⁻¹⁰	4x10 ⁻¹⁰	5x10 ⁻¹¹	1x10 ⁻¹²	<60µs	<2x10 ⁻⁹	<4x10 ⁻⁹
03	Rubidium	7x10 ⁻¹²	3x10 ⁻¹¹	8x10 ⁻¹²	3x10 ⁻¹²	3x10 ⁻¹²	2x10 ⁻¹²	8x10 ⁻¹³	<1µs	<1.0x10 ⁻¹¹	<1.5x10 ⁻¹¹

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

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Rev 2

Time & Frequency Solutions Ltd

25 Eastways, Witham, Essex CM8 3AL
 Tel: +44 (0) 1376 514114 Fax: +44 (0) 1376 516116
 E-mail: sales@timefreq.com Web: www.timefreq.com



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