

NTP80-M

Modular Rack Mounted Triple-Port Network Time Server

The NTP80-M Modular Network Time Server 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-M is the modular version of the NTP80plus:

- 1 x output module slot
- Select from our range of modules available for any application

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
- 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)
- 1 x Module slot for greater output flexibility
- 1pps output
- Supports up to 1500 clients

Input Synchronisation Options

- Satellite (GPS, GLONASS or BEIDOU) via Active or Long Distance 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

Applications

The NTP80-M 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-M - 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 an external time source e.g. from the internet.

Rail

The ability to operate in peer-to-peer mode means that the NTP80-M 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
- Accepts output module from our comprehensive range for increased flexibility



NTP80-M Specifications

Connections

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

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. 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:	9-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

Input Synchronisation Options

Satellite

GPS Time Accuracy (signal available): ±100 nanoseconds from UTC

A GPS Active Antenna is supplied as standard

Antenna upgrade option: unit is 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						Holdover accuracy at constant temperature after loss of reference		
			Averaging Time						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
03	Precision OCXO	5x10 ⁻¹¹	2x10 ⁻¹²	3x10 ⁻¹²	1x10 ⁻¹¹	1x10 ⁻¹¹	5x10 ⁻¹²	1x10 ⁻¹²			
04	Rubidium	7x10 ⁻¹²	3x10 ⁻¹¹	8x10 ⁻¹²	3x10 ⁻¹²	3x10 ⁻¹²	2x10 ⁻¹²	8x10 ⁻¹³	<1 μs	<1.0x10 ⁻¹¹	<1.5x10 ⁻¹¹

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

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