

NTP Time Server Module

10/100 Base-T

For use with Time & Frequency Solutions' M210 and M211 Modular Timing Systems. The NTP Time Server Module from Time & Frequency Solutions provides a proven means of distributing time via Local or Wide Area Networks. Network Time Protocol (NTP) is a method of hierarchical network clock synchronisation and distribution and is widely used in free-standing networks.



Features

- Functionality of a Stratum 1 Server
- Accuracy of better than 1 millisecond over a network
- Can be remotely configured and managed via Simple Network Management Protocol (SNMP)
- Non-volatile system log

Key Benefits

This module, when utilised in a Time System, which is synchronised to a real time source, provides the functionality of a Stratum 1 Server as described in the NTP specification.

Suitable real time sources (e.g. GPS, MSF, DCF77, WWVB) are available for inclusion in Time & Frequency Solutions' timing system products.

NTP uses sophisticated algorithms for the transfer of time to an accuracy of better than 1 millisecond over a Network.

Many implementations of NTP are available covering most commonly used systems and subsystems.

The addition of the 100Base-T NTP Time Server Module also provides the capability to remotely configure and manage the Time System by implementing the Simple Network Management Protocol (SNMP).

This allows configuration and alarm status monitoring using industry standard network management tools like our NMS [please ask for datasheet].

The module provides a non-volatile system log and installed module information for the whole Time System. These can be accessed through SNMP, TELNET or the modules's user serial port.

NTP Time Server Module Specifications

Module Connections

RJ45 connection to a 100Base-T network.
9-way D type socket RS232 connection for configuration and status

Interface Standards

NTP Version 3 [RFC 1305] - SNTP compatible [RFC2030].
SNMP v1 Enterprise MIB (RFC1155, RFC1157, RFC1213)
Daytime Protocol (RFC867)
Time Protocol (RFC 868)
TELNET (RFC 764)
TCP/UDP/IP/ICMP/Ethernet/IEEE802.3

NTP Extensions

There are a number of extensions to NTP v3 that the module provides:

Automatic disable - The NTP service can be stopped after a period where there has been loss of sync or an internal error.

Authentication The module supports the optional shared secret key authentication strategy specified in RFC1305.

Broadcast The module can operate as a NTP broadcast server.

Network Configuration

Configuration of the network parameters including IP Address, Subnet Mask, Gateway Address, SNMP Trap Address and SMNP Read/Write Community Names are performed by use of the front panel keyboard. All such configuration details are stored in non-volatile memory.

Environment (Operation & Storage)

Temperature : 0°C to +40°C
Humidity : Up to 95% RH (non-condensing)
EMC : CE Compliant

Ordering Information

Please quote part number when ordering: 0210HR000D

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