

## ***NTP8*** ***Network Time Server***



The NTP8 provides a high performance means of accurate time distribution over a local area network (LAN). This is achieved using Network Time Protocol (NTP). NTP is widely used as the means of time distribution over discrete networks and it is also extensively used on the Internet. The NTP8 is synchronized from an external source that can be either the standard GPS or the optional IRIG B modulating a 1kHz carrier. Through the use of the external synchronizing source, the unit provides a highly economic solution for a Stratum 1 Network Time Server. The unit is designed to maintain high accuracy even when the synchronization source is not available by means of its precision timing circuits. The NTP8, through use of the sophisticated NTP algorithms, will provide client system accuracy to better than 1 millisecond.

A rear panel BNC connector supplies 1PPS. The 1PPS can be derived from either the GPS receiver or the internal timing circuits

The NTP8 also provides the capability for equipment configuration and alarm reporting using Simple Network Management Protocol (SNMP). Using SNMP or Telnet, the status of the NTP8 can be managed using industry standard tools.

Applications for the NTP8 Network Time Server include synchronizing the clocks in computers used in process control systems, LAN's or any computer that needs to be time synchronized to an absolute time standard. When correlating data acquired by computer(s) to other computers or other equipment time is a useful tool.

Time is an agreed upon correlation standard and is easily obtained by computers connected to Network Time Servers. The document located at [www.brandywinecomm.com/net\\_timeFAQ.html](http://www.brandywinecomm.com/net_timeFAQ.html) answers some of the most commonly asked questions about the Network Time Protocol (NTP) and network time servers in general.

# brandywine communications

## *NTP8 Specifications*

### ***Module Connections***

The unit includes a standard RJ45 connection to a 10BASE-T network. A 9 way D type socket is also available for RS-232 connection for configuration and status purposes. The default RS-232 settings are 38.4k baud, no parity, 8 data bits and 1 stop bit. The synchronization source input is connected via a 50Ω BNC socket

### ***Interface Standards***

NTP Version 4 [RFC 1305]  
SNTP compatible (RFC 2030)  
SNMP v1 Enterprise MIB (RFC 1155, RFC 1157, RFC 1213)  
Daytime Protocol (RFC 867), Time Protocol (RFC 868)  
Ethernet/IEEE802.3  
UDP/IP  
ICMP  
Telnet

### ***Network Configuration***

Configuration of the network parameters including IP Address, Sub-net Mask, Gateway Address, SNMP Trap Address, and SNMP Read/Write community names is performed by means of the menu driven user port. All of the network parameters are stored in non-volatile memory. The same user port is available for the upgrade of the flash code for newer versions TFTP or additional options.

### ***Optional extras***

AUI connection is via a 9-way D type socket. A suitable MAU is optionally available.

### ***Environment***

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

### ***GPS Receiver (Standard Configuration)***

Time Accuracy (during GPS Signal availability): ±2 microseconds from UTC (with adequate satellite visibility)  
Antenna: An Active Antenna and 100 feet of lead in cable are included.

### ***Time Code Receiver (Option in lieu of GPS)***

Time code formats accepted: IRIG B modulating a 1kHz carrier  
Time Accuracy: ±1 millisecond from received time

### ***Serial Port***

Suitable for Driving LEDI series remote displays

### ***1PPS***

1PPS is available from either the GPS engine or the internal timing chain. (Internal jumper select, GPS engine is default)  
Connector: BNC  
Level: TTL, positive-going on time.

### ***Physical***

Size: 19" rack-mount 1U high (45mm) 305mm deep  
Weight: 5kg typical  
Power: 85-264 Vac 47-63 Hz

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