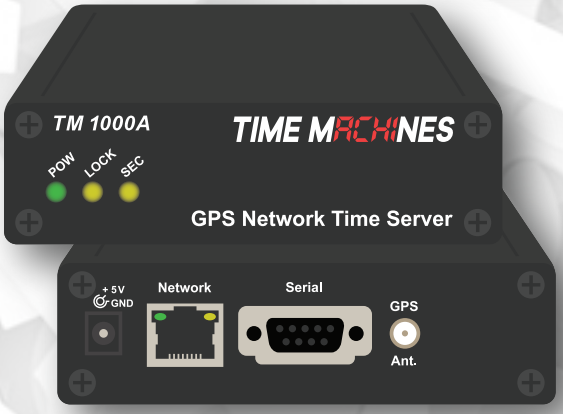
TIME MACHINES



The TimeMachines® GPS NTP Network Time Server is a GPS-based NTP server device that supplies accurate time for all computers and time-keeping devices on a network. By placing a time server on the local network, (S)NTP time packets are provided without requiring systems to go to the Internet to get a Stratum 1 time synchronization. The TM1000A uses a GPS antenna to maintain the current time as broadcast by United States' GPS satellites.

TM1000A - GPS NTP NETWORK TIME SERVER

SYNCHRONIZED, ACCURATE TIME.

With a TM1000A GPS Time Server on the local network, synchronized time is assured no matter the state of your Internet connection. Time accuracy is greatly improved, when compared to Internet based time sources, because delay is reduced to that of the local LAN segment. When paired with our PoE and WiFi based clocks, building and campus wide synchronized time systems can be created. Other systems that benefit from local time sources are voice and video logging systems, VoIP PBX phone systems, and any isolated network with time requirements.

HOW IT WORKS.

The TimeMachines® GPS Network Time Server represents a major step forward in technology. It supplies accurate time for computers and time keeping devices on the network. A Network Time Protocol (NTP), with a Stratum 1 time source is available on a local network with no need for an internet connection. It uses an active GPS antenna to maintain the current time as broadcast by United States GPS satellites.

Connect both the included power supply and GPS antenna to base unit, then connect base unit to a local network.

Go to a computer on a network, point a browser to the device at its default ip address to enter the software setup within the web page.

Set parameters to match network, and the system will send out time packets to any device on the system that asks for an update from it.

TM1000A
GPS NTP NETWORK TIME SERVER

TIME MACHINES®

APPLICATIONS & MARKETS:

TimeMachines® GPS based time servers are suited to any application where coordination of events at multiple locations is required. Without coordinated network time, searching for problems across multiple system logs becomes much more difficult. Education, industrial facilities, military installations, public safety command rooms, government, broadcasting, and hospitals are all candidates for synchronized time systems.

TIME SERVER FEATURES and SPECIFICATIONS:

- Receive time information from GPS satellites anywhere on the surface of the earth.
- RFC1119/1305/5905 NTP Protocol to serve time (Network Time Protocol).
- RFC1769/2030/4330 SNTP Protocol (Simple Network Time Protocol).
- Server Time Level: Stratum 1.
- Server Time Precision: Better than 5mS + network jitter.
- All networked computing platforms support time synchronization either natively or with add on drivers including: Windows, Macintosh, and Linux. Many other devices can access the device as well including VoIP phones and digital clocks.
- 10M/100M auto sensing network interface.
- Unit is capable of serving 350+ synchronizations per second. That provides support for over 300,000+ devices updating every 15 minutes on the network.
- Supports IPv4 and IPv6.
- Compliant with FCC Part 15B and CE marked for radiated emissions and is a lead free product.
- Power Requirements: +5V DC at less than 4W continuous.
- Environmental: Commercial temperature range, -40-70C, 95% humidity non-condensing. Altitude -304m to 18,000m.
- Minimum startup temperature -20C.
- Networking: Static or DHCP IPv4 addressing. Standard browser interface for setup.
- Serial port supports both RS-232C levels and TTL (+3.3V) outputting standard NMEA information strings, as well as the 1PPS signal at
- TTL levels. TTL signals can be turned off via software control.
- Indications: Power, GPS Signal Lock, and 1PPS indications.- Rear Connections: Power, Cat5 Ethernet, Serial, and GPS antenna via SMA connection.
- Supports +3.3V and 5V active GPS antennas with internal jumper setting.
- Mechanical Dimensions: 5" x 4.2" x 1.3".

GPS SPECIFICATIONS:

- Based on MediaTek MT3339 Chipset.
- 22 channel low power receiver module.
- Sensitivity: -165dBm.
- GPS Time Precision: +/- 10ns RMS jitter.
- Antenna Connection: 1575.42MHz (L1 Band).
- TTFF (Time To First Fix).
- Cold start @-125dBm typically 33 seconds.
- Re-acquisition (<10s obstruction) typically 1 second.

ANTENNA SPECIFICATIONS:

- Active patch antenna with magnetic base.
- Size: 1.57” x 1.89” x 0.51”, 43 grams.
- Amplifier: LNA +20dB, Noise: 1.5dB, VSWR: 2.0, Voltage: 2.7-6.0V.
- Cable: RG174, 5m length, SMA male.
- Environmental: -40 to +85C.
- Waterproof to IPx6.

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MADE in the USA