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Network Time Server - PTP and NTP Time Server

for GPS and Beidou - MA-802-S



MA-802-S NTP Server- Network Time Server
for GPS L1/Beidou B1

Description:

MA-802S series time server is a high-precision, highly concurrent and multi-functional satellite time synchronization device, which can support multiple time synchronization protocols, including NTP, PTP, IRIG-B code, 1PPS, RS485 and RS232 output. It adopts high-quality professional domestic clock timing chips, ensuring high-precision clock synchronization, supporting up to nine 10/100M adaptive Ethernet ports, and physically isolating each other. NTP synchronization accuracy is better than 1ms. In terms of high

concurrency, the time server can process about 30000 times service requests per second, providing efficient time synchronization support for your applications.

This series of time server are configured with WEB web page management, which can view and configure the device status without installing software on the computer. At the same time, the device also supports the SNMP v2 network management protocol and multi machine hot standby function.

The Time server adopts 1U rack design, with beautiful appearance and easy installation. In addition, it is equipped with a 4.7-inch VA color screen, providing an intuitive and easy to understand interface. Users can monitor various states of the Time server through the screen, which is easy to use.

Features:

- Satellite upgradation: for Beidou, GPS, GLONASS, GALILEO
- Interface upgradation: NTP, PTP, IRIG-B, 1PPS, 10MHz, TOD
- Performance upgradation: concurrency per second is better than 30000 times
- Screen upgradation: 4.7-inch color screen

Specifications:

- Supported satellite: for Beidou, GPS, GLONASS, Galileo
- Performance: NTP request volume: 30000 times/second
- Timing accuracy: better than 1ms
- Common oscillator: Stability (ppm): $\pm 20 \sim \pm 0.5$
- Annual aging rate (ppm): $\pm 3 \sim \pm 1$
- Time deviation after 1 day of lock loss: $\leq 60\text{ms}$
- Network port number: 1
- Supported interface: NTP/PTP/1PPS/IRIG-B bit/10MHz/TOD
- Others: support IPV4/IPV6, support binding multiple IPs to a single network port, support up to 5 devices with multi machine hot standby, support WEB web page management, support SNMP network management protocol, support WEB remote firmware upgrade.

Security Guarantee:

- Support NTP MD5 authentication: used to provide authentication for NTP packets exchanged between NTP servers and clients.
- Support NTP white list configuration: only NTP client terminals listed in the list can synchronize with the Time server.
- Support for WEB whitelist configuration: It can prevent unauthorized access and malicious behavior, and improve system security.
- Support time security range setting: When the error between the superior time source and the local machine exceeds a certain range value, its time will not be synchronized.
- Support for fault sound alarm: It can detect and handle abnormal situations in a timely manner without the need for manual monitoring.

Network Protocol:

- NTP v1.v2.v3 (RFC1119&1305) SNTP (RFC2030) (RFC1321) DHCP (RFC2131) HTTP IPV4

Server Performance:

- GPS clock reference mode, first-class network time server, synchronization accuracy 1μs.
- User terminal synchronization timing accuracy: 1-50ms (typical value of LAN).
- User capacity: can support tens of thousands of clients.
- NTP request volume: 10000-30000 times/second.

Support System and Platforms:

- Support all NTP protocol servers, PC, embedded devices, etc.

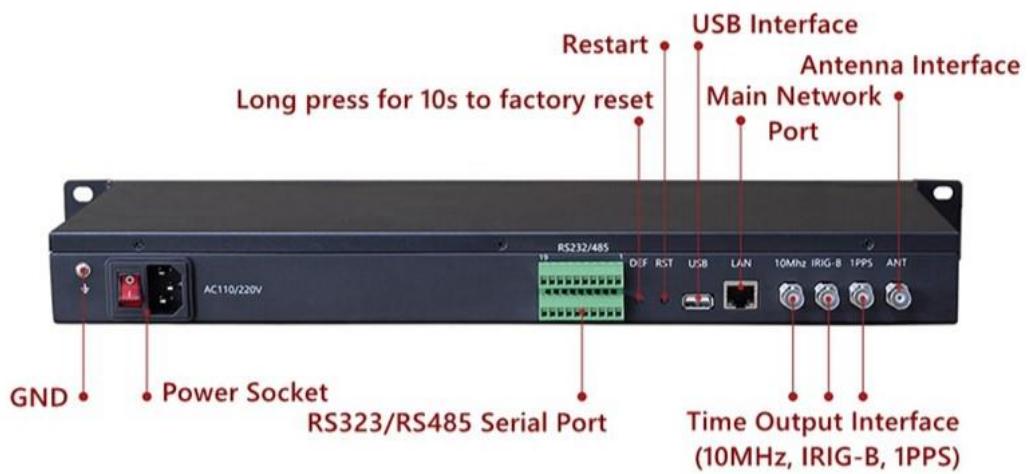
Signal Receiving Parameters:

- 50 channel timing GPS receiver.
- UTC synchronization accuracy 30ns (RMS), support single star timing window mode.
- Receive L1, C/A code signal-1575.42MHz.
- Tracking and locking sensitivity up to -162dBm.



Front Panel

- Configure LCD display, which can display IP address, year, month, day, hour, minute, second, number of locked satellites, time locked state, locked time source, working state.



Back Panel:

- GPS antenna entry: BNC, 1 channel, L1, 1575.42MHz
- Network port: RJ-45, 1 channel, 10/100M adaptive Ethernet interface 1 reset button, 1 factory reset button
- Customizable: serial port, multiple network ports, PPS output

Physical Parameters:

- Size: 480 × 44 × 180mm
- Power supply: AC 220V ±20%
- Working temperature: -10°C ~ +55°C (host); -40°C ~ +75°C (antenna)
- Storage temperature: -45°C ~ +85°C
- Humidity: 95% (no condensation)
- Power consumption: 5W

Packing List:

- 1 x Time Server
- 1 x Antenna
- 1 x Antenna Fixing Stand
- 1 x Power Cable
- 3 x Screws
- 1 x User Manual



Product Size:

- Product size: 1U rackmount

Note:

- Default IP: 192.168.0.30