

TMS6003

GNSS synchronized NTP/PTP Server

Two NTP/PTP ports physically isolated

The TMS6003 is rack mounted equipment able to provide a high stable time source on an Ethernet TCP / IP network.

The TMS6003 is a time server that uses either the Network Time Protocol (NTP) or the Precise Time Protocol (PTP) to synchronize all connected computers on the network.

NTP Server

The TMS6003 provides an NTP service in request / response mode in stratum1 when it is synchronized to its time sources. The client computers can be synchronized with a precision better than 5 ms.

The server has the following main interfaces:

- Network connection IEEE802.3 100/1000 Mbs
- Synchronous UTC pulse top pulse (1 PPS)

Synchronization

The TMS6003 synchronizes on GNSS.

The internal GNSS receiver is a specific receiver dedicated to time application. It is able to acquire 24 or more satellites (depending on the type of receiver) simultaneously. It delivers a very high precision second UTC reference pulse.

PTP Grandmaster

For more precise synchronization, PTP protocol (Precise Time Protocol) can be used. The TMS6003 integrates a PTPv2 grandmaster on both ports

Remote control

The remote control of The TMS6003 is done via the network, using:

- The SNMP standard protocol (MIB provided)
- The standard SSH protocol

An UDP frame containing the time and status of the TMS6003 is emitted every second.

Remote control is available on LAN 1 only.

Configuration

The entire configuration of The TMS6003 is contained in two removable SDCARD memories for easy system configuration and equipment update. In case of equipment replacement, the current configuration can be simply transferred by plugging the SDCARD in the new equipment minimizing the MTTR. Each LAN port is configured by one SDCard.

NTP server stratum 1

IEEE-1588 PTPv2 Grandmaster

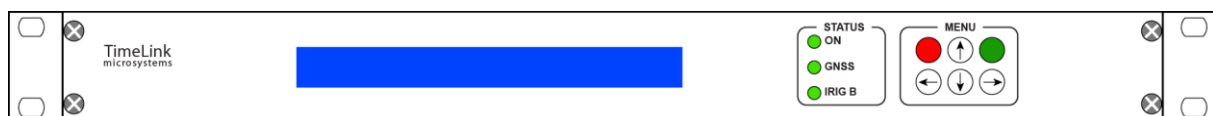
GNSS multi-constellation synchronization

Protected configuration on SDCARD

Hardware Accuracy of PPS \pm 100ns / UTC when synchronized by GNSS

HTTPS Monitoring and Control through a web based interface

Monitoring with SNMP V2c, V3



TMS6003 Front Panel

Specifications

Network Interface

Two IEEE 802.3. 100/1000 Ethernet physically isolated

NTP (Network Time Protocol)

NTP (RFC 1305) SNTP (RFC 1361) using UDP 123 port
Server configuration V3, V4 or automatic V3/V4

PTP (Precision Time Protocol)

PTP v2 IEE1588-2008
Default PTP profile

HTTPS

Advanced web interface for control and monitoring based on Events.

SNMP (Simple Network Management Protocol)

(RFC 1155, 1157, 1213) V2c, V3
SNMP provides to the network administrator The TMS6003 status.
For security reasons no configuration changes can be made with this protocol.

Port isolation

Each LAN port is on its own dedicated processor.

Syslog

The function syslog is available on TMS6003

Connectors

1 x TNC for the GNSS antenna input
1 x BNC output for 1PPS
2 x RJ45 network connection

1PPS Accuracy

±100 ns over UTC when the equipment is synchronized by GNSS

Console

A console link for equipment maintenance is available on the front panel. To compensate for the rarefaction of RS232 serial interfaces on PCs, The TMS6003 allows a direct connection in USB, a USB / serial converter is integrated. This USB connection is dedicated to a serial link and cannot accommodate any other type of device.

Power Supply

The TMS6003 is powered by the main 230V via two redundant power supplies for better reliability
Power supply range 85 to 260VAC at 40-60 Hz
Power consumption: 30 W

MTBF

>100 000 h

Temperature

Operating temperature:-20° to 60 ° C
Storage temperature:-20 ° to 70 ° C
Operating relative humidity:
10% to 90% (non-condensing)
Storage relative humidity:
5% to 95% (non-condensing)

Dimensions

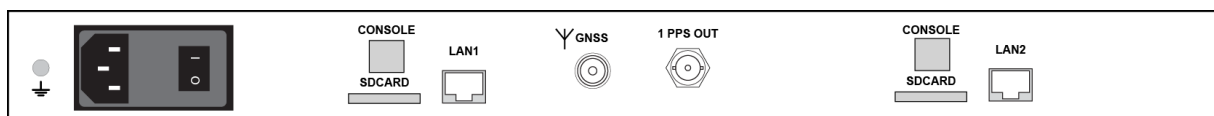
Rack 1U 19 " Depth 13.8 in

Weight

< 3Kg including the power cable

Certification

Certified CE, ROHS, REACH and ITAR Free



TMS6003 Back Panel