

TMF1512

10 MHZ GNSS synchronized frequency generator

The TMF1512 is a GNSS disciplined frequency generator specifically designed to provide 10 MHz and 1 PPS high accuracy reference.

The internal GNSS receiver is a specific receiver dedicated to time application. It's a bi-constellation model able to acquire both GPS and GLONASS satellites simultaneously. It delivers a very high precision UTC second reference pulse.

Even in case of loss of the GPS signal, equipment maintains the accuracy of the frequency and causes no frequency jump.

The TMF1512 is housed in 1U, 19" rack.

The front face has three status LEDs: power, satellite tracking and oscillator control. (lock).

The rear face includes all the input / output connectors.

- Antenna input, output signals:
- PPS GPS
- PPS local (1PPS in phase with the 10 MHz and accurate to ± 100 ns compared to UTC time when the oscillator is disciplined by the GNSS signal)
- 10 MHz sinus.
- Ethernet remote control link (RJ45)

Remote control

The remote control of the equipment is done via the, using a simple protocol (request/answer) allowing to get the equipment status, the date, time (local time or UTC), position, the number of satellites, an estimation of the frequency accuracy.

HTTP Server

The equipment includes an http server that provides access to equipment information and configuration. A standard web browser is used to access the standard port 80:



TMF1512 front face of the equipment

Specifications

Antenna input: TNC connector for active antenna, powered by the equipment: max. 80 mA - 5V DC.
(Antenna isn't provided with the equipment).
Oscillator: 10 MHz OCXO.

Oscillator stability in free run mode	< 10 ⁻⁹ / jour < 3x10 ⁻⁸ / month < 2x10 ⁻⁷ / year
Oscillator stability when disciplined by GNSS (mean value)	< 5x10 ⁻¹¹
Phase noise	10 Hz <-105 dBc/Hz 1 KHz <-135 dBc/Hz 10 KHz <-140 dBc/Hz

Connectors

9 connectors on the rear face:

- Power supply with fuse
- RJ45 network link J2
- RJ45 network link (J1 not used)
- SubD 9 pins RS232 link (configuration J3)
- SubD 9 pins RS232 remote control link (J4)
- BNC 10MHz output (J5)
- BNC PPS local (internal PPS of the equipment) (J6)
- BNC PPS GPS output (J7)
- TNC antenna input GPS (J8)

Accessories

To be specify when ordering

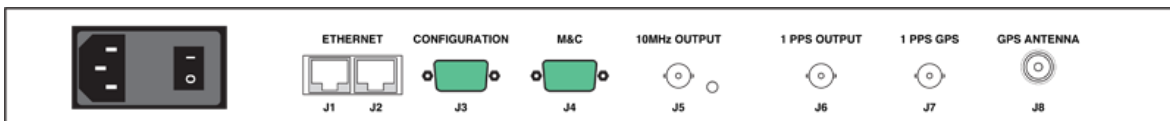
- Antenna
- Lightning protection

Dimensions

Rack 1U 19"
Weight : 3 kg
Consumption : 20 W

MTBF

TMF 1512 : 90 000 h



TMF1512 front face

Ordering Code:

TMF1512: standard model 10 MHz frequency