

TMF1800

10MHz Frequency Source

TMF1800 is designed for applications requiring an accurate 10 MHz source reference and 1 PPS signal.

Due to the synchronization thru an integrated GNSS receiver, the equipment can also distribute the time with an NTP server.

Oscillator

The internal oscillator is a low noise OCXO such guarantees stability better than 1.10^{-8} /day and a phase noise of excellent quality on four frequency outputs.

GNSS

The equipment uses a dual-constellation GNSS receiver (GPS + GLONASS) which provides a 1PPS reference with high accuracy. This signal is used to evaluate the frequency drift of the internal oscillator and enable it servo.

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

NTP Service

The device provides service Primary NTP-like the following features:

- Server Level 1
- Configurable V3 / V4 / Auto
- Server mode (Request / Response)

Client computers can be synchronized with an accuracy of 1 to 10 ms.

Monitoring

The monitoring equipment is carried out by the network connection by using an embedded web server or a simple protocol over a TCP port.

Configuration

The full configuration of the equipment is contained in a removable SD CARD type memory. This facilitates maintenance in case of updating or replacing equipment.



TMF1800 front panel

Specifications

Network Protocols

NTP/SNTP

(Network Time Protocol):
NTP (RFC 1305) SNTP (RFC 1361) Using port UDP 123.
Service is configurable in V3, V4 or automatically on V3/V4.

TP (Time Protocol)

DAY TIME
Time (RFC 868) Using port UDP37

HTTP

Pages Web Page for monitoring

TCP

Simple monitoring protocol

Connectors I/O

Antenna

TNC Connector (Active antenna powered thru the module, max. 80 mA - 5V DC).

1PPS Output

BNC Connector, TTL level, accuracy: ± 100 ns/UTC

10 MHz Output

BNC Connector, 4 outputs +13 dBm, loaded with 50 Ω

Guaranteed phase noise:

1 Hz	<-100 dBc/Hz
10 Hz	<-130 dBc/Hz
100 Hz	<-140 dBc/Hz
1 KHz	<-148 dBc/Hz
10 KHz	<-150 dBc/Hz

Console

RS232 9 female pins SUB'D connectors for firmware update

Network

RJ45 connector, 10/100 Mbs network.

Power Supply

EEC female socket 2P + N with fuse and switch On / Off,
90-260 VAC 47 / 63Hz
Consumption <20 W

Oscillator

OCXO 10 MHz OCXO Low Noise

Stability in standalone mode:

- < $\pm 2 \times 10^{-10}$ / day
- < $\pm 5 \times 10^{-9}$ / month
- < $\pm 3 \times 10^{-8}$ / year

Stability in disciplined mode (average / 1 year, excluding changes in temperature):
 5×10^{-11}

Size

Rack 1U 19 "
Depth 280 mm
Weight: 3 kg

Consumption

<20 W

MTBF

90 000 h

Usage Temperature

0° to 50 ° C

Accessories

The following items are not supplied with the equipment, please contact us

- Antenna GNSS type (GPS, GPS + GLONASS)
- Lightning protection ...
- Cable length

Ordering code

TMF1800 = Standard equipment