

# TMS2010

## IRIGB network time server

The TMS2010 is a rack unit equipment able to provide a high stability time source to any Ethernet TCP/IP network. This timeserver uses the NTP (Network Time Protocol) and TP (Time Protocol) to synchronize all the computers connected to the network.

### NTP Server

The TMS2010 server is NTP-Primary server type with the following functions :

- Level 1 server, compliant with NTP protocol release 3.0 or 4.0
- Mode : server (question/answer) or broadcast

The client's computers could be synchronized with a precision of 1 to 10 ms, depending on network load.

Equipment and server status information's are available through the SNMP (MIB) protocol.

A NTP client must be installed on every client computer for his synchronisation with the server.

It holds for outputs connectors:

- Standard RJ45 for network link. IEEE802.3 10/100 Mbs
- SubD 9 pins dedicated to RS232 serial link for configuration of the equipment
- .BNC for 1PPS phased with UTC time.
- BNC for IRIGB external time reference input.

### Irig-B

The IRIGB input uses the standard 1 KHz amplitude modulated signal compliant with IRIGB STANDARDS 200-98.

### Remote control

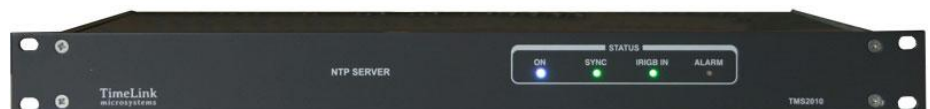
The remote control is done through the network using a dedicated web server

### Oscillator

An internal OCXO type oscillator allows a time stability of  $1 \times 10^{-9}$ /day when disciplined on the external IRIGB reference.

### Configuration

The entire configuration of the equipment is contained in a removable Micro SD memory SDCARD.



## Features

### NTP/SNTP

(Network Time Protocol):  
NTP (RFC 1305) SNTP (RFC 1361) port  
UDP 123.  
Server configuration : V3, V4 or V3/V4  
automatic.

### TP (Time Protocol)

#### DAY TIME

Time (RFC 868) using port UDP37

### HTTP :

Web pages for remote control.

### Connectors :

BNC isolated: IRIGB input  
BNC for 1PPS output.  
SUB'D 9 pins female for the console  
serial link .  
RJ45 for network connection.

### Network interface:

Ethernet IEEE 802.3. 10/100 Base TX.

### 1 PPS accuracy :

± 500 ns relative to the beginning of  
the IRIGB frame when disciplined with  
IRIGB.

### IRIGB code:

IRIG-B, signal amplitude modulated  
1/3, 1/1 – isolated by transformer.  
Code input are compliant with the  
"year" information.

### Internal reference:

Oscillator 10 MHz 1 ppm  
Stability in disciplined mode :  
< 1.10<sup>-9</sup>.

### Accessories :

To be specifies at time of order  
regarding the receiver type:

- o Antenna GNSS (GPS,  
GPS+GLONASS,.....)
- o lightning arrester

### Dimensions :

Rack 1U, 19''  
Weight : 3 kg  
Consumption : 20 W

### MTBF :

TMS2010 : 100 000 h



### Ordering:

TMS2010: unit with GPS/GLONASS receiver