LEDI® NETWORK ITS v2m

High Accuracy secure time Server with triple synchronization redundant inputs and with multiple synchronization outputs.

Internal time base

Its incorporated battery and its oscillator allow to provide stable time code output in case of synchronization or power supply failure.
Three quartz oscillators at choice :
- **OCXO LN:**
High frequency stability 5.10^{-10} (-10°C to 60°C).
Low ageing 3.10^{-10} / day.
- **OCXO:**
High frequency stability 1.10^{-9} (-20°C to 70°C).
Low ageing 5.10^{-10} / day.
- **TCXO:**
Frequency stability 1.10^{-6} (0°C to 60°C).
Ageing 2.10^{-9} / day.

Security

Back up power is included by default. Possibility of extended back up power capacity with Option J. The duration of power reserve will depend on the configuration of the time server, please contact our sales team for more details.
Backup configuration settings in flash memory.
High level of security: 64 bits RSA™ MD5 signature, HTTPS.
Supervision possible via SNMP software (Version 3).

Network Protocols

- **NTP (**v2, v3, **v4)**
- NTP Client/Server, Broadcast, Multicast
- SNTP (v4)
- HTTPS
- **SNMP** (v1, v2c, **v3**)
- IPv4 / **IPv6**. (DHCP v4 / v6 compatible)
- FTP
- SYSLOG
- PTPv2 IEEE 1588

Specifications

Power Supply	115-230 VAC/50-60Hz /	18-36 VDC 36-72 VDC	
Certifications	CE, EN 60950 (safety), EN 55022 (EMC transmission), EN 55024 (EMC immunity)		
Max. consumption	20 VA (depending on selected configuration)		
IP	31		
MTBF	110 000 h.		
MTTR	Mother board : 10 min. Display board : 5 min. Output board : 5 min.		
Weight	2.3 Kg (Standard configuration)		
Dimensions	19'' 1U Rack. 482x44x266 mm (LxHxT)		
Display	4 x 20 orange OLED screen with backlight.		
Operating temperature	-10° to 50°C		
Storage temperature	-20° to 70°C		
Maximum operating / storage altitude	3 500 m (11 483 ft)		

Key features

- **Power Supply Redundancy** 18-36 or 36-72 VDC with 115-230 VAC.
- **Configurable priorities of synchronization inputs.**
- **Compensation of input delay due to transmission distance and threshold setting for security.**
- Time Base and algorithm ensuring output **accuracy up to 50ns when synchronized to GNSS.**
- **Multiple synchronization outputs** of different types de time code.
- Time can be configured **individually** on each output, via DST and Offset.
- PPS and 10Mhz output (available with OCXO oscillator only) via BNC connectors.
- **Alarm management via SNMP TRAP** and two static relay outputs on screw terminal for synchronization and power supply alarms.
- **Manual** or **automatic** adjustment **for transmission delay.**
- **System Event Journal**.
- **Operational within 1 minute.**
- **Local or UTC time on the digital display.**

Configuration

Remote configuration and time setting via web interface.
(secured connexion via HTTPS available)
Time zone configuration. Automatic adjustment of Daylight saving. Supervision Information available via HTTP/ HTTPS, SNMPv3, Telnet, "GT Network Manager", "GT Ethernet Supervision". Time and synchronisation status is available on the alphanumerical front display. Operating on Windows®NT/XP/2000/2003/Vista (32 bits)/ Windows7
Firmware update via FTP.
1 NTP output (RJ45) is included in the basic configuration.

Synchronization Inputs

- **1st time reference input - choice amongst:**
  - Multi-constellation GNSS Receiver: (GPS, GLONASS, BEIDOU, GALILEO) Cold start, accuracy from 10 to 50 ns).
  - ASCII (NMEA 0183).
- **2nd time reference input - choice amongst:**
  - AFNOR NFS 87500/IRIG B/ IEEE1344.
  - NTPv4 Ethernet 10/100BaseT (RJ45 connector).
- **3rd reference input (backup):**
  - PPS input
  - Frequency input (from 1Khz to 10Mhz).

Synchronization Outputs

- Comes with 1 SDHC memory card for main NTP output
- Multiple outputs (see overleaf).

GNSS Antenna (refer to the GNSS elements)

- For more information on our GNSS antennas, refer to the technical specifications.

Ref : BDR_UK1-8_Master-clock-Time-servers-Software-V9.0-priceless
All technical changes, aesthetic, colour can be made without notice.

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ITEM CODE
92167 / ↑ ↑ ↑ ↑ ↑ ↑

1st SYNCHRONIZATION INPUT*

		Code
GNSS multiconstellation (GPS, GLONASS, BEIDOU, GALILEO)*	■	B
GPS Receiver (antenna and cable not included)*	■	P
NMEA + TOP	■	T
TOP (PPS)	■	M
none	■	0

*Antenna and cable to be ordered separately

2nd SYNCHRONIZATION INPUT

		Code
AFNOR NFS 87500/IRIG B (Modulated 1Kz)	■	8
AFNOR NFS 87500/IRIG B DCLS	■	T
NTP	■	N
None	■	0

3rd SYNCHRONIZATION INPUT

		Code
None	■	0
External frequency input 10MHz**	✖	H

**Frequency Input: available with OCXO oscillator only, 1 other required entry.

POWER SUPPLY

		Code
115-230 VAC 50-60Hz / 18 to 36 VDC	■	5
115-230 VAC 50-60Hz / 36 to 72 VDC	■	8

OSCILLATOR

		Code
TCXO, 1PPS output (BNC)	■	T
OCXO, PPS and 10MHz output modulated (BNC)	■	X
OCXO LN, PPS and 10MHz output modulated (BNC)	■	Y

SYNCHRONIZATION OUTPUTS
(please consult us for maximal number of output boards)

		Code
4 AFNOR NFS 87500/IRIGB IEEE1344 AC 2,2V outputs on screw terminal	■	B
1 ASCII RS232 output on DB9 + Pulse on screw terminal	■	E
1 ASCII RS485 output on DB9 + Pulse on screw terminal	■	F
1 x PTPv2 IEEE 1588 output (Connectors: 1 RJ45 1Gbits/S + 1 Optical SFP) + 1 Management port RJ45 (10/100Mbits/s) PTP Client capacity : 8 clients, 128 requests/sec per client.	■	C
1 x NTP V4/SNTP server output on RJ45	■	K
2 x NTP V4/SNTP server output on RJ45	■	L
4 outputs IRIG B AC 8,8V on screw terminal	■	H
4 outputs PPS, PPM, PPH, PP2S, DCF (TTL, phototransistor, DTTL) on screw terminal	■	P
4 outputs PPS, PPM, PPH, PP2S, DCF (TTL, constant relay, DTTL) on screw terminal	■	Q
4 AFNOR/IRIG B/IEEE1344 DCLS outputs(TTL, phototransistor, DTTL) on screw terminal	■	T
4 AFNOR/IRIGB/IEEE1344 DCLS outputs(TTL, constant relay, DTTL) on screw terminal	■	V
4 ASCII RS 232 unidirectional outputs on DB9	■	A
4 ASCII RS 485 / RS 422 unidirectional outputs on DB9	■	R
SMPTE / EBU output module SMPTE LTC12M –1999 size and EBU/ UER LTC 3097 XLR 3 pts Blackburst / Genlock synchronization input on BNC	■	S
Tropicalization	■	U
Battery for 4 hours back up power	■	J

GNSS ANTENNE OPTIONS
(please refer to the 92225 data sheet: GNSS elements)

NTP/SNTP client software Windows 98/NT/XP/2000/2003/Vista(32 bits) / Windows 7. 10 licences. This option is required for a secure synchronization of PC under Windows.

NTP/SNTP client software Windows® 98/NT/XP/2000/2003/Vista(32 bits) / Windows 7. **10 licenses.**	▣	**CDG021**
Additional SDHC memory card for other NTP outputs	▣	**réf.PCB0036A**

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