



## LEDI® NETWORK ITS V2m - 1U

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

### Internal Time Base

Its internal 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	OCXO	TCXO
frequency stability	5.10 <sup>-10</sup> (-10°C à 60°C)	1.10 <sup>-9</sup> (-20°C à 70°C)	1.10 <sup>-6</sup> (0°C à 60°C)
Ageing	3.10 <sup>-10</sup> / day	5.10 <sup>-10</sup> / day	2.10 <sup>-9</sup> / day

### Security and network protocols

- Basic power reserve included by default. Possibility of extending the duration (see reference table 92167/). Duration varies depending on the options chosen, contact us for more details.
- Backup of configuration setting in flash memory
- Supervision via SNMP V3 or supervision software GT SCADA or Syslog
- Remote configuration via secured web page
- Configuration setting command prompt via SSH
- Firmware update via FTP or SCP
- Compatible IP v4/v6 (compatible DHCP v4/v6)
- Configuration on Web interface via HTTP et HTTP(s)
- Secure access to web interface by identifier and password
- Authentication protocol and MD5 encryption
- Network communication ports can be disabled

### Specifications

Power supply	110-250VAC – 1,4 A max. – 50/60Hz – type IEC 60320 defined C14 and 18 - 36 VDC or 36 – 72 VDC – 2 points screw terminal block
Power Cable	IEC 60320 defined C13 / MALE SCHUKO 2 (EUROPE) & (Type F)*
Certifications	CE, EN62368 (safety), EN 55032 (EMC transmission), EN 55035 (EMC immunity), ROHS
Maximal Consumption	20 VA
IP	31
MTBF	110 000 h
MTBF/ MTTR	Mother board: 10 min Display board: 5 min Output board: 5 min
Weight	2,3 kg
Dimensions	19" 1U Rack. 482x44x266 mm (LxHxD)
Display	Orange OLED screen with backlight
Operating Temperature / hygrometry	-20 to 50°C / 0 to 90% HR
Storage temperature / hygrometry	-20 to 70°C / 10 to 85% HR
Maximum operating/ storage altitude	3 500 m (11 483 ft)

\*For other types of power cables, refer to the power cable reference table



### Key features

- NTP/SNTP output included by default on RJ45
- Power Supply Redundancy 18-36 or 36-72 VDC with 110-250 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 GPS/GNSS
- Independence and modularity of output boards
- Sorties PPS et 10 MHz (uniquement avec OCXO) sur BNC connectors
- Alarm management via SNMP TRAP (V1, V2C, V3) and two static relay outputs on screw terminal for synchronization and power supply alarms
- Manual or automatic adjustment for transmission delay
- Local or UTC time display on front panel

### Configuration

- Remote Configuration and time setting via embedded web interface
- Automatic Time offset and DST on outputs
- IP Configuration by front panel keyboard
- Configuration file can be retrieved and uploaded via secured web interface
- Auto-IP v4

### Synchronization inputs

#### 1<sup>st</sup> time reference input (at choice):

- Multi-constellation GNSS Receiver: (GPS, GLONASS, BEIDOU, GALILEO) or GPS; Cold start, accuracy 10 to 50 ns; Cold start, précision 10 à 50 ns
- ASCII (NMEA 0183 RMC or ZDA by auto-detection) + TOP
- PPS input

#### 2<sup>nd</sup> time reference input (at choice):

- AFNOR NFS 87-500/IRIG B/ IEEE1344
- NTP (V2, V3, V4) 10/100BaseT

#### 3<sup>rd</sup> reference input (backup):

- Frequency input (between 1kHz and 10MHz)

### Synchronization outputs

- Multiple outputs (see reference table 92167/)
- NTP/SNTP output included by default on RJ45
- PPS and 10Mhz output (available with OCXO oscillator only) via BNC connectors

NB: The RJ45 ports of the optional NTP outputs are independent and isolated by means of protocol break.

### GNSS Antenna (option)

- For more information on our GNSS antennas, refer to the technical specifications (see reference table 92225/)

### Storage Conditions

Conditions	Temperature	Hygrometry	Maximum cumulated duration
Extreme	-20°C to 0°C	10 to 85% HR	48h
Extreme	40°C to 70°C	10 to 85% HR	48h
Normal	10°C to 40°C	10 to 85% HR	6 months

The product must be lit for 4 hours every 3 months to keep its characteristics. see the user manual for more information.

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ITEM CODE

92167 /

1 <sup>st</sup> SYNCHRONIZATION INPUT									
<sup>(1)</sup> GNSS multiconstellations (GPS, GLONASS, BEIDOU, GALILEO) – SMA connector	■	B							
<sup>(1)</sup> GPS Receiver – SMA connector	■	P							
ASCII (auto-detection NMEA 0183 RMC or ZDA) – DB9 port + TOP – BNC connector	■	T							
TOP (PPS) – BNC connector	■	M							
Without	■	0							

<sup>(1)</sup> Antenna and cable to be ordered separately, see table 92225/

2 <sup>nd</sup> SYNCHRONIZATION INPUT									
AFNOR NFS 87-500/IRIG B (Modulation 1kHz – 12x) – 2 points screw terminal block	■	8							
IRIG B DCLS (No modulation 00x) – 2 points screw terminal block	■	T							
NTP 10/100 Base T – RJ45 port	■	N							
Without	■	0							

3 <sup>rd</sup> SYNCHRONIZATION INPUT									
Without	■	0							
<sup>(2)</sup> Frequency input 1kHz - 10MHz – BNC connector	✗	H							

<sup>(2)</sup> Frequency Input: only available with OCXO oscillator, 1 other required input

POWER SUPPLY									
110-250 VAC 50/60Hz and 18-36 VDC	■	5							
110-250 VAC 50/60Hz and 36-72 VDC	■	8							

OSCILLATOR									
TCXO, 1PPS output – BNC connector	■	T							
OCXO, 1PPS and 10 MHz outputs – BNC connectors	■	X							
OCXO LN, 1PPS and 10 MHz outputs – BNC connectors	■	Y							

BACKUP BATTERY POWER									
Without	■	0							
Backup battery power NiMh (in average max. 1h)	■	1							
Extended Backup battery power NiMh (in average max. 2h)	■	2							

<sup>(3)</sup> SYNCHRONIZATION OUTPUTS									
4x AFNOR NFS 87-500/IRIGB/IEEE1344 (12x version) AC 2,2V – 8 points screw terminal block	■	B							
2x AFNOR NFS 87-500/IRIGB/IEEE1344 (12x version) AC 2,2V – BNC connectors	■	G							
1x ASCII RS232 – DB9 port + TOP – 2 points screw terminal block (Protocols selectable)	■	E							
1x x ASCII RS485 – DB9 port + TOP – 2 points screw terminal block (Protocols selectable)	■	F							
1x NTP V4/SNTP - RJ45 port	■	K							
2x NTP V4/SNTP - RJ45 ports	■	L							
4x IRIG B (12x version) AC 8,8V – 8 points screw terminal block	■	H							
4x PPS, PPM, PPH, PP2S, DCF (TTL, phototransistor, DTTL) – 8 points screw terminal block	■	P							
4x PPS, PPM, PPH, PP2S, DCF (TTL, static relay, DTTL) – 8 points screw terminal block	■	Q							
4x AFNOR NFS 87-500/IRIG B/IEEE1344 DCLS (00x version) (TTL, phototransistor, DTTL) – 8 points screw terminal block	■	T							
2x AFNOR NFS 87-500/IRIG B/IEEE1344 DCLS (00x version) (TTL, phototransistor, DTTL) – BNC Connector	■	D							
4x AFNOR NFS 87-500/IRIGB/IEEE1344 DCLS (00x version) (TTL, static relay, DTTL) – 8 points screw terminal block	■	V							
4x ASCII RS 232 unidirectional – DB9 port (unique GT Protocole)	■	A							
4x ASCII RS 485/RS 422 unidirectional – DB9 port (unique GT Protocole)	■	R							
1x SMPTE / EBU module output format SMPTE LTC12M –1999 and EBU/ UER LTC 3097 – 3 points XLR connector	■	S							
Blackburst / Glenlock synchronization input – BNC Connector	■								
Tropicalized	■	U							

<sup>(3)</sup> Max. 3 output boards

SOFTWARE

NTP/SNTP client software Windows®, 10 licenses.  
This option is required for a secure synchronization of PC under Windows.

NTP/SNTP client software Compatibles OS Windows® 10 licenses	☐	CDG021
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