GORGY TIMING

LEDI® NETWORK ATS
"Grand Master Clock"

Secured time server with high precision

2 YEARS WARRANTY

Internal Time Base

The Quality of its oscillator allows to provide stable time signal even in holdover mode.

	Rubidium	**Advanced Rubidium**
Max. consumption	40W	
Frequency stability (Allan Deviation)	Up to 3.10^{-12}	
Frequency stability in T° between -20°C and +60°C	1.10^{-10}	
Ageing	5.10^{-11} month	3.10^{-11} month
Time drift (without synchronization over 180 days)	< 10 msec	
Vibration in operation	• GR-CORE-63, Section 5.4.2 • Random and Sinusoidal MIL-PRF-28800F, Class 3, 4	• MIL-STD-810F, 514.5 Method, Category 24 • Average acceleration: 7,7g rms duration: 1 h/axis • Axis: X/Y/Z axis

Security and network protocols

- **Back up power is included by default. Possibility of extended back up power capacity** (see reference table 92197/). The duration of power reserve will depend on the configuration of the time server, please contact our sales team 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
- PTPv2 IEEE 1588 (TELECOM, ENERGY profiles)

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
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
Max. consumption	45 VA (Rubidium version) at start 25 VA in operation between 10 and 30 °C
IP	31
MTBF/ MTTR	Mother Board: 139 000 h / 10 min Display Board: 151 000 h / 5min Output Board: 128 000 h / 5min
Weight	2 Kg
Dimensions	1U Rack 482 x 44 x 285 mm (LxHxP)
Display	4 x 20 orange OLED screen with backlight
Operating temperature	-10° to 50°C
Storage temperature	-20° to 70°C
Telecom standards	G.811 and G.812 Compatible
Shock and vibration tests	MIL STD 810 G

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

Key Features

- **NTP/SNTP server 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**
- PPS and 10Mhz output (available with OCXO oscillator only) via 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**
- **Internal Temperature monitoring** (°C)

Configuration

- Remote Configuration and time setting via embedded web interface
- IP Configuration by front panel keyboard
- Configuration file can be retrieved and uploaded via secured web interface
- Activating and deactivating configurations
- Auto-IP v4

Synchronization inputs

First synchronization input (at choice):
- GNSS multiconstellations: (GPS, GLONASS, BEIDOU, GALILEO) or GPS ; Cold start, accuracy 10 to 50 ns

Second input (at choice):
- NTPv4 Ethernet 10/100BaseT - RJ45 input
- PTPv2 (IEEE 1588)
- ASCII (NMEA 0183 RMC or ZDA by auto-détection) + TOP

Third input (backup):
- PPS input
- Frequency input (between 1 kHz to 10 MHz)

Synchronization outputs

- Multiple synchronization (see reference table 94031/)
- **NTP/SNTP server output included by default on RJ45**
- **PPS and 10MHz on BNC connectors**

NB: RJ45 port of each optional NTP output are independent and isolated by means of breaking protocol

GNSS Antenna (option)

- For further information about GNSS antenna, please refer to technical specification in table 94031/

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15

LEDI® NETWORK ATS

ITEM CODE							
94031 /	↑	↑	↑	↑	↑	↑	

1st SYNCHRONIZATION INPUT

(1)**GNSS multiconstellations** (GPS, GLONASS, BEIDOU, GALILEO – SMA connector	■	B					
(1)**GPS Receiver** – SMA connector	■	P					
Without	■	0					

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

2nd SYNCHRONIZATION INPUT

PTPv2 (IEEE 1588) – *RJ45 Port and SFP port*	■		Y				
NTP 10/100 Base T – *RJ45 port*	■		N				
(2)ASCII (auto-detection NMEA RMC or NMEA ZDA) - *DB9 port* + TOP	■		A				
Without	■		0				

(2) Configuration form to fill in

3rd SYNCHRONIZATION INPUT

Without	■			0			
TOP input (PPS) – *BNC connector*	■			M			
(2) External frequency input 1IHz - 10MHz – *BNC connectors*	✖			H			

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

POWER SUPPLY

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

CLOCK OSCILLATOR

Rubidium	■					R	
Advanced hardened vibration Rubidium	■					B	

(3)SORTIE DE SYNCHRONISATION — *(3) max. 3, in case of PTP input: max. 2*

2x **2.048MHz** & 2x **E1** (2.048Mbit/s) or **T1** (1.544Mbit/s) outputs, 75 ohms, BNC connectors (limited to 1 x "W" board per time server) BNC->RJ adaptor is included (75 Ohms ► 120 Ohms)	■	W	
1 x **PTPv2 (IEEE 1588)** – 8 clients per 128 req/s – *1x RJ45 Gbps and 1x SFP Optical Fibre port* + 1 x RJ45 management port (10/100 Mbps) (to associate to GNSS input)	■	C	
4 x **AFNOR NFS 87-500/IRIGB IEEE1344** (12x version) AC 2,2V – 8 points screw terminal block	■	B	
1 x **ASCII RS232** output - *DB9 port* + **TOP** – 2 points screw terminal block (Protocoles selection)	■	E	
1 x **ASCII RS485** - DB9 port + **TOP** – 2 points screw terminal block (Protocoles selection)	■	F	
1 x **NTP V4/SNTP** - *RJ45 port*	■	K	
2 x **NTP V4/SNTP** - *RJ45 port*	■	L	
4 x **PPS, PPM, PPH, DCF** (TTL, phototransistor, DTTL) – *8 points screw terminal block*	■	P	
4 x **PPS, PPM, PPH, DCF** (TTL, static relays, DTTL) – *8 points screw terminal block*	■	Q	
4 x **AFNOR/IRIG B/IEEE1344 DCLS** (00x version) (TTL, phototransistor, DTTL) – *8 points screw terminal block*	■	T	
4 x **AFNOR/IRIGB/IEEE1344 DCLS** (00x version) (TTL, relais statique, DTTL) – *8 points on screw terminal block*	■	V	
4 x **ASCII RS 232** unidirectional - *DB9 port* (Unique Protocole GT)	■	A	
4 x **ASCII RS 485 / RS 422** unidirectional - *DB9 port* (Unique Protocole GT)	■	R	
1x **SMPTE / EBU** module output format SMPTE LTC12M –1999 and **EBU/ UER LTC 3097** – *3 points XLR connector* **Blackburst / Glenlock** synchronization input – *BNC Connector*	■	S	
Tropicalization	■	U	

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**		

GORGY TIME

ASCII + PPS CONFIGURATION FORM

Form to be filled in for ASCII + TOP input configuration of the LEDI Network ATS time server

ASCII						PPS	
SPeed (Bauds)	**X**	**Format**	**X**	**Protocole**	**X**	**Source**	**X**
1200		RS232		NMEA RMC		Externe, Front montant	
2400		**RS422/485		NMEA ZDA		Externe, Front descendant	
4800						Interne	
9600						**Format**	**X**
14400						TTL	
19200						RS232	
38400						**RS422/485	
57600							
115200							

*** Combination not possible ASCII RS422/485 + PPS RS422/RS485*

Comments

Date:

Company stamp + signature

MASTER CLOCKS / TIME SERVERS / SOFTWARES / GNSS ELEMENTS

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47