



LEDI® NETWORK TS

High accuracy time server,
delivering multiple time codes
Supporting NTP V4 / IPV6 / SNMP

Internal Time Base

LEDI® NETWORK Time Server (TS) is equipped with internal time base allowing accurate timekeeping in case of loss of synchronization.

- **TCXO:**
 - Frequency stability: 2.10^{-8} (0°C à 60°C)
 - Ageing: $1.5.10^{-8}$ / day

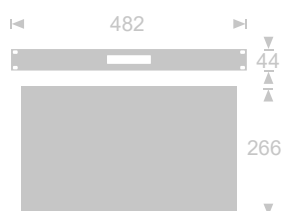
Security and network protocols

- **Basic power reserve included by default.** Possibility of extending the duration (see reference table 9220/). 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	110-250 VAC – 50/60Hz type IEC 60320 defined C14 or 36 – 72 VDC – 2 points screw terminal block
Power Cable	IEC 60320 defined C13 / MALE SCHUKO 2 (EUROPE) & (Type F)*
Certifications	CE, EN 62368 (Safety), EN 55032 (EMC transmission), EN 55034 (EMC immunity), ROHS
Maximal Consumption	20 VA
IP	31
MTBF	120 000 h
MTR	Mother board: 10 min Display board: 5 min Output board: 5 min
Weight	2,3 kg (standard configuration)
Dimensions	Rack 19" 1U 482x44x266 mm (LxHxD)
Display	4 x 20 character LCD display with blue backlight
Operating Temperature / hygrometry	-20 to 50°C / max 90% HR (without condensing)
Storage temperature / hygrometry	-20 to 70°C / 10 to 85% HR

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



Key features

- **NTP/SNTP output included by default on RJ45**
- **Plug and Play**
- **Multiple synchronization outputs** with different types of time codes
- **Independence and modularity of output boards**
- **Protection against time leap**
- **Alarm management via SNMP TRAP (V1, V2C and V3)**
- **Alarm management** via static relays and screw terminal for synchronization and power supply, as option
- **Time base and algorithm to ensure output accuracy jusqu'à 100 ns en synchronisation GPS**
- **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

Synchronisation input

- **1 synchronization input**
- DCF 77kHz (Europe)
- NTP 10/100 base T
- GPS (Accuracy < 100 ns)
- GPS converter (3Gxx) (Accuracy < 1 µs)
- AFNOR NFS 87-500 / IRIG B

Synchronization outputs

- AFNOR NFS 87-500/IRIG B modulated (Accuracy < 20 µs)
- DCLS AFNOR NFS 87-500 / IRIG B (TTL/ RS 422) (Accuracy < 10µs)
- NTP/SNTP (V2, V3, V4) (Accuracy < 50 µs)
- ASCII RS485 + TOP
- ASCII RS232 + TOP
- Tops 1000 Hz
- Alarms (synchronization and power default)
- SMPTE/EBU
- Pulse or DCF24v

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						
		9220		/				
			↑	↑	↑	↑	↑	↑
SYNCHRONIZATION INPUT								
⁽¹⁾ DCF 77 kHz – 2 points screw terminal block	■	8	D					
⁽¹⁾ GPS receiver (GPS converter antenna) – 2 points screw terminal block	×	8	C					
AFNOR NFS 87-500/IRIG B (Modulated 1kHz) – 2 points screw terminal block	■	8	8					
AFNOR NFS 87-500/IRIG B DCLS (TTL or RS 422) – 2 points screw terminal block	■	8	T					
NTP 10/100 base T – RJ45 port	×	8	N					
⁽¹⁾ ALS 162Khz radio synchronisation (antenna not supplied) – 2 points screw terminal block	×	8	S					
⁽¹⁾ GPS receiver – SMA connector	×	9	C					
POWER SUPPLY								
110-250 VAC – 50/60Hz	■				0			
18-72 VDC					9			
BACKUP BATTERY POWER								
Backup battery power NiMh (2h max.)	■					1		
Extended Backup battery power NiMh (4h max.)	×					2		
⁽²⁾PULSE OUTPUT OPTION								
Without						0		
24V/1A Minute reversed parallel Pulse output – 2 points screw terminal block	×					3		
1/2 Minute reversed serie 48 volts Pulse output – 2 points screw terminal block	×					5		
DCF24v (on request) – 2 points screw terminal block						-		
⁽²⁾SYNCHRONIZATION OUTPUT OPTION								
⁽³⁾ 1 x NTP V4/SNTP – RJ45 port	■						K	
1x ASCII RS232 output – DB9 port + 1x alarm contact output – 2 points screw terminal block (synchronization or power supply defect)	■						G	
4x Tops 1000 Hz output – 8 points screw terminal block	■						H	
2x AFNOR NFS 87-500/IRIG B outputs (modulated 1kHz) – 4 points screw terminal block – recommended cable telecom pair 9/10 SYT1	■						B	
1x ASCII RS 485 – DB9 port + TOP – 2 points screw terminal block	■						R	
1x ASCII RS 232 – DB9 port + TOP – 2 points screw terminal block	■						A	
2x NFS 87-500/IRIG B DCLS (TTL / RS 422) – 4 points screw terminal block	■						T	
1x SMPTE / EBU module output format SMPTE LTC12M –1999 and EBU/ UER LTC 3097 – 3 points XLR connector	■						S	
Synchronisation input Blackburst / Glenlock – BNC Connector	■							
Tropicalized	■						U	

⁽¹⁾ Antenna and cable to be ordered separately (see tables on the following page)

⁽²⁾ 1 pulse output max + 2 other outputs OR 3 synchronization outputs (maximum)

⁽³⁾ 1 NTP output max.

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ANTENNA

DCF ANTENNA for Server Ref. 92208/D	ITEM CODE
DCF Radiosynchronization Antenna + 4m cable	3D6

ALS 162 kHz antenna for server Ref. 92208/S	ITEM CODE
ALS Radiosynchronization Antenna + 5m cable	907025

GPS Converter ANTENNA for Server Ref. 92208/C	ITEM CODE
GPS Antenna (converter unit) with 25m cable	3G25-V4
GPS Antenna (converter unit) with 50m cable	3G50-V4
GPS Antenna (converter unit) with 100m cable	3G100-V4

GPS ANTENNA for Server Ref. 92209/C

		ITEM CODE					
		9	2	2	2	2	2
Antenna Type		↑	↑	↑	↑	↑	↑
GPS (Hardmount – to be used only with 25m and 50m cable)	■	Q					
GPS	■	G					
Cable Type (LSZH*)							
LMR 240 cable (25 m and 50 m cable)	■		3				
LMR 400 cable	■		4				
*Low smoke, no halogen.							
Cable number							
1 Cable	■			1			
Cable length							
25 m					25	00	
50 m	■				50	00	
80 m	■				80	00	
OPTIONS							
Lightning Surge Arrestor (+ 10 meters cable)	■						P
Inline Amplifier	■						A