

PRESENTATION

Compact and modular, the Netsilon time server combines the accuracy of a master clock with the secure approach of data networks:

- High precision internal clock with its **TCXO** quartz.
- Priority order for the different synchronisation references (input).
- Modular design allowing a wide variety of input/output signals (up to 4 expansion cards).
- Network security management: Enable/disable encryption, authentication, and access protocols.
- Alarm information available as SNMP traps and email.

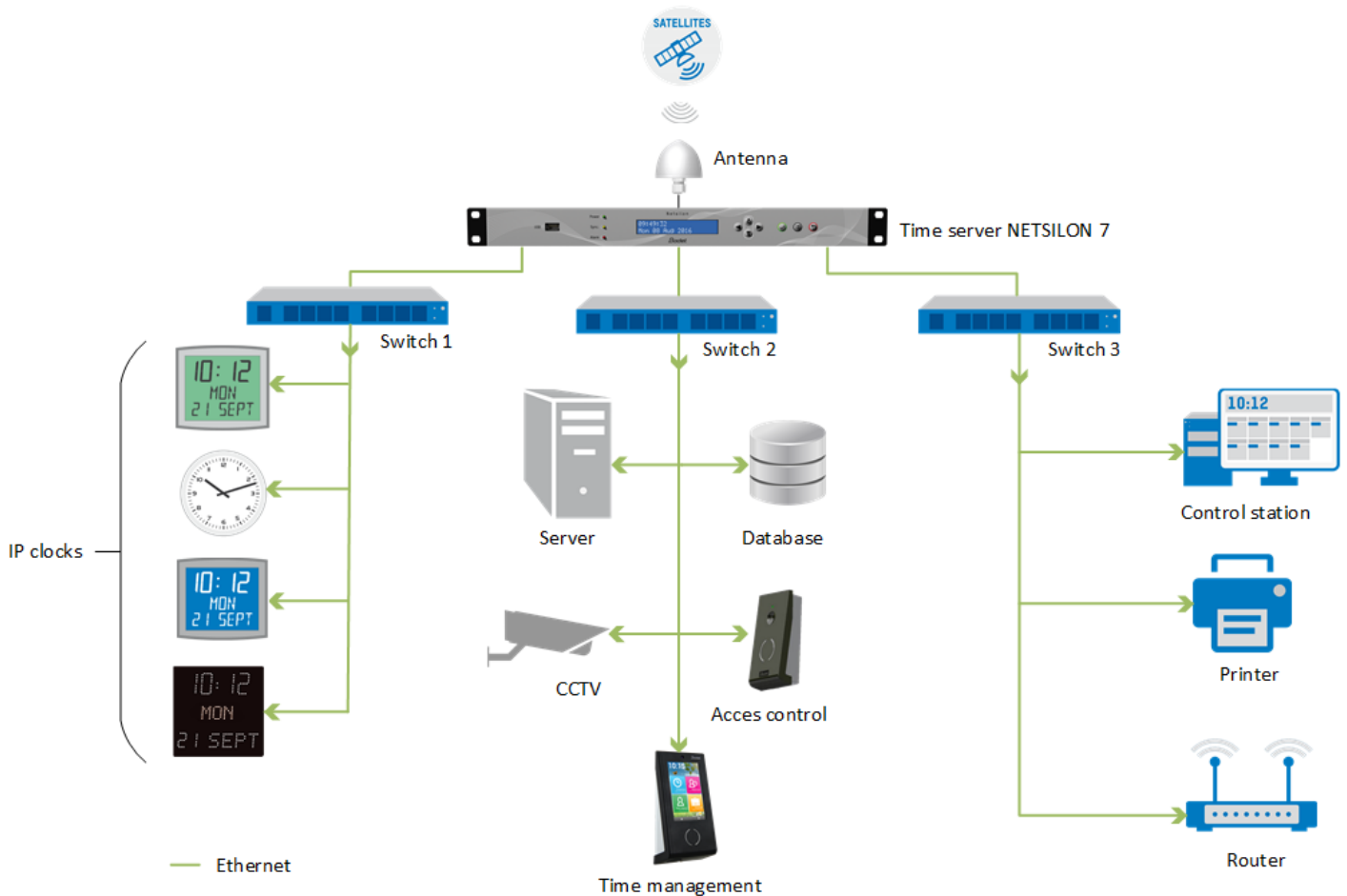
Warranty: 3 years.



COMPLIANCE

- Directive LVD 2014/35/EU
- Directive EMC 2014/30/EU

EXAMPLE OF INSTALLATION



REFERENCE SIGNALS

	STANDARD	OPTION
Input	GPS GLONASS NTP	ALS162 NTP
Outputs	NTP	NTP AFNOR 24V // Impulses DCF

SPECIFICATIONS

	TYPICAL VALUE OF TCXO QUARTZ
Precision (average after 24h GPS or GLONASS synchronisation).....	1x10 ⁻⁹
Stability (average after 2 weeks with GPS or GLONASS signal).....	1x10 ⁻⁷ /day
Holdover (after 2 weeks GPS or GLONASS synchronisation at constant temperature).....	5 ms (after 24 hours)

MECHANICAL CHARACTERISTICS

Construction	Metal case – 1 U rack – 19"
Operating temperature	From 0°C to +50°C (cooling without fan)
Relative Humidity level at 40°C	0-90 % RH without condensation
Protection rating	IP20
Weight	2.5 kg
Dimensions	442 x 264 x 44.2 mm



ELECTRICAL CHARACTERISTICS

Power supply	AC only : 100-240V \sim / 50-60Hz / 1.9-0.8A or DC only : 22-30V \equiv / 3.2-1.9A or AC+DC Redundant power supplies, or AC+AC characteristics, above.	FANLESS
Alarm Input.....	Alarm IN Dry contact Input, potential-free contact I _{IN} ≤ 10 mA	
Alarm Output.....	Alarm OUT Relay NC-NO-C. Maximum current : 1A/50V \equiv , 1A/30V \sim	
MTBF	100,000 hours	

COMMUNICATIONS

Network port	RJ45, 10/100/1000 BASE-T
Configuration serial interface.....	RS232, DB9 connector
Front panel	USB socket (Enable/Disable) for saving and updating software Keyboard (lockable) and LCD screen for network configuration

NETWORK CHARACTERISTICS

PROTOCOLS

NTP V2, V3, V4	Conforms with RFC 1305 and 5905. Supports Unicast, Broadcast, Multicast, Anycast, MD5 encryption, peering and Autokey.
Number maximum of NTP requests per second. All Ethernet ports combined.....	7 000
Maximum number of NTP clients (typical).....	32 000
SNTP V3, V4	Conforms with RFC 1769, 2030, 4330 and 5905.
TIME PROTOCOLE	Conforms with RFC 868.
DAYTIME PROTOCOLE	Conforms with RFC 867.

COMMUNICATION

HTTP/HTTPS.....	Conforms with RFC 2616 (signed certificates management)
SSH.....	SSH v1.3, SSH v1.5, SSH v2 (openSSH) (password and /or authentication by certificates)

MANAGEMENT

IP.....	IPv4, IPv6 : Dual stack
VLAN.....	802.1Q standard (single / multi)

SERVICES

DHCP	DHCPv4, DHCPv6, Autoconf & Slaac
SMTP	Mail forwarding

SUPERVISION

Alarm.....	SNMP traps, email and relay contact
SNMP	v1 (RFC 1157), v2c (RFC 1901-1908) and v3 (RFC 3411-3418)
Syslog.....	Event log service
Relay contact/External input	Sending and receiving of alarms

SECURITY FEATURES

- Enable/disable protocols,
- Authentication via 802.1x protocol,
- Redundancy via LACP protocol,
- Protection by single authentication (login + password) or authentication via LDAP / Radius,
- DES and AES encryption,
- SHA-1, MD5 authentication,
- SSL/TLS: securing exchanges via computer network,
- SCP: secured copy of Netsilon files in SSH session,
- SFTP: secured transfer of Netsilon files in SSH session.

REFERENCES

• 907 900	NETSILON 7 AC
• 907 901.....	NETSILON 7 DC
• 907 902	NETSILON 7 AC+DC
• 907 903.....	NETSILON 7 AC+AC

EXPANSION CARDS

• 907 920	NETWORK CARD (RJ45) 2-port
• 907 921	NETWORK CARD (SFP) 2-port
• 907 940.....	AFNOR CARD 2-outputs
• 907 942.....	IMPULSE CARD 1-output
• 907 944.....	CURRENT LOOP CARD 1 input + 1 output

ACCESSORIES

• 907 044.....	Bodet GLONASS synchronisation antenna
• 907 047.....	Bodet GPS synchronisation antenna
• 927 230.....	DHF transmitter AFNOR receiver
• 927 241.....	DHF secondary transmitter

OPTION CARDS

CURRENT LOOP CARD	
Nbr of connectors.....	1x DCF output 1x ALS162 input
Signal type	Analogue
Connector	Terminal
Max. no. of cards	1
Typical power	< 1W

NETWORK CARD (RJ45)	
Number of ports.....	2
Connector type.....	RJ45, 10/100/1000 BASE-T
NTP requests /sec (max).....	7000 (all Ethernet ports combined)
Management.....	Pv4, IPv6
Mode.....	Anycast, Multicast, Unicast.
Max number of cards.....	2, that is 5 ports max. (1 default + 2 per card)

NETWORK CARD (SFP)	
Number of ports.....	2
Connector type.....	SFP - Giga Ethernet
Standards	Compatible SX / LX
NTP requests /sec (max).....	7000 (all Ethernet ports combined)
Management.....	Pv4, IPv6
Mode.....	Anycast, Multicast, Unicast.
Max number of cards.....	2, that is 4 ports max.

AFNOR CARD	
Nbr of connectors.....	2x outputs (independent)
Signal type	Amplitude modulation
Connector	Terminal
Max. no. of cards	4
Typical power	< 1W

24 V IMPULSE CARD	
Nbr of connectors.....	1x output
Signal type	24 VDC (Min or 1/2 Min //)
Connector	Terminal
Max. no. of cards	4
Typical power	30W during the pulse 2W on average