

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 regulated by 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.

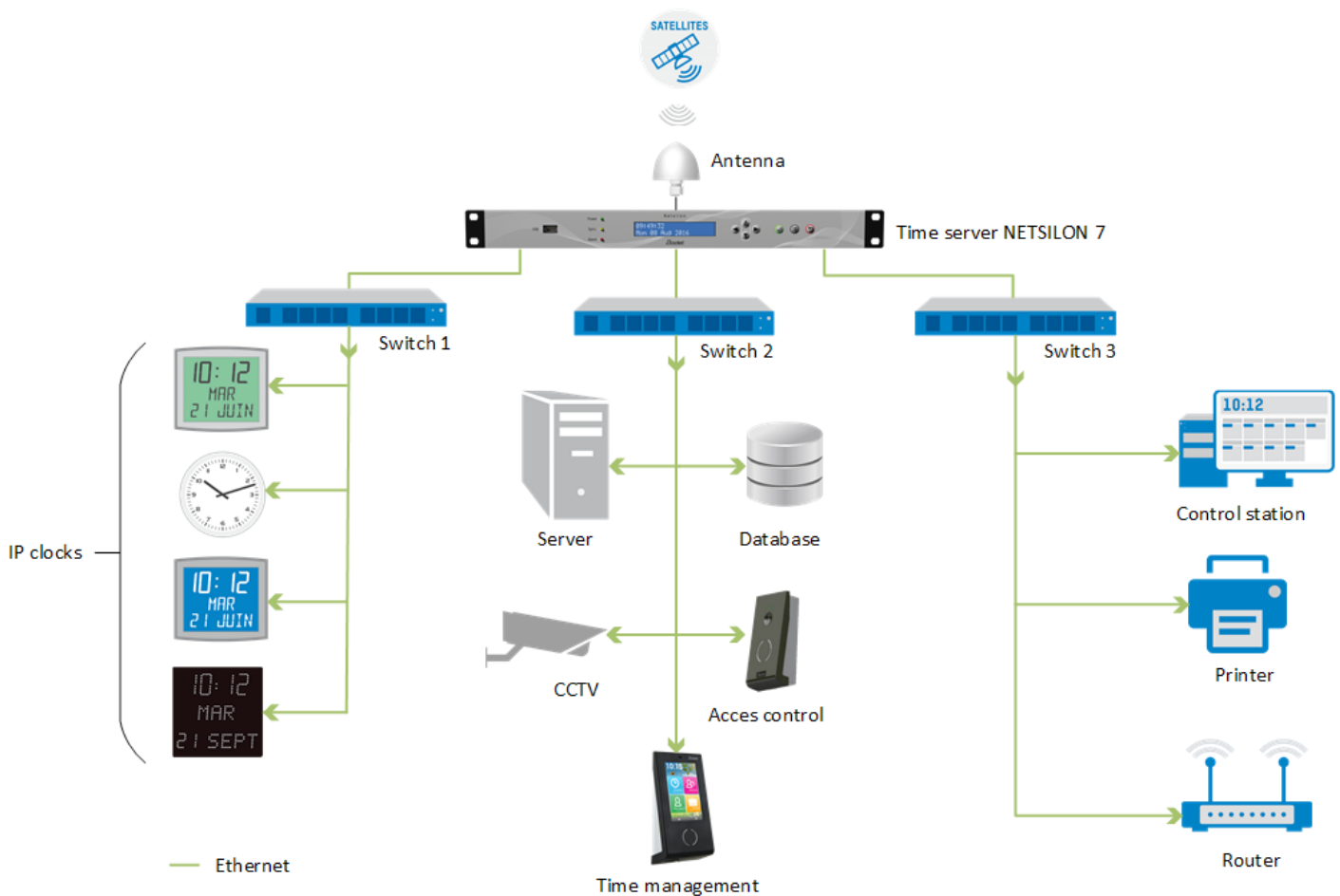
Warranty: 3 years.



APPLICABLE STANDARDS

- EN 55024 (2010)
- EN 55032 (2012)
- EN 60950
- EN 61000-3-2 (2014)
- EN 61000-3-3 (2013)
- EN 61000-6-2 (2005)
- EN 50121-4 (2006)
- EN 62311 (2008)

EXAMPLE OF INSTALLATION



REFERENCE SIGNALS

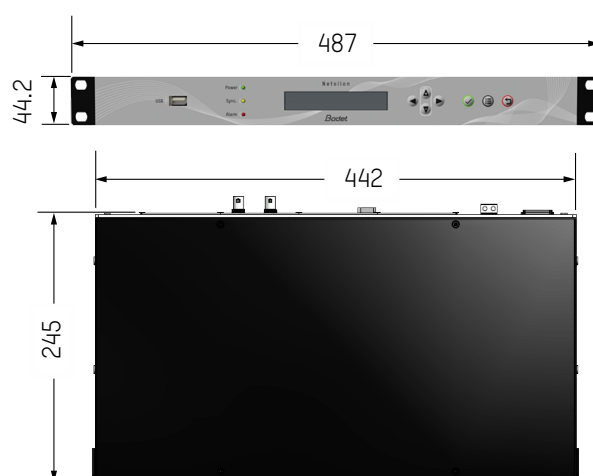
	STANDARD	OPTION
Input	GPS NTP	ALS162 NTP
Outputs	NTP	NTP AFNOR 24V // Impulses DCF

SPECIFICATIONS

	TYPICAL VALUE OF TCXO QUARTZ
Precision (average after 24h synchronisation (GPS).....	1×10^{-9}
Stability (average after 2 weeks with signal GPS).....	1×10^{-7} /day
Holdover (after 2 weeks GPS synchronisationat 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)
Humidity rating	0-90 % without condensation
Protection rating	IP41
Weight	2.5 kg
Dimensions	447 x 264 x 44.2 mm



ELECTRICAL CHARACTERISTICS

Power supply	DC only: 18-36 VDC (5,5A) or AC only: 85-264VAC; 1,9-0,75A or AC + DC	FANLESS
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).....	320 000
SNTP V3, V4	Conforms with RFC 1769, 2030, 4330 and 5905.
TIME PROTOCOL	Conforms with RFC 868.
DAYTIME PROTOCOL	Conforms with RFC 867.

COMMUNICATION

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

MANAGEMENT

IP.....	IPv4, IPv6 : Dual stack
---------	-------------------------

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)
Relay contact/External input	Sending and receiving of alarms

SECURITY FEATURES

- Enable/disable protocols
- Protection by single authentication (login + password)
- DES and AES encryption
- SHA-1, MD5 authentication
- SSL encryption
- SCP: secured copy of Netsilon files in SSH session
- SFTP: secured transfer of Netsilon files in SSH session

REFERENCES

• 907900	NETSILON 7 (100-240 VAC)
• 907901	NETSILON 7 (18-36 VDC)
• 907902	NETSILON 7 (100-240 VAC + 18-36 VDC)

EXPANSION CARDS

• 907920	NETWORK CARD (RJ45) 2-port
• 907921	NETWORK CARD (SFP) 2-port
• 907940	AFNOR CARD 2-outputs
• 907942	IMPULSE CARD 1-output
• 907944	CURRENT LOOP CARD 1 input + 1 output

ACCESSORIES

• 907047	Bodet GPS synchronisation antenna
• 927230.....	DHF transmitter AFNOR receiver
• 907241	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

AFNOR CARD

Nbr of connectors.....	2x outputs (independent)
Signal type	Amplitude modulation
Connector	Terminal
Max. no. of cards	4
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)

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

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.