

## 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.

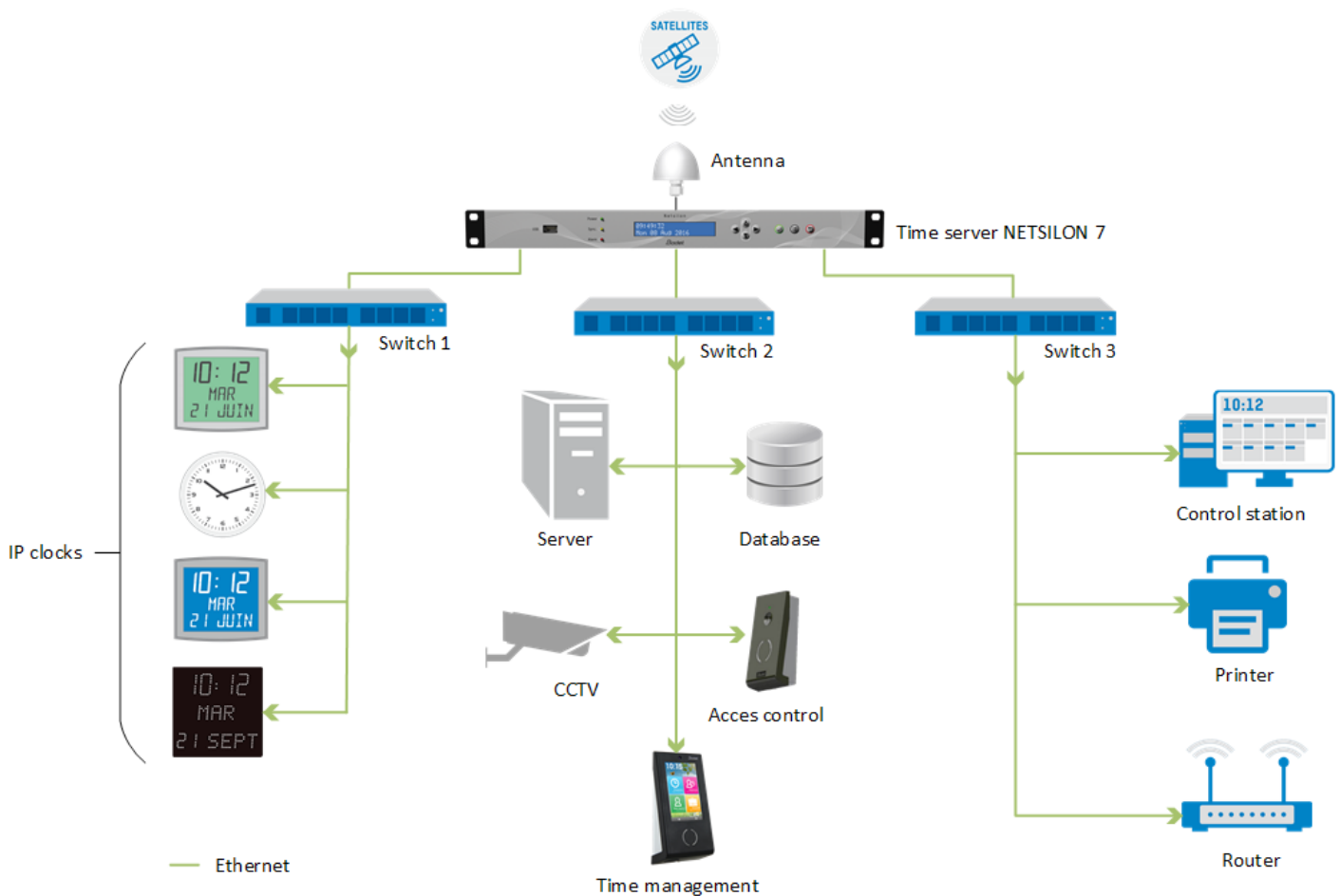


Warranty: 3 years.

## APPLICABLE STANDARDS

- RoHSv6
- DEEE
- EN 55022 : 2010
- EN 55032 : 2012
- EN 61000-3-2 : 2014
- EN 61000-3-3 : 2013
- EN 55024 : 2010
- EN 61000-6-2 : 2005
- EN 61000-6-4 : 2007 / A1 : 2011
- EN 50121-4 : 2006 / A1 2008
- EN 60950 : 2006

## EXAMPLE OF INSTALLATION



## REFERENCE SIGNALS

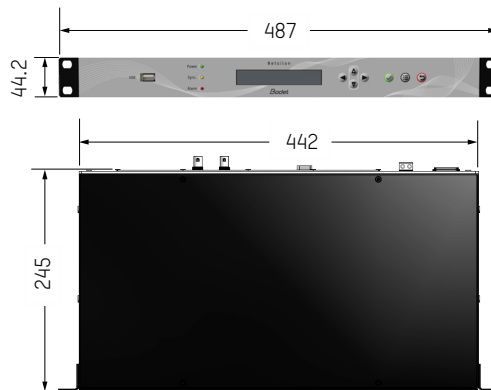
	STANDARD	OPTION
Input .....	GPS NTP	ALS162 NTP
Outputs .....	NTP	NTP AFNOR 24V // Impulses DCF

## SPECIFICATIONS

	TYPICAL VALUE OF TCXO QUARTZ
Precision (average after 24h synchronisation ( GPS).....	1x10 <sup>-9</sup>
Stability (average after 2 weeks with signal GPS).....	1x10 <sup>-7</sup> /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)
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.	<b>FANLESS</b>
Alarm Input.....	Alarm IN Dry contact Input, potential-free contact I <sub>IN</sub> ≤ 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.
SSH.....	SSH v1.3, SSH v1.5, SSH v2 (openSSH) (password and /or authentication by certificates

### MANAGEMENT

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

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

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.