

TIME SERVER: SECURESYNC

PARTNERSHIP

To deliver high precision solution, Bodet has signed a partnership with Spectracom, a world leading company in high precision timing solutions for communications equipment and networks
<http://www.spectracom.com>

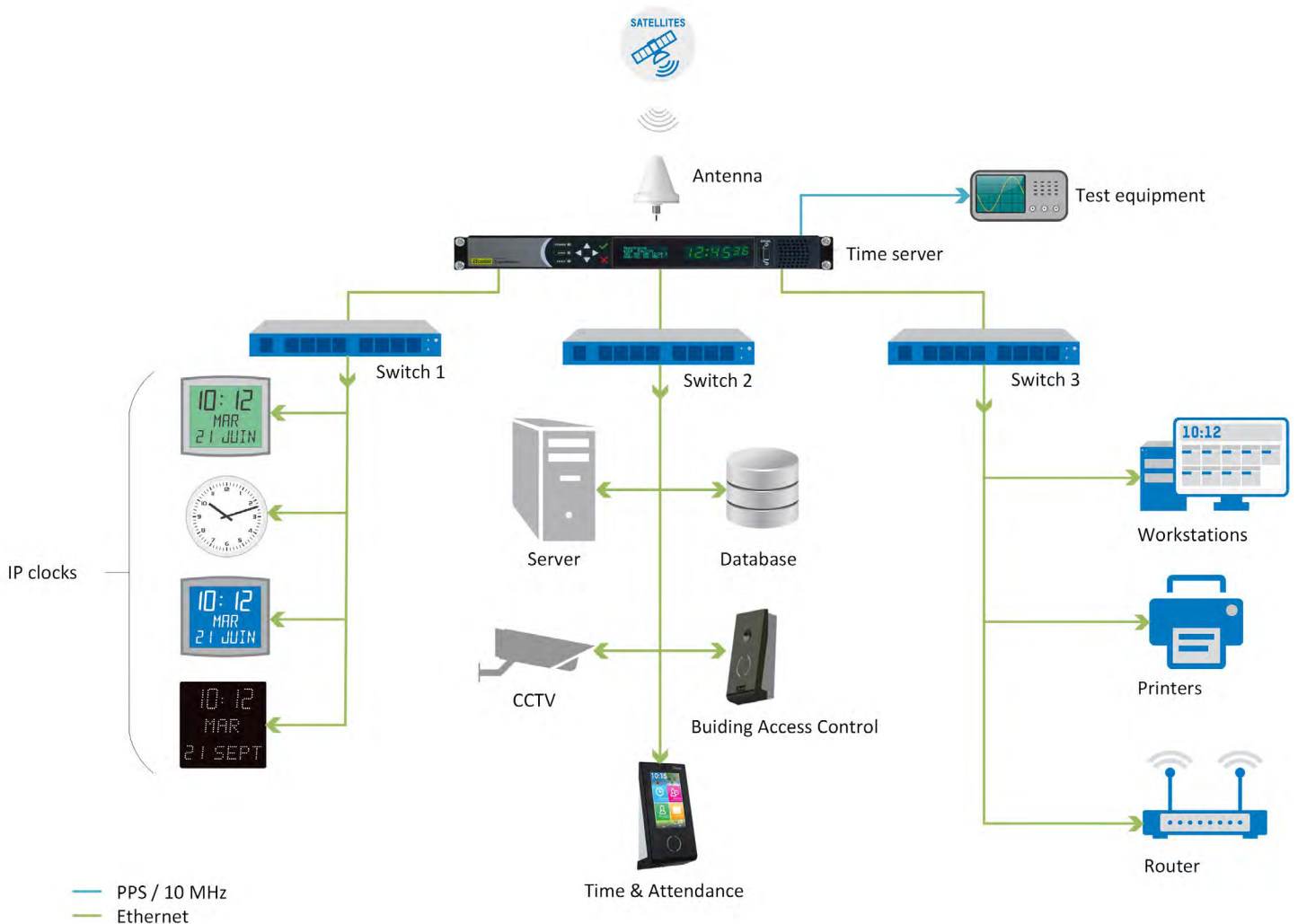


PRESENTATION

SecureSync combines precision master clock technology and secure network approach with a compact modular hardware design to bring a powerful high precision time reference system:

- Internal high precision time keeping via OCXO quartz oscillator.
- Multiple, prioritised input time references.
- Modular design supporting a wide variety of input/output signals (with up to 6 input/output modules).
- Secure network management: enable or disable protocols for encryption, authentication, authorisation and accounting.
- Alarms notifications via SNMP Traps and e-mail.

DIAGRAM



MODELS

Accuracy (average over 24 hours when GPS locked).....	2x10 ⁻¹²
Medium Term Stability (without GPS after 2 weeks of GPS lock).....	5x10 ⁻¹⁰ /day
Temperature stability (peak to peak).....	5x10 ⁻⁹
Input.....	1x GPS
Output.....	1xEthernet, 1xPPS - 1x10MHz frequency, 6 slots for option cards
PPS output: accuracy to UTC (Sigma locked to GPS).....	±25 ns
Holdover (constant temp after 2 weeks of GPS lock).....	After 4 hours: 0.5 µs After 24 hours: 10 µs
Alarm.....	Via SNMP Traps and e-mail.

MECHANICAL FEATURES

Construction.....	Shockproof metal casing for 19" - 1u rack
Operating temperature range.....	-20°C to +65°C
Protection index.....	IP41
Weight.....	2.72 kg
Dimensions.....	420 x 365 x 44 mm



ELECTRICAL FEATURES

Power supply.....	100-240 VAC, 50/60 Hz (with ventilation)
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COMMUNICATIONS

Network port.....	RJ45, 10/100-baseT
Serial Set-up Interface.....	RS232 communications on DB-9 connector
Front panel.....	LED segments displays time Lockable keypad and configurable LCD display for network set-up

NETWORK SERVICES

TIMING

NTP V2, V3, V4.....	Conforms with or exceeds RFC 1305 and 5905. Support Unicast, broadcast, Multicast, MD5 encryption, Peering, Stratum 2 and Autokey
SNTP V3, V4.....	Conforms with or exceeds RFC 1769, 2030, 4330 and 5905

MANAGEMENT

IPv4/IPv6.....	Dual stack
DHCPv4/DHCPv6 (AUTOCONF)/SLAAC.....	Automatic IP address assignment
LDAP.....	Authentication
RADIUS.....	Authentication
Syslog.....	Logging
SNMP.....	Supports v1, v2, v2c and v3 (no auth/auth/priv) with enterprise MIB

COMMUNICATIONS

HTTP/HTTPS.....	Browser-based configuration and monitoring
Telnet/SSH.....	Remote configuration
FTP Server.....	Access to file (logs, etc.)
SMTP.....	E-mail

SECURITY FEATURES

- Enable/Block Protocols
- Password Protected
- Encryption DES, 3DES, AES
- Authentication SHA1, MD5
- SSL Web-based Interface: SSL is used to secure HTTPS protocol to access configuration and status web pages.
- SSH: SSL and data compression technologies provide a secure and efficient means to control, communicate with, and transfer data to or from the time server remotely.
- SCP: securely transfers files to and from the time server over an SSH session.
- SFTP: FTP replacement operates over an encrypted SSH transport
- SNMP: remotely configure and manage over an encrypted connection.

REFERENCES

- 907082..... SecureSync - 0CX0 (100-240 VAC).
- 907084..... SecureSync - 0CX0 (100-240 VAC + 24-48 VDC).

ACCESSORIES

- 907078..... GPS antenna pack (refer to product datasheet for more information).
- 907091COP..... Copper SFP module for PTP card.
- 907091FIB..... Fiber SFP module for PTP card.

OPTIONS CARDS

Card description	Card description	Limit number of cards per SecureSync
• 907090.....	• Network card (3x Gigabit NTP outputs)	1
• 907091.....	• PTP Card (1x PTP output)	6
• 907092.....	• ASCII card (1x ASCII input + 1x ASCII output)	6
• 907093.....	• Alarm card (3x Alarm dry contact relay)	6
• 907094.....	• IRIG card (1x IRIG input + 2x IRIG outputs)	1
• 907095.....	• IRIG card (4x IRIG outputs)	6
• 907096.....	• PPS card (1x PPS input + 1x PPS output)	6
• 907097.....	• RS485 card (1x RS485 input + 1x RS485 output)	6




OPTION MODULE CARDS

1PPS		
	Input	Output
Quantity.....	1 PPS input 1 Frequency input	1 PPS output
Signal type and connector.....	TTL (BNC)	TTL or 10V (BNC), or RS485 (terminal block) 50 Ohms
Maximum number of cards.....	6	

IRIG		
	Input/Output	
Quantity.....	1 Input 2 Outputs	0 input 4 Outputs
Signal type and connector.....	Amplitude modulation (0.5 to 6V peak- to-peak into 50 Ohms) or DC level shift (unmodulated), user selectable, on BNC	
Formats*	IRIG A, B, E, G, NASA 36	
Accuracy.....	± 2-200 µs (format dependent)	
Maximum number of cards.....	6	

PRECISION TIME PROTOCOL (PTP)	
Mode.....	Ordinary clock, automatic master or slave selection, 1 or 2 steps operation
Time resolution.....	± 4 ns packet time-stamping
Accuracy.....	30 ns master to slave via crossover cable
Master capacity.....	Sync. rate above 512 sync/sec
Network.....	IPv4, IPv6, multicast
Connector.....	1 Gb SFP port, BNC for 1PPS output
PTP Profile Support.....	Default, telecom and enterprise profiles
Maximum number of cards.....	6
Standard.....	IEEE-1588 V2

 Please note that an SFP Module (copper or fiber optic interface) is required for all 1Gb PTP Option Card installations.

*contact factory for details.



ALARM CONTACT OUTPUTS	
	Alarms
Quantity.....	3 contacts
Signal type and connector....	NO/NC relays (terminal block)
Maximum number of cards....	1

ASCII TIME CODE	
	Input/Output
Quantity.....	1 Input 1 Output
Signal type and connector....	RS232 on DB9 RS485 on terminal block
Formats*	ICD-GPS-153C: 253, 5040, 5101 (SINCGARS); NMEA: GGA, RMC, ZDA; Broadcast formats
Accuracy.....	± 100-1000 µsec (for- mat dependent)
Maximum number of cards....	6

GIGABIT ETHERNET NTP	
Quantity.....	3 ports NTP
Signal type and connector....	RJ45
Management.....	Enabled or disabled (NTP server only)
Maximum number of cards....	1

PULSE PER SECOND (PPS)		
	Input	Output
Quantity.....	1	1
Signal type and connector....	BNC or Fiber Optic	BNC or RS-485 or Fiber Optic
Maximum number of cards....	6	