



# Synchronise every moment

For an accurate, reliable and secure time

## PTP Advanced option card - Netsilon



www.bodet-time.com

MADE IN FRANCE

### DESCRIPTION

- The PTP (Precision Time Protocol) option card supports PTP v2.1 and delivers the protocol via an SFP or RJ45 port.
- The PTP option card also delivers a configurable frequency signal on an SMA output.
- System configuration and settings via the embedded Netsilon web server.
- Option card compatible with Netsilon 9 and 11, up to 2 option cards maximum per time server.

### COMPLIANCE

- Directives: LVD 2014/35/EU, EMC 2014/30/EU, RED 2014/53/EU, RoHS 2015/863/EU.

### INFORMATION

- The master mode only operates with a GNSS or IRIG reception (IRIG: manual configuration of TAI/UTC offset).
- The master mode cannot operate if the GNSS reception is only based on the GLONASS constellation.

### TECHNICAL FEATURES

#### Precision Time Protocol (PTP)

PTP (on RJ45 or SFP)	
Time accuracy	4 ns.
Master mode capacity	up to 256 slaves at 128 requests per second.

#### Profiles

- IEEE 1588v2.1 Default E2E Profile.
- IEEE 1588v2.1 Default P2P Profile.
- IEEE C37.238-2017 Power Profile.
- IEC 61850 9-3 Utility Profile.
- IEEE 802.1AS TSN Profile.
- ITU-T G.8265.1 Telecom Frequency Profile.
- ITU-T G.8275.1 Telecom Phase / Time Profile.
- ITU-T G.8275.2 Telecom Phase / Time Profile.

#### Modes

- Multicast / Unicast Layer 2 (IEEE 802.3).
- Multicast / Unicast Layer 3 (UDP IPv4/IPv6).
- E2E /P2P Delay Mechanisms.
- Master and Slave capability.
- 1-Step, 2-Step for both Master and Slave operations.

#### SyncE

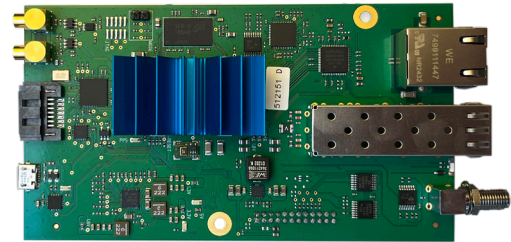
##### Synchronous Ethernet (only on RJ45)

- Master and Slave capability (in addition to PTP).
- Ethernet Synchronisation Messaging Channel (ESMC).
- Meets requirements of ITU-T G.8261, ITU-T G.8262 (SyncE) EEC Options 1 & 2.

#### NTPv4

##### Compliant with RFC 4330 and 5905.

- Supports Unicast, Multicast.
- High processing speed.
- Maximum number of requests per second : + 100,000.
- Management of leap seconds.



#### Main data

##### Ethernet Interface Combo Port:

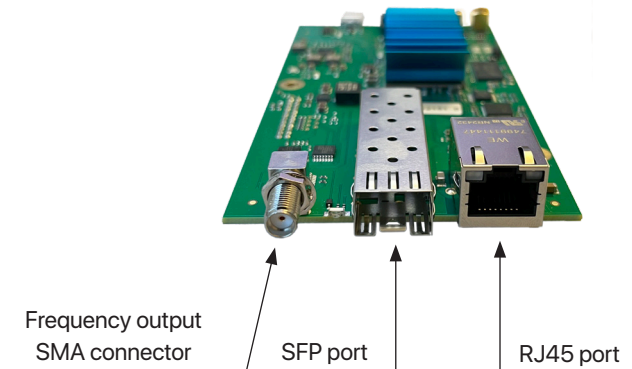
- 1 x 10/100/1000 Base - T RJ45.
- 1 x GBit SFP - slot (SFP slot compatible with SX/LX modules).

##### Network protocols

- IPv4, IPv6.
- DHCP.
- DSCP.
- VLAN tagging.

##### SMA output connector (50 Ohms)

- Configurable frequency output signal:
  - 1 PPS, 5 MHz, 10 MHz, 20 MHz, 25 MHz and 2048 KHz.
  - 10 ms, 20 ms, 25 ms, 10s, 20s, 30s, 60s, 10 min, 60 min.
- Signal waveform and levels: TTL, (5Vp-p), 50 Ohm, SMA.



### REFERENCES

907 923..... PTP Advanced option card (Netsilon)