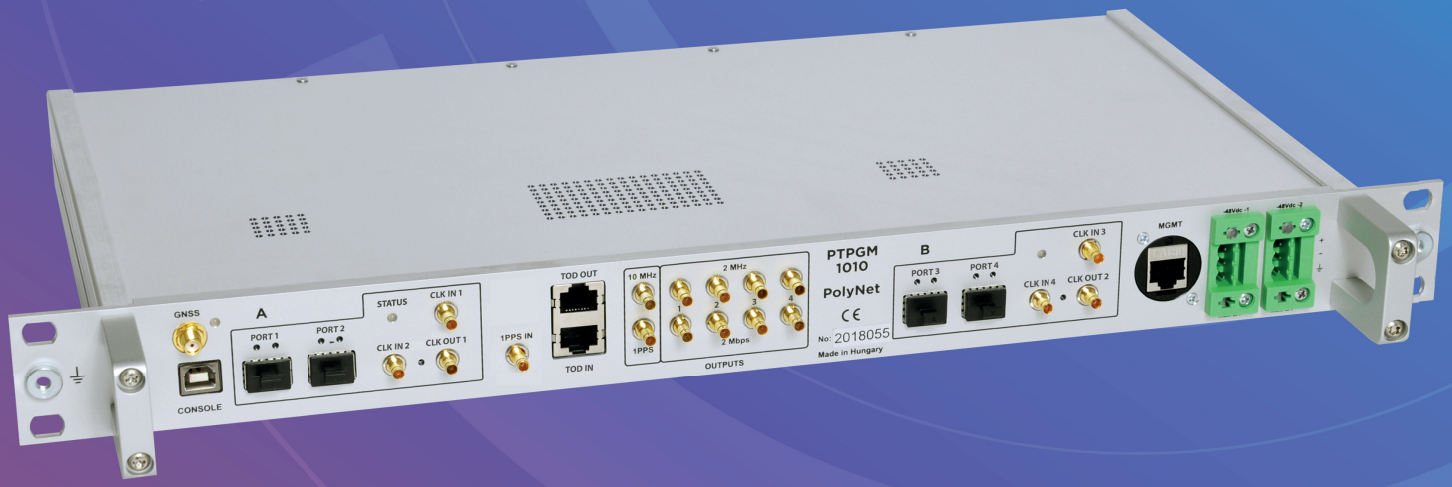
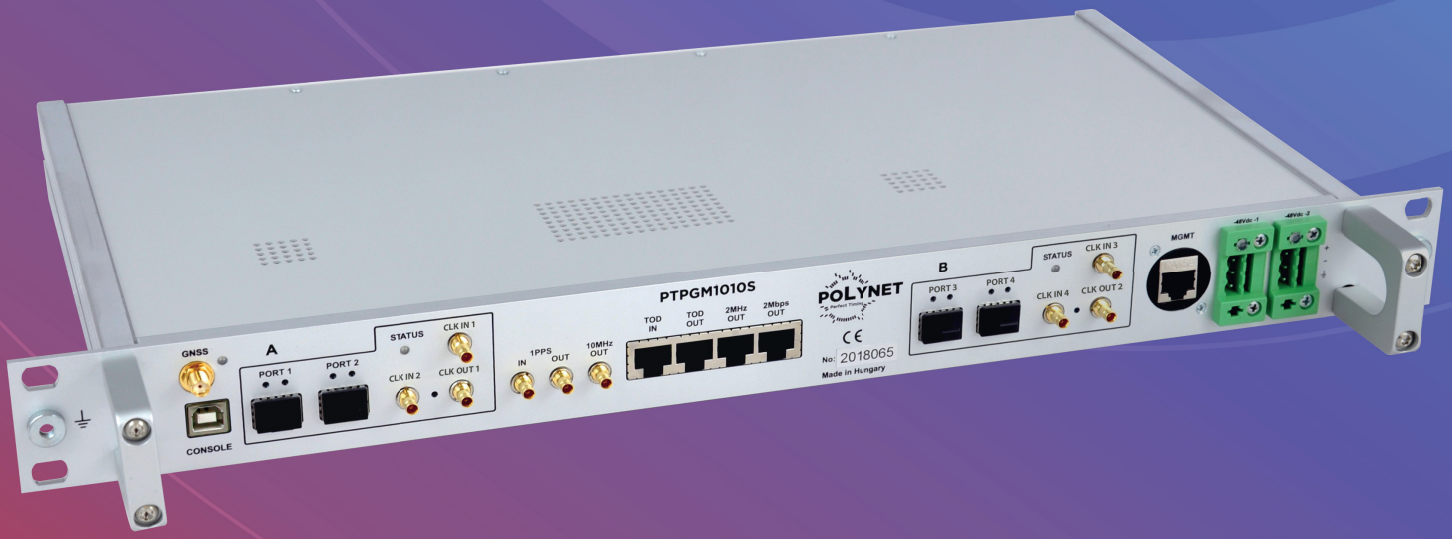
Network **Synchronization** Solutions

PolyNet PTPGM1010 IEEE 1588V2

Grandmaster Clock





Precision Time Protocol Grandmaster Clock, fully compliant with IEEE1588-2008 Standard

POLYNET
Perfect Timing

Network **Synchronization** Solutions

PolyNet PTPGM1010 Technical Data

Network Protocols

- IEEE1588-2008 Precision Time Protocol (V2)
- ESMC for SyncE quality messaging
- IPv4, IPv6, Native Ethernet,
- VLAN support (802.1Q VLAN trunking)
- SNMP V2c support

Server Precision

- PRTC-A, PRTC-B (one-step, hardware timestamps)

PTP capabilities

Supported profiles:

- Default profile
- Telecom Frequency: ITU-T G.8265.1
- Telecom Time: ITU-T G.8275.1, ITU-T G.8275.2
  61850-9-3-2016 and C37238-2017 power profiles are supported
- Unicast, Multicast and Hybrid modes are supported
- Hardware Timestamp Engine
- PTP clock quality messaging
  (Priorities, ClockClasses, ClockAccuracy, Variance)
- Delay request-response and peer delay mechanisms
  (E2E, P2P)
- Support for transparent and boundary clocks
- Unrestricted 1024 VLAN support on every PTP interface

PTP parameters

- Sync rate: up to 256 Hz
- Number of slaves: up to 2 x 1,024 clients at full rate (256 sync, 256 delay request reply and 256 announce packets per second)

Synchronous Ethernet parameters

- SyncE capabilities on every SFP port ESMC levels conformin to all stratum and ITU quality levels
- Compliant to the relevant sections of ITU-TG.8261/G.8262/G.8264

NTP Server capabilities

- Hardware Time-stamp Stratum 1 NTP engine NTPv1 ... NTPv4 protocol support
- MD5 authentication support Unrestricted 1024 VLAN support on every NTP interface

Ethernet connection

- Server ports: 4 x SFP 1G optical and/or electrical
- Management port: 10/100/1000 Mbit/s RJ45 Ethernet

Inputs

- Multiband GNSS receiver
- GNSS antenna: SMA connector – Support for 2 Bands GPS, Galileo, Glonass, QZSS,
- Beidu satellite systems
- SBAS supported
- 1 x 1PPS: 1.0/2.3 connector
- 2 x Clk In (2 or 10 MHz) 1.0/2.3 connector
- 2 x Clk In (2 Mbit/s) 1.0/2.3 connector
- TOD input: RJ45 connector
- External Caesium clock supported

Outputs

- 1 x 1PPS 1.0/2.3 connector
- 1 x TOD RJ45 connector
- 1 x 10MHz 1.0/2.3 connector
- 4 x 2MHz and 4 x E1 (2Mbps) 1.0/2.3 coax or RJ45 connector
- 2 x CLK Out port 1.0/2.3 connector (configurable: 2.048MHz, 5MHz, 10MHz)
- Option: IRIG-B

Management

- CLI – through serial or SSH connection
- ClockView NMS software
- User levels and privileges
- Local log fles and error indications

Weight, dimensions and power

- 3.2 kg
- 19 inch 1U rack size (428 x 225 x 43.5 mm)
- -48VDC redundant (ETSI EN 300 132-2)
- Power consumption: 35 W

Environmental ranges

- Operating temperature range: -5...+45 C
- Relative humidity: 5%...90%
- ETSI EN 300 019-1-3 Class 3.1E

Oscillator selection

- Rubidium or OCXO
- Holdover performance
- Rubidium oscillator: 200ns/day
- OCXO oscillator: 4µs/day

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