

## ■ PolyNet PTPGM1009 IEEE 1588V2 Grandmaster Clock



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

## 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  
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 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 conforming to all stratum and ITU quality levels  
Compliant to the relevant sections of ITU-T G.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: 1 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, Beidou satellite systems  
SBAS supported  
1 x 1PPS: 1.0/2.3 connector  
1 x Clk In (2 or 10 MHz) 1.0/2.3 connector  
TOD input: RJ45 connector  
External Caesium clock supported

## Outputs

2 x 1PPS 1.0/2.3 connector  
1 x TOD RJ45 connector  
2 x 10MHz 1.0/2.3 connector  
8 x 2MHz and 8 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 files 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)  
Optional: 230 VAC version  
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