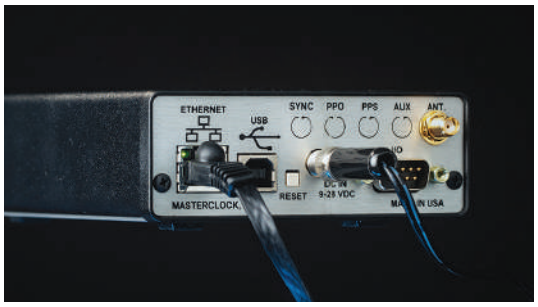
GMR1000

Multi-Functional Master Clocks



Features

- Standard Inputs/Reference Sources
- NTP client via RJ45 10/100 Mb Ethernet
- NMEA 0183 via RS232/422, Serial, or IP
- NENA format 0, 1, 8 via RS232/422
- Internal high-stability TCXO oscillator ± 3 sec. /year
- Configuration via USB or Ethernet

Specifications

Input Options

- GPS Receiver – 12 channels
- GNSS Receiver - 72-channels - GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1 SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN Galileo E1B/C
- Time codes: IRIG-B0 (DCLS), IRIG-B1 (AM), IRIG-A0 (DCLS), IRIG-A1 (AM),IRIG-E0 (DCLS), IRIG-E1 (AM), SMPTE 12M, 309M, 24/25/30 fps and 29.97 drop frame
- Internal high-stability OCXO oscillator ± 0.25 sec/year
- Synchronizing signals: PPS, PPM, PPH
- IEEE 1588 Precision Time Protocol

Standard Outputs

- NTP server with 10/100 Mb Ethernet
- NMEA 0183 via RS232/422 or USB
- NENA format 0, 1, 8 via RS232/422 or USB

Output Options

- Time codes: HAVE QUICK II non-NATO, IRIG-H, IRIG-B0 (DCLS), IRIG-B1 (AM), IRIG-A0 (DCLS), IRIG-A1 (AM), IRIG-E0 (DCLS), IRIG-E1 (AM), SMPTE 12M, 309M, 24/25/30 fps and 29.97 drop frame
- 5V at 20mA Pulse Per Second (PPS)
- Programmable Pulse Output (PPO)
- 10MHz sine wave
- IEEE 1588v2 Precision Time Protocol

Additional Features

- Internal TXCO maintains time during loss of external sync within ± 3 seconds/year
- WinDiscovery configuration software included
- Fully configurable offsets for time zone and DST
- Programmable relay closure - with NO/NC dry contact relay
- Relay alerts loss of sync by default
- Secure configuration and monitoring with SSH SHA2 AES256 encryption
- SNMPv3 with custom MIB
- IPv4/IPv6 compatible

Compliance

- FCC, ROHS, CE Marked, ANSI

Operating Parameters

- Temperature: 0 to 60°C
- Humidity: Up to 90% (non-condensing)

Power

- DC input (9-28 VDC)
- Includes external 24VDC wall mount power supply with locking DC plug
- Power consumption: < 7.5W steady state

Physical

- Size: 6.45 x 4.17 x 1.52 in (16.38 x 10.59 x 3.86 cm)
- Weight: 16 oz (453.6 g)

US and CANADA: (800) 940-2248 INTERNATIONAL: +1 (636) 724-3666 email: sales@masterclock.com

Ordering Information

Part #	Description
GMR1000	Base configuration
Options	
GMR-10 MHZ	10 MHZ Output, SMA Cntr
GMR-DIN	DIN Rail Bracket
GMR-DS6	6-digit front panel display
GMR-GNSS	GNSS Receiver, SMA Connector
GMR-GPS	GPS Receiver, SMA Connector
GMR-HSO-2	OCXO High Stability Oscillator
GMR-PPO	Programmable Pulse Output, SMA Cntr
GMR-PPS-OUT	PPS Output, SMA Cntr.
GMR-PTP	PTP IEEE 1588 Server / Client, 10/100 MB, RJ45
GMR-SYNC-IN	PPS, PPM, PPH, Input, SMA Cntr
GMR-TCG	Time Code Generator (HAVE QUICK II non-NATO, IRIG B, IRIG A, IRIG E, SMPTE 12M, 309M, 24/25/30 ND fps - 29.97 Drop Frame). DB9 connector (Includes DB9FTBA DB9 Female to Terminal Block Breakout Adapter)
GMR-TCR	Time Code Reader (IRIG B, IRIG A, IRIG E, SMPTE 12M, 309M, 24/25/30 ND fps - 29.97 Drop Frame). DB9 connector (Includes DB9FTBA DB9 Female to Terminal Block Breakout Adapter)
GPS Antennas	
GPSANT-Basic	
GPS-KIT-Standard	
GNSS-KIT-High-Gain	
PKG-Standard	*other cable lengths available
Rack Mount avail with RM4	
Power Types	DC
Plug Types Available	North American, Euro Plug, U.K. Style, and Australia/New Zealand (Locking Plug)

GMR5000

Multi-Functional Master Clocks

The GMR5000 is a 1U rack mount time and frequency generator/server that can reference a variety of timing sources and provide a range of outputs to meet customer needs. The base model includes both NTP client and server functionality compatible with IPv4/IPv6 networks and offering Secure-Socket-Host (SSH) encryption for secure communications. Properly configured and using standard NTP polling rates, the device can support and synchronize thousands of simultaneous NTP clients.

Features

- 13-Digit display (Date/Time or Day of year/Time)
- Programmable relay closure - NO/NC dry contact relay
- Relay alerts loss of sync by default
- WinDiscovery configuration software included
- Fully configurable offsets for time zone and DST
- Secure configuration and monitoring with SSH SHA2 AES256 encryption
- SNMPv3 with custom MIB
- IPv4/IPv6 compatible

Specifications

Standard Inputs

- NTP client via RJ45 10/100 Mb Ethernet (dual-port)
- NMEA 0183 via RS232/422
- NENA format 0,1,8 via RS232/422
- Internal high-stability TCXO oscillator ± 3 sec./year
- Configuration via USB or Ethernet

Input Options

- GPS and Multi-GNSS receiver options
- Time codes: IRIG-B0 (DCLS), IRIG-B1 (AM)
  (See TCR Options Data Sheet for additional IRIG options)
- SMPTE 12M, 309M, 24/25/30 fps and 29.97 drop frame
- High-Stability Oscillator options:
  Internal high-stability OCXO oscillator ± 0.25 sec/year
  Rubidium Oscilator ±1 mS/year
- Synchronizing pulses: PPS (second), PPM (minute), PPH (hour)
- 10 MHZ Input (CMOS or Sinusoidal)
- Optical Fiber LAN (1 or both ports)
- IEEE 1588v2 Precision Time Protocol

Standard Outputs

- NTP server via RJ45 10/100 Mb Ethernet (dual-port)
- NMEA 0183 via RS232/422 serial, or via IP
- NENA format 0, 1, 8 via RS232/422 serial, or via IP
- RS-232/422
- Kinemetrics/Truetime serial protocol RS232/RS422
- 5V at 100mA Pulse Per Second (1PPS)

Output Options

- Time codes: IRIG-B0 (DCLS), IRIG-B1 (AM), IRIG-A0 (DCLS), IRIG-A1 (AM), IRIG-E0 (DCLS), IRIG-E1 (AM), IRIG-H0 (DCLS), SMPTE 12M, 309M, 24/25/30 fps and 29.97 drop frame
- 5V at 100mA Programmable Pulse Output (PPO)
- Optical Fiber LAN (1 or both ports)
- 10 MHZ Output (Sinusoidal)
  (1 MHz & 5 MHz requires Rb (HSO-3) option)
- IEEE 1588v2 Precision Time Protocol

Compliance

- FCC, ROHS, CE Marked, ANSI

Operating Parameters

- Temperature: 0 to 60°C
- Humidity: Up to 90% (non-condensing)
- MTBF: 625,979 hours (Calculated using Fixed/Ground Mil HDBK 217F assumptions)

Power and Dimensions

- Universal IEC C14 AC input connector
- AC Input 100-240 VAC, 50/60 Hz
- POWER <15W (<20 with Rb option)
- Size: 16.90w x 1.750h x 5.174d in (42.92w x 4.445h x 13.14d cm)
- Weight: 2.6 lbs. (1.2 kg)

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Ordering Information

Part #	Description
GMR5000	Base configuration
Available Options	
GMR-10 MHZ-IN	10 MHZ Input, SMA Cntr
GMR-10 MHZ-OUT	10 MHZ Output, SMA Cntr
GMR-FO-1	1 Fiber Optic (SC Single Mode) &1 Ethernet Output (RJ45)
GMR-FO-2	2 Fiber Optic Outputs (SC Single Mode) & No Ethernet
GMR-GNSS	GNSS Receiver, SMA Connector
GMR-GPS	GPS Receiver, SMA Connector
GMR-HSO-2	OCXO High Stability Oscillator
GMR-HSO-3	Rubidium Ultra High Stability Oscillator
GMR-PPO	Programmable Pulse Output, SMA Cntr
GMR-PTP	PTP IEEE 1588 Server / Client, 10/100 MB, RJ45
GMR-SYNC-IN	PPS, PPM, PPH, Input, SMA Cntr
GMR-TCG	Time Code Generator (IRIG B, IRIG A, IRIG E, SMPTE 12M, 309M, 24/25/30 ND fps - 29.97 Drop Frame). DB9 connector (Includes DB9FTBA DB9 Female to Terminal Block Breakout Adapter)
GMR-TCR	Time Code Reader (IRIG B, IRIG A, IRIG E, SMPTE 12M, 309M, 24/25/30 ND fps - 29.97 Drop Frame). DB9 connector (Includes DB9FTBA DB9 Female to Terminal Block Breakout Adapter)
GPS Antennas	
GPSANT-Basic	
GPS-KIT-Standard	
GNSS-KIT-High-Gain	
PKG-Standard	*other cable lengths available
Rack Mount avail with RM4	
Power Types	AC
AC Cord Types Available	IEC C13 to North American (NEMA 5-15, Type B), Euro Plug (CEE 7/7, Type F), U.K. Style (Type D), or Australia/New Zealand (Type I)