



GMR5000

Multi-Functional Master Clock

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. Using standard NTP polling rates, the device can support and synchronize thousands of simultaneous NTP clients. Base model includes both NTP client and server functionality compatible with IPv4/IPv6 networks and SSH encryption for secure communications.



Standard 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
- Fully configurable offsets for time zone and DST
- Secure configuration and monitoring with SSH SHA2 AES256 encryption
- SNMPv3 with custom MIB
- IPv4/IPv6 compatible
- WinDiscovery configuration software included

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 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)
(See TCR Options Data Sheet for additional IRIG options)
- SMPTE 12M, 309M, 24/25/30 fps, 29.97 drop frame
- High-Stability Oscillator options:
 - a. Internal high-stability OCXO oscillator ± 0.25 sec/year
 - b. Rubidium Oscillator ± 1 mS/year
- Synchronizing pulses: PPS, PPM, PPH
- 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
- Kinematics/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), HAVE QUICK II NON-NATO, 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)

5-YEAR LIMITED PARTS & LABOR WARRANTY **MADE IN THE USA**

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AVAILABLE OPTIONS

Part #	Description
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). BNC/3Pin Terminal Block Connector
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 BNC/3Pin Terminal Block Connector

GPS / GNSS ANTENNAS (KITS)

GPSANT-Basic	28dB Magnetic/Adhesive Mount GPS Antenna with 16'/5m antenna cable and SMA male connector
GPS-KIT-Standard	28dB GPS antenna, with SMA female pigtail connector, threaded pipe/mast mount kit
GNSS-KIT-High Gain	38dB High Gain GNSS antenna, N Female connector with N male to SMA female adapter, metal L mounting bracket, Optional ground plate.
GNSS-KIT-Anti Jam	38dB Anti-Jam High Gain GNSS antenna, TNC Female connector with TNC male to SMA female adapter, metal L mounting bracket
PKG-Standard	Standard Antenna Cable: 50'/15m antenna cable with SMA male connectors. Additional cable length options available
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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)

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