

# Masterclock®

Multi-Functional Master Clocks

## GMR5000

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

#### Standard Inputs

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

#### Input Options

- > GPS or GPS/GLONASS receiver
- > Time codes: IRIG-B0 (DCLS), IRIG-B1 (AM), SMPTE 12M, 309M, 24/25/30 fps and 29.97 drop frame
- > High-Stability Oscillator Options:
  - Internal high-stability OCXO oscillator  $\pm 0.25$  sec/year
  - Rubidium Oscillator  $\pm 1$  mS/year
- > Synchronizing pulses: PPS (second), PPM (minute), PPH (hour)
- > 10 MHz Input (CMOS or Sinusoidal)
- > VITC input
- > Optical Fiber LAN
- > IEEE 1588 Precision Time Protocol

#### Power, Physical Dimensions, Operating Parameters

- > Universal AC input
- > Size: 18.9w x 1.750h x 5.174d in (48w x 4.445h x 13.14d cm)
- > Weight: 2.6 lb (1.2 kg)
- > Temperature: 0 to 60°C
- > Humidity: Up to 90% (non-condensing)
- > Available with 1RU rack mount

#### Standard Outputs

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

#### Output Options

- > Time codes: IRIG-B0 (DCLS), IRIG-B1 (AM), SMPTE 12M, 309M, 24/25/30 fps NDF and 29.97 drop frame
- > 5V at 100mA Programmable Pulse Output (PPO)
- > Optical Fiber LAN
- > 10 MHz Output (Sinusoidal)
- > IEEE 1588 Precision Time Protocol

#### Other Features

- > 13-Digit display (Date/Time or Day of year/Time)
- > Programmable relay closure - one event per day with NO/NC dry contact relay
- > Relay alerts loss of sync by default
- > WinDiscovery configuration software included
- > Fully configurable offsets for time zone and DST
- > Telnet/SSH communication
- > IPv4/IPv6 compatible
- > SNMP with custom MIB

#### Compliance

- > FCC, CE Marked, ROHS, ANSI

**MASTERCLOCK, INC.**

**5-YEAR LIMITED PARTS & LABOR WARRANTY**

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