

GPS and GNSS Options

The GPS and GNSS receiver options for the GMR Series of master clocks provide precision time reference based on satellite broadcasts, achieving Stratum 1 synchronization. PPS on-time output is locked to the top of each second. Three antenna options are available for both standard and mobile applications.

FEATURES

- Supports GPS, GLONASS, Beidou, and Galileo
- Stratum 1 synchronization via satellite constellations
- Receive time signals from up to 24 satellites
- Accurate reference to within ± 15 ns of UTC
- PPS on-time output is locked to the top of each second
- NMEA-0183 messages on serial port output
- Provides most accurate external time source for GMR devices
- Compact antenna designs for portable applications
- Optional magnetic-mount or standard-mount antennas
- Antenna cable lengths up to 500 ft (152 m) available
- In-line surge arrestors and in-line GNSS amplifiers available

RECEIVER OPTIONS

| | GMR-GPS Option | GMR-GNSS Option |
|---------------------------------|--|--|
| Satellites | 12-channel, up to 12 satellites simultaneously, parallel | 32-channel, up to 24 satellites simultaneously, parallel |
| Constellations supported | GPS only | GPS, GLONASS, Beidou, Galileo |
| Frequency | L1, 1575 MHz | L1, 1575 MHz and 1598-1606 MHz |
| Antenna Connector | SMA female | SMA female |
| RF Bias to Antenna | 5 V DC, center pin | 5 V DC, center pin |
| PPS | 50 ms, TTL level, on timing leading edge | 50 ms, TTL level, on-time leading edge |
| Accuracy | ± 60 ns of UTC | ± 15 ns of UTC |

ANTENNA OPTIONS

| | Basic | Standard | High Gain |
|-----------------------|-------------------------------------|--|--|
| Type | Active, External | Active, External | Active, External |
| Gain | 28 \pm 2 dB | 28 \pm 2 dB | 40 \pm 4 dB |
| Mount | Magnet/Adhesive | Outdoor, threaded pipe/mast. M24 x 1.5 internal thread - Mounting kit provided | Metal mounting kit provided, per user specifications |
| Operating Temp | -40° to 85°C (up to 95% humidity) | -40° to 85°C (up to 95% humidity) | -40° to 85°C (up to 95% humidity) |
| Voltage | 2.2-5 V | 3-5 V | 3.3-9 V |
| Polarization | Right hand circular | Right hand circular | Right hand circular |
| Impedance | 50 Ω | 50 Ω | 50 Ω |
| Connector | SMA Female | SMA Female | SMA Female |
| Antenna Cable | Belden 8219 or equivalent | Belden 8219 or equivalent | Belden 8219 or equivalent |
| Weight | 0.9 oz (26 g) | 6.7 oz (190 g) | 9.6 oz (272 g) |
| Dimensions | 1.5 x 1.9 x .59 in (39 x 49 x 15mm) | 3.7dia x 5.5h in (9.3dia x 14h cm) | 3.2dia x 5.0h in (8.1dia x 12.6h cm) |



High-Gain Antenna



Standard Antenna



Basic antenna

