

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

