

The Calnex Rb/GPS Reference Source provides a stable 10MHz, 1pps and Time of Day (ToD) reference that can be used with any suitable lab equipment.



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# Rb/GPS Reference Source



## SPECIFICATIONS

### Freerun (no GPS)

#### Output Frequency Accuracy/Stability:

- 12 mins warm-up time @ 25°C: 5E-10 for frequency stability

### GPS Locked (needs 24 hrs to be GPS locked)

#### Output Frequency Accuracy/Stability:

- 12 mins warm-up time @ 25°C: 5E-10 for frequency stability
- 24 hrs warm-up time @ 25°C and GPS locked: 1E-12, typical (requires a stable temperature of  $\pm 1^\circ\text{C}$ )

#### Output time accuracy/stability:

- 24 hrs warm-up time @ 25°C and GPS locked: <50ns (requires a stable temperature of  $\pm 1^\circ\text{C}$ )

### Holdover (lost GPS)

#### Output Frequency Accuracy/Stability:

- 12 mins warm-up time @ 25°C: 5E-10 for frequency stability
- 24 hrs warm-up time @ 25°C and Holdover (lost GPS): <3E-11/month (requires a stable temperature of  $\pm 2^\circ\text{C}$ )

#### Output Time Accuracy/Stability:

- 24 hrs warm-up time @ 25°C and Holdover (lost GPS): <2 $\mu\text{s}$ /48hr or <1 $\mu\text{s}$ /24hr (requires a stable temperature of  $\pm 2^\circ\text{C}$ )

**ToD Message:** NMEA format \$GPRMC [ \$GPRMC,085331.00,A,5558.8958,N,00337.7333,W,1.140312,E,43 ]

**Indicators/LEDs:** Power On, Rb Locked, Track/Sync

**Output Ports:** 10MHz Reference Output (BNC), 1pps Reference Output (BNC), ToD/RS-232 (DB9)

**Power Supply:** 100-240Vac (nominal) at 50/60Hz (via external AC-DC adaptor)

**Vibration:** Unit must be used in a mechanically stable environment free from shock and vibration

**Size:** 270 x 60 x 200mm (w x h x d)

**Weight:** 2kg

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All specifications subject to change without notice.

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