

GlobalSync

Complete Kit for a GPS Timing Receiver Reference

KEY FEATURES

- Ideal GPS Timing Reference for Network Synchronization
- Provides Accurate Time for Time Stamping
- Includes Power Supply and the Necessary Cables and Connectors
- Enhanced Holdover - Less Than 1 Microsecond Over 2 Hours

APPLICATIONS

- Stratum 1 Accuracy (<math><1E-12</math>)
- Cellular Base Station (CDMA and TDMA)
- Fixed Wireless (LMDS, MMDS, and Wireless Local Loop)
- Asset location, E911

INTRODUCTION

Symmetricom's GlobalSync™ is a portable GPS timing reference. In combination with its accessory kit, GlobalSync provides everything necessary to add a GPS reference to your existing network equipment.

GLOBALSYNC TECHNOLOGY

Using Symmetricom's proprietary SnapShot™ technology, a network of GlobalSync units is able to lock system time to within 20 nsec (RMS) of each other. After a quick initial survey, only one GPS satellite need be visible in order to maintain system accuracy. This is especially important in a crowded urban environment that lacks antenna locations with an unobstructed view of the sky. Another helpful and advanced feature is the T-RAIM (time-receiver autonomous integrity monitoring) algorithm we have incorporated to monitor the health of individual GPS satellites. This algorithm assures that timing and position information from a malfunctioning satellite is not used, thus preventing it from negatively affecting your system's accuracy.

Contact Symmetricom to discuss your specific requirements. Discover how our GlobalSync, or another of the many precision timing and frequency products designed and manufactured by Symmetricom, can enhance your applications.



FIG.1 GlobalSync

GlobalSync Specifications

ELECTRICAL SPECIFICATIONS

- Inputs: L1 GPS (1575.42 MHz) C/A code (from GPS antenna)
90 - 264 VAC @1.25 Amp Max
- Outputs: 1 PPS TTL @ 50 ohms
10 MHz Sine @ 50 ohms (coherent with 1 PPS) 13 dBm ±2
+5V@80 ma for antenna Amp.
RS-232 for GPS time/status alarms
- Timing Accuracy: ≤20 nsec RMS between units over any 20 minute interval (under limited temp. variations); ±1 sec programmable offset from GPS in 17nsec steps
- Phase Noise:
 - 10 Hz <-120 dBc/Hz
 - 100 Hz <-130 dBc/Hz
 - 1 KHz <-145 dBc/Hz
 - 10 KHz <-150 dBc/Hz
 - 100 KHz <-150 dBc/Hz
- Holdover¹: <1 micro sec over 2 hours typ.
- Spurious:
 - Harmonic: <-30 dBc
 - Non-Harmonic: <-80 dBc
- Time to first position fix: <20 minutes, 90% of the time
- Timestamp message: Calendar date and time to 1 second using Symmetricom Serial Binary Interface Protocol

ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: 0°C to +55°C
- Storage Temperature: -40°C to +85°C
- Operating Altitude²: Operating: -200 ft to 40,000 ft. (12,200 meters)
- Operating Humidity: ≤90%, Non-condensing

PHYSICAL SPECIFICATIONS

- Size: 12.0" L X 10.0" W X 2.0" H (304.8mm L X 254mm W X 50.8mm H)
- Weight: 3.65 lbs (1.65 kg)
- Fault Indicators: Software controlled/Power On LED (GRN)
- Antenna Input: Type F
- Outputs: 1 PPS and 10 MHz: BNC connectors, RS-232: DB-9M (DTE)
- Warranty: 1 year (Consult factory for extended warranty)

ACCESSORIES

- Kit includes [order number 107054-001]: 10' service cable D89 F to F; Two 10' 50 Ohm cables BNC/BNC; GPS antenna (26dB) w/Stand; 75' antenna cable; 25' antenna cable

¹Holdover refers to operation without GPS signals after an initial period of 8 hours of proper GPS reception

²Maximum operating temperature derated above 5,000 feet (1,525 meters)

NOTE: Values are typical



FIG.2 GlobalSync Connectors



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