



TimeGPS

Simple, Low Cost GPS Solution for Synchronization and Retiming

KEY FEATURES

- Small Form Factor, Suitable for Mounting on a Rack or in a Cabinet
- Two Retiming Channels Available (E1 or DS1)
- Quartz and Rubidium Options Available
- Several Output Types Available (Three Outputs Per System)

INTRODUCTION

Symmetricom's TimeGPS is a GPS controlled frequency source. The system receives GPS satellite signals to control an onboard oscillator and provide either three output signals, or retiming for two channels (E1 or T1).

The TimeGPS features a monitoring system indicating the system status via LEDs, alarm relays and RS 232 interface. The unit provides two RS 232 interfaces so that remote* and local management activities can be performed independently.

A separate frequency output port without squelch function at the front panel allows frequency verification testing. It can also be configured as an output for clock distribution.

The TimeGPS provides a number of configuration features allowing the user to integrate the equipment into their specific application environment. The user can set specific events (e.g. certain failures, GPS timeouts, etc...) to minor or major alarm levels.

Additionally, the user can squelch the outputs if such an event occurs. The unit comes with Windows-based craft software for configuration and installation.

APPLICATIONS

The primary application of the TimeGPS is as a retiming device for telecommunication networks. It is an ideal solution for remote switches, base stations or node Bs.

INSTALLATION

The TimeGPS's primary strength lies in its flexibility and form factor. It is a highly compact simple device that is designed to mount inside a cabinet. And yet, it can be easily converted into a rack-mountable system that can be used for remote offices needing independent GPS signals, or retiming.



TimeGPS

* Not supported by Symmetricom TimeScan or TimePictra management system

TimeGPS Specifications

GENERAL

- Power supply
 - Voltage: 20 ... 70 VDC
 - Current consumption: maximum 0.5 A
 - Power consumption: typically 4.5 W
- Inputs: Antenna signal with 5 VDC feeding; N-Type connector, female
- Outputs: 3 x signal 2048 kHz (G.703/13); 2 x Sub D9; 120 Ω balanced / 75 Ω unbalanced
2 x alarm relay outputs; Sub D15; change over contacts, floating (1A, 60V-/50V-, 30W)
- Frequency accuracy: Locked to GPS: 1×10^{-11} (24 h) @25°C
- Timing accuracy: 200 ns (MTIE 10⁴ s) with GPS available
- 12-channel GPS C/A-Code-Receiver, tracks up to 12 satellites continuously
- Local oscillator: TCXO
- Communication interface: 2 x RS232 interface, 9600 Baud, ASCII protocol, 2 x Sub D9

PHYSICAL

- Size WxHxD: Maximum 75 x 180 x 160 mm (front panel 75 x 195 mm)
- Weight: Maximum 1.5 kg

REGULATIONS & STANDARDS

- ES 201 468, EN 300 132-2, EN 300 386, EN 60950

ENVIRONMENTAL CONDITIONS

- Stationary use: 0°C ... 45°C (EN 300 019-1-3 class 3.2)
- Transportation: -25°C ... 70°C (EN 300 019-1-2 class 2.2)
- Storage: -40°C ... 85°C (EN 300 019-1-1 class 1.2)
- Humidity: 95 % non-condensing

OPTIONS

- 1544 kHz, 120 Ω balanced, 75 Ω unbalanced
- E1, 2048 kbps (G.703/9) (only available with corresponding frequency 2048 kHz)
- DS1, 1544 kbps (G.703/5) (only available with corresponding frequency 1544 kHz)
- 5 MHz, sine wave, 1 Vrms/50 Ω
- 10 MHz, sine wave, 1 Vrms/50 Ω
- 1PPS; square wave, pulse width typically 10ms; TTL, minimum 2.4 into 50 Ω
- 19" 2U rack mount panel
- OCXO
- Rubidium (frequency accuracy 1×10^{-12} , timing accuracy 100 ns MTIE 10⁴ s)
- Re-Timing (2048/1544 kHz, dual channel E1/DS1 re-timing)

ACCESSORIES

- Antenna set: including active 50 dB GPS antenna, mounting kit and antenna cable with connector
- Lightning protection
- Standard pre-cut antenna cables
 - __ 25 m cable RG-58
 - __ 50 m cable RG-213
 - __ 75 m cable RG-213
 - __ 100 m cable RG-213
 - __ 150 m cable Low Loss
 - __ 200 m cable Low Loss
 - __ 250 m cable LCF 1/2"
- User defined length of antenna cable (maximum 350 m)



TimeGPS in 19" shelf mounting



SYMMETRICOM, INC.
2300 Orchard Parkway
San Jose, California
95131-1017
tel: 408.433.0910
fax: 408.428.7896
info@symmetricom.com
www.symmetricom.com