Geographic Position Receiver
Model SV8PLUS

The SV8PLUS receives signals from orbiting Geographic Positioning System (GPS) satellites and uses the signals to calculate the location and velocity of the SV8PLUS. The SV8PLUS transmits this information to the datalogger. The transmission rate is factory set at 1200 bps, which allows a CR10X datalogger to use its control ports and Instruction 15 to read the GPS data. This GPS receiver is also compatible with our CR23X and CR5000; the SDM-SIO4 Serial Input/ Output module is required to interface the CR5000 with the SV8PLUS. Trimble Navigation manufactures the SV8PLUS.

The SV8PLUS receives satellite signals, calculates its location on Earth, and outputs a data stream to a Campbell Scientific datalogger.

Features

- Receives up to eight channels of GPS data; the number of channels at a particular time depends on the number of satellites viewable above the horizon
- Uses Instruction 15 to turn the SV8PLUS off when GPS data are not needed, reducing the power budget
- Supports differential correction
- Monitors position, GPS time, and velocity
- Allows the datalogger time to be set to the GPS time or local time with the accuracy of the GPS signal
- Provides a timing pulse at one second intervals. The timing pulses are extremely accurate and can be used to synchronize time between the datalogger and other instruments
- SAE and CE compliant

Ordering Information

SV8PLUS	GPS Receiver, active patch magnetic mount antenna, power cable, and RS-232-to-control port communication cable
14021	SV8PLUS mounting bracket

CAMPBELL SCIENTIFIC, INC.
815 W. 1800 N. • Logan, Utah 84321-1784 • (435) 753-2342 • FAX (435) 750-9540 • www.campbellsci.com

Specifications

Update rate:	1 Hz
Accuracy:	
Position:	25 m CEP, 50%
Velocity:	0.1 m s^{-1}, 0.05 m s^{-1} differential GPS
Time:	95 ns RMS (over-determined clock mode)
Acquisition (typical):	<130 s (90%) with no initialization; <45 s (90%) with position, time and almanac saved by backup; <20 s (90%) with ephemeris saved
Reacquisition after signal loss:	<2 s (90%)
Operational limits:	Altitude <18,000 m or velocity <515 m s^{-1}. Either limit may be exceeded but not both
Operating range:	-40° to +85°C; 5% to 95% RH, non-condensing @ 60°C
Current drain (nominal):	80 mA active
Operating voltage:	9 to 32 Vdc
Dimensions:	4.0" x 5.0" x 1.1" (10.2 x 12.7 x 2.8 cm)
Weight:	0.57 lb (0.26 kg)

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