

SVEEeight Plus

Versatile GPS Receiver Module

Key features and benefits

- Ready to "plug and play"
- Direct replacement for SVEEsix Plus module
- Next-generation technology
- Power consumption <1.5 W
- Choice of three data protocols

The SVEEeight Plus GPS™ receiver module integrates more powerful Trimble technology into our SVEEsix Plus form factor to deliver a superior level of performance at low cost for OEM applications. Fast GPS signal acquisition and low power consumption make the SVEEeight Plus GPS module ideal for mobile applications.

Packaged for Direct Integration

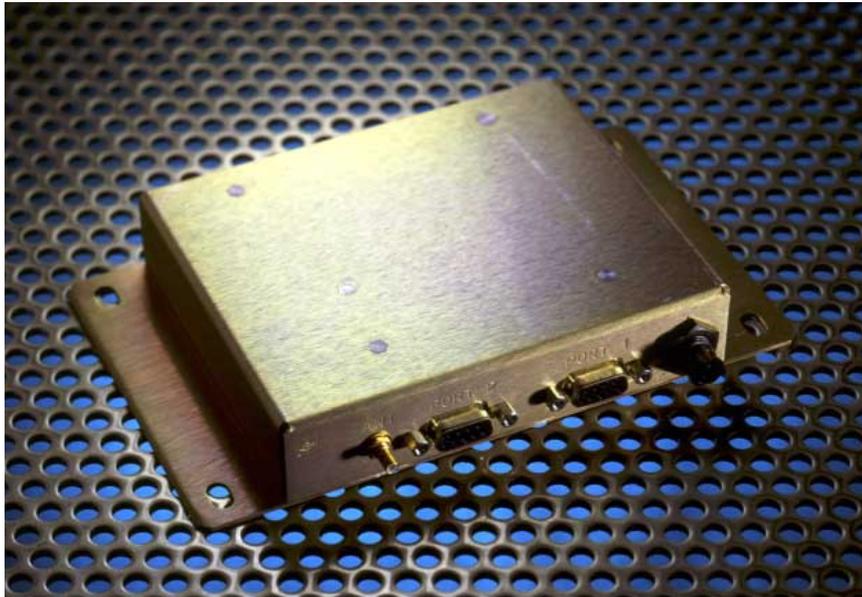
The SVEEeight Plus module is a direct, plug-in replacement for the popular SVEEsix Plus GPS module, which is widely used in vehicle location and security applications. It meets SAE vehicle shock and vibration standards, as well as European CE mark requirements.

Packaged in a tough metal enclosure, the module is ready for fast, easy installation. Just bolt it to a vehicle, connect the antenna and input power, and you have an instant location system. Connecting it to a radio modem gives you a rugged, high-accuracy vehicle tracking unit.

Top Performance

The SVEEeight Plus GPS module makes use of the recent advances in silicon technology to offer even more robust RF performance with fewer components, cutting power consumption to less than 1.5 watt.

Using Trimble's 8-channel technology, the SVEEeight Plus GPS module delivers rapid startup



times and reliable performance. It incorporates Trimble's proven software to deliver highly accurate position data even in areas where satellite signals are weakened by terrain, foliage and structures. Position and velocity filters provide smooth, reliable positions for mobile applications.

The SVEEeight Plus GPS module is differential GPS (DGPS) ready for applications requiring high levels of accuracy. Just connect a standard RTCM SC-104 corrections input from a DGPS beacon or subscription service for DGPS accuracy to 2 meters.

Easy Integration

Flexibility and easy integration are ensured with the SVEEeight Plus GPS module's user-configurable dual serial I/O ports and choice of

one of three protocols:

- easy-to-use TAIP, ideal for tracking applications;
- powerful TSIP, for maximum data and control over the GPS receiver; or
- NMEA 0132, with a selection of standard NMEA data messages.

The user can easily configure either port to receive RTCM SC-104 differential corrections for DGPS operation.

Trimble offers a selection of high-sensitivity and robust noise-rejection GPS antennas for use with the SVEEeight Plus GPS module. The module reliably reports antenna status to assure proper system operation.

SveeEight Plus

Versatile GPS Receiver

FEATURES

- Ideal for "plug and play" applications
- Direct replacement for SveeSix Plus with next-generation technology
- Sturdy packaging meets SAE and European CE requirements
- Power consumption <1.5 W
- Plug-in DGPS corrections for 2-meter accuracy
- Choice of three data protocols (TSIP, TAIP, NMEA)

PERFORMANCE SPECIFICATIONS

General	L1 frequency, C/A code (SPS), 8-channel continuous tracking receiver, 32 correlators
Update rate	1Hz (TSIP, NMEA, or TAIP)
Accuracy	Position: 25 m CEP (50%) without S/A Velocity: 0.1 m/sec without S/A (1 sigma) Time: 95 nanoseconds RMS (over-determined clock mode)
DGPS accuracy	Position: 2 m CEP (50%) Velocity: 0.05 m/sec (1 sigma)
Acquisition (typical)	Cold start: <130 seconds (90%) Warm start: <45 seconds (90%) Hot start: <20 seconds (90%)
	Cold start requires no initialization. Warm start implies last position, time and almanac are saved by back-up power. Hot start implies ephemeris also saved.
Reacquisition after signal loss	<2 seconds (90%)
Dynamics	
Altitude	18,000 m
Velocity	515 m/sec maximum
Acceleration	4g (39.2 m/sec ²)
Motional Jerk	20 m/sec ³
Operational limits	Altitude <18,000 m or velocity <515 m/sec Either limit may be exceeded but not both.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-40°C to +85°C
Storage temperature	-55°C to +100°C
Vibration	0.008 g ² /Hz 5Hz to 20Hz 0.05 g ² /Hz 20Hz to 100Hz -3dB/octave 100Hz to 900Hz
	Note: Specifications comply with SAE J 1211 requirements
Operating humidity	5% to 95% R.H. non-condensing, @ +60°C
Altitude	Up to 18,000 m

TECHNICAL SPECIFICATIONS

Prime power	+9 to +32 VDC input
Power consumption (nominal)	80 mA, 0.95W, at 12V, 25°C, with antenna
Back-up power	+3 to +12V DC (2.2 microamps @ +3.5V, 25°C)
Serial ports (2)	RS-232
I/O Protocol options	TSIP (Trimble Standard Interface Protocol) @ 9600 baud, 8-Odd-1 TAIP (Trimble ASCII Interface Protocol) @ 4800 baud, 8-None-1 NMEA 0183 v2.1 @ 4800 baud, 8-None-1 RTCM SC-104 @ 4800 baud, 8-None-1
NMEA messages	Standard: GGA and VTG Optional: User-selected combination of GGA, GLL, VTG, ZDA, GSV, GSA and RMC; user can store configuration in non-volatile memory.

PHYSICAL CHARACTERISTICS

Dimensions	
Metal enclosure	4.03" D x 4.97" W x 1.1" H (102mm x 127mm x 28mm) (excluding mounting flange)
Mounting flange	4.03" D x 6.81" W x 0.062" H (102mm x 173mm x 2mm)
Weight	0.57 lb. (0.26kg) (board + enclosure + flange)
Connectors	
Antenna	SMB
Serial data (2)	DB9
Power	3-pin Conxall

ACCESSORIES



GPS antenna Compact, active micropatch antenna with 5-meter cable and magnetic mount. 1.60" x 1.90" x 0.55" high (40.6mm x 48.3mm x 13.9mm)



Hard mount antenna Compact, hard mount, active micropatch antenna with single-hole 0.75" threaded mount and TNC connector. 2.46" diameter x 0.75" high (62.6mm x 19.0mm)



Rooftop antenna Bullet™ II or Bullet III antenna with 23-meter cable and SMB adapter. 3.04" dia. x 2.94" H (77.3 mm dia. x 74.6mm)

ORDERING INFORMATION

You may visit our website for current information, part numbers, and ordering information at
<http://www.trimble.com/products/catalog/oem/svee8p.htm>

Visit our website at www.trimble.com

Specifications subject to change without notice.



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