SVeeSix-CM3™

GPS Module for Embedded OEM

Performance Specifications

General:	L1 frequency, C/A code (SPS), 6-channel, continuous tracking receiver	
Update rate:	TSIP @ 2 Hz, NMEA & TAIP @ 1 Hz	
Accuracy:	Position:	25 m SEP without SA
	Velocity:	0.1 m/sec without SA
	Time:	1 micro-second (nominal)
DGPS accuracy:	Position:	2 to 5 m (2 sigma)
	Velocity:	0.1 m/sec
	Time:	1 micro-second (nominal)
Acquisition (typical):	Cold start:	2 to 5 minutes
	Warm start:	50 seconds
	Hot start:	30 seconds
Reacquisition:	<2 seconds	
Dynamics:	Velocity:	500 m/sec maximum
	Acceleration:	4g (39.2 m/sec^2)
	Jerk:	20 m/sec^3

Environmental Specifications

Operating temp:	-10° to +60°C (standard)	
	-40° to +85°C (optional)	
Storage temp:	-55° to +100°C	
Vibration:	0.008g^2/Hz	5 Hz to 20 Hz
	0.05g^2/Hz	20 Hz to 100 Hz
	-3dB/octave	100 Hz to 900 Hz
Operating humidity:	5% to 95% R.H. non-condensing @ +60°C	
Altitude:	-400 m to +18,000 m	

Technical Specifications

Prime power:	+5 volts DC (-3% to +5%)	
Power consumption (nominal):	SVeeSix-CM3: 230 ma, 1.15 watts with antenna: 240 ma, 1.20 watts	
Backup power:	+3 to +5 volts DC	
Backup consumption:	1 micro-amp @ +3 volts and +25°C (nominal)	
Serial port / 1PPS:	CMOS TTL levels	
Protocol options:	TSIP @ 9600 baud, 8-Odd-1	
	NMEA 0183 v2.0 @ 4800 baud, 8-None-1	
	TAIP @ 4800 baud, 8-None-1	
NMEA messages:	Standard:	GGA and VTG
	Optional:	Any combination of GGA, GLL, VTG, ZDA, GSA, GSV and RMC
Antenna power:	Short circuit protection	
	Short circuit detection	
	Short to +20 volt protection	
	Open detection	

Physical Characteristics

Dimensions:	3.25" L x 1.83" W x 0.58" H (82.6 mm x 46.5 mm x 14.7 mm)
Weight:	1.3 oz. (36.4 grams)
Connectors:	RF: SMB; I/O: 8-pin (2x4), 2 mm header

Upgrades and Accessories

Differential GPS:	Allows the module to decode and incorporate GPS corrections to improve position accuracy. Accepts RTCM SC-104 through secondary serial port or uses TSIP and TAIP correction messages through primary port.
GPS antenna and J Mount:	Compact, active micropatch antenna with 5-meter cable and magnetic mount. 2.45" Diameter x 0.45" High J Mount accessory for mounting on trunk or door flange.
Rooftop antenna:	Bullet antenna with 75 feet of cable and SMB adapter.

Ordering Information

SVeeSix-CM3 modules:	
26889-61	TSIP (binary) protocol
26889-62	NMEA (ASCII) protocol
26889-63	TAIP (ASCII) protocol
SVeeSix-CM3 modules with DGPS option:	
26890-61	TSIP (binary) protocol
26890-62	NMEA (ASCII) protocol
26890-63	TAIP (ASCII) protocol
SVeeSix-CM3 with passive antenna support:	
26891-61	TSIP (binary) protocol
26891-62	NMEA (ASCII) protocol
26891-63	TAIP (ASCII) protocol
GPS antenna:	
26774-00	Magnetic mount antenna with 5-meter cable
27018-00	J Mount accessory kit
SVeeSix-CM3 Starter Kit:	
21589-50	Includes SVeeSix-CM3 with DGPS, magnetic mount antenna,TSIP, NMEA and TAIP firmware, software toolkits for TSIP and TAIP, interface cable, and manual.

Note: Other configurations are available. Consult your local Trimble representative for details.

Specifications are subject to change without notice.

Trimble
THE GPS SOLUTION

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Trimble

Tracking & Communication Products

SVeeSix-CM3™

GPS Module for Embedded OEM

Gain an expanded feature set—low power consumption, fast warm start, 12 volt antenna protection—at a lower integration cost

The SVeeSix-CM3 is Trimble's latest advance in GPS core module technology. Form-fit compatible with SVeeSix-CM2 applications, the CM3 lowers integration costs while adding a wealth of features.

An antenna monitoring feature protects against cable shorts to ground or 12 volts. It also alerts the user should the antenna become shorted or disconnected. These unique capabilities make the SVeeSix-CM3 ideal for car navigation.

An optional second serial port allows for direct input of RTCM SC-104 differential corrections. This feature dramatically lowers the cost of integrating differential.

A real-time clock means faster acquisition. Users can begin operation without hooking up to a computer and downloading the time.

Optional passive antenna support adds flexibility. And the board's new design lowers power consumption.

A rugged and reliable six-channel receiver, the SVeeSix-CM3 provides position and velocity data anywhere on Earth, at any time of day, in any weather. It also provides accurate time. A one-pulse-per-second signal is synch-ronized to UTC within a nominal accuracy of one microsecond—ideal for multi-site synchronization and time-distribution applications.

To help you evaluate and integrate the SVeeSix-CM3, Trimble offers the System Designer's Starter Kit. It includes an RS-232 serial port adapter, a choice of binary, ASCII, or industry standard protocols, and source code for software interface programs.

More features, lower integration cost, and shorter integration time—three very good reasons for choosing the SVeeSix-CM3.