Specifications

Trimble SPS585 GNSS Smart Antenna

Receiver Name	**SPS585**
Configuration Option	
Type	Smart Antenna
Base and rover interchangeability	No
Base operation	Not supported
Rover operation	Yes
Heading and Moving Base operation	Not supported
Rover position update rate	1 Hz, 2 Hz, 5 Hz
Rover maximum range from base	Unlimited
Rover operation within a VRS™ network	Yes
Factory options	See Receiver Upgrades below
General	
Keyboard and display	LED indicators for receiver status On/Off key for one-button startup
Dimensions (L × W × D)	11.7cm (4.6") Diameter x 10.0cm (3.9") High
Weight	0.733 kg (1.62 lb)
Antenna Options	
Internal Antenna (Smart Antenna)	GNSS (Dual Frequency) GPS, Glonass, BeiDou, Galileo, QZSS MSS (RTX) L1 SBAS
GA510 (Discontinued)	No
GA530, Rugged GA530	No
GA810	No
GA830	No
L1/Beacon, DSM 232 (Discontinued)	No
Zephyr™ Model 2	No
Zephyr Geodetic™ Model 2	No
Zephyr Model 2 Rugged	No
Temperature	
Operating	–20 °C to +55 °C (–4 °F to +131 °F) 0 °C to +45 °C (+32 °F to +113 °F) while charging
Storage	–40 °C to +75 °C (–40 °F to +167 °F)
Humidity	98% Condensing
Waterproof	IP65
Shock and Vibration	
Pole Drop	Designed to survive a 2 m (6.6 ft) drop onto all faces and corners onto concrete.
Shock – Non-operating	To 75 g, 6 ms, saw-tooth
Shock – Operating	To 40 G, 10 msec, sawtooth, 100 shock events at 2 Hz rate
Vibration	MIL-STD-810G (Operating), Method 514.6, Procedure I, Category 4, Figure 514.6C-1 (Common Carrier, US Highway Truck Vibration Exposure). Total Grms levels applied are 1.95g.

Trimble

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Measurements	
	Advanced Trimble Maxwell™ 6 Custom GPS Chip High-precision multiple correlator for L1/L2 pseudo-range measurements
	Unfiltered, unsmoothed pseudo-range measurements data for low noise, low multipath error, low time domain correlation, and high dynamic response
	Signal-to-noise ratios reported in dB-Hz Trimble EVEREST™ multipath signal rejection Proven Trimble low elevation tracking technology
	220-channel GNSS
	2-channel SBAS (WAAS/EGNOS/MSAS)
SBAS (WAAS/EGNOS/MSAS) Positioning[3]	
Horizontal accuracy	± 0.50m (1.6ft)
Vertical accuracy	± 0.85m (2.8 ft)
Code Differential GPS Positioning[2]	
Correction type	DGPS RTCM 2.x
Correction source	IBSS or VRS
Horizontal accuracy	±(0.25m + 1 ppm) RMS ±(0.8 ft + 1 ppm)
Vertical accuracy	±(0.50m + 1 ppm) RMS ±(1.6 ft + 1 ppm)
OmniSTAR Positioning	
VBS service accuracy	Not supported
XP service accuracy	Not supported
HP service accuracy	Not supported
CenterPoint RTX Positioning[12]	
Horizontal accuracy	0.10m (0.34ft) RMS standard, 0.04m (0.13 ft) RMS with Upgrade
Vertical accuracy	0.10m (0.34ft) RMS standard, 0.09m (0.30 ft) RMS with Upgrade
Convergence time for specified precisions	30 mins or less
xFill Positioning	
Horizontal accuracy	RTK[11] + 0.01m(0.03 ft)/min RMS
Vertical accuracy	RTK[11] + 0.02m(0.06 ft)/min RMS
RTK Positioning[2]	
Horizontal accuracy	0.10m (0.34ft) RMS Standard, 0.010m (0.033ft) RMS with Upgrade
Vertical accuracy	0.10m (0.34ft) RMS standard, 0.02 m (0.065 ft) RMS with Upgrade
Precise Heading[2]	
Heading accuracy	Not supported
2 m antenna separation	Not supported
10 m antenna separation	Not supported
Power	
Internal	Integrated internal battery 3.75V 9000 mA-hr Li-ION battery Internal battery will charge from external USB power source when input voltage is >4.75V Integrated charging circuitry
External	Power input on the Mini-B USB connector
	Draws maximum available current from external USB device.
	SPS585 AC adapter, 10W, 5.1-5.3VDC output
	SPS585 Vehicle adapter, 10W, 4.9-5.0VDC output
	Receiver automatically turns on when connected to external power
Power over Ethernet (PoE)	Not supported
Power consumption	3.5W (not charging), 10W (charging)

Trimble

Specifications

Trimble SPS585 GNSS Smart Antenna

Operation Time on Internal Battery	
Rover	4 hours; varies with temperature
Base station	Not supported
450 MHz systems	Not supported
900 MHz system	Not supported
Regulatory Approvals	
	FCC Part 15 Subpart B (Class B Device) and Subpart C
	CAN ICES-3(B)/NMB-3(B), RSS-Gen, RSS-310 and RSS-210
	R&TTE Directive: EN 301 489-1/-3/-5/-17, EN 300 440, EN 300 328, EN 300 330, EN 60950, EN 50371
	ACMA Regulatory Compliance Mark (RCM)
	CE mark compliance
	UN ST/SG/AC.10.11/Rev. 3, Amend. 1 (Lithium-ion Battery)
	UN ST/SG/AC. 10/27/Add. 2 (Lithium-ion Battery)
	WEEE and RoHS compliant
Communications	
Lemo (Serial)	No
Modem 1 (Serial)	No
Modem 2 (Serial)	No
1PPS (1 pulse-per-second)	No
USB	1 USB 2.0 (Type B) Device via Mini_B
Ethernet	No
WiFi	802.11b/g, 2.4GHz. Simultaneous Client and Access Point (AP) modes
Bluetooth wireless technology	Fully-integrated, fully-sealed 2.4 GHz Bluetooth module[1]
Network Protocols	
HTTP (web browser GUI)	Yes
NTP Server	Yes
TCP/IP or UDP	Yes
Ntrip	NTRIP v1 and v2, Client mode
mDNS/uPnP Service discovery	Yes
Dynamic DNS	Yes
eMail alerts	Yes
Network link to Google Earth	Yes
PPP and PPPoE	Yes
Supported data formats	
Correction Inputs	CMR™, CMR+™, CMRx, RTCM 2.x, RTCM 3
Correction Outputs	Not supported
Data Outputs	NMEA[3], GSOF
External GSM/GPRS, cell phone support	Supported for Internet-based correction streams (VRS, IBSS) – directly using the external SNM940.
Integrated radios (optional)	No
Channel spacing (450 MHz)	
Sensitivity (450 MHz)	
Internal MSK Beacon receiver	No

Trimble

Specifications

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Receiver Upgrades	
Constellation	Not available, (Ships with Full GNSS capability)
Frequency	Not available, (Ships with Dual Frequency capability)
Precision	Rover 10/2, Precise Rover
Function	Datalogging
Data Logging	
Memory limit	50 MB

Notes

1 Bluetooth type approvals are country-specific. For more information, contact your local Trimble office or representative.

2 Accuracy and reliability may be subject to anomalies such as multipath, obstructions, satellite geometry, interference and atmospheric conditions. Always follow recommended practices.

3 NMEA position outputs are not available for high precision modes (RTK, RTX, VRS). GSOF outputs are not restricted.

11 RTK refers to the last reported precision before the correction source was lost and xFill started

12 Receiver accuracy and convergence time varies based on GNSS constellation health, level of multipath, and proximity to obstructions such as large trees and buildings.

Specifications subject to change without notice.

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