

Specifications

Trimble SPS552H GNSS Heading Add-on Modular Receiver



Receiver Name

SPS552H GNSS Heading Add-on Modular Receiver

Configuration Option

Type	Modular
Base and rover interchangeability	No
Base operation	No
Rover operation	No
Heading and Moving Base operation	Heading Only
Rover position update rate	1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz
Rover maximum range from base	2400m
Rover operation within a VRS™ network	No
Factory options	See Receiver Upgrades below

General

Keyboard and display	VFD display 16 characters by 2 rows On/Off key for one-button startup Escape and Enter keys for menu navigation 4 arrow keys (up, down, left, right) for option scrolls and data entry
Dimensions (L x W x D)	24 cm (9.4 in) x 12 cm (4.7 in) x 5 cm (1.9 in) including connectors
Weight	1.55 kg (3.42 lb) receiver with internal battery and no radio

Antenna Options

GA510	Not included in a kit
GA530	Not included in a kit
GA810	L1/L2/L2C GPS, Glonass. Included in Standard kit
L1/Beacon, DSM 232	Not supported
Zephyr™ Model 2	L1/L2/L2C GPS, Glonass. Included in Precise kit
Zephyr Geodetic™ Model 2	Not included in a kit
Zephyr Model 2 Rugged	L1/L2/L2C GPS, Glonass. Included in Rugged kit

Temperature

Operating	-40 °C to +65 °C (-40 °F to +149 °F) ¹
Storage	-40 °C to +80 °C (-40 °F to +176 °F)
Humidity	MIL-STD 810F, Method 507.4
Waterproof	IP67 for submersion to depth of 1 m (3.3 ft), dustproof

Shock and Vibration

Pole Drop	Designed to survive a 1 m (3.3 ft) pole drop onto a hard surface
Shock – Non-operating	To 75 g, 6 ms
Shock – Operating	To 40 g, 10 ms, saw-tooth
Vibration	Tested to Trimble ATV profile (4.5 g RMS): 10 Hz to 300 Hz: 0.04 g/Hz; ² 300 Hz to 1,000 Hz; -6 dB/octave

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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

Very low noise carrier phase measurements with <1 mm precision
in a 1 Hz bandwidth

Signal-to-noise ratios reported in dB-Hz

Proven Trimble low elevation tracking technology

220-channel L1C/A, L1/L2/L2C. Upgradable to GLONASS L1/L2C/A, L1/L2P Full
Cycle Carrier

Trimble EVEREST™ multipath signal rejection

4-channel SBAS (WAAS/EGNOS/MSAS)

Galileo GIOVE-A and GIOVE-B⁸

N/A

Code Differential GPS Positioning²

Correction type

Correction source

Horizontal accuracy

Vertical accuracy

SBAS (WAAS/EGNOS/MSAS) Positioning³

Horizontal accuracy

Vertical accuracy

OmniSTAR Positioning

VBS service accuracy

XP service accuracy

HP service accuracy

Location RTK Positioning²

Horizontal accuracy

Vertical accuracy

Precise Heading²

Heading accuracy

2 m antenna separation

10 m antenna separation

When combined with SPSx5x

0.09° RMS

0.05° RMS

Power

Internal

Integrated internal battery 7.2 V, 7800 mA-hr, Lithium-ion

Internal battery operates as a UPS in the event of external power source failure

Internal battery will charge from external power source when input voltage is
>15 V

Integrated charging circuitry

External

Power input on 7-pin 0-shell Lemo connector is optimized for lead acid batteries
with a cut-off threshold of 11.5 V

Power input on the 26-pin D-sub connector is optimized for Trimble lithium-ion
battery input with a cut-off threshold of 10.5 V

Power source supply (Internal/External) is hot-swap capable in the event of
power source removal or cut off

DC external power input with over-voltage protection

Receiver automatically turns on when connected to external power

Power over Ethernet (PoE)

N/A

Power consumption

4.5 W at 18 V

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Operation Time on Internal Battery

Rover	13 hours; varies with temperature
Base station	N/A
450 MHz systems	
900 MHz system	

Regulatory Approvals

FCC: Part 15 Subpart B (Class B Device) and Subpart C, Part 90
Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
Canadian RSS-310, RSS-210, and RSS-119.
Cet appareil est conforme à la norme CNR-310, CNR-210, et CNR-119 du Canada.

R&TTE Directive: EN 301 489-1/-5/-17, EN 300 440, EN 300 328, EN 300 113, EN 60950, EN 50371

ACMA: AS/NZS 4295 approval

CE mark compliance

C-tick 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)

RoHS compliant

WEEE compliant

Communications

Lemo (Serial)	7-pin 0S Lemo, Serial 1, 3-wire RS-232
Modem 1 (Serial)	26-pin D-sub, Serial 2, Full 9-wire RS232, using adaptor cable
Modem 2 (Serial)	26-pin D-sub, Serial 3, 3 wire RS-232, using adaptor cable
1PPS (1 pulse-per-second)	Available
Ethernet	Through a multi-port adaptor
Bluetooth wireless technology	Fully-integrated, fully-sealed 2.4 GHz Bluetooth module ⁴
Integrated radios (optional)	N/A

Channel spacing (450 MHz)

450 MHz output power

900 MHz output power

Frequency approvals (900 MHz)

External GSM/GPRS, cell phone support

Internal MSK Beacon receiver

N/A

Supported data formats

Correction Inputs

CMR™, CMR+™, CMRx, RTCM 3, RTCM 2.x

Correction Outputs

N/A

Data Outputs

NMEA, GSOFF, 1PPS Time Tags

Receiver Upgrades

L5, Glonass

Notes

1 Receiver will operate normally to those temperature limits. Internal batteries will operate from $-20\text{ }^{\circ}\text{C}$ to $+48\text{ }^{\circ}\text{C}$

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

3 Depends on SBAS system performance.

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

Specifications subject to change without notice.

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