# **SPS855 GNSS MODULAR RECEIVER**

## FLEXIBLE RECEIVER FOR JOBSITE MEASUREMENT

Whether you need a reliable GNSS base station or a rugged rover, the Trimble® SPS855 GNSS Modular Receiver gives you the flexibility to perform all of your construction site measurements. As a permanent or semi-permanent base station, it provides GNSS corrections for site measurements and machine control. As a rover, it can move easily from a site supervisor truck to a pole mount for grade checking, site measurement and stakeout.

The versatile SPS855 receiver is available in a range of options to suit your jobsite or marine construction performance requirements. Simply purchase the receiver that you need today, and upgrade as your needs change.



### Secure and Easy to Use

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The Trimble SPS855 is comprised of an integrated GNSS receiver and radio plus a choice of external antenna. The receiver can be placed in a secure environment such as the job trailer or boat cabin where it is protected from theft and weather. The less expensive antenna can be placed in a location with clear visibility to the sky and maximum radio coverage.

You don't have to be a GNSS expert to use the SPS855. Integrated 450 or 900 MHz license-free radio and interface with Trimble SCS900 Site Controller Software make the SPS855 easy to use, fast to setup and more productive on the job. Trimble Autobase™ technology means anyone on the jobsite can perform daily base station set up with one button push.

For more advanced troubleshooting, the receiver's web interface allows your GNSS manager to remotely monitor base station performance, availability, and configuration. No need for time-consuming and costly visits to the base station to set up each day or diagnose issues that may arise.

The fully upgradable SPS855 GNSS Modular Receiver can be configured in a variety of ways. For example:

- As a base station only
- As a rover only with SBAS, Location, or Precision Real-Time Kinematic (RTK) accuracy
- As a flexible base or rover with Precision **RTK** accuracy

The SPS855 can be combined with the Trimble SPS555H Heading Add-on Receiver, for applications on cranes, construction vessels, and dredges where real-time position and orientation are important.



## SPS855 GNSS Modular Receiver

#### GENERAL

Keyboard and displayVacuu	m fluorescent display 16 characters by 2 rows
	Dimmable. On/Off key for one-button startup
Dimensions (L × W × D)	24 cm × 12 cm × 5 cm (9.4 in x 4.7 in x 1.9 in)
Weight 1.65 kg (3	.64 lb) receiver with internal battery and radio
1.55 kg (3.42	lb) receiver with internal battery and no radio

#### ANTENNA OPTIONS

Zephyr™ 2 Models	. Triple frequency GNSS (GPS, GLONASS, Galileo, BeiDou),
	MSS (CenterPoint RTX, OmniSTAR™, L1 SBAS)
GA830	. Triple frequency GNSS (GPS, GLONASS, Galileo, BeiDou),
	MSS (CenterPoint RTX, OmniSTAR, L1 SBAS)
GA530	

#### **ENVIRONMENT**

Operating <sup>1</sup> 40 °C to +65 °C (-40 °F to +149 °F)
Storage
Humidity MIL-STD 810F, Method 507.4
Waterproof IP67 for submersion to depth of 1 m (3.3 ft), dustproof
Pole drop Designed to survive a 1 m (3.3 ft) pole drop onto a hard surface

#### MEASUREMENTS<sup>2</sup>

- 440-channel L1C/A, L1/L2/L2C GPS and QZSS
- Upgradable to L5 and GLONASS L1/L2C/A, L1/L2P Full Cycle Carrier Galileo
- BeiDou
- CenterPoint<sup>™</sup> RTX<sup>™</sup> Correction Service
- OmniSTAR
- Trimble EVEREST™ multipath signal rejection
   4-channel SBAS (WAAS/EGNOS/MSAS/QZSS)

#### CODE DIFFERENTIAL GPS POSITIONING<sup>3</sup>

Horizontal accuracy	0.25  m + 1  ppm RMS (0.8  ft + 1  ppm RMS)
Vertical accuracy	.0.50 m + 1 ppm RMS (1.6 ft + 1 ppm RMS)

#### REAL-TIME KINEMATIC (RTK UP TO 30 KM) POSITIONING<sup>3</sup>

Horizontal accuracy	 .8 mm + 1 ppm RMS (C	.026 ft + 1 ppm RMS)
Vertical accuracy	 15 mm + 1 ppm RMS	(0.05 ft +1 ppm RMS)

#### **TRIMBLE XFILL**

Horizontal accuracy.....RTK<sup>4</sup> + 10mm/minute RMS 

TRIMRI E CENTERPOINT RTY

Horizontal accuracy	4cm (0.13 ft) RMS
Vertical accuracy	9cm (0.30 ft) RMS

#### INITIALIZATION TIME

Initialization reliability <sup>5</sup>
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#### OPERATION TIME ON INTERNAL BATTERY

- Rover Base station 450 MHz systems..... Approximately 11 hours; varies with temperature<sup>6</sup>

#### POWFR

- - 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

#### **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 MMB-003 du Canada. Canadian RSS-310, RSS-210, and RSS-119. Cet appareil est conforme à la norme
- CRN-310, CNR-210, et CNR-119 du Canada.
  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 compliantChina CRRC 220 MHz

#### COMMUNICATIONS

Lemo (Serial)	
Modem 1 (Serial)	5-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 on Marine versions
Ethernet	Through a multi-port adaptor
Bluetooth wireless technology	Fully-integrated,
	fully-sealed 2.4 GHz Bluetooth module <sup>7</sup>
Integrated radios (optional)	Fully-integrated, fully-sealed
	internal 450 MHz (UHF) Tx/Rx;
	internal 900 MHz Tx/Rx;
	internal 220 MHz Tx/Rx
Receiver position update rate . Correction data input/output .	e support

- Receiver will operate normally to -40 °C. Internal batteries are rated to -20 °C.
- The Trimble SPS855 GNSS Modular Receiver is capable of supporting existing and planned GNSS satellite signals, including GPS, GLONASS, Galileo, CenterPoint RTX, Quasi Zenith Satellite System and BeiDou, and existing and planned augmentations to these GNSS systems. 2 Support for the Galileo system is developed under a license of the European Union and the European
- Space Agency. Accuracy and reliability may be subject to anomalies such as multipath, obstructions, satellite 3 geometry, and atmospheric conditions. Always follow recommended practices. 4 RTK refers to the last reported precision before the correction source was lost and xFill started.
- May be affected by atmospheric conditions, signal multipath, and satellite geometry. Initialization 5 reliability is continuously monitored to ensure highest quality.
- 6 For receivers with the 2.0W upgrade, reduced battery performance should be expected compared to the 0.5W solution.
- 7 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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