



FEATURES

- cm-level accuracy RTK receiver
- Support base and rover mode
- 25mm x 25mm small size
- 230mW low power
- GPS L1, BDS B1, QZSS, SBAS
- Weighs 3 gram

The S2525F8-RTK is a cost-effective OEM GNSS receiver that delivers centimeter-level position accuracy for various high-precision applications, such as aerial mapping, machine control guidance, and GIS data collection.

The S2525F8-RTK receives RTCM 3.x data from a base station, or another receiver in base station mode outputting SkyTraQ raw measurement, to perform carrier phase RTK processing, achieving centimeter-level accurate relative positioning. In challenging signal environments where cm-level RTK positioning is not possible, S2525F8-RTK delivers high accuracy Differential-GNSS and GNSS positioning.

The S2525F8-RTK has size of 25mm x 25mm, roughly dimension of a quarter; and 230mW power consumption. This very small size and low power makes it ideal for integration into small handheld devices for mobile GIS application or for UAV applications.

TECHNICAL SPECIFICATIONS

Receiver Type

167 Channels
Dedicated search and track engine
GPS L1, 6 BDS B1, QZSS, SBAS

Performance Spec

Hot Start 1 sec
Warm Start 28 sec
Cold Start 29 sec
Reacquisition 1 sec
Velocity Accuracy 0.05m/sec
Timing Accuracy 10nsec
Acceleration 4g

Sensitivity

Cold Start -148dBm
Tracking -160dBm

Position Accuracy

Autonomous 2.5m CEP
DGPS < 1m
RTK centimeter-level

Communication

3.3V UART serial
57600 baud, 8, N, 1

Supported Protocol

Rover Mode

NMEA-0183 V3.01 GPGGA, GPGLL,
GPGSA, BDGSA
GPGSV, BDGSV,
GPVTG, GPRMC
RTCM-SC104 3.0, 3.1

Base Mode

SkyTraQ Raw Data

PHYSICAL CHARACTERISTICS

Size 25mm x 25mm
Weight < 3g

Electrical Characteristics

Voltage 3.3V +/- 5%
Current 70mA

Environmental Characteristics

Working temperature -40°C ~ +85°C
Storage temperature -55 °C ~ +100°C
Humidity 5% ~ 95%

Ordering Information

GPS/BDS RTK Model	RTK Maximum Update Rate			Precision Time/Position
	1Hz	5Hz	10Hz	Stamp
S2525F8-RTK	X			
S2525F8-RTK-5		X		
S2525F8-RTK-5S		X		X
S2525F8-RTK-10			X	
S2525F8-RTK-10S			X	X

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