

# SV100 DUAL

## GNSS RECEIVER

Designed For Vehicle Navigation & Machine Guidance



### EASY CONFIGURATION

For vertical industry users requiring GNSS navigation data, SingularXYZ provides a user-friendly android configuration app connected via Bluetooth, offering a clean interface for necessary functions. Users can easily get RTK fixed solution via 4G/UHF, and then output the navigation data to their system via RS232 serial port, 4G or Ethernet.

### PRECISE NAVIGATION

To ensure superior positioning and navigation performance, the SV100 dual is equipped with a dual-antenna GNSS engine that can track GPS, BDS, GLONASS, Galileo, QZSS & IRNSS. Embedded with multi-frequency anti-jamming technology, the SV100 dual offers high quality GNSS data even in urban blocks and tree shade.

### RUGGED HOUSING

Considering various working environments, the SV100 dual is protected with rugged housing. IP67 waterproof and dustproof design, suitable for outdoor work in all kinds of weather. Magnesium aluminum alloy housing and compact structure to avoid accidental drop damage. Anti-vibration design for in-vehicle environments such as agriculture and machine control.

## SATELLITES TRACKING

BDS	B1I, B2I, B3I, B1C, B2a, B2b <sup>1</sup>
GPS	L1 C/A, L1C, L2P, L2C, L5
GLONASS	L1, L2
Galileo	E1, E5a, E5b
QZSS	L1, L2, L5
IRNSS	L5
SBAS	WAAS, EGNOS, MSAS, GAGAN, SDCM
L-Band	Upgradeable
Cold start	<30s
RTK initialization time	<5s(typical)
RTK initialization reliability	>99.9%
Re-acquisition	<1s

## ACCURACY

Standalone	1.5m Horizontally 2.5m Vertically
DGPS	0.4m Horizontally 0.8m Vertically
Static post processing	2.5 mm + 1 ppm Horizontally 5 mm + 1 ppm Vertically
RTK	8mm+1ppm Horizontally 15mm+1ppm Vertically
Velocity accuracy	0.03m/s
Heading Accuracy	0.2° /1m baseline
Time accuracy	20ns

## DATA FORMAT

Data output format	- NMEA-0183 - Binary format *.xyz
Data update rate	1 ~ 50Hz selectable
Correction data format	RTCM v3.3/3.2/3.1/3.0
Network protocol	TCP, MQTT <sup>2</sup> , Ntrip Server, Ntrip Caster

## COMMUNICATION

4G modem	FDD-LTE B1/B3/B5/B7/B8 TDD-LTE B38/B39/B40/B41 TDSCDMA B34/B39 WCDMA B1/B2/B5/B8 GSM B2/B3/B5/B8 CDMA1x/CDMA2000 BC0/BC1
UHF modem (optional)	- Working range: 3 – 5 km - Frequency range: 410-470MHz - Protocol: TRIMATLK, TRANSEOT, SATEL, TRIMMARK3, etc. - Channel spacing: 25KHz - Transmit power: 0.5W/1.0W
Bluetooth	BT4.0 dual mode
WiFi	802.11 a/b/g/n/ac
FTP	Support FTP download
NAT-DDNS	Support
Interface	- 1 10-pin connector, including 1 RS232, 1 PPS output, 1 USB and power supply - 1 RJ45 for Ethernet - 1 TNC connector for GNSS antenna - 1 TNC connector for UHF antenna - 1 SMA connector for 4G antenna - 1 SIM card slot

## USER INTERACTION

LED indicators	4 LEDs indicating battery, satellite tracking, RTK status and network
WebUI	- Accessible via Wi-Fi, Ethernet - Support configuration, status checking, data transfer, data storage and system upgrade
Power switch	Power switch on 10-pin cable

## ELECTRICAL

Power consumption	3.5W
Input voltage	- Without battery: 9 - 28V DC - With internal battery: 9 - 22V
Battery (optional)	6600 mAh, support up to 13 hours working time.
MTBF	> 20000 hours

## PHYSICAL

Size	162×142×65 mm, including connectors
Weight	1.05 kg without battery
Housing material	Aluminum alloy

## DATA RECORDING

Storage	8 GB <sup>3</sup> , support loop recording
Storage format	RINEX 3.02/3.04, Binary format *.xyz

## ENVIRONMENTAL

Working temperature	-40 °C to + 75 °C
Storage temperature	-55 °C to + 85 °C
Humidity	95% non-condensing
Waterproof & dustproof	IP67
Drop	Designed to survive a 1m drop onto concrete
Vibration	MIL-STD-810

1. The BDS B2b signal is reserved for future upgrade.
2. The MQTT protocol is customizable.
3. Storage can be expanded to 32GB according to user demands.

All specifications are subject to change without notice.

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