

SATELLITES TRACKING

Channels	1408
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GPS	L1C/A, L1C, L2C, L2P(Y), L5
GLONASS	G1, G2, G3
Galileo	E1, E5a, E5b, E6
QZSS	L1C/A, L1C, L2C, L5
NavIC	L5
SBAS	WAAS, EGNOS, SDCM, BDSBAS, GAGAN
L-Band	Support
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	2.5mm+0.5ppm Horizontally 5mm+0.5ppm Vertically
RTK	8mm+1ppm Horizontally 15mm+1ppm Vertically
PPP	5cm Horizontally 10cm Vertically
SBAS	< 1.0 m 3D RMS
Time Accuracy	20ns

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 <sup>1</sup>	- Working range: Up to 15km with optimal conditions - Frequency range: 410-470MHz - Protocol (TX & RX): LoRa - Protocol(RX): TRIMATLK, TRANSEOT, SATEL, TRIMMARK3, etc. - Channel spacing: 25KHz - Transmit power: 0.5W~2W selectable
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

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

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 enhanced UHF base is not compatible with normal UHF rovers on the market. For different user needs, SingularXYZ also provides normal UHF as an option compatible with UHF of other brands. Please clarify your requirements when placing the order.
2. The MQTT protocol is customizable.
3. Storage can be expanded to 32GB according to user demands.

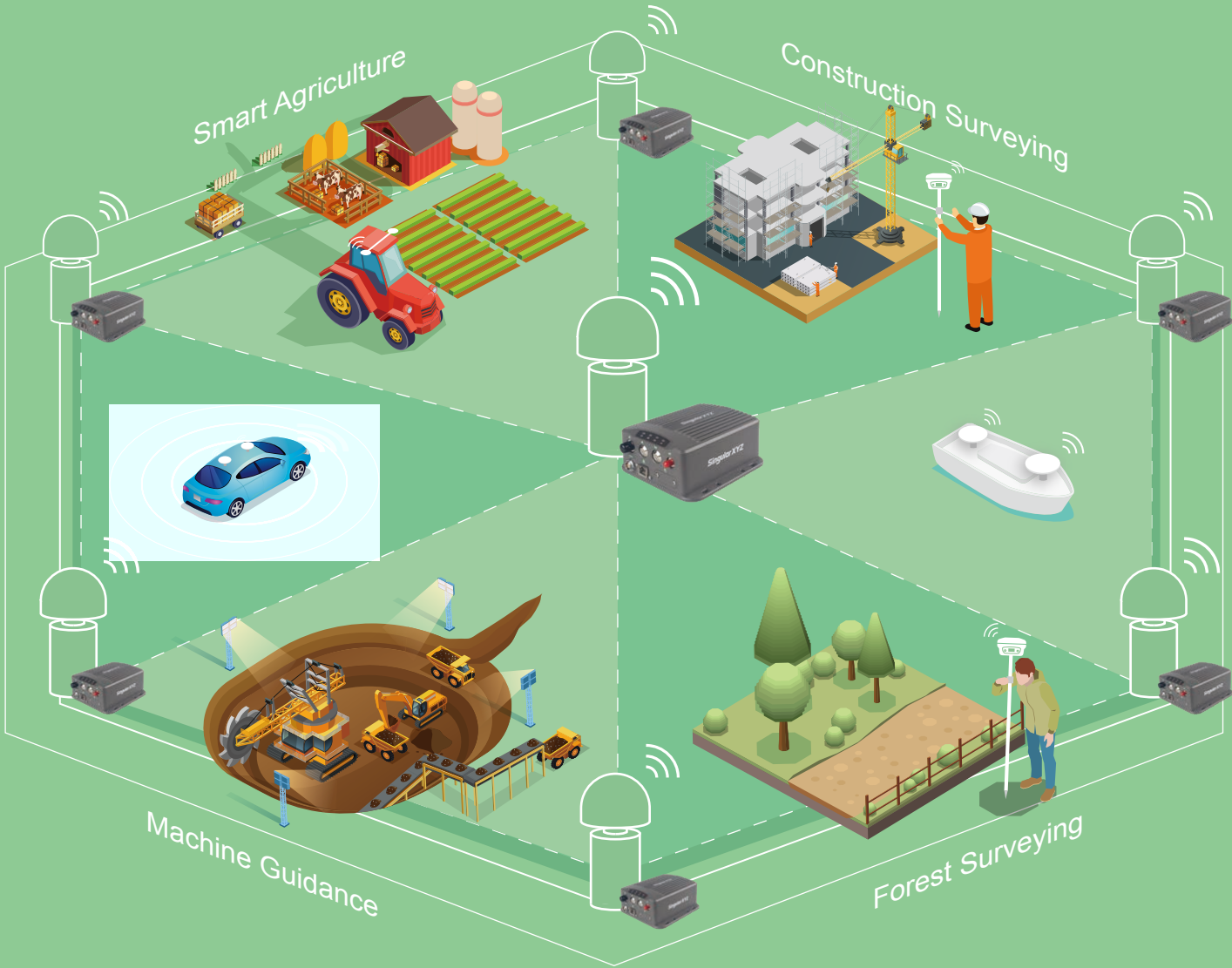
All specifications are subject to change without notice.

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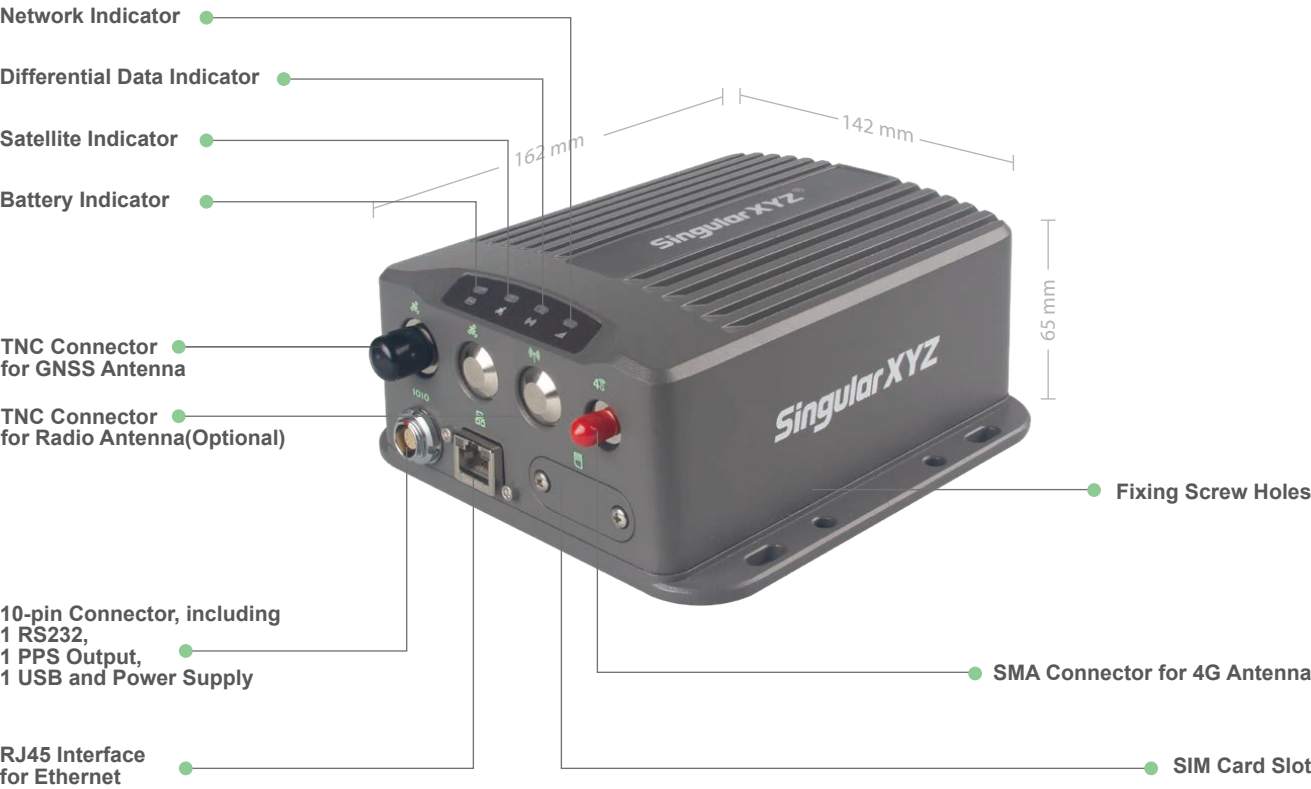
SV100

COST-EFFECTIVE CORS SOLUTION

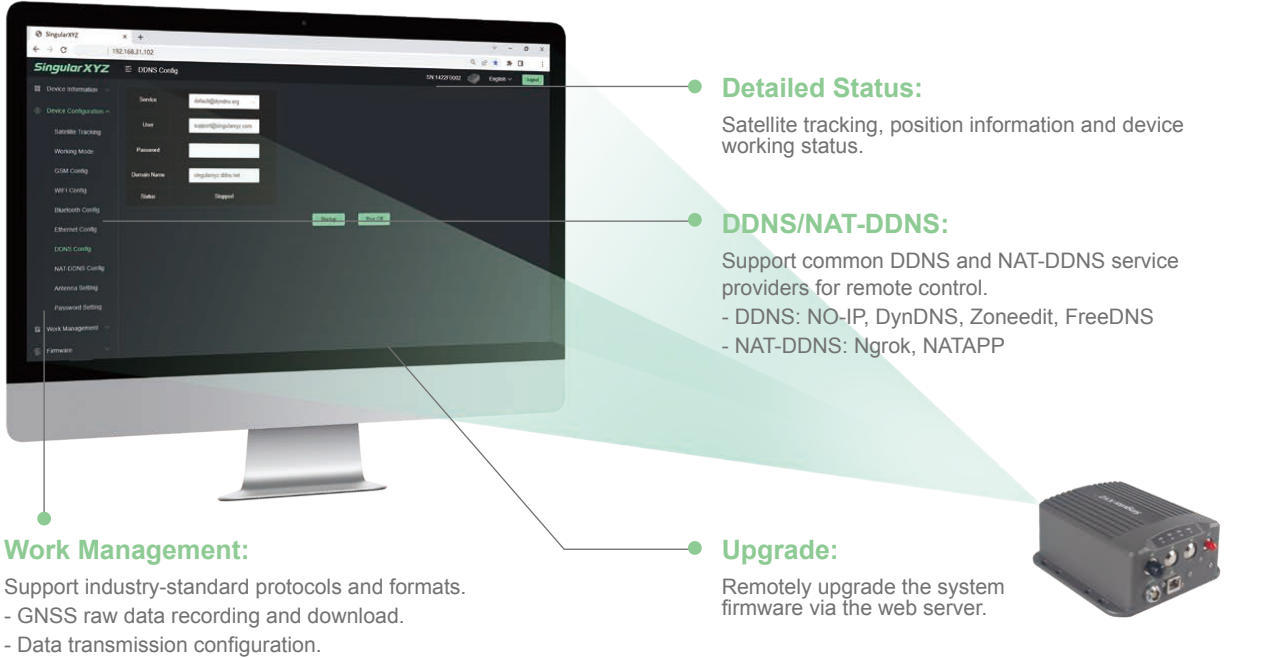
For Precise GNSS Network Infrastructure



Designed for the expertise and convenience of users, the SV100 features precise GNSS data and industry-standard communication for reliable CORS station, stable network/power supply/system for 24/7 operation, comprehensive web UI and remote control for your easy configuration, providing a professional and cost-effective solution for your CORS network.



With all operation functions integrated into the web UI, such as device status, work configuration, system upgrade, etc., and the remote access to the web UI via DDNS/NAT-DDNS, users can realize fully control to the SV100 anywhere, which is convenient for CORS network management.



## RELATED PRODUCTS

**FULL-CONSTELLATION**  
Synchronously tracking of GPS, GLONASS, BDS, Galileo & QZSS and anti-jamming technology delivers high quality and stable GNSS data.

**PROFESSIONAL WEB UI**  
Accessed via Ethernet/WiFi, users can monitor, configure and upgrade the SV100 on the web UI comprehensively and easily.

**STANDARD COMMUNICATION**  
Support industry-standard protocols of TCP, Ntrip server, Ntrip caster, etc., and formats of NMEA-0183, RTCM v3.3/3.2/3.1/3.0, etc.

**STABLE POWER SUPPLY**  
With external power supply and an optional 6600mAh battery, SV100 is not afraid of sudden power failure or voltage instability.

**STABLE NETWORK**  
In addition to stable Ethernet connection, SV100 also embedded 4G module as the backup, ensuring your network stability.

**24/7 CONTINUOUS OPERATION**  
With an MTBF of over 20,000 hours, SV100 shows high system stability for your 24/7 continuous operation.

**REMOTE CONTROL**  
Featuring both DDNS and NAT-DDNS for remote control, you don't need to go to the site any more no matter you are using Ethernet or 4G.

**FLEXIBLE WORK MANAGEMENT**  
Support synchronously GNSS raw data logging and data transmission of COM port, TCP, Ntrip client, Ntrip server, Ntrip caster and radio.

**IP67 RUGGED HOUSING**  
IP67 protection, aluminum alloy housing and MIL-STD-810 anti-vibration design for any work environments.

**LARGE STORAGE**  
With default 8GB or up to 32GB customizable internal memory, loop recording capability for your GNSS raw data storage.

**SA500  
CHOKE RING ANTENNA**

- Full-constellation signal receiving
- High gain and wide beam width
- LNA for out-of-band rejection, suppress the EMI
- GFRP rugged housing with IP67 protection

Full-constellation data supported

COSR stations status monitoring and management

Smart user account management

Real-time connected user management and checking

**SINGULARCASTER  
SOFTWARE**