




## Singular XYZ SV100 Cost-Effective Cors Solution User Guide

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### SATELLITES TRACKING

**BDS:** B1I, B2I, B3I, B1C, B2a, B2b1  
**GPS:** L1 C/A, L1C, L2P, L2C, L5  
**GLONASS:** L1, L2  
**Galileo:** E1, E5a, E5b  
**QZSS:** L1, L2, L5  
**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  
**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, MQTT2 , 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

**Interfac:**

- 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

## 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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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.



## FULL-CONSTELLATION

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



## 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 NETWORK**

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



### **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.

### **IP67 RUGGED HOUSING**

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



### **PROFESSIONAL WEB UI**

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



### **STABLE POWER SUPPLY**

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



### **24/7 CONTINUOUS OPERATION**

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



### **FLEXIBLE WORK MANAGEMENT**

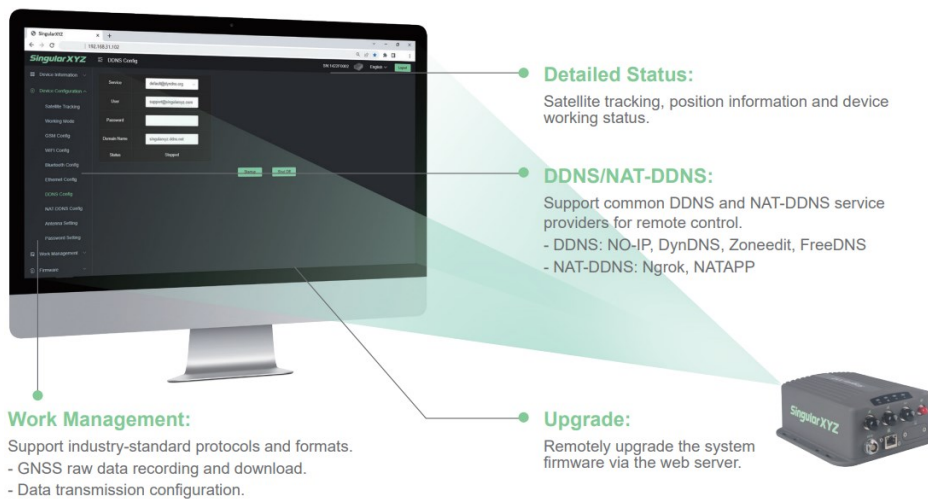
Support synchronously GNSS raw data logging and data transmission of COM port, TCP, Ntrip client, Ntrip server, Ntrip caster and radio.



### **LARGE STORAGE**

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

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



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## Documents / Resources

	<p><b><a href="#">Singular XYZ SV100 Cost-Effective Cors Solution</a> [pdf] User Guide</b> SV100, SV100 Cost-Effective Cors Solution, Cost-Effective Cors Solution, Cors Solution</p>
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## References

- [SingularXYZ](http://SingularXYZ)