

SPECIFICATIONS

GNSS Features

Channels.....	336
GPS.....	L1C/A, L1C, L2C, L2E, L5
GLONASS.....	L1C/A, L1P, L2C/A, L2P, L3
BDS.....	B1, B2, B3
GALILEOS.....	E1, E5A, E5B, E5AltBOC, E6
SBAS.....	L1C/A, L5 (Just for the satellites supporting L5)
IRNSS.....	L5
QZSS.....	L1C/A, L1 SAIF, L2C, L5, LEX
MSS L-Band.....	Trimble RTX ^[1]
Positioning output rate.....	1Hz~50Hz
Initialization time.....	< 10s
Initialization reliability.....	>99.99%

Positioning Precision

Code differential GNSS positioning... Horizontal: 0.25 m + 1 ppm RMS Vertical: 0.50 m + 1 ppm RMS
GNSS static..... Horizontal: 2.5 mm + 0.5 ppm RMS Vertical: 5 mm + 0.5 ppm RMS
Real-time kinematic..... Horizontal: 8 mm + 1 ppm RMS (Baseline<30km) Vertical: 15 mm + 1 ppm RMS
SLink (RTX) ^[2] Horizontal: 4-10 cm Vertical: 8-20 cm
RTK XTRa (xFill) ^[3] Horizontal: 5 + 10 mm/min RMS Vertical: 5 + 20 mm/min RMS
SBAS positioning..... Typically<5m 3DRMS
RTK initialization time..... 2~8s
IMU tilt compensation..... Additional horizontal pole tip uncertainty typically less than 8mm + 0.6 mm/° tilt down to 30°
IMU tilt angle..... 0°~60°

Hardware Performance

Dimension.....	15.3cm(φ)×10.6cm(H)
Weight.....	1.2kg (battery included)
Material.....	Magnesium aluminum alloy shell
Operating temperature.....	-25°C~+65°C
Storage temperature.....	-35°C~+80°C
Humidity.....	100% Non-condensing
Waterproof/Dustproof.....	IP68 standard, protected from long time immersion to depth of 1m IP68 standard, fully protected against blowing dust
Shock/Vibration.....	Withstand 2 meters pole drop onto the cement ground naturally
Power consumption.....	2W
Power supply.....	6-28V DC, overvoltage protection
Battery.....	7.4 V 3400mAh rechargeable, removable Lithium-ion battery
Battery life.....	Single battery: 16h (static mode) 10h (internal UHF base mode) 12h (rover mode)

Communications

I/O Port.....	5PIN LEMO external power port + Rs232 7PIN LEMO +external USB(OTG)+Ethernet 1 UHF antenna interface 1 GPRS antenna interface (internal and external antenna switchable) SIM card slot (standard)
Internal UHF.....	Radio receiver and transmitter, 1W/2W/3W switchable
Frequency range.....	410-470MHz
Communication protocol.....	Farlink, Trimtalk450s, SOUTH, SOUTH+,SOUTHx, HUACE, Hi-target, Satel
Communication range.....	Typically 15km with Farlink protocol
Cellular mobile network.....	4G network communication module, downward compatible with 4G/3G
Bluetooth.....	BLEBluetooth 4.0 standard, Bluetooth 2.1+EDR
NFC Communication.....	Realizing close range (shorter than 10cm) automatic pair between receiver and controller(controller requires NFC wireless communication module else)

WIFI

Modem.....	802.11 b/g standard
WIFI hotspot.....	Receiver broadcasts its hotspot form web UI accessing with any mobile terminals
WIFI datalink.....	Receiver can transmit and receive correction data stream via WiFi datalink

Data Storage/Transmission

Storage.....	64GB SSD internal storage Automatic cycle storage (The earliest data files will be removed automatically while the memory is not enough) Support external USB storage
Data Transmission.....	The customizable sample interval is up to 50Hz Plug and play mode of USB data transmission Supports FTP/HTTP data download
Data Format.....	Differential data format: CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 GPS output data format: NMEA 0183, PJK plane coordinate, Binary code, Trimble GSOF Network model support: VRS, FKP, MAC, fully support NTRIP protocol

Sensors

Electronic Bubble.....	Controller software can display electronic bubble, checking leveling status of the carbon pole in real-time
IMU.....	Built-in IMU module, calibration-free and immune to magnetic interference
Thermometer.....	Built-in thermometer sensor, adopting intelligent temperature control technology, monitoring and adjusting the receiver temperature

User Interaction

Operating system.....	Linux
Buttons.....	2-button and visual operation interface
Indicators.....	2 LED indicators, data interaction indicator and Bluetooth indicator
LCD.....	1.54-inch HD color LCD touch screen with resolution 240*240
Web interaction.....	With the access of the internal web interface management via WiFi or USB connection, users are able to monitor the receiver status and change the configurations freely
Voice guidance.....	The intelligent voice technology provides status and operation voice guidance, supports Chinese/English/Korean/Spanish /Portuguese/Russian/Turkish
Secondary development.....	Provides secondary development package, and opens the OpenSIC observation data format and interaction interface definition
Cloud service.....	The powerful cloud platform provides online services like remote manage, firmware update, online register and etc

[1] It requires a subscription to data service.

[2] RTK XTRa also requires a subscription to the data service, and precision is dependent on GNSS satellite availability. RTK XTRa positioning ends after 5 minutes of radio downtime.

[3] The RTX accuracies depend on correction service chosen. And 95% of the time with initializations are around 5-30 minutes.

Remarks: Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Specifications subject to change without prior notice



SOUTH
Target your success

INNO7

- Smart interactive RTK receiver -



SOUTH
Target your success

SOUTH SURVEYING & MAPPING TECHNOLOGY CO., LTD.

Add: South Geo-information Industrial Park, No.39 Si Cheng Rd, Guangzhou, China
Tel: +86-20-23380888 Fax: +86-20-23380800
E-mail: mail@southsurvey.com euoffice@southsurvey.com
http://www.southinstrument.com http://www.southsurvey.com