

Y1

GNSS RECEIVER

Powerful, Versatile, Compact, Cost-effective



FULL-CONSTELLATION TRACKING

Featuring 1198 channels for full constellation tracking, Y1 GNSS receiver can deliver reliable centimeter-level accuracy positioning. Benefiting from the strong signal tracking and advanced RTK algorithm, Y1 shows stable & high fixed rate even in harsh environments, such as city canyon, forest and other signal-limited scenarios.



ENHANCED COMMUNICATION

Integrated with enhanced UHF modem¹ and 4G modem inside, Y1 receiver provides fluent and stable data streams between rover and base in long working distance. The enhanced UHF can achieve up to 15km² working range with 2W power, no external radio is required, which is convenient for users to carry on field survey tasks.



VERSATILE FUNCTIONALITY

Aiming to provide users with first-class working experience, Y1 receiver combines all common functionalities in rugged IP67 housing. Equipped with 4G/UHF/WiFi/Bluetooth for flexible transmission, built-in IMU for 60° tilt measurement, NFC for simple connection, OLED display for status checking, web UI for easy configuration and upgrading, Y1 can always meet your needs.

SIGNAL TRACKING

Channels	1198
GPS	L1C/A, L2P, L2C, L5, L1C
BDS	B1I, B2I, B3I, B1C, B2a, B2b
GLONASS	L1, L2
Galileo	E1, E5a, E5b, E6, E5 AltBoc
QZSS	L1C, L2, L5, L1C/A
Navic	L5
SBAS	WAAS, EGNOS, SDCM, BDSBAS, GAGAN

ACCURACY

RTK reliability	> 99.99%
RTK initialization	< 10s
Hot start	< 15s
Cold start	< 50s
Re-acquisition time	< 1s
Static post-processing	± 2.5mm+0.5ppm Horizontally ± 5mm+0.5ppm Vertically
RTK	± 8mm+1ppm Horizontally ± 15mm+1ppm Vertically
RTD	± 0.5 m Horizontally ± 1.0m Vertically
SBAS	< 1.0 m 3D RMS
Tilt surveying	< 2.5cm, within 60° tilt

DATA FORMAT

Data recording formats	RINEX 2.X, 3.X, binary data
Correction data formats	RTCM 2.x, 3.x, CMR
Data output formats	NMEA-0183 messages, binary data
Data output rate	1Hz, 2Hz, 5Hz, 10Hz, 20Hz
Supported protocols	VRS, FKP, MAC, Ntrip

COMMUNICATION

BT	BT4.0
Wi-Fi	IEEE 802.11 a/b/g/n 2.4G 5G, support configuration & data download via web UI
4G	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
Interface	1 7-pin lemo port for RS232 transmission and power supply 1 SIM card slot for 4G 1 TNC connector for UHF antenna

ELECTRICAL

Power	6-28V DC
Battery	2×3300mAh, 3.6V, more than 12 hours working time
Power consumption	< 2.85 W ¹

PHYSICAL

Size	12.3 × 12.3 × 7.0cm
Weight	834 g, with batteries inside
Memory	8 GB
Display	0.93" OLED display
Button	2 buttons for power/enter and function
Indicator	2 LEDs indicating satellite tracking and correction data
Housing	Magnesium-aluminum alloy
Speaker	For voice broadcast of real-time status
NFC	NFC easy connection

ENVIRONMENTAL

Working temperature	-30 °C ~ +65 °C
Storage temperature	-40 °C ~ +85 °C
Waterproof & dustproof	IP67
Shock and Vibration	Designed to survive a 2m drop onto concrete
Humidity	100% no condensation

Note:

1. The power consumption of Y1 varies with the different work modes.

All specifications are subject to change without notice.