SingularXYZ®

X1 LITE

GNSS RECEIVER

A Cost-effective Choice For Professional Surveying



STRONG GNSS PERFORMANCE

To ensure superior GNSS performance in every corner of the world, the X1 Lite is equipped with a high-precision GNSS engine for simultaneously tracking GPS, BDS, GLONASS, Galileo, QZSS, IRNSS & SBAS. Adopted with anti-interference technology, the X1 Lite offers reliable positioning in any complex environments.

FLEXIBLE WORK MODES

In order to meet different user demands, X1 supports comprehensive working modes - 8GB storage for static measurement, enhanced UHF module for 15km internal UHF mode and longer external radio mode, Bluetooth connection to PDA CORS mode.

EASY-TO-USE DESIGN

In addition to basic functions, the X1 Lite GNSS receiver is also designed with abundant features to smooth your work. 60° IMU tilt for higher efficiency, NFC for faster connection, 6700mAh batteries for 20hrs operation, IP68 protection for harsh work surroundings and ultra-small size of Φ 133.5 × 67 mm to light your burden.

راوجيوتيك(م.م.ح)الشارقة

RAO GEO TECH.Fze

Authorized Exclusive Partner in UAE of SingularXYZ®

GIVE YOUR WALKS OF XYZ

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X1 LITE GNSS RECEIVER

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
Tilt surveying	<±2.5cm, within 60° tilt

DATA FORMAT

Data output format	- NMEA-0183 - RINEX 3.02/3.04 - Binary format *.xyz
Data update rate	1～50Hz selectable
Correction data format	- RTCM v3.3/3.2/3.1/3.0 - CMR
Supported protocols	Ntrip client, Ntrip Server, Ntrip Caster, TCP

COMMUNICATION

UHF modem[1]	- 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
NFC	Support NFC connection
Interface	- 1 7-pin lemo port for RS232 transmission and power supply - 1 TNC connector for UHF antenna - 1 Type-C USB port for static data download & firmware upgrade

USER INTERACTION

Indicators	4 LEDs indicating battery/charging, satellite tracking, correction data transmission, and static recording
Button	2 buttons for power and function

ELECTRICAL

Power consumption	2.0 W[2]
Input voltage	DC 9~28V
Battery	- 6700 mAh, over 20 hours working time - Fast charge of 3 hours charging time

PHYSICAL

Size	Φ133.5 mm × 67 mm
Weight	870 g
Storage	8 GB[3]
Housing material	Magnesium-aluminum alloy
Speaker (optional)	For voice broadcast of real-time status

ENVIRONMENTAL

Working temperature	-40 ℃ to + 65 ℃
Storage temperature	-55 ℃ to + 85 ℃
Humidity	100% non-condensing
Waterproof & dustproof	IP68
Drop	Designed to survive a 2m drop onto concrete

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 power consumption varies with the different work modes.
3. Storage can be expanded to 32GB according to user demands.

All specifications are subject to change without notice.

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