α-GEO

GeoPuls

Handheld Laser RTK

Laser survey

IMU TILT

FULL GNSS

GSM

IP67

Handheld Laser RTK

GeoPuls is a RTK instrument with laser function. Its appearance is bold and innovative, and its performance is excellent. Based on the experience of the previous generation of laser equipment, we have made more improvements, including no more frequent calibration, and the use of green laser to solve the problem of difficult to aim in bright light. Ina real sense,it realizes measure where you aim, and replacing the pole in the traditional measurement method. However, we are also compatible with the pole mode, which allows the laser measurement to be used even when the pole is used. GeoPuls is a product that surveyors really need.

GEO

PULS



Military-level technology

Military-level processing technology, complete electromagnetic compatibility and shielding technology, minimize system electromagnetic interference, and ensure high-quality observation data and results.

Advanced Multi-Constellation Tracking & PPP Technology

Equipped with a 1408-channel high-performance GNSS board, the GeoPuls delivers full signal tracking across all operational satellite constellations, including GPS, GLONASS, BDS, GALILEO, QZSS and IRNSS, ensuring continuous, high-precision spatial positioning even in challenging environments.
At the meantime, GeoPuls supports state-of-the-art PPP technologies, such a highlight performance makes GeoPuls achieve centimeter-level standalone accuracy with BDS PPP and sub-decimeter precision with Galileo HAS.

IMU Tilt Sensor

GeoPuls is equipped with a fast initialization, calibration free and immune to magnetic interference inertial Measurement Unit(IMU). All users can use this technology to collect orstakeout topo points up to 120°.



Laser Surveying

The world's exclusive patented laser coordinate measurement quick calibration technology can easily achieve centimeter-level measurement accuracy, making measurement more accurate and user-friendly. Besides the green laser module used in the equipment overcomes the difficulty of aiming under sunlight, making field measurement operations faster and more efficient.

Dual-mode Bluetooth

It supports Basic Rate and Enhanced Data Rate operation of traditional Bluetooth, and also supports the latest low-power standard, dual-mode industrial-grade high-speed SPP3.0+ble5.0, suitable for Android/ISO/PC.

GSM

A fast internet connection is guaranteed with a built-in 4G module that accelerate receiving correction data using all telecommunication signals and bands.

IP67

Strictly measured IP67 waterproof and dustproof grade, sturdy and durable, completely suitable for harsh outdoor environments.



SPECIFICATIONS

Performance specification

Satellite signals tracked simultaneously	GPS: L1 C/A, L2C, L2P, L5
	GLONASS: L1, L2
	BEIDOU: B1, B2, B3, B1C, B2a, B2b
	GALILEO: EI/E5a/E5b/E6
	QZSS: L1/L2/L5/L6
	SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM
Channels	1408 channels
Cold start	<60 s
Hot start	<15 s
Positioning output rate	1Hz–50Hz
Signal Reacquisition	<1s
RTK Initialization time	<5s
Initialization Reliability	>99.99%
Time accuracy	20 ns

Positioning

Static GNSS surveying	Horizontal: ±(2.5mm + 0.5ppm)
	Vertical: ±(5mm + 0.5ppm)
RTK surveying	Horizontal: ±(8mm + 1.0ppm)
	Vertical: ±(15mm + 1.0ppm)
Laser surveying	±1cm + 5mm/m

Communication & Data Storage

I/O interface	USB TypeC

Cellular

Integrated full frequency multi band 4G modem, supports WCDMA/CDMA2000/TDD-LTE/FDD-LTE

Bluetooth

Dual-mode Bluetooth

Data format

Differential data	RTCM2.X、RTCM3.X
GPS output data format	NMEA 0183s RTK, Binary code

1-Precision and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. The specifications stated recommend the use of stable mounts in an open sky view, EMI and multipath clean environment, optimalGNSS constellation configurations. Base lines longer than 30 km require precise ephemeris and occupations up to 24 hours may be required to achieve the high precision static specification.

ELECTRYCAL

Power: 5V/2A

Support USB Type-C fast charging

Internal 3350 mAh battery

Battery Life ＞12 h

Hardware

PHYSYCAL

Material	Polymer Engineering Materials
Dimensions	136.5×65×56(mm)
Weight	300g
Key	Power button
Indicator	Power indicator, data link indicator, satellite indicator, Bluetooth indicator
Operating temperature	-20°C to + 75°C
Storage temperature	-40°C to + 85°C
Protection IP	IP67 dust proof, protected from 30min immersion to depth of 1m
Shock	Survive 2 m drop onto the concrete
Vibration	MIL-STD-810G
Humidity	100%, condensing

IMU

IMU	Supported, 4D IMU initialization in 3 seconds
IMU update rate	400Hz
IMU accuracy	＜2.5cm within 120°
IMU tilt compensation	0-120°

GUANGZHOU ALPHA GEO-INFO CO.,LTD

Address: Building A, Runhui Science and Technology Park, Shenzhou Road, Huangpu District, Guangzhou 510663, Guangdong, China

Website: www.alphageo-info.com

E-mail: alphageo@aliyun.com

Phone: +8618565149475

Where Precision Meets Innovation

α-GEO