L2 Plus

Smallest Handheld Laser RTK



As the saying goes, a sparrow may be small, but it has all the vital organs, same as to the **L2 Plus** of Alpha GEO, it is the smallest handheld RTK that integrates laser along with high-precision GNSS board and IMU in the compact body, offering a portable solution for most measurement scenarios.









Unforgettable at first sight

L2 Plus impresses with its unique design and ultra-small body size, the dimension of this RTK receiver is only 61(L)×41(W)×120(H)mm, such a small size RTK receiver can take the place of cellphone that putting it into the pocket is not a problem.

And the weight of L2 Plus is only 170g including internal battery, extremely lightweight that you almost don't feel tired while you hold it for a long time in the field work.

The housing of L2 Plus is made of polymer engineering materials, which has advantages of high strength, high temperature resistance and corrosion resistance, performing well in complex environments.

Practical & Convenient



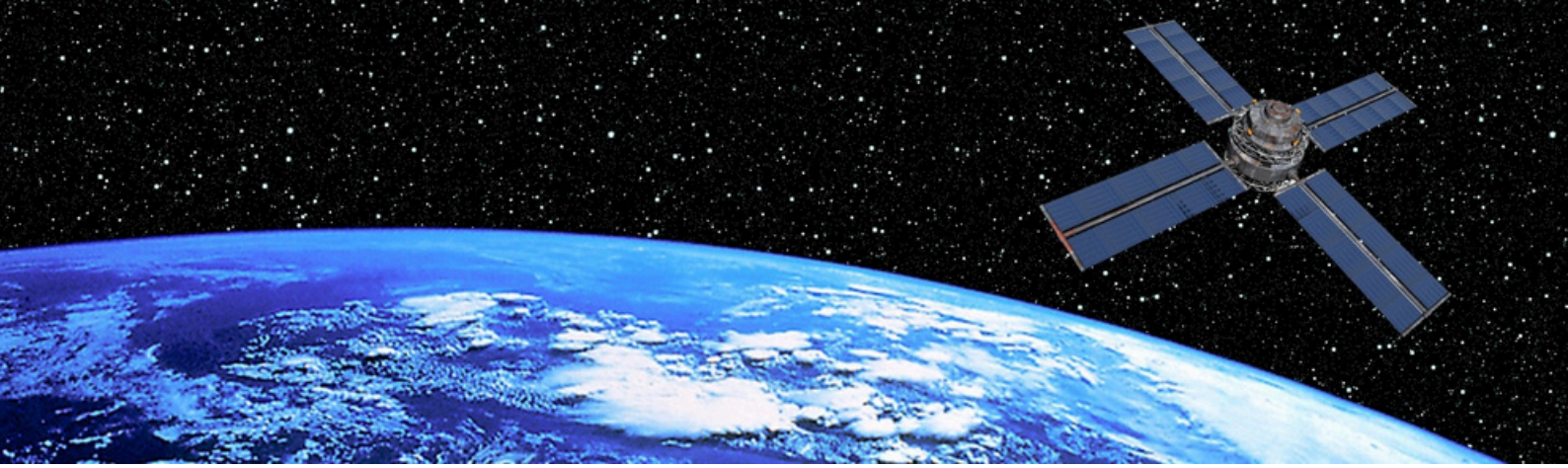
Walking ahead in the surveying

L2 Plus fusion laser measurement technology, which can quick calibrate and easily achieve centimeter-level measurement accuracy, capturing a high-precision coordinate for the target point.



With laser measurement, surveyors can collect the coordinate of points that they cannot reach directly or in dangerous places, like the high voltage towers, manhole covers on busy roads, ensuring the safety of personnel.

L2 Plus shoots a green laser beam that brings unexpected results, brighter laser beam can be found on the target easily, shoot further distance and achieve higher accuracy, which is more suitable for outdoor scenarios.



Signal capturing expert

Empowered by powerful signals tracking algorithm, and with the 1408 channels of GNSS engine, L2 Plus is able to track enormous signals of all running satellite constellations quickly, even weak signals can be captured, which improves the fixed rate and speed, so you don't need to wait a long time to get the fixed solution as used to be.

Such an excellent engine algorithm and calculating capability, that is more than enough to let you easily navigate in complex environments, such as in the thick forest or beside the high buildings, the accuracy can be ensured.





Super Inertial Measurement Unit

The application of IMU in the RTK is a revolutionary advancement. L2 Plus is equipped with a new generation of IMU module as standard, which is fast initialization, calibration free and immune to magnetic interference.

It's incredible how powerful this small body is, it can help you to collect or stakeout the accurate topo points coordinate faster and easier. Moreover, the inclination angle can be up to 120° so that you can reach to a higher target point.

Tilt angle 120°



SPECIFICATIONS

GNSS Performance	
Channels	1408
Data Format	RTCM2.X、RTCM3.X
Signals tracking	GPS: L1C/A, L2C, L2P, L5
	GLONASS: L1, L2
	BDS: B1, B1C, B2, B2a, B2b, B3
	GALILEO: E1, E5a, E5b, E6
	QZSS: L1, L2, L5, L6
	SBAS: WAAS, EGNOS, MSAS, GAGAN, SDCM
Cold start	<60s
Hot start	<15s
Positioning output rate	1Hz ~ 50Hz
Signal reacquisition	<1s
RTK initialization time	<5s
Initialization reliability	>99.99%
Time accuracy	20ns
Positioning accuracy*	
Static GNSS surveying	H: ±(2.5mm + 0.5ppm)
	V: ±(5mm + 0.5ppm)
RTK surveying	H: ±(8mm + 1ppm)
	V: ±(15mm + 1ppm)
Laser surveying	±1cmm + 5mm/m
IMU	
Sensor	Supported, 4D IMU initialization in 3 seconds
Update rate	400Hz
Accuracy	<2.5cm within 120°
Tilt compensation	0 ~ 120°

Communications	
I/O interface	Type-C
Bluetooth	Bluetooth V4.0
Electrical	
Battery	Built-in Li-ion battery, supports external power supply
Capacity	2000mAh
Battery life	>12hrs
Interface	Type-C 5V/2A
Environmental	
Operating temperature	-40℃~+75℃
Storage temperature	-40℃~+85℃
Protection IP	IP67
Shockproof	Survive a 2m pole drop onto concrete
Vibration	MIL-STD-810G
Humidity	100% Non-condensing
Physical	
Dimensions	120mm×61mm×41mm
Weight	170g
Materials	Polymer engineering materials
Keys	Power button
Indicators	1*Satellite indicator 1*Bluetooth indicator 1*Data communication 1*Power indicator

* Precision and reliability may be subject to anomalies due to multipath, obstruction, satellite geometry, and atmospheric conditions. the specification stated recommend the use of stable months in an open sky view, EMI and multipath clean environment, optimal GNSS constellation configurations. Baselines longer than 30km require ephemeris and occupations up to 24 hours may be required to achieve the high precision static specification.

α-GEO

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