Kilichain

NEW LINUX OPERATING SYSTEM
HIGH-PRECISION TRACKING ALGORITHM
ALL-IN-ONE POCKET-SIZE DESIGN IMU GNSS

L7 Pro

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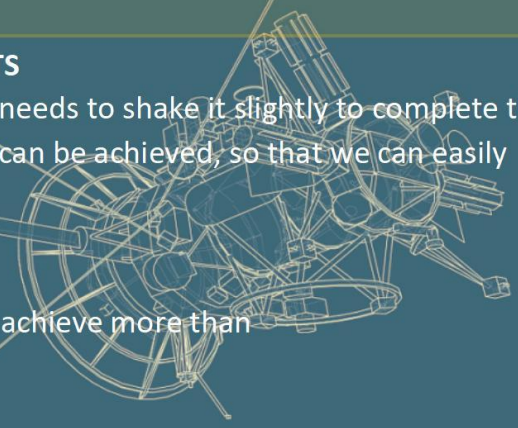
L7 Pro The GNSS receiver has excellent performance, adopts complete GNSS technology, provides first-class GNSS signal tracking, and performs GNSS surveys beyond the usual limits. L7 PRO GNSS adopts the latest innovative technology, and the inertial module can perform automatic tilt compensation in a very compact design. Linux intelligent operating system, voice and WEBUI support WIFI connection. Rover is equipped with Type-C charger, which supports fast charging. Rover supports inserting SIM card to use the network,



TILT COMPENSATION FOR HARD-TO-REACH MEASUREMENTS

The built-in IMU module does not require calibration. It only needs to shake it slightly to complete the initialization, and the 5cm tilt measurement accuracy (≤30 °) can be achieved, so that we can easily measure in various geographical scenarios.

LARGE CAPACITY AND LONG BATTERY LIFE

Built-in battery with a capacity of up to 8400mAh, which can achieve more than 14 hours of continuous battery life.

TWO OPERATING MODES INTERCHANGE

Base station mode and rover mode can be switched freely according to needs which can realize automatic switching between rover station and base station.

ALL-IN-ONE DESIGN

Built-in Bluetooth, radio, WIFI, storage, positioning, inertial navigation, antenna and other modules to meet rich needs of measurement jobs.

Specifications

GNSS	
Channels	1408
GPS	L1C/A, LIC, L2P(Y), L2C, L5
GLONASS	G1,G2,G3
GALILEO	E1, E5a, E5b, E6
BDS	B11, B2I, B3I, B1C, B2a , B2b
QZSS	L1C/A,L1C,L2C,L5
SBAS	L1C/A
Positioning rate	Default 1 HZ, Maximum 20 HZ
Satellite signal reacquisition time	＜1s
GNSS Accuracies (1)	
Real time kinematics (RTK)	Horizontal: 8mm + 1ppm RMS Vetical: 15mm + 1ppm RMS Initialization time:< 5 s Initialization reliability: > 99.9%
Post-processing static	Horizontal: 2.5mm + 0.5ppm RMS Vertical: 5mm + 0.5ppm RMS
Post-processing kinematics (PPK)	Horizontal: 2.5 mm + 1 ppm RMS Vertical: 5 mm + 1 ppm RMS
Positioning rate	Default 1 HZ, Maximum 20 HZ
Time to first fix	Cold start: < 25 s Hot start: < 10 s Signal re-acquisition: < 1 s
RTK tilt - compensated	Tilt angle 0~60°, Tilt accuracy 25mm (within 30° accuracy)
Physicals	
Size	140 mm x 140 mm x 88 mm (5.5 in × 5.5 in × 3.5 in)
Weight	1.03 kg (2.27 lb)
Material	Magnesium alloy shell + ABS / PC
Working temperature	-45°C to +75°C (-49°F to +167°F)
Storage temperature	-55°C to +85°C (-67°F to +185°F)
Shock	Survive a 2 meters of pole drop
Ingress protection	IP67 waterproof and dustproof
Front panel	4 LED indicates 2 physical buttons
Ingress protection	IP67 waterproof and dustproof, protected from temporary immersion
Humidity	100% condensation
Tilt sensor	Calibration - free IMU for pole - tilt compensation. Immuneto magnetic disturbances.

Communications	
External radio	Frequency: 410-470MHz Transmitting power: 5W or 35W Working Range: 15-30Km Link rate: 9600 bps to 460800 bps
Built-in UHF radio	Standard Internal Rx/Tx: 410 - 470 MHz/840MHz Transmit Power: 0.5 W to 1.5 W Protocol: CSS,Kilichain,TT450
WIFI	IEEE 802.11 a/b/g/n
Bluetooth	BT4.1, backward compatible with BT2.x, protocol supports Windows/Android/IOS system
Built-in storage	32 GB internal memory
Data formats	NMEA-0183 NTRIP Client, NTRIP Caster
Correction data format	RTCM2.x, RTCM3.x, CMR
Network modem	LTE FDD:B1/B3/B5/B8 LTE TDD:B38/B39/B40/B41 TD-SCDMA:B34/B39 CDMA:BCO WCDMA:B1/B8 GSM:900/1800MHz
Ports	Mobile station Type-C, SIM card
Electricals	
Lithium battery capacity	8400mAh
Operating time on internal battery	18h(Rover) 11h(Base) (2)
External power input	9 V DC to 36 V DC
Power consumption	As Rover<2.0W As Base<2.2W

*All specifications are subject to change without notice.
(1) Accuracy depends on the open sky, free of multipaths, optimal GNSS geometry and atmospheric condition. (2) Battery life is subject to the particular operating temperature.