SPECIFICATIONS

T7 GNSS Receiver

— Brand new diminutive RTK receiver —

Satellite Signals Tracked Simultaneously	
Signal tracking	965 channels
	GPS: L1, L1C, L2C, L2P, L5, L1 C/A, L2 C/A, L2A
	GLO: G1, G2, G3, L1 C/A, L1P, L2 C/A, L2P, L3
	BDS: BDS-2: B1I, B2I, B3I BDS-3: B1I, B3I, B1C, B2a, B2b*
	GAL: E1, E5A, E5B, E6C, AltBOC*
	QZSS: L1, L2C, L5*
	SBAS: L1*
	IRNSS: L5*
	MSS L-Band（Reserve）
GNSS features	Positioning output rate:1Hz~20Hz
	Initialization time:<10s
	Initialization reliability:>99.99%

Positioning precision			
Code differential GNSS positioning	Horizontal: ±0.25m+1ppm	Vertical: ±0.50m+1ppm	SBAS positioning accuracy: Typically<5m 3DRMS
Precision Static	Horizontal: ±3mm+0.1ppm	Vertical: ±3.5mm+0.4ppm	
Static and Fast Static	Horizontal: ±3mm+0.5ppm	Vertical: ±5mm+0.5ppm	
Real-time kinematic surveying	Horizontal: ±8mm+1ppm	Vertical: ±15mm+1ppm	
Network RTK	Horizontal: ±8mm+0.5ppm	Vertical: ±15mm+0.5ppm	

User interaction	
Operating system	Linux
Buttons	One button operation
Indicators	Four indicate lights
Web UI	Freely to configure and monitor the receiver by accessing to the web server via Wi-Fi and USB
Voice guide	iVoice intelligent voice technology provides status and voice guide
	Supporting Chinese, English, Korean, Russian, Portuguese, Spanish, Turkish and user define
Secondary development	Providing secondary development package

Hardware performance	
Dimension	135mm(Diameter)x84.75mm(Height)
Weight	0.97kg (battery included)
Material	Magnesium aluminum alloy shell
Operating	-45°C~+70°C
Storag	-55°C~+85°C
Humidity	100% Non-condensing
Waterproof/Dustproof	IP67 standard, protected from long time immersion to depth of 1m
Vibration	MIL-STD-810F
Shock	Withstand 2 meters pole drop onto the cement ground naturally
Power Supply	9-28V DC, overvoltage protection
Battery	Internal Li-on, 6800mAh, 3.7V
Battery life	Static mode 10h, Rover RTK mode 8h, Base RTK mode 8h

Communications	
I/O port	5PIN LEMO external power port + RS232, 7PIN external USB(OTG)+Ethernet
	1 radio antenna interface
Wireless modem	Built-in radio with 1W, typically work range can be 5KM (Option 2W up to 8KM)
	Radio repeater
Frequency Range	410-470MHz
Communication Protocol	Farlink, Trimtalk450s, SOUTH, HUACE, Hi-target, Satel
Double Module Bluetooth	BLEBluetooth 4.0 standard, support for android, ios cellphone connection
	Bluetooth 2.1 + EDR standard
NFC Communication	Realizing close range (shorter than 10cm) automatic pair between receiver and controller
	(controller equipped NFC wireless communication module needed)

WIFI	
Standard	802.11 b/g standard
WIFI Hotspot	The WIFI hotspot allows any mobile terminal to connect and access to the internal webserver for the control and moditor receiver
WIFI data link	To work as the datalink that receiver is able to broadcast and receive differential data via WIFI

Data storage/ Transmission	
Data Storage	8GB SSD internal storage
	Support external USB storage and automatical cycle storage
	Changeable record interval, up to 20Hz raw data collection
Data Transmission	USB data transmission, supporting FTP/HTTP data download
Data Format	Differential data format: CMR, sCMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2
	GPS output data format: NMEA 0183, PJK plane coordinates, Binary code
	Network model support: VRS, FKP, MAC, fully support NTRIP protocol

Inertial sensing system	
Tilt Angle	up to 60 degrees
Thermometer	Built-in thermomter sensors, adopting intelligent temperature control technology which can monitor and adjust the temperature of receiver in real time

Linux OS	WIFI	WEB UI	HD Ivoice
All Constellations	IMU (Optional)	Eletronic Bubble	IP67
8GB SSD storage	OTG	NFC	Bluetooth 4.0

Outstanding GNSS performance ▶▶▶
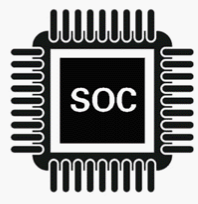
Equipped with new generation the most powerful GNSS RTK engine with 965 channels,T7 can track signal from all consatellations including B3 signal of BDS satellites.Its high-performance GNSS antenna is upgraded with strong anti-interference ability and sensitive satellite signal capture ability, to track more satellite in harsh environments. system is much higher, it can be adapted to the job of longer uninterrupted power.

Ultimate portability ▶▶▶

Highly integrated GNSS antenna, Bluetooth module and WIFI module, leading the design trend of miniaturization, light weight, and portable RTK to a new height.Magnesium alloy housing, tough line design, more delicate surface decoration, stronger sense of technological design, more durable.

Speaker

Innovative design ▶▶▶

Single button boot design, one button evokes all RTK operations. The body screen adopts a translucent high-strength panel, which has a stronger visual sense of technology. Plus four indicator lights , common information is clear at a glance.Double speaker design, three-dimensional sound broadcast, remove noise barriers, and receive clearer sound.

Long Range radio link ▶▶▶

Built-in transceiver integrated radio, working frequency 410-470MHz. TrimTalk450S,TrimMark3, SOUTH, CHC, SATEL,HI-TARGET are all compatible.Equipped with Far-Link "Simultaneous" radio module, based on Farlink protocol, it can increase the sensitivity and efficiency of radio signal, achieve the typical working range as 5KM operation, and meet the needs of customers for small and medium-scale .

5km

10h

Barrier-Free Measurement ▶▶▶

Built-in 6800mAh high-capacity battery, the battery life is more than 10 hours, one charge, meets all-day work.Equipped with fast charging charger, which can be fully charged within 5 hours.The battery core can be recharged with long life,and performance is more secure and reliable.

IMU survey(Optional) ▶▶▶

Built-in IMU compensator, correct the coordinates according to the tilt direction and angle of the centering rod automatically within 60°,assist you quickly and accurately survey or stake out points without leveling the pole, improve working efficiency by 20%.

60°