GNSS POSITIONING SYSTEM





Intelligent, Versatile, Innovative, Compact, Lightweight, Rugged



GNSS POSITIONING SYSTEM

T-cube

HOW IT WORKS



Compared with regular GNSS receiver, how can T-cube work without internal radio and network modules?

After connecting with controller or Android cellphone or tablet via Bluetooth, the internal antenna receives GPS + GLONASS + BEIDOU satellites signals, and transmits to the mainboard. Meanwhile, the controller or Android device acquires differential correction signals from CORS via the network of telecom or WIFI, and then transmits to the mainboard, which will figure out the precise coordinates based on data of satellite and differential signals.



APPLICATIONS



T-cube is capable to work perfectly as a VRS RTK rover mounted on a range pole, which is ideal for construction, cadastral and land survey.



By putting it on a backpack, surveyor can free his hand from pole and focus on controller, moving around easily for various kinds of terrains. Ideal for land investigation, electric pipeline survey, etc.



By being mounted on specific bracket, T-cube can work with a tablet by carrying on hands, achieving a more convenient operation on a larger monitor of the tablet.



T-cube can be fixed on top of vehicle to record moving track. Ideal for patrolling, monitoring, scheduling management.

TECHNICAL FEATURES



The innovative split-type design avoids the electro-magnetic interference from controller to the mainboard. T-cube only weighs 500g with a hand's size, ideal to carry no matter on hand or on the back.



T-cube is a compact multi-constellation receiver designed to deliver centimeter accuracy to a variety of applications. That enables T-cube to support GPS, GLONASS, GALILEO and BEIDOU signals for improving accuracy and speed of positioning.



The internal antenna gives T-cube an excellent tracking ability with outstanding precision and stability. At the meantime, multi-path interference is greatly reduced.



WIFI module enables connection with Android cell-phone and tablets, and also WIFI to get Internet differential corrections from CORS. The Bi-module Bluetooth realizes fast connection with controllers as well.



Got frustrated by buttons and lights? Tcube has only 2 buttons, 1 I/O interface, and 4 indicator lights to satisfy all operation for your job. Within 3 minutes, you can get your work started on the field.



good performance.

Equipped with an 8GB SSD, T-cube can essentially improve data management efficiency and provide enough storage space during continuous work. It also supports an external USB storage for data transfer.

Intelligent storage ability

SANDING T-cube is equipped with 8GB Solid State Disk that ensures adequate storage space for data collection, as well as the stability of high data sampling rate.





The new LEMO interface is designed to integrate data

pullout and insertion experiments, and still maintains

transmission and charging, it's carried out thousands of

Outstanding receiver housing

Functional LEMO interface

The brand new design for improvement of waterproof, and the steadiness of inner structure, S660N new housing can endure every kind of shocks to protect inner components from looseness and damage.



L-Band & PPP

With the high-performance of GNSS board, T-cube reserves **L-Band** signal tracking, and **PPP** (Precise Point Positioning) function.



SPECIFICATIONS

GNSS Performance	
Channels	336/692
GPS	L1/L2/L5
GLONASS	L1/L2/L3
BDS	B1/B2/B3
GAL	E2-L1-E1/E5a/E5b/E6/AltBOC
SBAS	L1 C/A, L5
L-Band	Optional
Update Rate	1Hz~20Hz
Reacquisition	<1.5s
Cold Start	<60s(40s, integrated with acceleration module)
Real Time Kinematic	
Horizontal	0.010m+1ppm
Vertical	0.020m+1ppm
Initialization time	Typically<10 seconds (Baseline<10km)
Initialization reliability	Typically>99.9%
Code Differential GNSS Positioning	
Horizontal	0.30m+1ppm
Vertical	0.50m+1ppm
Static	
Horizontal	0.0025m+1ppm
Vertical	0.005m+1ppm
Single Point Positioning	
Horizontal	±1.5m
Vertical	±3.0m
PPP(Precision Point Positionning)	
Horizontal	±0.1m
Vertical	±0.2m
Convergence time	20 min
Communication	
	LEMO port (Enable to switch to Ethernet port and OTG function)
Bluetooth	Bluetooth V2.1/ Bluetooth V4.0, support EDR
WIFI	802.11 b/g standard
Data Storage and Transmission	
Memory	SGB SSD (Solid State Disk) internal memory
Sampling rate	
	Standard NMEA-0183: GSV, AVR, RMC, HD1, VGK, VHD, RO1,
Novigation output	GGK, GGA, GSA, ZDA, VIG, GSI, PJI, PJK, BPQ, GLL, GRS
Navigation output	TRA, SLB, EDP
	IPI, TRI, VOM, STA, DEV, AAT, REC, DAL
Poforonco I/O	
Electrical	
Battery	6800mAb Li-ion battery built in 3.7V
Battery life	Typically 8 hrs or more
Environmental	
Operating temperature	-30°C~+65°C
Storage temperature	-35°C~+75°C
Operating humidity	5%~95% R H non-condensing
Shockproof	Withstand drop from 1 5m to concrete
Waterproof/Dustproof	Test to IP67 standard
Physical	
Dimensions(mm)	115(L)×115(W)×40(H)
Weight	540g(Internal battery included)

Remarks: Measurement accuracy and operation range might vary due to atmospheric conditions, signal multipath, obstructions, observation time, temperature, signal geometry and number of tracked satellites. Specifications subject to change without prior notice

SANDING SANDING OPTIC-ELECTRICS INSTRUMENT CO., LTD. Add: Geomatics Industry Park, No. 39 Si Cheng Road, TianHe D

Add: Geomatics Industry Park, No. 39 Si Cheng Road, TianHe District, Guangzhou 510663 P.R. China Tel: +86-20-23380888 Fax: +86-20-22139032 E-mail: export@sandinginstrument.com