The Kronos 500 GNSS RTK System

COMPACT AND COMPLETE

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The Kronos 500 is a new generation compact GNSS RTK receiver system, weighing in only at 950g, with all the features of the Kronos 200M and more. This would allow the user to literally hold the advanced solution to RTK issues in the palm of his hand with ease.

KEY FEATURES AT A GLANCE:

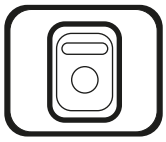
New compact housing

All new, compact, impact resistant housing, constructed with robust magnesium alloy, for lightweight operation and able to resist drops to concrete from a height of 2.5m.

Inbuilt tilt sensor

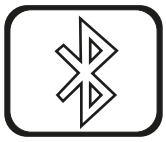
The inbuilt tilt sensor allows operation of the receiver within 30 degrees of tilt, improving user efficiency and alleviating operation rigidity.

Auto electronic level calibration



The system allows for automatic correction of the survey results, using an electronic bubble sensor. This would allow for jobs to be done without the prior need to level the system

New Bluetooth™ module

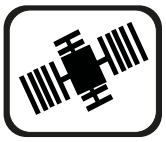


The Kronos 500 is equipped with the new v4.0 Bluetooth™ module, which allows for a faster and more reliable connection with external devices, including smartphones and tablets.

High portability

The Kronos 500 is now conveniently portable, thanks to the small physical size, and new lightweight casing.

Advanced Satellite constellations compatibility



At the core of the Kronos 500 technology is an advanced GNSS board that allows for GPS, GLONASS, and COMPASS compatibility, including the COMPASS B1, B2 and B3 signals. This allows for the receiver to function based on stand-alone COMPASS satellite signals.

Improved and intelligent system operation

The Kronos 500 system is able to operate intelligently, allowing it to operate faster with higher stability, with reduced power consumptions compared with its predecessors. It also features a real time self-check system to ensure maximum efficiency of operation.

Advanced datalink module

The Kronos 500 features a new datalink capability, which would allow it to be compatible with most of the radio communication protocols available currently, and also seamless connectivity to present-day CORS systems.

SPECIFICATIONS

Surveying Performance	
Channel	220 Channels
Signal Tracking	BDS B1, B2, B3
	GPS L1C/A, L1C, L2C, L2E, L5
	GLONASS L1C/A, L1P, L2C/A, L2P, L3
	SBAS L1C/A, L5 (Just for the satellites supporting L5)
	Galileo GIOVE-A, GIOVE-B, E1, E5A, E5B
	QZSS, WAAS, MSAS, EGNOS, GAGAN, SBAS
GNSS Features	Positioning output rate: 1Hz~50Hz
	Initialization time: < 10s
	Initialization reliability: >99.99%
Positioning Precision	
Code Differential GNSS Positioning	Horizontal: ±0.25 m + 1 ppm
	Vertical: ±0.50 m + 1 ppm
	SBAS positioning accuracy: typically<5m 3DRMS
Static GNSS Surveying	Horizontal: ±2.5 mm + 0.5 ppm
	Vertical: ±5 mm + 0.5 ppm
Real-Time Kinematic Surveying	Horizontal: ±8 mm + 1 ppm
(Baseline<30km)	Vertical: ±15 mm + 1 ppm
Network RTK	Horizontal: ±8 mm + 0.5 ppm
	Vertical: ±15 mm + 0.5 ppm
	RTK initialization time: 2~8s
Physical	
Dimension	12.9 cm×11.2cm
Weight	970g (including installed battery)
Material	Magnesium aluminum alloy shell
Environmental	
Operating	-45^{0}C ~ +60^{0}C
Storage	-55^{0}C ~ +85^{0}C
Humidity	Non-condensing
Waterproof/Dustproof	IP67 standard, protected from long time immersion to depth of 1m
	IP67 standard, fully protected against blowing dust
Shock and Vibration	Not operating: Withstand 2 meters pole drop onto the cement ground naturally
	While: Withstand 40G 10 milliseconds sawtooth wave impact test
Electrical	
Power Consumption	2W
Battery	Rechargeable, removable Lithium-ion battery
Battery Life	Single battery: 7h (static mode) 5h (internal UHF base mode) 6h (rover mode)
Communications and Data Storage	
I/O Port	5PIN LEMO external power port + RS232
	7PIN LEMO RS232 + USB
	1 network/radio data link antenna port
	SIM card slot
Wireless Modem	Integrated internal radio receiver and transmitter 0.5W/2W
	External radio transmitter 5W/25W
Working frequency	410-470MHz
Communication protocol	TrimTalk450s, TrimMark3, PCC EOT, SOUTH
Cellular Mobile Network	WCDMA3.5G network communication module, GPRS/EDGE compatible, CDMA2000/EVDO 3G optional
Double Module Bluetooth	BLEBluetooth 4.0 standard, support for android, ios cellphone connection
	Bluetooth 2.1 + EDR standard
NFC Communication (Optional)	Realizing close range (shorter than 10cm) automatic pair between Kronos 500 and controller (controller equipped NFC wireless communication module needed)
Data Storage/Transmission	4GB internal storage, more than 3 years raw observation data (about 1.4M/day), based on recording from 14 satellites Plug and play mode of USB data transmission
Data Format	Differential data format: CMR+, CMRx, 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, supporting NTRIP protocol
Inertial Sensing System (Optional)	
Tilt Survey	Built-in tilt compensator, correcting coordinates automatically according to the tilt direction and angle of the centering rod
Electronic Bubble	Controller software display electronic bubble, checking leveling status of the centering rod real time
User Interaction	
Buttons	One-button operation, visual operation, convenient and efficient

Your HORIZON Partner

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