



# THE HORIZON KRONOS 300

GNSS RTK system.  
NOW YOU CAN

**HORIZON®**

**MEASURE RIGHT**



ASME UANHE ZAobao AWARD  
2007 Singapore Prestige Brand  
Winner, SPBA - Regional Brands



ISO 9001:2008  
CERTIFICATE NUMBER: F572416

[www.horizon.sg](http://www.horizon.sg)

The Kronos 300 is a GNSS receiver that allows you to do more, a HORIZON GNSS product which continues with the tradition of performance excellence shown by the Kronos 200 GNSS system. It now features a more robust and rugged housing, within which resides a faster and more powerful BD970 board built on the proven Maxwell 6 technology. Like the Kronos 200, the Kronos 300 also features an in-built GSM/GPRS module, as well as an in-built UHF transmitter module for a complete communication interface. The UHF module has been upgraded to a power-switchable type, which would allow a transmission range of beyond 8km independently.

The completely new Kronos 300 housing now features an illuminated display LED screen, which would let you check on various operation and satellite statuses during operation. It has also been designed to be very rugged and robust, providing safety contingencies for accidental drops from a height of 2metres onto concrete during operation. The waterproofing capability of the Kronos 300 is rated at IP67. Working in the rain (if necessary) would not present any problems.

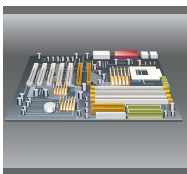
The Kronos 300 has also been fitted with two in-built batteries, with a total capacity of 8800mAh. This would allow you to operate the receiver up to 20hrs when fully charged.

You can now do more with the Kronos 300. Yes you can.



## KRONOS 300 GNSS SYSTEM

### FEATURES AT A GLANCE:



Featuring the Upgraded Trimble Maxwell 6 Technology BD970 Motherboard.  
An amply proven technology, now made better.



Inbuilt Radio Transmitter  
The 0.5-2W (switchable) UHF radio module allows coverage of beyond 6km under optimal conditions.



Inbuilt GPRS/GSM Module, for a complete and versatile communication interface.



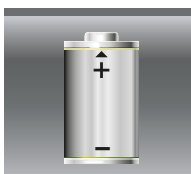
Advanced OLED  
With 1.53" OLED, mode settings and operation status can be easily accessed during operation



UHF Transmitting Antenna- All Direction Antenna (100W, gain 7.5dBi) for extended transmission range.



Outstanding Waterproof Capability  
IP67 Standard and allows for water immersion of up to 1metre.



Inbuilt Twin Batteries  
With a total capacity of 8800mAh, the receiver is capable for operations of up to 20 hours



New and Extremely Rugged Housing  
Designed and built to withstand a 2m drop onto concrete or other hard surfaces.

# KRONOS 300 GNSS SYSTEM TECHNICAL SPECIFICATIONS

Internal Memory		4G (15 static days with frequency of 1 Hz)
Number of Channels		220
Satellite signals tracked	GPS:	Simultaneous L1 C/A, L2E, L2C, L5
	GLONASS:	Simultaneous L1 C/A, L1 P, L2 C/A (GLONASS M Only), L2 P
	SBAS:	Simultaneous L1 C/A, L5
	GALILEO:	Simultaneous L1 BOC, E5A, E5B, E5AltBOC1
	COMPASS:	B1,B2
	QZSS:	L1 C/A, L1 SAIF,L2C, L5
<b>PERFORMANCE SPECIFICATION</b>		
Initialization time:		45 sec
Signal recapture:		1 sec
RTK signal initialization:		20 sec
Velocity Accuracy		Horizontal-0.007 m/s Vertical 0.020m/s
Acceleration		11 g
<b>Maximum Operating Limits</b>		
Velocity		515m/s
Altitude		18,000 m
Up to 50 Hz raw measurement & position outputs.		
Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth		
Proven low elevation tracking technology.		
<b>PROCESSORS</b>		
Trimble BD970 main board, GSM/GPRS module: SIEMENS MC75i		
GSM/GPRS bands supported		Single band operation at 800 MHz, Dual band operation at 900 MHz and 1800 MHz, Tri-band operation at 800 MHz, 900 MHz, 1800 MHz.
PACKET DATA SERVICE OF GPRS		CLASS 10
Maximum rate of transmission		85.6 kbit/s.
Embedded TCP/IP protocol suite that supports multiple links and provides ACK answer and large-capacity cache.		
<b>CONNECTION DEVICES</b>		
Connectors I/O: 9-pins serial port (baud rate up to 115.200kbps)		
Multicable with USB interfaces for connecting with PC.		
2.4GHz Bluetooth device class II		Maximum range of 50m.
<b>INTERNAL RADIO</b>		
Integrated Radio Receiver/Transmitter		0.5-2W selectable
		410-430MHZ,430-450MHZ,450-470MHZ Optional ( default 0.5W,450-470MHZ)
		UHF Range(varies with terrain/temperature, and power selected): >4km – 8km
		With External Radio(optional):25W, UHF Range(varies with terrain/temperature):8-10km typical, 15-20km optimal

<b>GSM/GPRS MODEM</b>	
External cellphone support for GPRS/GSM (2G default,3G Optional), Module for network RTK (CORS) Operations, VRS ( optional)	
Network RTK (via CORS) range varies w/ temperature/GPRS Data rate): 20-50km	
<b>SERIAL PROTOCOLS</b>	
Reference outputs	CMR+, CMRx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1.
Navigation outputs:	ASCII (NMEA-0183 GSV), AVR, RMC, HDT, VGK, VHD, ROT, GSK, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS, GSOF.
<b>RECEIVER ACCURACY</b>	
Static horizontal accuracy	3mm ± 1ppm (RMS).
Static vertical accuracy	5mm ± 1ppm (RMS).
Fixed RTK horizontal accuracy	8mm ± 1ppm (RMS).
Fixed RTK vertical accuracy	15mm ± 1ppm (RMS).
Code Differential GNSS Positioning ( Horizontal)	25cm ± 1ppm (RMS).
Code Differential GNSS Positioning ( Vertical)	50cm ± 1ppm (RMS).
SBAS differential positioning accuracy	<5m 3DRMS
Stand Alone RTK positioning accuracy	1.5m (CEP).
<b>POWER SUPPLY (12-15V DC EXTERNAL POWER INPUT)</b>	
Rechargeable, 7.2V, 8800mAh Lithium-Ion	
Working time	Typically 18-20 hours for built-in battery (varies with operation mode and environmental factors)
<b>PHYSICAL SPECIFICATIONS:</b>	
Size	Dimensions (LxWxH) 165mm x 168mm x 122mm (6.5in x 6.6in x 4.8in)
Weight	Weight 1.85kg (including inbuilt battery and radio module)
Operational temperature	- 45°C to 60°C (-49°F to 140°F)
Storage temperature	- 55°C to 85°C (-67°F to 185°F)
Humidity	Up to 100%
Waterproof/Dustproof	IP67
Shock & Vibration resistance	2m drop against hard surface