ROVA 1

Tri-freq Algorithm
Picking 3 optimal Beidou signals for speedy calculation.

5 constellations
GPS, GLONASS, BEIDOU, GALILEO, QZSS

"Fixed!" fast and easily

1598 channels

Mk 803

SoC
System-on-Chip technology

40 nanometer process

16 frequencies

Industry-leading small power consumption

Empowered by Mk-803 SoC board, ROVA 1 is an ideal GNSS rover that you can imagine - handy size with featherweight, exceptional fixing speed and accuracy especially in touch condition, power-saving, and reliable IMU tilt correction.

LANDMARK SURVEY ENGINEERING

SPECIFICATIONS

ROVA

POSITIONING
Board Model	Mk-803
Channels	1,598
GPS	L1 C/A, L2C, L2P, L5
GLONASS	L1 C/A, L1P, L2C/A, L2P
BEIDOU	B1, B2, B3
GALILEO	E1, E5A, E5B, E6, E5 AltBOC
QZSS	L1, L2C
L-band	Reserved for upgrade
Positioning Rate	1-20Hz

ACCURACY
Code Differential	H: 0.25m ± 1ppm (rms)
	V: 0.50m ± 1ppm (rms)
Static	H: 2.5mm ± 0.5ppm (rms)
	V: 5mm ± 0.5ppm (rms)
Real-time Kinematic	H: 8mm ± 1ppm (rms)
	V: 15mm ± 1ppm (rms)
Network RTK	H: 8mm ± 0.5ppm (rms)
	V: 15mm ± 0.5ppm (rms)

IMU MEASUREMENT
Tilt Angle	Maximum 60°
Accuracy	10mm + 0.7mm/°

DATA STORAGE
Type & Storage	SSD 4GB
	External USB Pen drive
Data Tranfer	USB Transfer
	Supports FTP/HTTP download
GPS Output Format	CMR+, sCRMx, RTCM 2.x, RTCM 3.x, NMEA 0183, PJK plane coordinates, binary code VRS, FKP, MAC
Network Model	Ntrip fully supportable

COMMUNICATION
I/O	5pin LEMO external power + RS232
	Type-C (OTG+Fast Charge+Ethernet)
	Radio antenna TNC interface
UHF Radio Module	X-link 2W
	410-470MHz
Protocol	TrimTalk 450s, TrimMark 3, PCC, EOT, SOUTH Farlink
Cellular	Through controller's network
WiFi	802.11b/g/n
	Hotspot/Data Link
Bluetooth	Bluetooth 2.1 + EDR and 4.0
NFC	<10cm

INTERFACES
Button	1
LED Indicator	Data Link, Satellite, Recharging

POWER SUPPLY
Battery	Internal Li-on Battery 7.4V, 6,800mAh
Operating Time	Rover Mode 15h

PHYSICAL
Dimension	80mm(H), 130mm (W)
Weight	790g
Operating Temp.	-45-75°C
Proof	IP68
	2m drop on hard surface
	40G 10ms sawtooth wave

ITEM LIST (ROVER)	ITEM LIST (BASE)
Receiver	Receiver
Carrying Case	Carrying Case
Charger	Charger
Type-C Cable	Type-C Cable
Radio Antenna	Radio Antenna
Carbon Fiber Pole	30cm Pole
HI Measuring Plate	HI Measuring Plate
Connector	Connector

Data Collector H6

Android 8.1
5" HD screen
6GB RAM/64GB ROM
Full Keyboard
IP67

LANDMARK SURVEY ENGINEERING

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