

M1G2

Portable Heading Solution

M1G2 is suitable for monitoring, machine control and CORS reference station. It has rich data streams such as radio, serial port, Bluetooth, WIFI and 4G network. User can use any phone or tablet to configure device easily from the powerful Web UI.



Multi-constellation and Multi-frequency

With 1100 channels of GNSS tracking, M1G2 covers multiple GNSS signals to provide stable and reliable data source.

Rich Data Interface

M1G2 supports multiple data interface such as serial port, 1PPS, event to demand various of applications. Its powerful Linux system ensures a smooth operation without any worries.

Rich Wireless Communication

M1G2 supports WIFI, Bluetooth, Ethernet, SIM card. User can send or receive data through any methods.

Suitable for Base and Rover

Its lightweight design makes it possible to set up M1G2 as rover or base station for different applications.

L-Band Atlas

Atlas is a service to provide global precision correction service over L-band satellites. With ATLAS subscription, M1G2 is able to achieve centimeter accuracy without any correction data.

Web UI

It is able to view position status, configure device, download data and update firmware from Web user interface with any phone, tablet or PC.

Smart Alert

It will alert user through email or SMS once the charger is disconnected, temperature is too high or memory storage is almost full.

Rugged Design

M1G2 main body is using aluminum alloy materials to provide strong shock and vibration resistant characteristics. IP67 certification ensures operation in various of tough environments.

Product Specification

GNSS		Operation Range	3 ~ 5 Km typically 10 Km with optimal conditions ²		
Satellites Tracking	GPS: L1CA/L1P/L1C/L2P/L2C/L5 BDS: B1I/B2I/B3I/B1C/B2a/B2b/ ACEBOC GLONASS: G1/G2/G3, P1/P2 GALILEO: E1/E5a/E5b/E6/ALTBOC QZSS: L1CA/L1C/L2C/L5/LEX IRNSS: L5 SBAS ¹ : L1/L5 L-Band: Atlas H10/H30/Basic	Protocol	Satel, PCC, TrimTalk, TrimMark III, South, HiTarget		
	Channels	1100			
	Signal Reacquisition	< 1 sec			
	Cold Start	< 60 sec			
	Warm Start	< 30 sec			
	Hot Start	< 10 sec			
	Initialization Reliability	> 99.9%			
	Update Rate	10 Hz standard, 20 Hz optional			
	Operation System	Linux			
	Internal Memory	8 GB			
External Memory	Support SD card				
Performance		Communication			
High Precision Static	H: 2 mm + 0.1 ppm V: 3 mm + 0.4 ppm	Bluetooth	BT5.0		
Static/Fast Static	H: 2.5 mm + 0.1 ppm V: 3.5 mm + 0.4 ppm	WiFi	802.11 b/g/n, hotspot/client mode		
RTK	H: 8 mm + 1 ppm V: 15 mm + 1 ppm	Ethernet	Support		
Code Differential	H: 0.3 m V: 0.6 m	Port	2 x Lemo-0, 2-pin, DC in 2 x GNSS TNC female 1 x LTE, SMA female 1 x UHF 1 x Nano SIM 1 x TF card 1 x DB26: 2 x RS485 1 x RS232 1 x CAN 1 x Mini USB, support OTG 1 x 1PPS, SMA female 1 x Event, SMA female 1 x RJ45 ethernet		
SBAS	H: 0.3 m V: 0.6 m		Baud Rate	9600 ~ 115200 bps	
L-Band	Atlas H10: 4 cm RMS Atlas H30: 15 cm RMS Atlas Basic: 30 cm RMS		Web UI	Support	
1PPS	10 ns		NMEA Output	NMEA0183, NMEA2000, Binary	
Heading	0.16° @0.5 m baseline		Correction Data	RTCM2.X, RTCM3.X (MSM), CMR, CMR+, DGPS, BINEX, RAW	
	0.08° @1.0 m baseline		Data Recording	Support 8 recording simultaneously	
	0.04° @2.0 m baseline		Recording Format	Binary, RINEX, BINEX	
0.02° @5.0 m baseline	Recording Interval ²		2s, 5s, 10s, 15s, 30s, 60s 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz	Data Stream	1 x Bluetooth 3 x Serial port 4 x NTRIP server streams 1 x NTRIP client streams 5 x Socket (TCP/UDP) streams
Internal Modem			Smart Alert	Email and SMS alert	
Support Band	Global GSM/WCDMA/LTE		FTP Function	FTP server FTP client (FTP push)	
Power Supply		NTP Server	Support		
Voltage	10~28 VDC with over-voltage protection	Others	DDNS, SNMPD, Firewall		
Internal Radio		Physical			
Type	TX and RX	Dimension	150 x 105 x 34 mm		
Frequency Range	410 ~ 470 MHz	Weight	550 g		
Channel Spacing	12.5 KHz / 25 KHz	Operating Temperature	-40°C ~ +65°C		
Emitting Power	1 W	Storage Temperature	-45°C ~ +80°C		
		Water/Dust Proof	IP67		
		Shock and Vibration	Survive a 1.2 m drop on concrete floor		
		Humidity	Up to 100%		
		Indicators	Heading, radio, cellular, WiFi, Bluetooth, satellite, power		
		Certificate	CE		

1. BAS supports WAAS, EGNOS, GAGAN, SDCM, MSAS.

2. The maximum rate depends on the GNSS registration.

