

M1G2

High Precision Monitoring GNSS receiver



M1G2

Key Features

The M1G2 high-precision GNSS Receiver is characterized by small size, complete functions, and multiple interfaces, which can be used as high-precision GNSS receiver for engineering and monitoring purposes

• Multi-constellation / Multi-frequency

With 1100 channels of GNSS tracking, M1G2 covers multiple GNSS signals to provide stable and reliable data source. Support BD3 satellite signal reception.

• Rich Wireless Communication

M1G2 supports Ethernet, SIM card, Bluetooth, Radio, WIFI to input or output data.

• Rich Data Interface

M1G2 supports RS232/485, 1PPS, USB, EVENT, CAN, etc. data interface, support multiple interfaces to synchronize with other applications.

• WEB UI management Platform

Support WIFI mode connection, user can monitor M1G2 status, configure it, download data and update firmware via WEB User Interface in any mobile phone, Tablet or Laptop conveniently.

• Flexible Split Type Design

Receiver and Antenna are separated, suitable for Deformation monitoring, Network Reference Station, Driving Test system, Mechanical Control and other aspects.

• Remote Debug

Supports remote debug, through inputting the IP and Port of the

remote Server, users can remote debug M1G2, to monitor or configure it remotely

• Supports custom plane coordinate output

With built-in coordinate conversion algorithm, it can output plane projection coordinates under your requirements, no need third-party software to do Projection conversion.

• Data stored locally and FTP Transmission

Collected data stored locally and support FTP uploaded to server in RINTEX Format.

• Rugged Design

Designed with aluminum alloy shell, M1G2 can resist 1.5m free drop. IP67 protection ensures it can be operated under various severe working conditions.

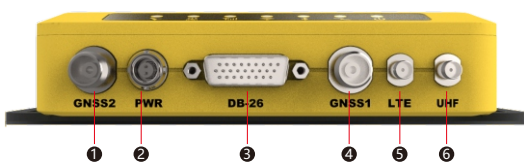
• Alert

M1G2 will alert by E-Mail or SMS once the receiver temperature is too high, or Internal disk space is close to full, or GNSS satellites drop a certain amount, or difference between estimated coordinates and base coordinates is too big.

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▲ Top view



▲ Front view



▲ Right-side view

1	Power indicator	Red	on: Power supplied off: Power off
2	Satellite indicator	Yellow	Always on: Float solution/fixed solution Flash each 1s: single solution off: Invalid solution
3	Bluetooth indicator	Blue	Always on: Bluetooth connected off: Bluetooth disconnected
4	WiFi indicator	Green	Always on: Client mode / AP opens Off: Client mode / AP off
5	Network indicator	Green	Always on: Network connected Off: Network disconnected
6	Radio indicator	Green	Always on: Radio opens Off: Radio off
7	Heading indicator	Green	Always on: Heading opens Off: Heading off

1	GNSS2	TNC, external GNSS slave antenna connector	
2	PWR	2-pin LEMO connector, power supply	
3	D-SUB 26	Two RS485 serial ports One USB2.0 interface (supports OTG) One CAN interface	One RS232 serial port One EVENT interface One 100M Ethernet port
4	GNSS1	TNC, external GNSS master antenna connector	
5	LTE	SMA, 4G antenna interface	
6	UHF	external UHF antenna	

1	TF card slot	MicroSD card slot
2	SIM card slot	Standard size SIM card interface

Technical Parameters

• GNSS

Channel	1100
Signal Tracking	GPS: L1C/A, L1C, L1P, L2C, L2P, L5 BDS: B1I, B2I, B3I, B1C, B2a, B2b, ACEBOC GLONASS: G1, G2, G3 Galileo: E1, E5a, E5b, ALTBOC, E6 QZSS: L1C/A, L1C, L2C, L5, LEX SBAS L-Band
Update Rate	10Hz standard, 20Hz Optional
Timing Accuracy	10ns
RTK Horizon Accuracy	8mm+1ppm (RMS 67%)
SBAS Horizon Accuracy	0.3m (RMS67%)
DGPS Horizon Accuracy	0.3m (RMS67%)
Heading Accuracy	0.16°rms@0.5m antenna spacing 0.08°rms@1.0m antenna spacing 0.04°rms@2.0m antenna spacing 0.02°rms@5.0m antenna spacing
Hot Start	10s (Typical)
Requisition Time	< 1s
Maximum Speed	515m/s

• Power

Input Voltage	8V-36V DC wide voltage input (±10% tolerance)
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• Physical& Environment

Weight	550g
Dimension	150mm*105mm*34mm
Work Temperature	-30°C to +65°C
Storage Temperature	-40°C to +80°C
Protection	IP67
Drop	Withstands 1.5m drop
Shock	50Hz, 0.5mm, 5mins

• SYSTEM

Operation System	Linux AM335X Sitara ARM Cortex-A8
Memory	512MB RAM+8GB ROM
Extended Memory	32GB

• Interface

Network	4G all-network communication module
Bluetooth	V2.1+EDR / V5.0 Dual mode, Class2
WLAN	WIFI IEEE 802.11 b/g/n
UHF	TX/RX integrated digital transmission radio TX Power: 1 Watt Frequency range: 410MHz-470MHz & 902.4-928MHz
Cable ports	D-SUB 26 interfaces: 2 RS485 serial ports 1 RS232 serial port 1 USB2.0 interface (Support OTG) 1 1PPS output interface 1 EVENT interface 1 CAN interface 1 100M Ethernet port PWR: 2-PIN LEMO connector, power supply GNSS1: TNC, external GNSS master antenna connector GNSS2: TNC, external GNSS slave antenna connector LTE: SMA, 4G antenna interface UHF: UHF antenna
Other	SIM card slot TF card slot