M100X GNSS Receiver

GNSS Receiver
Ver.2024.07.09

SinoGNSS®
By ComNav Technology Ltd.

Signal Tracking（Positioning）

GPS: L1C/A, L2C, L2P

BDS: B1I, B2I, B2b, B3I

GLONASS: G1, G2

Galileo: E1, E5b

QZSS: L1C/A, L2C

SBAS: L1C/A

PPP

L-Band*

Signal Tracking（Heading）

GPS: L1C/A, L2C, L2P

BDS: B1I, B2b, B3I

GLONASS: G1, G2

Galileo: E1, E5b

QZSS: L1C/A, L2C

SBAS: L1C/A

Accuracy

Standalone: 1.5m 3D RMS

Single Baseline RTK: 8 mm +1 ppm Horizontal,
15 mm + 1 ppm Vertical

Azimuth: 0.15°/R

Roll/Pitch: 0.25°/R

Velocity: ≤0.02m/s

IMU: Gyroscope Measurement Ranges: ±500°/s
Gyro Bias Stability: 2.2°/h(X) 2.7°/h(Y) 1.6°/h(Z)
Accelerometer Measurement Ranges: ±8g
Accelerometer Bias Stability: 0.013mg

GNSS+INS

Break Time	Positioning Accuracy(m)RMS		Velocity Accuracy(m/s)RMS	
	Horizontal	Vertical	Horizontal	Vertical
0s	0.02	0.03	0.02	0.01
10s	0.3	0.15	0.05	0.02
30s	2.5	1	0.18	0.04
60s	3.8	1.5	0.22	0.06

Performance Specification

Cold Start: ≤30s

Hot Start: ≤10s

RTK Initialization Time: <5s(Baseline≤10km)

Signal Re-acquisition: <1s

Initialization Reliability: >99.9%

Communication

Correction Data I/O: RTCM2.X, RTCM3.X

Data Output: NMEA-0183: GSV, RMC, HDT, GGA, GSA, ZDA, VTG, GST; HEADING, GPYBM
INS Data: 2364&2365

Data Output Rates: 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz, 50Hz, 100Hz

LAN: 10/100 Mbps

4G Modem
-LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B12/B13/B18/B19/B20/B25/B26/B28
-LTE-TDD: B38/B39/B40/B41
-WCDMA: B1/B2/B4/B5/B6/B8/B19
-GSM: B2/B3/B5/B8

Protocols: TCP/IP, Ntrip, JT808

Bluetooth: 4.1

USB: 2.0

Port

RJ45:	1
RS232:	2
RS422:	1
CAN:	1
USB:	1
Power:	1
Antenna:	2
SIM Card Slot:	1

Physical

Size: 151.2mm x 103.7mm x 27.9mm

Weight: <300g

Material: Aluminum Alloy

Memory: 8G

Electrical

Voltage: DC 9-36V

Power Consumption: <5W

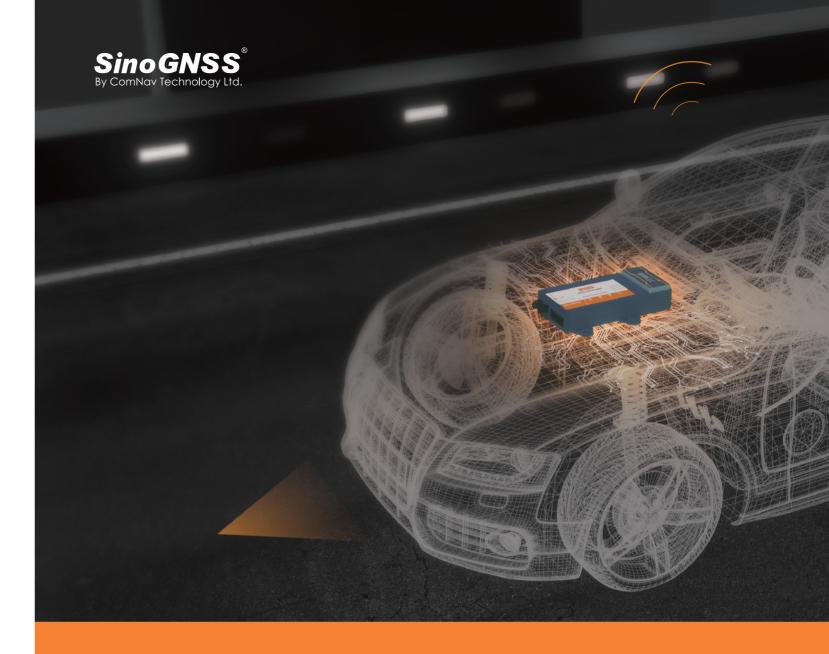LED: Power LED*1, INS LED*1, Satellite LED*1, 4G LED*1

Environmental

Working Temperature: -40℃~+75℃

Storage Temperature: -55℃~+85℃

Waterproof & Dustproof : IP67

Shock: Survive from a 1m drop

Note: * means Upgradeable

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M100X
GNSS Receiver

GNSS+INS: DESIGNED FOR VEHICLE APPLICATIONS

M100X GNSS Receiver

M100X is a new GNSS+INS receiver for high-accuracy vehicular positioning and heading applications, featuring GNSS positioning module and high-performance MEMS module. It is equipped with interfaces that comply with the standards and regulations of vehicle, which is more convenient to integrate with vehicular devices and systems. It can be applied in complex environments, like urban canyons, city overpasses, underground garages, tunnels and parks.

Slave Antenna

Master Antenna

26PIN Data Interface

Built-in 4G/Bluetooth

4G LED

Satellite LED
INS LED

Power LED

High-order Algorithm

With GNSS+INS algorithm, M100X significantly enhances the accuracy of positioning in partially obstructed environments and provides real-time high-precision positioning, velocity and heading data

High Dynamic

Data update rates up to 100Hz, suitable for various high-speed scenes

100Hz

Quantum-III Soc Chip

Build in Full-Constellation and Multi-Frequency GNSS SoC, maintaining high reliability in complex environments

Robust Design

Shock-resistant design, IP67 dust- and waterproofness and resistance to a 1m drop ensure its durability and reliability even in harsh environments.

Easy Configuration

Paired with the Navigation Master APP, supporting quick configuration and remote management

Multiple Data Interfaces, Supports Secondary Development

With multiple data interfaces, it supports various protocols, supporting secondary development.

Related Products

AT360 Antenna

- Low noise amplifier and high gain
- Millimeter level phase center error with outstanding stability and repeatability
- Strong capability of tracking satellites at low elevation angle
- IP67 waterproof and dustproof

Navigation Master Software

- Android APP, User-friendly
- Quickly connect via Bluetooth
- High compatibility
- Support remote management

NaviCloud

- NaviCloud is a groundbreaking cloud platform, revolutionizing the way people work and collaborate. Upload projects and data to the cloud for instant access anytime, anywhere. Manage devices seamlessly and share project information effortlessly within your organization. Unlock your team's full potential with NaviCloud.

NaviCloud

Applications

Autonomous Mining Truck

Intelligent Port

Mapping

Autonomous Bus