



Size: 132 mm × 72 mm

Weight: 0.7 kg

A100 GNSS Receiver

Multi-constellation and Future-proof GNSS

The A100 is capable of tracking GPS L1, L2, BeiDou B1, B2, GLONASS L1, L2, Galileo E1, E5b and SBAS. Using the advanced QUANTUM™ technology in combination with advanced Microprocessor Unit, the A100 GNSS Receiver provides increased positioning availability and reliability.

Integrated Design

Integrated high-performance GNSS OEM board and antenna in one rugged housing, SinoGNSS A100 provides positioning services from dual-frequency DP-Filter autonomous to Real Time Kinematic (RTK). The built-in Bluetooth® allows easy wireless connectivity in the field.

Ideal for Harsh Agriculture Applications

SinoGNSS DP-Filter technology improves the absolute positioning accuracy, makes the A100 provide smooth 20cm pass-to-pass accuracy that is ideal for agriculture guidance and automated steering applications. With robust housing certificated by IP68, the A100 is able to meet your specific application demands even in harsh environments.

Flexible Interface

The A100 is designed with one 14-pin Tyco Ampseal supporting two RS-232 serial ports and a CAN port, it also provides 1 PPS and three sunlight readable LED indicators. The wide input voltage range makes it compatible with all kinds of farming vehicles.

Features

GPS L1/L2, BeiDou B1/B2, GLONASS L1/L2,
GALILEO E1/E5b, SBAS

Advanced QUANTUM™ Technology

DP-Filter Smooth Function¹

Support Maximum 20 Hz RTD/RTK

Support 4G/Bluetooth Communication

Overvoltage Protection

Signal Tracking

| | |
|----------|--------------------------|
| Channels | 352 |
| GPS | L1 C/A, L2C, L2P |
| BeiDou | B1, B2 |
| GLONASS | L1 C/A, L1P, L2 C/A, L2P |
| GALILEO | E1, E5b |
| SBAS | WAAS, EGNOS, MSAS, GAGAN |

Performance Specifications

| | |
|----------------------------|----------------|
| Cold start | <50 s |
| Warm start | <45 s |
| Hot start | <15 s |
| Initialization time | <8 s |
| Signal re-acquisition | <1.5 s |
| Initialization reliability | >99.9% |
| Velocity accuracy | 0.03 m/s (RMS) |
| Overload | 15 g |

Positioning Specifications

| | |
|---------------------|--|
| Post Processing | 2.5 mm + 1 ppm Horizontal 5 mm + 1 ppm Vertical |
| Single Baseline RTK | 8 mm + 1 ppm Horizontal 15 mm + 1 ppm Vertical |
| DGPS | <0.4 m RMS |
| SBAS | 1 m 3D RMS |
| Standalone | 1.5m 3D RMS |

Communications

| |
|---|
| Internal 4G cellular modem |
| Support NTRIP protocol |
| Bluetooth: BT 4.0 |
| 14-pin Tyco Ampseal (2*RS232, 1*CAN) |
| 1 Pulse Per Second (PPS) output |
| 3 LEDs indicating power, satellite tracking and differential data |
| Support single and dual-frequency smooth function |

Data Format

| | |
|---------------------------|--|
| Correction data I/O | RTCM 2.X, 3.X, CMR(GPS only), CMR+(GPS only) |
| Position data output | ASCII: NMEA-0183 GSV, RMC, HDT, VHD, GGA, GSA, ZDA, VTG, GST; PTNL, PJK; PTNL, AVR; PTNL, GGK NMEA-2000 ComNav Binary BINEX Data: 0x00, 0x01-01, 0x01-02, 0x01-05, 0x7d-00, 0x7e-00, 0x7f-05 |
| Position data output rate | 1 Hz, 2 Hz, 5 Hz, 10 Hz, 20 Hz |

Physical

| | |
|-----------------|----------------------------------|
| Size(L × W × H) | 132 mm × 72 mm |
| Weight | 0.7 kg |
| Housing | Aluminum-magnesium alloy housing |

Environmental

| | |
|--------------------------|--|
| Operating temperature | -40 °C to + 75 °C |
| Storage temperature | -55 °C to + 90 °C |
| Humidity | 100% sealed, anti-condensation |
| Waterproof and dustproof | IP67 |
| Shock and Vibration | Designed to survive a 2 m drop onto concrete |

Electrical

| | |
|-------------------|----------------------------------|
| Input voltage | 6-36 VDC, overvoltage protection |
| Power consumption | 2.5 W |

Software

ComNav Compass Receiver Utility software

1: DP-Filter smooth function largely improves the pass to pass accuracy. Please refer to white paper for more information on our official website.