geode™

GNS3 Receiver

YOUR LOCATION, OUR SOLUTION.

SCALABLE REAL-TIME GNSS RECEIVER

Looking for a simple and scalable sub-meter, sub-foot, decimeter, and centimeter GNSS solution at an affordable price? With the Geode, you can easily collect real-time GNSS data without the huge price tag or complexity of other precision receivers.

Designed with versatility in mind, the Geode works well with with most Apple®, Windows®, and Android™ devices. User-selectable corrections options include SBAS, Atlas L-Band, Galileo High Accuracy Service (HAS) and RTK. Take the Geode with you mounted on a pole, in a pack, or held in your hand to collect real-time precision GNSS data wherever the job takes you.

- **SCALABLE ACCURACY** – Collect precision multi-frequency, multi-constellation GNSS data at various accuracy levels.
- **WORLDWIDE CORRECTIONS** – Multiple correction sources provide precise, real-time data. Galileo High Accuracy Service (HAS) Compatibility: (GNS3H)
- **COMPACT SIZE** – Small and lightweight for all-day use
- **OPEN INTERFACE** – Works with Juniper Systems' handhelds or your own device
- **SIMPLE TO USE** – Intuitive and easy operation, one-button simplicity
- **ALL-DAY BATTERY LIFE** – Ideal for long work days

JUNIPER® SYSTEMS

geode™

Made for iPhone | iPad

GEODE GNS3 COMPATIBILITY
- Windows® 10/11 PC
- Android™ 8 and above
- iPhone and iPad (See our website for full list of compatible Apple devices)
- GeodeConnect™ software provides configuration, communications setup, and receiver settings

RECEIVER
- Receiver Type: multi-frequency multi-constellation and L-band capable
- Signals: GPS: L1CA, L1P, L1C, L2P, L12P, L2C, L5, GLONASS: G1, G2, BeiDou: B1, B2, B3, GALILEO: E1BC, E5A, E5B, E6B and QZSS: L1CA, L1C, L2C, L5
- Channels: 800+
- SBAS Support: 3-channel parallel tracking
- L Band: Atlas[1] worldwide 1525-1560 Mhz (with Subscription)
- Galileo High Accuracy Service support (GNS3H, with multi-frequency enabled)
- Update Rate: 1 Hz standard, up to 10 Hz and 20 Hz options

ACCURACY
- SBAS: 30 cm RMS[2]
- RTK: 1 cm RMS
- Atlas (95%): H10: 8 cm, H30: 30 cm, Basic: 50 cm (requires subscription), GALHAS (95%): 20 cm[3]
- Autonomous: 1.2 meters RMS[4]
- Cold Start: <60 sec typical (no almanac)
- Reacquisition: 15 sec Atlas, all others <1 sec

COMMUNICATIONS
- Bluetooth® 5.1 SPP, iAP2, EAP
- Bluetooth Range: Class 1 Long Range
- Ports: USB Type-C; Serial RS232C DB-9
- Serial Baud Rates: 4800–115200

ANTENNA
- Internal precision single/multi-frequency with integrated ground plane
- External Antenna Port: MCX type

RECEIVER PROTOCOLS
- Data I/O Protocol: NMEA 0183, Crescent Raw Binary (proprietary)
- Correction I/O Protocol: Hemisphere GNSS Proprietary, ROX, RTCM v2.3, RTCM v3.2, CMR, CMR+
- Other: 1PPS Timing Output, Speed Pulse, Event Marker Input

POWER
- Input Voltage: 5VDC @ 2A USB
- Power Consumption: 1.7–2 W nominal
- Overtime Technology™ Battery: 3.6V 6000 mAh Li-ion (GNS3M/GNS3H) 10 hours[5], (GNS3S) 16 hours[5]
- Charging Time: Less than 4 hours

JUNIPER RUGGED™
- Operating Temp: -20 C to +60 C
- Storage Temp: -30 C to +60 C
- Meets or Exceeds MIL-STD 810G (Drop, Vibration, Temperature, Ingress Protection)
- Enclosure Rating: IP68 (1.4 meters for 30 min)

RECEIVER UPGRADES
- 10 Hz Data Rate
- 20 Hz Data Rate
- Multi-Frequency
- Atlas Basic
- Atlas H30
- Atlas H10
- Athena[1] RTK Engine

INCLUDED ACCESSORIES
- Cable: USB Type C to USB Type-C
- 5/8 x 11 Pole Mount Adapter
- USB charger

CONFIGURATIONS
- Geode GNS3S Single Frequency Antenna, no Atlas support
- Geode GNS3M Multi Frequency Antenna, all subscriptions supported
- Geode GNS3H Multi Frequency Antenna, Galileo High Accuracy Service supported

DIMENSIONS
- 110x110x57 mm (4.36x4.36x2.25 in)
- Weight: 405g (14.3oz)GNS3M/GNS3H; 365g (12.9oz) GNS3S
- Mount: ¼ x 20 camera stud and M4 AMPS diagonal

1. Atlas and Athena are registered trademarks of Hemisphere GNSS Inc.
2. GNSS accuracy subject to observation conditions, multipath environment, number of satellites in view, satellite geometry, and ionospheric activity.
3. Galileo HAS Final Mode specification is 20 cm; HAS is currently operating in Initial Phase mode with relaxed accuracy and convergence time standards.
4. Signals used dependent on model configuration.
5. Battery run time dependent on correction signal and temperature.

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