

# geode™

GNS3 Receiver



ULTRA  
RUGGED

DESIGNED &  
ASSEMBLED  
★ ★ IN ★ ★  
USA

## YOUR LOCATION, OUR SOLUTION.

### SCALABLE REAL-TIME GNSS RECEIVER

Looking for a simple and scalable sub-meter, sub-foot, and decimeter 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 most Apple®, Windows®, and Android™ devices. An integrated antenna makes messy cables a thing of the past, yet still has an external antenna port if it's needed. 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



**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 GNS3 COMPATIBILITY

- Windows® PC
- Android™ 7 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: GNSS multi-frequency, multi-constellation
- Signals: GPS: L1CA, L1P, L1C, L2P, L2C, L5, GLONASS: G1, G2, BeiDou: B1, B2, B3 (without L5), GALILEO: E1BC, E5a, E5b and QZSS: L1CA, L1C, L2C, L5
- Channels: 800+
- SBAS Support: 3-channel parallel tracking
- L Band: Atlas worldwide 1525-1560 Mhz (with Subscription)
- Update Rate: 1 Hz standard, up to 10Hz and 20Hz options

## ACCURACY

- SBAS: <30 cm HRMS<sup>1</sup>, <60 cm 2DRMS
- Atlas (95%): H10: 10 cm, H30: 30 cm, Basic: 50cm (requires subscription)
- Autonomous: 1.2 meters HRMS<sup>2</sup>
- Cold Start: <60 sec typical (no almanac)
- Reacquisition: 15 sec Atlas, all others <1 sec

## COMMUNICATIONS

- Bluetooth® 4.1 SPP, iAP2, EAP
- Bluetooth Range: Class 1 Long Range
- Ports: USB Type-C; Serial RS232C DB-9
- Serial Baud Rates: 4800-115200

## 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 (optional)

## POWER

- Input Voltage: 5VDC @ 2A USB
- Power Consumption: 1.7-2 W nominal
- Overtime Technology™ Battery: 3.6V 6000 mAh Li-ion (GNS3M) 10 hours<sup>3</sup>, (GNS3S) 16 hours<sup>3</sup>
- Charging Time: Less than 4 hours

## ANTENNA

- Internal precision single/multi-frequency with integrated ground plane
- External Antenna Port: MCX type, 50 ohm 15VDC @ 45 mA maximum (GNS3M)/ 20mA maximum (GNS3S)

## 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
- 20Hz Data Rate
- Multi-Frequency
- Atlas Basic
- Atlas H30
- Atlas H10

## INCLUDED ACCESSORIES

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

## CONFIGURATIONS

- Geode GNS3S Single Frequency Antenna, 9-pin serial port, No Atlas support
- Geode GNS3M Multi Frequency Antenna, 9-pin serial port, All Atlas subscriptions supported

## DIMENSIONS

- 110x110x57mm (4.36x4.36x2.25in)
- Weight: 394g (14 oz)
- Mount: ¼ x 20 camera stud and M4 AMPS diagonal



1. GNSS accuracy subject to observation conditions, multipath environment, number of satellites in view, satellite geometry, and ionospheric activity  
2. Signals used dependent on model configuration  
3. Battery run time dependent on correction signal and temperature