

geode™



GET REAL-TIME, SUB-METER ACCURACY

SUB-METER GPS RECEIVER

Looking for a simple sub-meter GNSS solution at an affordable price? With the Geode, you can easily collect real-time, sub-meter GNSS data without the huge price tag or complexity of other precision receivers. Designed with versatility in mind, the Geode works with iPhone and iPad as well as a wide range of Windows®, Windows Mobile, and Android™ devices and is especially useful for bring-your-own-device workplaces. Take the Geode with you mounted on a pole, in a pack, or held in your hand to collect real-time sub-meter GNSS data in harsh environments, using almost any handheld device.



SUB-METER ACCURACY – Collect precision GNSS data with an existing device



REAL-TIME DATA – Multiple correction sources provide precise, real-time data



AFFORDABLE – Professional accuracy at a budget-friendly price



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

Made for
 iPhone | iPad



GEODE GNS2 COMPATIBILITY

- iPhone 11 Pro Max, iPhone 11 Pro, iPhone 11, iPhone XS, iPhone XS Max, iPhone XR, iPhone X, iPhone 8, iPhone 8 Plus, iPhone 7, iPhone 7 Plus, iPhone SE, iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6, iPod Touch (7th Generation), iPad Mini (5th Generation), iPad (7th Generation), iPad Pro 11-inch, iPad (6th Generation), iPad Pro 10.5 inch, iPad Pro 12.9 inch (1st, 2nd, and 3rd Generation.)
- Windows® PC (8/10)
- Windows® Embedded Handheld 6.5
- Android™ 4.x and above
- GeodeConnect™ software provides configuration, communications setup, and receiver settings

RECEIVER

- Receiver Type: GNSS single frequency with carrier phase tracking
- Signals Received: GPS, SBAS, GLONASS, BeiDou, GALILEO and QZSS¹
- Channels: 162
- SBAS Tracking: 3-channel parallel tracking
- Update Rate: 1 Hz standard, 2–10 Hz (optional)

ACCURACY

- SBAS (WAAS): <30 cm Horizontal RMS (<60 cm 2DRMS)²
- Cold Start: <60 sec typical (no almanac)
- Reacquisition: <1 sec

COMMUNICATIONS

- Bluetooth® 4.1 SPP, iAP2, EAP
- Bluetooth Range: Class 1 Long Range
- Ports: Micro USB Client 2.0; Serial RS232C DB-9 (optional)
- 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 (10 hours)
- Charging Time: Less than 4 hours

ANTENNA

- Internal precision Multi-GNSS with integrated ground plane
- External Antenna Port: MCX type, 50 ohm 15VDC @ 20 mA maximum

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
- Dimensions: 4.4 x 4.4 x 1.7 inch (111 x 111 x 43 mm)
- Weight: 0.8 lb (360 g)
- Mount: ¼ x 20 camera stud and #6-32 AMPS

RECEIVER UPGRADES

- 2 Hz to 10 Hz update rate
- Multi-GNSS upgrade

INCLUDED ACCESSORIES

- 5VDC USB Universal Charger
- USB Data/Charging Cable (USB-A to Micro-B)
- 5/8 x 11 Pole Mount Adapter

CONFIGURATIONS

- Geode GNS2 GPS, 1 Hz
- Geode GNS2 Multi-GNSS, 1 Hz
- Geode GNS2 Multi-GNSS, with 9-pin serial port, 1 Hz
- Geode GNS2 Multi-GNSS, 10Hz
- Geode GNS2 Multi-GNSS, 10Hz with 9-pin Port



1. Signals used dependent on model configuration

2. GNSS accuracy subject to observation conditions, multipath environment, number of satellites in view, satellite geometry, and ionospheric activity.