










geode™

SUB-METER GPS RECEIVER

Get Real-Time, Sub-Meter Accuracy

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 a wide range of Windows®, Windows Mobile, and Android® devices to fit your needs exactly 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

Geode Specifications

RECEIVER

- Receiver Type: GNSS single frequency with carrier phase tracking
- Signals Received: GPS, SBAS, GLONASS, BeiDou, GALILEO and QZSS ¹
- 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® 4.0 (Serial Port Profile)
- 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 typical)
- Charging Time: ~4 hours typical

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 (diag.)

RECEIVER UPGRADES

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

SOFTWARE

- GeodeConnect™: Provides configuration, communications setup, and receiver settings
- Available for:
 - Windows Embedded Handheld 6.5
 - Android 4.x and above
 - Windows PC (8/10)

INCLUDED ACCESSORIES

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

OPTIONAL ACCESSORIES

- Smartphone Adapter Tray
- External Patch Antenna
- Antenna Cable

MODELS

- Geode GPS, 1 Hz
- Geode GPS with 9-pin serial port, 1 Hz
- Geode Multi-GNSS, 1 Hz
- Geode Multi-GNSS with 9-pin serial port, 1 Hz
- Other models with additional upgrades available

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.



Contact **ICM** today for a quote **877-494-5793**