Rugged, Bluetooth GNSS & SBAS High Accuracy GIS Receiver

SXBlue II+ GNSS


## GPS + GLONASS + SBAS = Free High Accuracy GIS

**The SXBlue II+ GNSS is a palm-sized receiver that delivers real-time, high accuracy performance using GPS/GLONASS satellites and free SBAS corrections. It's battery-powered lightweight design makes it the ideal choice for a variety of mapping apps including GIS, Forestry, Mining, Utilities, Agriculture, Surveying and Environmental, at a price you can afford.**

### Go Real-time, All the time!

The SXBlue II+ GNSS uses innovative technologies that delivers high accuracy in real-time, all the time. There is no need for post-processing or other correction source when SBAS (WAAS, EGNOS, MSAS or GAGAN) are available. Utilizing both GPS and GLONASS satellites, the SXBlue II+ GNSS will work where GPS receivers struggle, such as in the forest, around buildings and other difficult mapping environments. The SXBlue II+ GNSS is designed to work where you need to work; in the forest or in the city, all day long.

### GPS + GLONASS + SBAS = Revolutionary SXBlue II+ GNSS receiver

Until now, SBAS users couldn't enjoy the tremendous benefits offered by adding GLONASS satellites since SBAS doesn't support GLONASS. However, now technology employed by the SXBlue II+ GNSS allows it to use both GPS and GLONASS satellites for high perfomance, real-time mapping accuracy using SBAS. No post-processing is needed to achieve the accuracy you expect.

### Work in More Places than Ever Before

We've heard it over and over. Once you start using GLONASS, you'll be addicted. By using GLONASS satellites, your productivity immediately improves. With both GPS and GLONASS satellites, you'll have nearly twice as many satellites in view, meaning you won't have to wait for the high accuracy data you want. The SXBlue II+ GNSS maximizes your productivity by working directly within your GIS framework.

### A Long Term Solution

Because the SXBlue II+ GNSS receiver doesn't have a built-in computer, it can't become obsolete. On one project, connect it to your new smartphone. On the next project, connect it to your tablet SXBlue II+ GNSS doesn't care which operating system your mobile device uses, it just keeps delivering high accuracy positioning to which ever device you want to connect to it using Bluetooth, USB or RS-232.

### Key Features :

- SBAS support for GPS and GLONASS
- Palm-sized
- Rugged, waterproof
- High accuracy
- Beidou / Galileo / QZSS Ready

# Specifications

## GNSS Sensor

| | |
|---|---|
| Receiver Type : | L1/G1, GPS + GLONASS (Galileo, DeiDou, QZSS optional) with carrier smoothing |
| Channels: | 372 channels |
| SBAS Support: | 3-channel, parallel tracking WAAS, EGNOS, MSAS, GAGAN SBAS ranging |
| GPS Sensivity | -142 dBm |
| Update Rate : | 1 Hz (optional 10 or 20 Hz) |
| DGNSS Horizontal Accuracy : | < 60 cm 2dRMS, 95% confidence[1] (< 30 cm HRMS, < 25cm CEP) |
| Horizontal Accuracy : | < 2.5 m 2dRMS, 95% confidence (autonomous, no SA)[2] |
| Optional Proprietary RTCM : | < 20 cm 2dRMS, 95% confidence[3] |
| Optional RTK : | 1cm + 1ppm |
| Cold Start : | < 60 sec typical (no almanac or time) |
| Reacquisition : | < 1sec |
| Maximum Speed : | 1 850 kph / 1 150 mph / 999 knots |
| Maximum Altitude : | 18 288m (60 000 ft |
| **Post-processing:** | |
| Horizontal Accuracy1: | 5 mm + 0.5 ppm (Static) or better<br>10 mm + 1 ppm (Kinematic) or better |
| Vertical Accuracy1: | 5 mm + 1.0 ppm (Static) or better<br>20 mm + 1 ppm (Kinematic) or better) |

## Communication

| | |
|---|---|
| Port: | Bluetooth, RS-232C, USB 2.0 |
| Bluetooth Transmission: | Class 1 Typical range[4] |
| Bluetooth Frequency: | 2.400 - 2.485 GHz |
| Fully Bluetooth pre-qualified: | Bluetooth 2.0 |
| Baud Rates: | 4,800 to 115 200 |
| Data I/O Protocol: | NMEA 183, RTCM 104, Binary |
| Timing Output: | 1 PPS (HCMOS, active high, rising edge sync,10 kOhms, 10 pF load) |
| Event Marker Input: | HCMOS, active low, falling edge sync, 10 kOhms, 10 pF load |
| Raw Measurement Data: | Binary (Free RINEX utility) |
| Correction I/O Protocol: | ROX Format, RTCM V2-3, RTCM V3-2, CMR, CMR+ |
| LED mode indicators: | Power, GNSS lock, DGPS position DIFF lock, Bluetooth connection |
| Battery Status LED: | 5 LED's bar graph |

## Power

| | |
|---|---|
| Battery Type: | Field replaceable Lithium-Ion pack (Rechargeable inside unit or separately) |
| Battery Capacity: | 3,900 mAh. 7.2V |
| Battery Life: | 8 + hours |
| Power Consumption: | < 3.5W |
| Charging Time: | 4 to 5 hours using supplied charger |
| Antenna Voltage Output: | 5 VDC |
| Antenna Input Impedance: | 50 Ohms |

## Environmental

| | |
|---|---|
| Operating Temperature: | -40°C to +85°C (-40°F to +185°F)[5] |
| Storage Temperature: | -40°C to +85°C (-40°F to +185°F) |
| Humidity: | 95% non-condensing |
| Compliance: | FCC, CE, RoHS and Lead-free |

## Mechanical

| | |
|---|---|
| Enclosure Material: | Re-enforced Nylon |
| Battery Case Material: | ABS |
| Enclosure Rating: | Waterproof, IP-67 |
| Enclosure Dimensions: | 14.1 x 8.0 x 4.7 cm (5.57 x 3.15 x 1.85 in.) |
| Weight: | 487g (1.07 lb) |
| Data Connectors: | DB-9 Female<br>USB Type B Female |
| Antenna Connector: | SMA Female |

## Antenna

| | |
|---|---|
| Frequency Range: | L1, G1, L-Band (1,525 MHz - 1,607 MHz) |
| Gain (without cable): | 26 dB (+/- 2 dB), 35 mA |
| Voltage: | + 4.5 to 15 VDC |
| Impedance: | 50 Ohms |
| Dimensions: | 6.6 diam. x 2.7 cm (2.61 x 1.05 in.) |
| Weight (without cable): | 114g (0.25 lbs) (with removable magnet mount) |
| Antenna Connector: | SMA Female |
| Temperature: | -55°C to +70°C (-67°F to +158°F) |
| Humidity: | Immersion 1 meter |

## Standard Accessories

- SXBlue II+ GNSS Receiver
- Li-Ion Battery Pack (Field replaceable)
- Li-Ion Charger
- Belt/Shoulder Carrying Case
- Precision Antenna with 1.5m cable
- Soft Hat for antenna
- RS-232 Cable (6 ft.)
- USB Type A/B Cable (6 ft.)

## Field Activated Options

- 10-20 Hz Output Rate
- RTK Base / Rover

NOTES :

1. Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services) and ionospheric activities
2. Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activities
3. Option required on both base and rover. Also requires communication link between base and rover
4. Transmission in free space
5. Lithium- Ion battery performance degrades bellow -20°C (-4°F)







GENEQ inc.
10700, Secant St., Montreal
(QC), H1J 1S5, Canada
P: +1 .514.354.2511
1.800.463.4363 (Canada and USA)
F: +1.514.354.6948 E: info@geneq.com
**www.sxbluegps.com**
**www.geneq.com**

Authorized Distributor

Revision-2015/06/23