



GPS + GLONASS + RTK = 1cm Accuracy

The SXBlue III GNSS is a palm-sized receiver that delivers real-time 1cm accuracy using GPS/GLONASS satellites. Its battery-powered lightweight design makes it an ideal choice for applications that require cm-level horizontal and vertical accuracy in real-time such as agriculture, engineering, mining, utilities, surveying, GIS, and others. A free Microsoft Windows-based NTRIP/DIP software utility for Windows and Windows Mobile is included to allow the SXBlue III GNSS to connect to any of the hundreds of RTK Networks and RTK reference stations available around the world.

Go 1cm Real-time, All the Time!

The SXBlue III GNSS takes full advantage of both GPS and GLONASS satellites to allow you to work all day and in more places without suffering from non-productive down-time that GPS-only RTK receivers sometimes experience. You get 117 channels of proven 1cm RTK performance from a lightweight unit that fits in the palm of your hand, and includes a field-replaceable rechargeable battery for 8+ hours of operation. In addition to RTK, you also have the option of using SBAS for sub-meter mapping that the SXBlue product has built its reputation on. Having the choice of either L1/L2 GPS/GLONASS RTK for real-time centimeter accuracy or GPS/GLONASS SBAS for 30cm real-time mapping provides you the flexibility that no other receiver of this size and price can offer you.

Use GLONASS Without Having GLONASS in your Base Station

A unique and powerful feature of the SXBlue III GNSS is its ability to utilize GLONASS satellite data with reference stations that are not GLONASS-enabled. For example, if you have not upgraded your receiver to GLONASS because the RTK network you use does not support GLONASS, that is no longer a problem with the SXBlue III GNSS. While the SXBlue III GNSS is connected to an RTK Network or any reference station that does not support GLONASS, it will still incorporate GLONASS data into the 1cm RTK positioning. This is a huge step forward in allowing users to enjoy the tremendous benefits of

GLONASS without relying on the reference station infrastructure. You could even use a twenty year old GPS receiver that is broadcasting GPS-only RTK and still get GPS/GLONASS performance from the SXBlue III GNSS receiver.

Work in More Places than Ever Before

We have heard it over and over. Once you start using GLONASS, you will be addicted. By using GLONASS satellites, your productivity immediately improves. With both GPS and GLONASS satellites, you will have nearly twice as many satellites in view, meaning you will not have to wait for the RTK accuracy you want.

A Long Term Solution

Because the SXBlue III GNSS does not have a built-in computer, it cannot become obsolete. On one project, connect it to your new smartphone. On the next project, connect it to your tablet computer. Android? Windows Mobile? The SXBlue III GNSS does not care which operating system your mobile device uses, it just keeps delivering 1cm RTK accuracy to whichever device you want to connect to it using Bluetooth, USB or RS-232.

Key Features:

- Utilize GPS and GLONASS even if your reference station only supports GPS.
- Utilize GPS and GLONASS for SBAS
- 1cm RTK accuracy
- Rugged, waterproof

Specifications

GNSS Sensor

| | |
|----------------------|--|
| Receiver type: | GNSS (GPS/GLONASS) L1/L2 RTK with carrier phase |
| Channels: | 17 total, parallel tracking. |
| GPS: | 24-channels L1, 36-channels L2 P/C, 24-channels L5. |
| GLONASS: | 12-channels L1, 12-channels L2. |
| SBAS: | 3-channels L1, 6-channels L5. |
| SBAS Support: | 3 Satellite parallel tracking WAAS/EGNOS/MSAS/GAGAN (with SBAS ranging) |
| Update rate: | Up to 10Hz, optional 20Hz |
| RTK Accuracy: | 1cm |
| SBAS Accuracy: | <30cm HRMS |
| Autonomous Accuracy: | 1.2 meters |
| Cold start: | < 60 sec typical (no almanac or time) |
| Reacquisition: | < 1 sec |
| Max speed: | 1,850 kph / 999 knots / 1,150 mph |
| Max altitude: | 18,288 meters / 60,000 ft |

Communication

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|--------------------------|---|
| Ports: | Bluetooth 2.0, RS-232C, USB 2.0 |
| Bluetooth: | Class 1 (250m range typical) |
| Band rates: | 4,800 – 480,000 |
| Data I/O Formats: | NMEA 0183, RTCM 104, Binary Autonomous, WGS-84 (G1750) SBAS, ITRF-2000 |
| Output datum: | RTK: Same datum as the datum used by the correction source 1 PPS (HCMOS, active high, rising edge sync, 10 \times Ohms, 100pf load) HCMOS, active low, falling edge sync, 10 \times Ohms, 10pf load |
| Timing Output: | Binary (Free RINEX Utility) |
| Event Marker Input: | RTCM 2.x, 3.x, CMR, CMR+ proprietary binary |
| Raw Measurement Data: | Power, GNSS lock, RTK position, RTK lock, Bluetooth |
| Correction I/O Protocol: | |
| GPS Status LEDs: | |

Power

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|----------------|--|
| Battery type: | Field replaceable, rechargeable Lithium-Ion pack. Rechargeable inside unit or separately |
| Battery life: | 8+ hours |
| Charging time: | 4-5 hours using supplied charger |

Environmental

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

Mechanical

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|------------------------|---|
| Enclosure material: | Re-reinforced Nylon |
| Battery case material: | ABS |
| Enclosure rating: | Waterproof, dustproof, IP-67 |
| Immersion: | 30cm, 30 minutes |
| Dimensions: | 141 x 80 x 47mm (5.57" x 3.15" x 1.85") |
| Weight: | 187g (1.05 lbs) |
| Data Connectors: | DB-9 female, USB Type B female |
| Antenna connector: | SMA female |

Antenna

| | |
|------------------|---|
| GNSS Freq Range: | 1525 - 1607 MHz, 1217 - 1260 MHz |
| Impedance: | 50 OHMs |
| Gain (no cable): | 20dB \pm 2dB |
| Noise Figure: | 2.5dB Max |
| Voltage/Current: | +4.5 to +5.5 VDC |
| Connector: | SMA female |
| Dimensions: | 26.6 mm H x 66.3 mm D 0.86 in H x 2.6 in D |
| Weight: | 125 g (0.363 lb) |
| Temperature: | -55°C to +70°C (-67°F to +158°F) |
| Humidity: | Water-proof |

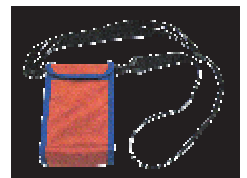
Standard Accessories

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|--|--------------------------------|
| SXBlue III GNSS Receiver | Hard Shell Case |
| Lithium Battery Pack (Field replaceable) | Pole Bracket and Clamp |
| Lithium Charger | RS-232 Cable (6 ft) |
| Belt/Shoulder Carrying Case | USB Type A/B Cable (6 ft) |
| L1/L2, L-Band GNSS Antenna | CD-ROM (manuals and utilities) |
| Antenna Cable (1.5 meter) | NTRIP Software |
| Soft Hat for antenna | Field Activated Options |
| Antenna Mounting Plate | 20Hz Output Rates |
| Magnetic Mount | L2C |

NOTES

1. Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services) and ionospheric activities. Stated accuracies for baseline lengths of up to 50 km.
2. Transmission in free space.
3. Free options available on serial port upon request.
4. Lithium-Ion battery performance degrades below -20°C (-4°F).

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