

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 performance, 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 immedi-

tely 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, BeiDou, 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 10 mm + 1 ppm (Kinematic) or better
Vertical Accuracy1:	5 mm + 1.0 ppm (Static) or better 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 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 below -20°C (-4°F)

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