



Rugged, Bluetooth Sub-Meter Mapping Receiver

The SXBlue II+ GPS is a compact, real-time receiver that delivers true sub-meter performance every second to your application. Its integrated lightweight design makes it the ideal choice for a variety of industry applications including GIS, Forestry, Mining, Utilities, Agriculture, Surveying and Environmental, at a price you can afford.

Go Real-time, All the Time!

The SXBlue II+ GPS uses innovative technology that delivers sub-meter accuracy in real-time, all the time. There is no need for post-processing or a beacon receiver when WAAS, EGNOS, MSAS, or GAGAN are available. Even in environments where GPS reception is limited, the SXBlue II+ is designed to keep working and deliver the DGPS accuracy you need all day long.

Accuracy and Productivity in One

The SXBlue II+ GPS takes real-time accuracy a step further. Its accurate code phase measurements and leading edge multipath mitigation delivers sub-60 cm (2dRMS, 95% confidence) positioning.

With its superior tracking performance and innovative real-time positioning, that means no downtime even in harshest conditions, the SXBlue II+ maximizes your productivity by working directly within your GIS framework.

A Long Term Solution

Add a field computer that suits your application, an off-the-shelf software of your choice, and the SXBlue II+ GPS becomes the heart of a modular solution you can grow with. In today's rapidly evolving technologies, its unique multi-port interface (fully independent

Bluetooth, mini USB, RS-232 ports) helps to protect your long term investment by always allowing the use of up-to-date computer hardware, operating system and software.

Options

The SXBlue II+ GPS can also evolve with your needs with its optional features:

- 10Hz or 20Hz output rates
- Base Station (standard RTCM-104 output)
- Proprietary RTCM for sub-20cm accuracy
- Single Frequency Real-time Kinematic (RTK) for cm level accuracy
- Carrier Phase for post-processed cm level accuracy
- Galileo / Beidou / QZSS Ready

Key Features

- Sub-60cm, 2dRMS real-time performance
- Multi-port interface (Bluetooth, USB, RS-232)
- Rugged and Waterproof design
- Integrated Li-Ion battery pack for 10 + hours of autonomy
- Battery Status gauge
- Compact and lightweight

Specifications

GPS Sensor

Receiver Type:	L1, C/A code, with carrier phase smoothing
Channels:	372 channels (10-channel when tracking SBAS)
SBAS Support:	3-channel, parallel tracking WAAS, EGNOS, MSAS, GAGAN and compatible
GPS Sensitivity	-142 dBm
Update Rate :	1Hz (optional 10 and 20Hz)
DGNSS Horizontal Accuracy:	< 60 cm 2dRMS, 95% confidence ¹ (< 30 cm HRMS, < 25 cm CEP)
Horizontal Accuracy:	< 2.5 m 2dRMS, 95% confidence (autonomous, no SA) ²
Optional Proprietary RTCM:	< 20 cm 2dRMS, 95% confidence ³
Optional L1 RTK:	< 5 cm 2dRMS, 95% confidence ³ 2 to 6 cm + 1 ppm (Vertical)
Cold Start:	60 sec (no almanac or RTC)
Reacquisition:	< 1sec
Maximum Speed:	1850 kph (11 150 mph / 999 Knots)
Maximum Altitude:	18,288 m (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:	4800 to 115 200
Data I/O Protocol:	NMEA 183, Binary, RTCM 104
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:	Proprietary binary (Free RINEX utility)
Correction I/O Protocol:	ROX Format, RTCM V 2.3, RTCM V 3.2, CMR, CMR+
Led Mode Indicators:	Power, GPS 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:	3,900mAh. 7.2V
Battery Life:	15 hours
Power Consumption:	< 2.5W
Charging Time:	5 hours (with 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)
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-65
Enclosure Dimensions:	14.1 x 8.0 x 4.7 cm (5.57 x 3.15 x 1.85 in.)
Weight:	476g (1.05 lb)
Data Connectors:	DB-9 Female, USB Type B Female
Drop Resistance:	Designed to withstand 1m drop
Antenna Connector:	SMA Female

Antenna

GPS Frequency Range:	L1 (1575 MHz +/- 10 MHz)
Gain (without cable):	26.5 dB (+/- 2 dB), 35mA
Voltage:	+5 VDC +/- 10%
Impedance:	50 Ohms
Dimensions:	5.5 diam. x 2.2 cm (2.16 x .87 in.)
Weight (without cable):	79g (.17 lbs) (with removable magnet mount)
Antenna Connector:	SMA Female
Temperature:	-55°C to +85°C (-67°F to +185 °F)
Humidity:	Immersion 1 meter

Standard Accessories

- SXBlue II+ GPS 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

- 10Hz or 20Hz Output Rate

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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