Rugged Dual Frequency RTK GPS receiver

SXBlue L1/L2 GPS

Smallest, Rugged, Bluetooth High-Accuracy L1/L2 RTK-Mapping receiver

The SXBlue L1/L2 GPS, one of the smallest dual frequency receivers in the world, that delivers centimeter accuracy every second using RTK with GPS L1 and L2. The SXBlue L1/L2 sets a new price/performance standard for dual frequency, high-accuracy GPS receivers. Its integrated lightweight design makes it the ideal choice for a variety of applications including GIS, Machine control, Mining, Construction, Utilities, Agriculture, Surveying and Environmental, at a price you can afford.

Go RTK with the SXBlue L1/L2 GPS!

The SXBlue L1/L2 GPS uses innovative technology that puts dual frequency RTK in one of the smallest packages ever. You get 51 channels of proven 1 cm RTK performance from a lightweight unit that fits in the palm of your hand. In addition to RTK, you also have the option of using L1 SBAS for sub-meter mapping that the SXBlue has built its reputation on. Having the choice of using either L1/L2 RTK for real-time centimeter accuracy or L1 SBAS for 30cm real-time mapping provides you the flexibility that no other unit of this size and price can offer you.

Accuracy and Productivity in One

The SXBlue L1/L2 GPS takes real-time and High Accuracy GIS to the next level. Its accurate carrier phase measurements and leading edge multipath mitigation delivers 1 cm real-time positioning. With its superior tracking performance and innovative real-time positioning, that means no downtime even in harshest conditions, the SXBlue L1/L2 GPS maximizes your productivity by working directly within your framework (Esri, Autodesk, Carlson, CMT, Intergraph, MapInfo, TDS, etc.) both in the field and the office.

A Long Term Solution

The SXBlue L1/L2 GPS becomes the heart of a modular solution you can grow with. In today's rapidly evolving technologies, its unique multi-port interface (independent Bluetooth and 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.

RTK at a price you can afford!

- GPS L1/L2 RTK for centimeter accuracy.
- Switch between RTK Base and RTK Rover
- Compatible with RTK Networks
- Compatible with Esri's ArcPad (all versions), Carlson, CMT, and most surveying/GIS data collection software
- 48 channels for GPS L1/L2 + 3 channels for SBAS

Key Features

- 1cm + 1ppm L1/L2 RTK accuracy.
- 30cm using L1 SBAS
- Micro-sized GPS L1/L2 antenna
- Rugged and Waterproof design (IP-67)
- Multi-port interface (Bluetooth, RS-232)
- Long-range, Class 1 Bluetooth
- Compact and lightweight
- RoHS compliant

Other Features

- Satellite tracking technology uses all satellites, not just the ones that the reference station is tracking.
- Update rates of up to 20Hz (20 times a second)
- RTCM Ver. 2.3/3.x, CMR/CMR+
- NMEA 0183 output
- Patented technology allows you to use SBAS in conditions where other SBAS receivers won't work.

GENEQ inc.

Specifications

GPS Sensor

Receiver Type:	L1/L2 RTK with carrier phase
Channels:	48 channels, parallel tracking 12 x L1 C/A, 12 x L1P, 12 x L2C, 12 x L2P
SBAS Support:	3 channels, parallel tracking, dedicated to WAAS, EGNOS, MSAS, GAGAN and compatible or L1 C/A. Features SBAS Ranging.
RTK Formats:	RTCM 2.3, RTCM 3x, CMR, CMR+
Update Rate:	10Hz default, optional 20Hz
RTK Horizontal Accuracy:	10mm + 1ppm (RMS) [1]
RTK Vertical Accuracy:	20mm + 1ppm (RMS) [1]
SBAS Horizontal Accuracy:	< 60cm 2dRMS, 95% confidence [1] (< 30cm HRMS, < 25cm CEP)
RTK initialization:	On-The-Fly (OTF)
Cold Start:	60s (no almanac or RTC)
Reacquisition:	< 1s
Maximum Speed:	1607 km/h (999mph)
Maximum Altitude:	18,288m (60,000 ft)

Communication

Ports:	Bluetooth, RS-232C
Bluetooth Transmission:	Class 1,
Bluetooth Frequency:	2.400 – 2.485 GHz
Fully Bluetooth pre-qualified:	Bluetooth 2.0
Baud Rates:	4800 to 115200
Data I/O Protocol:	NMEA 183, Binary
Data Output Datum:	Autonomous: WGS 84 (G1150) SBAS: ITRF-2000 Local Correction: ouput datum follows datum of correction source
Raw Measurement Data:	Proprietary binary (Free RINEX utility)
Correction I/O Protocol:	RTCM 2.3, 3.x, CMR, CMR+, ROX
GPS Status LED:	Power, GPS Lock, DGPS/RTK Position, DGPS/RTK Lock, Bluetooth connection

Power

Input Voltages:	12 VDC (9 to 18 VDC), or 24 VDC (18 to 36 VDC)
Average Power Consumption:	5 Watts
Average Current Consumption:	420 mA @ 12 V (5 Watts) 195 mA @ 24 V (4.7 Watts)
Antenna Voltage Output:	5 VDC
Antenna Input Impedance:	50 Ω

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:	Environmentally sealed powder-coated aluminium
Enclosure Rating:	Waterproof, IP-67
Immersion:	30cm, 30 minutes
Overall Dimensions:	14.20 x 8.54 x 3.53 cm(5.59 x 3.36 x 1.39 in.)
Enclosure Dimensions:	11.26 x 8.54 x 3.53 cm (4.43 x 3.36 x 1.39 in.)
Weight :	268g (0.06 lbs)
Data Connectors:	3-pin weathertight
Antenna Connector:	BNC Female, straight

Antenna

GPS Freq Range:	1575 MHz ± 10 MHz, 1227 MHz ± 10 MHz
Impedance	50 OHMs
Gain (no cable):	26dB ±2dB
Noise Figure:	2.5dB Max
Voltage/Current:	2.5-5Vdc / <60mA Max
Connector:	SMA female
Dimensions:	19.8mm H x 55.4mm D 0.78in H x 2.18in D
Weight:	79.4g (0.175 lb)
Temperature:	-55°C to +85°C
Humidity:	Waterproof

Standard Accessories

- SXBlue L1/L2 GPS Receiver
- 3m cable fused power
- CD-ROM (manuals and utilities)
- RS-232 Cable (6 ft)
- L1/L2 Antenna with 3.5m cable
- Antenna Mounting Plate
- 90° RSMA to SMA Adaptor
- Magnetic Mount

Standard Features

- RTK Base and Rover
- 10 Hz Output Rate

Field Activated Options

- 20Hz Output Rate
- Auto-Dif

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

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