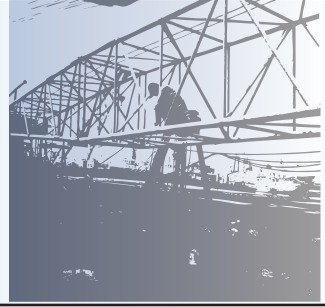# Panther XB101 Plus GNSS Receiver

With the latest Trimble-precise Maxwell™ 6 technology, besides practicing 50Hz per second absolute geospatial positioning, the Panther XB GNSS receiver provides assurance of long-term future-proffing and trouble-free operation. Furthermore, the panther XB Plus redefines high-performance positioning on On-board multipath mitigation, Proven low-elevation tracking technology and Dramatically improved RTK initialization.

The advanced technology of Panther XB Plus GNSS receiver is able to integrate ADL radio module and 3G SIM card and support internet to transfer positon on the go.

The Panther XB GNSS Receiver was designed for eash integration and rugged dependability.

Customers benefit from the Ethernet connectivity available on the board, allowinghigh speed data transfer and configuration via standard web browsers. USB, RS232 and CAN are also supported.

All software features are password-upgradeable, allowing functionality to be upgradedas your requirements change.

We can OEM and design the Panther XB Plus GNSS by joining up the mobile devices with dynamic attributes to meet the customer's different applications, such as unmanned vehicals ROV, Robotic Arm etc. for position and orientation simultaneously.

PANTHER GNSS Receiver

Panther XB101 Plus GNSS Receiver
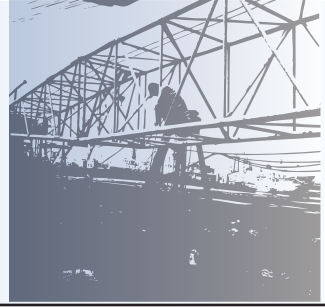
Technical Specification

220 Channels:

– GPS: Simultaneous L1 C/A, L2E, L2C, L5

– GLONASS: Simultaneous L1 C/A, L1 P, L2 C/A (GLONASS M Only), L2 P

– SBAS: Simultaneous L1 C/A, L5

– Galileo: Simultaneous L1 BOC, E5A, E5B, E5AltBOC1

– BeiDou: B1, B2

– QZSS: L1 C/A, L1 SAIF, L2C, L5

• Advanced Trimble Maxwell 6 Custom Survey GNSS Technology

• High precision multiple correlator for GNSS pseudorange measurements

• Unfiltered, unsmoothed pseudorange measurements data for low noise, low multipath error, low time domain correlation and high dynamic response

• Very low noise GNSS carrier phase measurements with <1 mm precision in a 1 Hz bandwidth

• Proven Trimble low elevation tracking technology

Initialization time2 . . . . typically <10 seconds

Initialization reliability2 . . . .>99.9%

• 2 RS233 port /1 pps and Event in

• 1 LAN Ethernet port:

Reference outputs/inputs . . . . CMR, CMR+, SCMRX, RTCM 2.1, 2.2, 2.3, 3.0 , 3.18 ,3.2

Navigation outputs . . . . ASCII: NMEA-0183 GSV, AVR, RMC, HDT, VGK, VHD, ROT, GGK, GGA, GSA, ZDA, VTG, GST, PJT, PJK, BPQ, GLL, GRS, GBS and Binary: Trimble GSOF

• Control Software: HTML web browser. Internet Explorer, Firefox, Safari, Opera, Google Chrome

Performance Specifications

Time to First Fix (TTFF)

Cold Start. . . . .<45 seconds

Warm Start. . . . .<30 seconds

Signal Re-acquisition . . . .<2 seconds

Velocity Accuracy

Horizontal . . . . 0.007 m/sec

Vertical . . . . 0.020 m/sec

Environmental Characteristics

Operating . . . . –40 °C to +75 °C

Storage . . . . –55 °C to +85 °C

Vibration. . . . . MIL810 F, tailored

System on Module Specifications(Option)

Scalable core up to 624 MHz.

• Marvell® Scalable Power Manager

• 90 nm low-power process

• Full GPS and dead reckoning (DR) control code Libary

Radio Specifications(option)

Link Rate/Modulati on 19,200 bps/4FSK

9600 bps/4FSK

19,200 bps/GMSK

16000 bps/GMSK

9600 bps/GMSK

8000 bps/GMSK

4800 bps/GMSK

Link Protocols Transparent EOT/EOC, Packet-switched, Trimble®, SATEL®

POSITIONING SPECIFICATIONS

Mode	Accuracy		Latency	Maximum Rate
Single Baseline RTK (<30 km)	0.008 m + 1 ppm Horizontal		<20 ms	50 Hz
	0.015 m + 1 ppm Vertical			
DGPS	0.25 m + 1 ppm Horizontal		<20 ms	50 Hz
	0.50 m + 1 ppm Vertical			
SBAS	0.5 m	Horizontal	<20 ms	50 Hz
	0.85 m	Vertical		

PANTHER GNSS Receiver