

Precis-BX305 GNSS RTK Board

GPS L1L2/GLONASS G1/Beidou B1B3 with 192 GNSS Channels

Precis-BX305 is a compact GNSS positioning solution offering real-time, cost efficient centimeter-level positioning capability as well as flexible interfaces for a number of applications, such as navigation, precise agriculture, surveying and UAV.

The compact positioning system Precis-BX305 can be integrated with other host devices or can serve as an independent positioning system, which is dedicated to delivering high precision, reliable positions between the rover and the reference antennae. It uses standard serial port or UHF module for communication. A PicoBlade connector makes it easy to integrate with host devices or autopilots. The Precis-BX305 board supports multi-GNSS RTK positioning, which improves continuity and reliability of RTK positioning.



Key Features

- Supports 3 constellations, 5 frequencies
 - GPS L1L2/BDS B1B3/GLONASS L1
- Supports 192 GNSS channels
- Centimeter level positioning accuracy
- Rapid RTK integer ambiguity resolution
- Up to 20Hz position/velocity/time solutions
- Dual COM interfaces in TTL level
- Easy to integrate with Pixhawk and other autopilots
- External antenna input through SMA connector
- Data output: NMEA-0183
- Correction: RTCM 2.x/3.x and CMR
- Onboard 9-axis inertial/magnetic sensors
- High performance miniaturized microstrip GNSS antenna
- Supports logging of raw observation data
- Compact design and low power consumption

Technical Support: support@tersus-gnss.com

Sales Inquiry: sales@tersus-gnss.com

Website: www.tersus-gnss.com



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Performance Specifications

- Channel Number.....192
- Frequencies..... GPS L1L2/ BDS B1B3/ GLONASS G1
- Standard Positioning Accuracy
 - Horizontal (RMS)1.5m
 - Vertical (RMS).....3.0m
- RTK Positioning Accuracy
 - Horizontal (RMS).....10mm+1ppm
 - Vertical (RMS)15mm+1ppm
- Observations Accuracy
 - C/A Code (zenith direction) 10cm
 - P Code (zenith direction)10cm
 - Carrier Phase (zenith direction)1mm
- Time to First Fix (TTFF)
 - Cold start<50s
 - Warm start<30s
- Timing Accuracy (RMS) 20ns
- Initialization reliability>99.9%
- Velocity Accuracy (RMS)0.03m/s
- Differential Data FormatRTCM 2.X/3.2/CMR
- Max. Update Rate.....20Hz

Optional Accessories

- PicoBlade cables
- AX3701 GNSS antenna
- Compact 500mW UHF transceiver (433MHz/915MHz)
- Tersus USB connector and GNSS instrument case
- 3m GNSS antenna cable with TNC/SMA connectors

Communication

- Serial port
5 pin female serial port×2 with TTL level
- USB port
Integrated 1 host USB 2.0 port (receptacle) for data communication and 1 micro USB (receptacle) for power supply
- UHF
Integrated UHF module with 1.5km~2km coverage

Physical Characteristics

- Power5V DC+5% ~ -3%
- Power Consumption (Typical)2.6W
- Active Antenna Input Impedance.....50Ω
- Max. Antenna Bias Current Draw.....100mA
- GNSS input sensitivity.....85 dBm ~ -105 dBm
- Size130×60×18mm
- Weight69g
- Antenna Connector.....SMA Receptacle×2
- COM baud rate... Up to 230400bps
- PPS Port.....Receptacle SMA port (TTL level)

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