



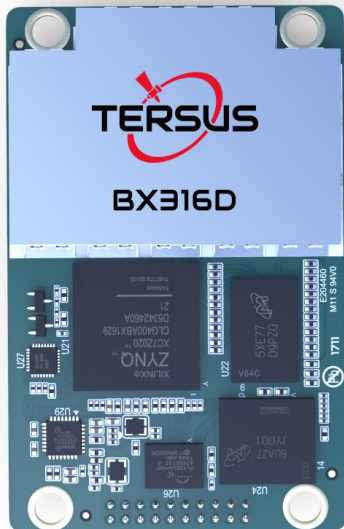
BX316D

GNSS RTK Board with Heading

Overview

The BX316D is a GNSS RTK board for providing accurate positioning and heading information. This board provides real-time, cost efficient and cm-level positioning as well as flexible interfaces for a variety of applications, such as precision navigation, precision agriculture, surveying, and UAVs.

The BX316D is pin-to-pin compatible with NovAtel OEM617D. It is designed for take-up by original equipment manufacturers and system integrators. In-built 4GB memory supports data collection. Its popular interface and log/command format make it compatible with most of the OEM boards in market.



Key Features

Supports RTK positioning mode or RTK positioning + heading mode. The two modes are software configurable

Supports 384 channels

Up to 20Hz RTK solution updates and raw data output

Supports in-built 4GB memory, which makes data collection easy

Pin-to-pin compatible with NovAtel OEM617D

Log/command compatible with NovAtel protocol

Supports PPS output and event mark input

Serial ports with LVTTTL level

External antenna inputs through MMCX connectors

Data output: NMEA-0183 and Tersus binary format

Correction: RTCM 2.x/3.x/CMR/CMR+

Easy to integrate with Pixhawk and other autopilots



Technical Specifications

Performance

Signal Tracking for Primary Antenna:	
GPS L1/L2, GLONASS L1/L2, BeiDou B1/B2	
Signal Tracking for Secondary Antenna:	
GPS L1+GLONASS L1 or GPS L1+BeiDou B1	
GNSS Channels:	384
Single Point Positioning Accuracy (RMS):	
– Horizontal:	1.5m
– Vertical:	3.0m
RTK Positioning Accuracy (RMS):	
– Horizontal:	10mm+1ppm
– Vertical:	15mm+1ppm
Observation Accuracy (zenith direction):	
– C/A Code:	10cm
– P Code:	10cm
– Carrier Phase:	1mm
Heading Accuracy:	
– 1m Baseline (RMS):	0.15°
Time To First Fix (TTFF):	
– Cold Start:	<50s
– Warm Start:	<30s
Timing Accuracy (RMS):	20ns
Velocity Accuracy (RMS):	0.03m/s
Initialization (typical):	<10s
Initialization Reliability:	>99.9%
Correction:	RTCM 2.x/3.x/CMR/CMR+
Max. Update Rate:	20Hz
Input Voltage:	3.3V DC
Power Consumption (typical):	2.8W
Active Antenna Input Impedance:	50Ω
Storage:	In-built 4GB memory

Communication

Serial Ports:	LVTTTL x2
USB Ports:	USB 2.0 device x1
CAN Ports:	ISO/DIS 11898 x1*
PPS Ports:	LVTTTL x1
Event Mark:	LVTTTL x1

* This port's function is related to firmware version.

Physical

Size:	46x71x12mm
Weight:	23g
Antenna Connector:	MMCX female x2
COM Baud Rate:	Up to 460800bps
Operating Temperature:	-40°C ~ +85°C

Optional Accessories

AX3702 GNSS Antenna
3m GNSS antenna cable with TNC/SMA connectors
Tersus carrying case

Website | www.tersus-gnss.com
Sales Inquiry | sales@tersus-gnss.com
Technical Support | support@tersus-gnss.com

