



## Tersus BX316 Firmware Version (FW0089) Release

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Dec 14, 2018

### Overview

Tersus GNSS Inc. ("Tersus") is glad to release the firmware to BX316 OEM board. Firmware version (FW0089) is available for download at [www.tersus-gnss.com/pages/software](http://www.tersus-gnss.com/pages/software) and support documents are available at [www.tersus-gnss.com/pages/documents](http://www.tersus-gnss.com/pages/documents).

### Features

- The firmware tracks three constellations: GPS (L1/L2), GLONASS (L1/L2) and BeiDou (B1/B2).
- This firmware provides centimeter-level accurate positioning to meet the wide range of precision positioning applications.
- The 4 GB onboard data storage makes it possible to store raw measurements for post-processing application.
- The maximum update rate is 20Hz for RTK and 20Hz for raw measurements.
- With a number of configurations, the firmware matches the needs for post-processing workflows, and for the use as a base/rover station or rover.

### Change from Previous Versions

Issue	Type	FW
Fixed the bug of solution type in heading log	Bug fix	FW0089
Optimized cycle slip detecting method.	Enhancement	
Fixed the bug of log headingb	Bug fix	FW0087
Optimized heading function.	Bug fix	FW0086

Fixed the problem of invalid 'RTKSOURCE' command.	Bug fix		
Changed new BX316 (serial number start with 022) default storage medium to eMMC.	Enhancement		
When input have TAB(it maybe copy from pdf,html..etc.). Make Response enable.	Enhancement		
The RTCM date will be broadcast only when the coordinates are fixed.	Bug fix	FW0082	
Changed the RTCM1230 encoding and RTCM1033 decoding.	Bug fix		
AP added more checks for response.	Enhancement		
Make file downloads more robust.	Enhancement		
Fixed the bug of Galileo and BeiDou sig mask and GPS and GLONASS sig mask.	Bug fix		
Add DAC control clock drift range protection to +/- 0.6 ppm	Enhancement		
Consider clock drift error at recover clock drift stage.	Enhancement		
Expand clock drift recover range to 15Hz and expand clock drift tuning range to 40Hz.	Enhancement		
The RTK engine is updated to version 3.0 which is more stable re reliable.	Enhancement		FW0041
The maximum update rate is 20Hz for RTK.	Enhancement		
Add RTCMv3 messages, including GPS ephemeris (MT1019), GLONASS ephemeris (MT1020), BDS ephemeris (MT1042), GLONASS bias information (MT1230).	Enhancement		
Optimizing the upgrade program. Even if the OEM board is unable to boot, the upgrade	Enhancement		

program may be enforced.		
The logic of firmware update has been optimized.	Enhancement	
The USB feature of firmware has been optimized.	Enhancement	
Fixed the bug when the updating is not successful.	Bug fix	
Changed the naming method of storage files. The time when the file was created is taken as the file name.	Enhancement	
Added a new feature of [base network]. (refer to < User Manual For BX Series GNSS Receiver >, 2.6.1)	Enhancement	