



BX50 Firmware Version 2192 Release Note

June 12, 2025

Overview

The BX50 is a multi-frequency GNSS OEM board independently developed by Tersus GNSS. It tracks all current GNSS constellations, including GPS, GLONASS, Galileo, BeiDou, QZSS, SBAS, and IRNSS, to ensure maximum flexibility. It supports TAP satellite-based precise point positioning service. With TAP, the BX50 doesn't need to work with the local RTK base station or CORS but directly receives corrections from satellites. The firmware version updated this time is 2192, and the firmware can be used for all BX50 series GNSS OEM boards (BX50L-TAP and BX50M-TAP). Please upgrade the firmware according to the user manual.

Features

- Supports multiple constellations & frequencies:
 - GPS L1 C/A, L1C, L2C, L2P, L5C
 - GLONAS L1OF, L2OF, L3OC
 - Beidou B1I, B2I, B3I, B1C, B2a, B2b
 - Galileo E1, E5a, E5b, E5AltBOC, E6
 - QZSS L1 C/A, L1C, L2C, L5C
 - SBAS L1 C/A, L5
 - IRNSS L5
 - L-Band
- Supports 1792 channels
- Supports satellite-based PPP service-TAP
- Supports Tersus ExtremeRTK™ GNSS technology
- Supports real-time interference visualization and mitigation.

Change from Previous Versions

| Issue | Type | Version |
|---------------------------------------------------------------------------------------------------------------------------|--------------|---------|
| Formal release | | |
| Increase the positioning accuracy and ambiguity resolution success rate of PPP in environments with minor signal blockage | Bug fix | 2192 |
| Optimize the "SHOWCONFIG" command, add status queries for the baud rate and INTERFACEMODE status of COM3 | Bug fix | |
| Optimize the adaptive recognition of different types of correction data | Bug fix | |
| Adjust the default RTK timeout setting to 120 seconds and the Pseudorange timeout setting to 300 seconds | Bug fix | |
| Add "ppppos" message output, including the PPP positioning status | New function | |
| Optimize the RTK positioning performance when receiving CMR correction data from a single GPS constellation | Bug fix | |
| Fix the issue that might cause the board to restart when running for a long time at 20Hz | Bug fix | |
| Add "satinfo" message output, including all the satellite's information tracked | New function | |
| Optimize the logic for the function that automatically switching to PPP when RTK correction data is interrupted | Bug fix | |
| Some other improvements in functionality and stability | Bug fix | |
| Update Baseband Library | Bug fix | 2051 |
| Fix the issue that might occur on serial ports when outputting a large amount of data | Bug fix | |
| Optimize RTK performance in long baselines | Bug fix | |
| Update BSP(Board Support Package) | Bug fix | |
| Some other improvements in functionality and stability | Bug fix | |
| Initial firmware version | | 1945 |