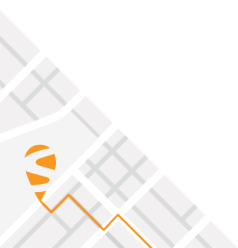




Release Notes and Installation Guide

mosaic-Sx Firmware Package v4.10.0



1 Installation Guidelines

In order to upgrade the firmware to version 4.10.0, only the following file is to be installed on the receiver:

SUF file	Located in	Contains
mosaic-Sx-4.10.0.suf	firmware/	See section 6

There is no need to install the file mosaic-Sx-4.10.0-failsafe.suf, unless Septentrio Support advises otherwise.

2 New Features and Improvements

2.1 New features in version 4.10.0

1. The satellite timing system used for the positioning is now selected automatically by default. GLONASS cannot be used.
2. IP over USB is now available.
3. QZSS support has been added to the positioning engine.
4. The maximum number of satellites used in RTK positioning has been increased.

2.2 Improvements in version 4.10.0

1. BeiDou Phase III signals (B1C and B2a) are now encoded in RTCM3 MSM according to the second addendum to the RTCM version 3.3 standard.
2. The NMEA talker ID for BeiDou has been changed from BD to GB in accordance with the NMEA version 4.11 standard.
3. Login with Ed25519 SSH keys is now supported.
4. An issue related to an invalid UTC time field at startup of the receiver in the NMEA interface has been resolved.
5. Decoding of Galileo ephemerides at cold startup has been improved.
6. Interoperability with VRS bases has been improved.
7. TLS 1.3 is now supported.
8. Galileo compatibility in the moving base application has been improved.

2.3 New features in version 4.8.2

1. When using specific base stations that send L1P instead of L1CA, GLONASS is now enabled in the RTK solution.
2. Support for tracking and usage in PVT for BeiDou satellites with PRN 38 to 63 was added.
3. Cosmos receiver service is now supported for field tests.
4. Support for BeiDou B3I signal tracking and usage in PVT was added.
5. The granularity of setRTCMv3Delay was increased from 1 to 0.1 seconds.
6. SECORX-S correction delivery through L-band is now supported.
7. The number of available IPR/TCP2way ports has been increased from 3 to 5.

2.4 Improvements in version 4.8.2

1. The maximum number of satellites for which differential corrections are stored and usable by RTK and DGNSS is increased to 60.
2. The receiver has been made more robust against possible crashes induced when requesting a PVTSupport(A) block with the exeSbfOnce command.
3. The spectrum plot display in the web interface has been improved.
4. RTK with only BeiDou satellites is now possible.
5. The MaxBaseline setting of setDiffCorrUsage is also applied in the selection of the RTK base.
6. Signals not enabled for PVT usage in the setSignalUsage command are now not used anymore accidentally in specific circumstances.
7. Decoding of the BeiDou almanac has been improved.
8. Postponing the initial usage of GLONASS by RTK is now only happening in even more restricted circumstances.
9. In case, firstly, MT1033 is not present in the received RTCMv3 or contains an unrecognized receiver type descriptor, and, secondly, MT1230 is received, GLONASS L1 and L2 code-phase biases are not treated as unknown anymore by RTK.
10. With the implementation of TLS on NTRIP, the NTRIPClientStatus SBF block and the NMEA SNC message have been updated.
11. A rare occurrence of incorrect data in the decoded GPS ephemerides has been fixed.
12. An error causing the wrong computation of the magnetic course in NMEA VTG message has been fixed.

3 Known Issues and Limitations

1. It is not possible to upgrade the receiver using mobile Safari on iOS devices.
2. If more than one user simultaneously changes settings via the web interface, the resulting configuration of the receiver may not be consistent.
3. Ethernet must be enabled explicitly in order to receive SECORX-S corrections over NTRIP.
4. The web server on the receiver has been tested with Chrome (version 61), Firefox (version 55) and Internet Explorer (version 11). If you experience any problems with your browser, please use a different client application.
5. IPS connections may stay visible in the web interface after the client has been disconnected.

6. The NTRIP server connection is sometimes not reliable when connected to a caster running "Professional Ntrip Broadcaster" (up to v2.0.22).
7. Firewall on computers can delay accepting connection by up to 4 minutes. Before using IPR functionality ensure that the desired IP port is enabled on your computer.
8. When accessing the webUI over HTTPS, occasional CPU overloads can be detected.
9. The SECORX-S solution can fall back to non-RTK after continuous operation exceeding several weeks.

4 Support

For further information or support, please consult the Septentrio support website (<http://www.septentrio.com/support>).

5 Legal Notice

Septentrio does not authorize the use of its products as critical components in devices or systems intended for safety-of-life applications or in devices or systems, of which the failure may endanger life or cause injuries, unless written approval is given.

All the firmware and documentation delivered with the mosaic-Sx Firmware Package is licensed, as explained in the About page which is accessible via the web interface of the receiver.

6 System Components and Versions

Product: mosaic-Sx Version: 4.10.0 Receiver Platform: GRB0051 Release Date: 18 June 2021	version	mosaic-Sx-4.10.0-failsafe.suf	mosaic-Sx-4.10.0.suf
Failsafe	9.0.2-g6e95581	Y	
Operating System	9.0.2-g6e95581		Y
GNSS Firmware	6.10.2-g92d2286c1e		Y
Antenna Information	2.13.0-e47835c0		Y