



Release Notes and Installation Guide

PolaRx5 Firmware Package v5.2.0



1 Installation Guidelines

In order to upgrade the firmware to version 5.2.0, the following files must be installed on the receiver in the indicated order:

	SUF file	Located in	Contains
1.	PolaRx5-firmware-5.2.0-OS_failsafe.suf	firmware/failsafe/	See Section 6
2.	PolaRx5-firmware-5.2.0-full.suf	firmware/	See section 6

2 New Features and Improvements

2.1 New features in version 5.2.0

1. The receiver now supports https.
2. The new Meas3 SBF blocks can now be used as a compact alternative to the MeasEpoch SBF block.
3. RTCM-MSM messages can now be recorded on disk with the limitation that cell mask splitting is not supported.
4. The receiver now supports the output of BeiDou and Galileo I/NAV ephemerides in RTCM3.
5. It is now possible to define a static reference position that is used for the generation of RTCM messages or RINEX files, and which is independent from the position computed by the receiver.
6. The receiver now supports TCP2Way functionality.
7. Multi-session logging now supports NMEA.
8. The RTK engine now supports Galileo, BeiDou, GPS and GLONASS.
9. In the command line interface, the BeiDou signals CMPL1, CMPE5b and CMPB3 have been renamed BDSB1, BDSB2 and BDSB3 respectively, and the SBF blocks CMPRaw and CMPNav have been renamed BDSRaw and BDSNav respectively. The old names are still recognised but should not be used in new designs.

2.2 Improvements in version 5.2.0

1. External USB disks up to 128 GB are now supported.

2. The receiver can now track the L5 signal of SBAS satellites transmitting according to the new SBAS L5 DFMC ICD.
3. The NTRIP caster now supports NTRIPv1 clients.
4. FTP Push now supports clients with multi-line welcome messages.
5. NMEA message SRX, SDI & SPW were added.
6. Galileo satellites E33 to E36 are now supported.
7. The receiver is now able to track BeiDou G7 (C17).
8. QZSS satellites J04 to J07 are now supported.
9. Support for CNAV has been improved.
10. Galileo satellites transmitting test-data messages are now flagged as unhealthy.
11. SBAS MSM is now supported.
12. The base station ID range in the GGA NMEA message (0-1023) has been increased to (0-4095) to support the RTCM base ID definition.
13. The encoding of the datum in GGA and GNS NMEA messages was corrected.
14. Security on WiFi connections has been improved.
15. In the setSBFOutput user command, the GEORawL1 SBF block has been removed from the RINEX SBF group.
16. The code smoothing algorithm has been improved.
17. When using a GNSS constellation simulator, correct time determination is guaranteed only when the simulated date is set after Dec 31, 2015 (instead of Dec 31, 2009 in earlier firmware versions).
18. The REF OUT frequency is now steered to GNSS time (unless disabled by command).
19. The Dropbear SSH Server has been upgraded.
20. In RTCM message types 1003 and 1004, the value of the "GPS L2 Code Indicator" field associated to P(Y) measurements has been changed from 1 to 3.
21. The visualisation of unhealthy satellite signals in the web interface has been improved.
22. The performance of the WAAS-based position solution has been improved.
23. The RTK compatibility with legacy RTCM2 streams has been improved.
24. The latitude and longitude fields in the SBF block PosCovGeodetic were swapped. This has been corrected.
25. If the receiver is started with Galileo and BeiDou tracking disabled/not permitted (and NVRAM is clear), then empty GAGSV and BDGSV sentences are no longer output.

2.3 New features in version 5.1.2

None

2.4 Improvements in version 5.1.2

1. MSM encoding has been improved.
2. Interference mitigation has been made more effective.
3. The antenna file has been updated.

3 Known Issues and Limitations

1. If the message "USB device not recognised" is shown on the PC after an upgrade of the receiver firmware, it is recommended to restart the receiver. Afterwards, the USB connection will be functional again.
2. It is not possible to upgrade the receiver using mobile Safari on iOS devices.
3. If more than one user simultaneously changes settings via the web interface, the resulting configuration of the receiver may not be consistent.
4. IPS connections may stay visible in the web interface after the client has been disconnected.
5. When connecting to the web interface using clientless SSL VPN, the Expert Control Panel may fail to load commands.
6. The external disk must be large enough to hold more than one day of data. If the disk is too small, FTP push may fail and the logged data may be lost.
7. The NTRIP server connection is sometimes not reliable when connected to a caster running "Professional Ntrip Broadcaster" (up to v2.0.22).
8. When Terrastar corrections are received via NTRIP, the corrections icon in the web interface stays inactive.
9. The generation rate of GBS and GRS NMEA sentence is limited to 1 Hz.

4 Support

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

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6 System Components and Versions

Firmware Package: 5.2.0 Applicable Product: PolaRx5 Receiver Platform: SSR7 Release Date: 30 March 2018		version	PolaRx5-firmware-5.2.0-OS_failsafe.suf	PolaRx5-firmware-5.2.0-full.suf
Failsafe	5.0.0-gbbb667b	Y		
Operating System	5.0.0-gbbb667b		Y	
GNSS Firmware	6.0.0-r67365		Y	
Antenna Information	2.9.0-ee19910c		Y	