u-center 19.09.01

GNSS evaluation software for Windows

Release note

Abstract

This release note contains general information, features, improvements, changes and known limitations for u-center 19.09.01.

Document information

Title	**u-center 19.09.01**	
Subtitle	GNSS evaluation software for Windows	
Document type	Release note	
Document number	UBX-19043317	
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Disclosure restriction	Production Information	

Contents

1 General information

The u-center GNSS evaluation software for automotive, mobile terminal and infrastructure applications provides a powerful tool for evaluation, performance analysis and configuration of the u-blox GNSS receiver.

1.1 Released files

The following table lists the files that have been released.

File	Description
u-center_v19.09.01.exe	u-center installer including u-blox CDC-ACM (USB) (x64 bit) driver v1.2.0.8 for Windows 7 and 8
u-center-v19.09.01_ReleaseNote_(UBX-19043317).pdf	Release note
u-center_UserGuide_(UBX-13005250).pdf	User guide

☞ For Windows 10, the CDC-ACM (USB) driver from Microsoft should be used, which is available from Windows Update.

⚠ u-blox Sensor and VCP drivers are deprecated, so they have been removed from the release package.

1.2 Version and checksum of files

The following table lists the versions and the checksums of the Released files.

File	Version	MD5
u-blox GNSS Standard Driver for Windows	1.2.0.8	
u-center.exe	19.09.01	276408769aad8ec750e1366620004f8e
flash.xml	200037	aef55f7596b6f200db1736eabe4d6315
flash.xml_changelog.txt		da424625dfa7ac2392542da0d169be8e
flash.txt	101098	b49a4b5d33efa113737208e788cf3afc
NMEA.dll	19.09.01	78ad216380e47030097cc791b6395f2a
RTCM.dll	19.09.01	a812b2386ff0ee3aae9d0aecb3700ef9
sqlite3.dll	3.21.0.0	07fb6d31f37fb1b4164bef301306c288
UBX.dll	19.09.01	7ab60b7f8a80430d6be20d86187a4079
ubxfwupdate.exe	19.03	
ubloxgnssusbcons.exe	18.4.0.0	7571060ea6937f31c6e5d7e4bebd864a

1.3 Released documentation

• Release Note (UBX-19043317)
• u-center User Guide (UBX-13005250)

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2 Features

2.1 Supported Microsoft Windows versions

u-center 19.09.01 runs on Microsoft Windows Vista and later versions up to (including) Windows 10.

2.2 Supported receiver generations

u-center 19.09.01 can update the firmware of the following receiver generations:

- u-blox 5 with ROM 3.00, ROM 4.00, ROM 5.00
- u-blox 6 with ROM 6.00, ROM 6.02, ROM 7.03
- u-blox 7 with ROM 0.10, ROM 0.11, ROM 0.14, ROM 1.00
- u-blox 8/M8 with ROM 0.21, ROM 0.22, ROM 2.01, ROM 3.01
- u-blox F9 with ROM 0.30, ROM 0.40, ROM 1.01

⚠️ u-blox 5 receiver support is end of life and will be removed in one of the next versions.

2.3 Supported protocol specification version

u-center 19.09.01 supports the u-blox protocol specification from version 10.00 and later versions up to (including) version 27.

2.4 External hardware support

The following external hardware is supported to interface with the receiver:

Interface	Device	DLL version
DDC/I2C	Totalphase Aardvark I2C/SPI Host Adapter	`aardvark.dll` v5.15 for Windows 32-bit
DDC/I2C	Diolan U2C-12 USB-I2C/SPI/GPIO Adapter	`i2cbrdg.dll` v1.0.0.9 for Windows 32-bit
SPI	Totalphase Aardvark I2C/SPI Host Adapter	`aardvark.dll` v5.15 for Windows 32-bit
SPI	Totalphase Cheetah SPI Host Adapter	`aardvark.dll` v5.15 for Windows 32-bit
SPI	Diolan U2C-12 USB-I2C/SPI/GPIO Adapter	`i2cbrdg.dll` v1.0.0.9 for Windows 32-bit

2.5 Multiple GNSS AssistNow Service

u-center 19.09.01 includes the multiple GNSS AssistNow Service (libMGA) version 1.10.

2.6 Debug messages

The following messages will be enabled or polled when pressing the "Debug Messages" button:

- Any UBX-INF
- UBX-MON-MSGPP
- UBX-NAV-CLOCK
- UBX-NAV-PVT
- UBX-NAV-SIG
- UBX-NAV-ORB
- UBX-NAV-SAT
- UBX-RXM-SVSI (every 30 seconds)
- UBX-MON-HW (polled)

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- UBX-MON-EXCEPT (polled)
- and additional u-blox debug messages

The following messages will additionally be enabled or polled when pressing the "Debug Messages" button for ADR product line:

- UBX-ESF-MEAS
- UBX-ESF-STATUS

The following messages will additionally be enabled or polled when pressing the "Debug Messages" button for HPG product line:

- UBX-NAV-RELPOSNED
- UBX-NAV-SVIN
- UBX-MON-IO
- UBX-NAV-SOL
- UBX-NAV-AOPSTATUS

The following messages will additionally be enabled or polled when pressing the "Debug Messages" button for SPG product line:

- UBX-MON-IO
- UBX-NAV-SOL
- UBX-NAV-AOPSTATUS

3 Improvements and changes

3.1 Version 19.09.01

- Feature: Added key RTCM-DF003_OUT to configuration group RTCM. This configuration key enables user to specify the RTCM reference station ID.
- Improvement: Added hold, average and maximum trace overlay features to the MON-SPAN message view.
- Improvement: Minor cosmetics changes done in UBX-CFG-VALSET/GET/DEL views and Advanced configuration view.
- Improvement: In UBX-RXM-RTCM message, RTCM 4072 subtype support added to report Statistics list and History list correctly.
- Improvement: Packet console distinguishes between different RTCM4072.x subtypes instead of reporting them all as RTCM4072.
- Improvement: Minor usability improvements done in NTRIP server/caster.
- Bug fix: UBX-CFG-OTP chip configuration message now generates the hex codes correctly.

3.2 Version 19.08.01

- Feature: UBX-NAV-PVT, UBX-NAV-HPPOSLLH, UBX-NAV-POSECEF views add support for new invalidEcef or invalidLlh flags.
- Feature: Added a new epoch marker to binary/text/packet view along with a button to turn the marker on and off.
- Feature: UBX-NAV-STATUS message uses new PUB fields carrSoln and carrSolnValid to show the carrier range status.
- Improvement: CFG-NMEA-FILT_GAL configuration item becomes available.
- Improvement: Added features to the epoch manager menu item "Receiver->Epoch Manager", to support priority navigation output mode.
- Improvement: Added support for new relPosNormalized flag in UBX-NAV-RELPOSNED message view to show if the heading vector is normalized or not.
- Improvement: The optional receiver configuration that can be stored at the beginning of a log file can now be made up of UBX-CFG-VALGET messages for generation 9 receivers.
- Improvement: UBX-MON-COMMS message becomes available.
- Bug fix: Fixed u-center database collector for UBX-NAV-RELPOSNED message both for message version 0 and message version 1.
- Bug fix: Fixed minor bug and some dialog layout improvements done in "Tools->Receiver Configuration" menu.
- Bug fix: Fixed crash when selecting entries in Receiver->ProtocolFilter.

3.3 Version 19.06.01

- Feature: Signal identifiers are visible for newly added bands: GPS L2 CL, GPS L2 CM, Galileo E1 B, Galileo E5 bI, Galileo E5 bQ, BeiDou B2I D1, BeiDou B2I D2, QZSS L2 CM, QZSS L2 CL, GLONASS L2 OF.
- Feature: Support for QZSS signal has been increased to 10 signals.
- Improvement: Cosmetic changes done to the layout of the generation 9 GNSS configuration view.
- Improvement: u-blox Generation 9 now visible in u-center's status bar and menu item "Receiver->Generation".
- Improvement: The load/save receiver configuration dialog in menu item "Tools->GNSS Configuration" now supports generation 9 receivers.

- Bug fix: Fixed the display of the "2d err" property in statistics view and in deviation map.
- Bug fix: Fixed u-center crashing while closing.

3.4 Version 19.05

- Improvement: In statistics view, the average and standard deviation column is now shown to two decimal places for the "Carrier range status" property.
- Bug fix: Message UBX-HNR-INS is now available in u-center.
- Bug fix: Help dialog now drawn correctly.

3.5 Version 19.04

- Bug fix: Fixed the problem with NMEA message parser so that it can now detect invalid NMEA messages properly.
- Bug fix: UBX-CFG-VALGET now updates the hex view as the user enters configuration keys to the request list. Also the user now has to press "Send" to send the request to the receiver instead of "Poll".
- Bug fix: Fixed issues in the log file player that led to messages being omitted or being played more than once.

3.6 Version 19.03

- Bug fix: Fixed Beidou B2 signal visibility in "Satellite-Levels" view.
- Bug fix: High Navigation Rate data can now be viewed in the table view.

3.7 Version 19.02

- Improvement: Added support for Bosch SMI230 IMU sensor in UBX-CFG-SPT and UBX-MON-SPT.
- Improvement: Updated libMga to v19.02.
- Bug fix: u-center now saves the configuration correctly.
- Bug fix: Fixed u-center crash issue while pressing the "Load differences from default" button in "View->Generation 9 Configuration View".

4 Known limitations

4.1 Known issues

- Enumerating the ports on a computer with many ports can take a long time.
- Using the protocol filter with "silent" or "no receiver" results in an empty message tree.

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