u-center 22.05

GNSS evaluation software for Windows

Release note

Abstract

This release note contains general information, features, improvements, changes and known limitations for u-center 22.05.

Document information

Title	**u-center 22.05**	
Subtitle	GNSS evaluation software for Windows	
Document type	Release note	
Document number	UBX-22013880	
Revision and date	R01	24-May-2022
Disclosure restriction	C1-Public	

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_v22.05.exe	u-center installer including u-blox CDC-ACM (USB) (x64 bit) driver v1.2.0.8 for Windows 7 and 8
u-center-v22.05_ReleaseNote_(UBX-22013880).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	22.05	65a575d66c0bd8cea4eb890d7373bace
bssndrpt.exe		cc672cec579490e6cfb92726a81287c1
bugsplat.dll		24e4da53ab6b3b7bb924eacbd46a59ec
bugsplatrc.dll		efa8f6d360edf491e1de52798bdacce6
flash.xml	200062	67aee07b0308cc275bc7247006252501
flash.xml_changelog.txt		18431489a7e11d3993aac941fccb30aa
flash.txt	101098	b49a4b5d33efa113737208e788cf3afc
NMEA.dll	22.05	14be7a9debc7f0eac92dc42e1e36180d
paho-mqtt3cs.dll	22.05	0a3e9d5dec5b2a26096fbb8bb56328a3
RTCM.dll	22.05	babc307d9032691f577d6835826c30cb
sqlite3.dll	3.21.0.0	07fb6d31f37fb1b4164bef301306c288
UBX.dll	22.05	b5472d3c82c6ed512899afd2aec1f1e3
ubxfwupdate.exe	21.05	

1.3 Released documentation

- Public release note (UBX-22013880)
- u-center user guide (UBX-13005250)

2 Features

2.1 Supported Microsoft Windows versions

u-center 22.05 runs on Microsoft Windows Vista and later versions up to (including) Windows 10.

2.2 Supported receiver generations

u-center 22.05 supports the following receiver generations:

- u-blox 6
- u-blox 7
- u-blox 8/M8
- u-blox 9
- u-blox 10

2.3 Supported protocol specification version

u-center 22.05 supports the u-blox protocol specification from version 10.00 and later versions up to (including) version 42.

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 22.05 includes the multiple GNSS AssistNow Service (libMGA) version 22.05.

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)
- 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

For detailed information on any new messages or protocols, contact u-blox support or see product interface description.

3.1 Version 22.05

- Improvement: Improved MQTT tool with options to subscribe to key, AssistNow and data topics.
- Improvement: Adjusted UBX-RXM-SPARTNKEY message so users can't enable/disable it anymore as being only the pollable message.
- Improvement: Fixed faulty RewindField in AssistNowOffline tool to update the string accordingly.

3.2 Version 22.02

- Feature: Added new messages UBX-MGA-INI-ATT, UBX-MGA-SF-INI, UBX-MGA-SF-INI2 to support "Advanced calibration handling" feature.
- Feature: Added new message UBX-RXM-COR to support multiple correction sources.
- Feature: Position protection level reported values from message UBX-NAV-PL are added in chart and statistic views.
- Improvement: At successful MQTT connection, the client can now connect to the PointPerfect and AssistNow Online services.

3.3 Version 21.09

- Feature: Added MQTT client to receive PointPerfect correction data.
- Feature: Added new message UBX-ESF-CAL for showing the calibrated external sensor fusion data.

3.4 Version 21.05

- Feature: Added support for secondary output NMEA-NAV2-* messages (NMEA-NAV2-GGA, NMEA-NAV2-GLL, NMEA-NAV2-GNS, NMEA-NAV2-GSA, NMEA-NAV2-RMC, NMEA-NAV2-VTG, NMEA-NAV2-ZDA).
- Feature: Added new message UBX-SEC-SIGLOG.
- Feature: Added new message UBX-NAV-PL, new message for showing the Protection Level information.
- Feature: Added MQTT client in Receiver > MQTT client for high precision GNSS service.
- Improvement: Checkbox for NAV2 messages in Receiver > Epoch detection is renamed to indicate the behavior better.
- Improvement: New field "Age of the most recently received differential correction" added in messages UBX-NAV-PVT and UBX-NAV2-PVT.

3.5 Version 21.02

- Feature: Relevant UBX-NAV2-* messages are available including UBX-CFG-NAV2 configuration group and CFG-MSGOUT-UBX-NAV2-* configuration items. This will enable the support for the secondary navigation solution output messages.
- Feature: Display data from UBX-NAV2-* messages in views 'Receiver' > 'Epoch detection' is available for dual band receiver.
- Feature: Added UBX-RXM-SPARTN message to monitor SPARTN input status.

- Feature: SPARTN protocol reported as a correction source in messages like UBX-NAV-SAT, UBX-NAV-SIG and reported as an input protocol in messages like UBX-MON-COMMS, UBX-MON-MSGPP.
- Feature: Added new messages UBX-CFG-ESFALG, UBX-CFG-ESFA, UBX-CFG-ESFG, UBX-CFG-ESFWT, UBX-CFG-SENIF, UBX-CFG-SPT, UBX-ESF-ALG, UBX-HNR-ATT, UBX-MON-SPT, UBX-NAV-COV, UBX-NAV-EELL, NMEA-GxTHS, UBX-NAV2-CLOCK, UBX-NAV2-COV, UBX-NAV2-DOP, UBX-NAV2-EELL, UBX-NAV2-ODO, UBX-NAV2-POSECEF, UBX-NAV2-POSLLH, UBX-NAV2-PVT, UBX-NAV2-SAT, UBX-NAV2-SBAS, UBX-NAV2-SIG, UBX-NAV2-SLAS, UBX-NAV2-STATUS, UBX-NAV2-SVIN, UBX-NAV2-TIMEBEIDOU, UBX-NAV2-TIMEGAL, UBX-NAV2-TIMEGLO, UBX-NAV2-TIMEGPS, UBX-NAV2-TIMELS, UBX-NAV2-TIMEQZSS, UBX-NAV2-TIMEUTC, UBX-NAV2-VELECEF, UBX-NAV2-VELNED, UBX-RXM-SPARTN, UBX-SEC-SIG, UBX-RXM-TM, UBX-CFG-HW-RF_LNA_MODE.
- Feature: Added support for BeiDou satellites with PRN 38 - PRN 63.
- Feature: Added support in UBX-NAV-SAT to report SLAS as a correction source.
- Feature: Added new flag in UBX-NAV-SBAS and UBX-NAV2-SBAS messages as 'SBAS integrity used' to indicate if SBAS integrity feature has been used by the receiver or not.
- Bug fix: Fixed issue with reading/writing values for configuration items of type I4.
- Bug fix: UBX-CFG-RATE no longer marks invalid input values. Before it would mark measurement periods and navigation rate values as not acceptable, while the receiver would accept them fine as expected.
- Bug fix: Fixed issue where in NMEA 4.11 some BeiDou satellites could be misidentified as GLONASS.

3.6 Version 20.10

- Improvement: Changed some ADR/UDR messages from confidential to PUB.
- Improvement: Added protocol version 33 used by ZED-F9R (HPS 1.0) to u-center Receiver > Protocol Filter > u-blox Generation 9.
- Bug fix: Fixed bug for the u-center crash when NTRIP server/caster is opened.
- Bug fix: Fixed UBX-CFG-NMEA reporting of version number when V4.11 is selected.
- Bug fix: Fixed for crashes when changing GNSS configuration.

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.
- Full support for u-blox 10 generation receiver is not yet available.

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5.1 Licenses

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THE BASIC LIBRARY FUNCTIONS

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