

Release Note

Topic	u-connectXpress v2.0.0 for NINA-B3 series UBX-19014982
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1 General Information

1.1 Scope

This release note describes the u-connectXpress v2.0.0 software for NINA-B3 series modules. The u-connectXpress software was previously known as the u-blox connectivity software (uCS).

1.2 Supported hardware

1.2.1 New ordering codes for the modules flashed with u-connectXpress v2.0.0

Product name	Ordering code	Type number	Software version
NINA-B311	NINA-B311-01B	NINA-B311-01B-00	V2.0.0
NINA-B312	NINA-B312-01B	NINA-B312-01B-00	V2.0.0
NiNA-B316	NINA-B316-01B	NINA-B316-01B-00	V2.0.0

1.2.2 Ordering codes for the modules upgradeable to u-connectXpress v2.0.0

Product name	Ordering code	Type number	Software version
NINA-B311	NINA-B311-00B	NINA-B311-00B-00	V1.0.0
NINA-B312	NINA-B312-00B	NINA-B312-00B-00	V1.0.0

It is possible to update all NINA-B3 series modules to u-connectXpress v2.0.0. See the NINA-B3 System Integration manual [2] for information about the software update procedure.

1.3 Released software package

File	Description
NINA-B3_2.0.0.zip	u-connectXpress v2.0.0 software package

The software package is available for download from [NINA-B3 u-connect software](#).

1.4 Updated documentation

- [1] NINA-B3 Data Sheet, Doc. No. [UBX-17052099](#)
- [2] NINA-B3 System Integration Manual, Doc. No. [UBX-17056748](#)
- [3] u-connectXpress User Guide, Doc. No. [UBX-16024251](#)
- [4] u-connect AT Commands Manual, Doc. No. [UBX-14044127](#) (This was previously named the u-blox Short Range Modules AT Commands Manual.)
- [5] u-blox connectivity software v5.0.0 for NINA-B1 Release Notes, Doc. No. [UBX-19008637](#)

1.5 Released software tools

The s-center version 4.7.1 or later is recommended for evaluation of u-connectXpress v2.0.0. The s-center application is available for download from [s-center evaluation software](#).

2 New features

u-connectXpress v2.0.0 for NINA-B3 series has all the features of previous software releases (u-blox connectivity software v1.0.0), plus improvements and new features such as the main ones that are described below. For more information about using these features, see the u-connectXpress software User Guide [3] and the u-connect AT commands manual [4].

2.1 LE Secure Connections

NINA-B3 now supports the enhanced security mode “LE Secure Connections” for protection against man-in-the-middle attacks and increased encryption using the FIPS-compliant key generation algorithm called Elliptic Curve Diffie Hellman (ECDH). For further details, see the u-connectXpress software User Guide and the AT commands - AT+UBTPM, AT+UBTST, AT+UBTGCHA and AT+UBTGDES.

2.2 Major increase of GATT characteristics/services

The maximum number of GATT services and characteristics that can be created and stored in NINA-B3 has been increased significantly. The maximum number depends on the configuration of NINA-B3 and can be up to 29 characteristics. For further details, see the u-connectXpress software User Guide and the AT command AT+UBTGCHA and the new optional parameter <max_length>.

2.3 Improved customization possibilities for Device Information Service record

The Device Information Service in Bluetooth low energy exposes manufacturer and vendor information about a device. The information in the Device Information Service such as manufacturer’s name, model number, firmware revision, and software revision can be read by remote Bluetooth low energy devices. The complete set of available data fields in the service record can now be fully customized via an AT command. For further details, see the updated AT command AT+UBTLEDIS.

2.4 Possibility to disable the DC/DC converter

It is now possible to disable automatic switching between the DC/DC converter and the LDO, and to force the module to always use the LDO. This can for example, be useful in areas with extreme magnetic fields. For further details, see the AT command AT+UPWRREG.

2.5 Configurable reconnect timer

It is possible to configure reconnect timer interval by specifying it in the URL. For further details, see the updated AT command AT+UDDRP and the new optional parameter <ac-to>.

3 Notes and limitations

3.1 Solved limitations

In addition to the list below, the solved limitations listed in chapter 3.1 of the u-blox connectivity software v5.0.0 for NINA-B1 Release Notes [5] are also included in this software version.

Description	Reference
Not possible to send notifications longer than 20 bytes when setting MTU size 247 (AT+UBTGSN).	UCS_DEV-227
Scan response data cleared when going from Discoverable to Not Discoverable and back.	UCS_DEV-176
Minimum value for Connect link-loss timeout not checked properly. Module hang on store and restart.	UCS_DEV-174
Disconnect command (AT+UDCPC=1) is not functional until reception of the confirm event of the connect command.	UCS_DEV-142
Module repeatedly resets when extended advertisements are disabled after enabling them.	UCS_DEV-83
When using a large MTU size (AT+UBTLECFG=26,1) - Module restarts when OBS421 connects as central.	UCS_DEV-81
Extended advertisement support up to maximum 232 bytes of data. Should support 252 bytes of data.	UCS_DEV-79
Wrong parameter value in +UBTCFG response for output power.	UCS_DEV-78
Module hangs if un-bond is performed before bonding is finished.	UCS_DEV-77
Reading RSSI (AT+UBTRSS) when peer is out of range hangs the module.	TE_NINA_NRF_FW-911
Freeze/lost connection when using UART without flow control.	TE_NINA_NRF_FW-831
Bonding not functional when device is configured to both central and peripheral.	TE_NINA_NRF_FW-807

3.2 Known limitations

Description	Reference
Incoming connection from remote default peer (+UDDRP) is rejected. On device A, set device B as default peer, connect from device B to device A using UDCP or default peer configuration. The connection is refused.	UCS_DEV-208
Wrong frame size reported in the EDM Connect Event. In EDM mode, when a central node connects to a remote peripheral device, the wrong frame size is reported in the EDM Connect Event, (0x0011). To get the correct size, use the Resend Connect Events (0x0056) command.	UCS_DEV-185
It is not possible to switch to EDM mode on peripheral after establishing a BLE connection in AT mode. No data can be transferred.	UCS_DEV-175