

Release Note

Topic	u-connectXpress software v4.0.0 for NINA-B2	
	UBX- 21010534	C1-Public
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1 Software

1.1 General Information

1.1.1 Scope

This release note describes the u-connectXpress software v4.0.0 for NINA-B2. It describes changes in the software since version 3.0.0.

1.1.2 Related documentation

- [1] AT Command manual, [UBX-14044127](#)
- [2] NINA-B2 Product summary, [UBX-17062096](#)
- [3] NINA-B2 Data sheet, [UBX-18006649](#)
- [4] u-connectXpress software User guide, [UBX-16012261](#)
- [5] Declaration of Conformity, [UBX-18007187](#)
- [6] Extended data mode, protocol specification, [UBX-14044126](#)

1.1.3 Released software image

The files in the NINA-B2 software image are summarized in the table below.

File	Description
NINA-B22X-SW-4.0.0-003.bin	Software binary
NINA-B22X-CF-1.0.json	Manifest that defines the memory addresses for the binary
NINA-B22X-SI-4.0.0-003.txt	u-connectXpress software signature

1.1.4 Hardware and software compatibility

The table below lists the NINA-B2 module variants and which u-connectXpress software versions they support.

Order code	Pre-flashed software	Supported software versions
NINA-B221-00B	1.0.0	1.0.0, 2.1.0, 3.0.0, 4.0.0
NINA-B221-02B	3.0.0	3.0.0, 4.0.0
NINA-B221-03B	4.0.0	3.0.0, 4.0.0
NINA-B222-00B	1.0.0	1.0.0, 2.1.0, 3.0.0, 4.0.0
NINA-B222-02B	3.0.0	3.0.0, 4.0.0
NINA-B222-03B	4.0.0	3.0.0, 4.0.0

1.2 Released software tools

s-center version 5.3.0 has been released and is published on u-blox.com.

2 Features and improvements

2.1 Data in AT mode

Support to send data when being in AT mode has been included. It is now possible to send and receive data in text, hex, or binary format using `AT+UDATW` and `AT+UDATR` commands.

2.2 Bluetooth pairing with fixed pin

For devices that lack a user interface, an AT command option (`AT+UBTSM`) has been added for using a pre-configured fixed pin (Bluetooth Low Energy headless fixed pin pairing).

2.3 GPIO stream

Control and monitor GPIO pins using the stream command (`AT+UDCP`) has been added. This feature is not fully tested in all use cases and is provided in experimental form for evaluation only.

2.4 Sleep mode

When configured in sleep mode, NINA-B2 operates with even lower power consumption than that in standby mode and retains memory content. In this mode, the UART is disabled but any connection is kept. This feature was provided in experimental form for evaluation purposes in previous releases but is now officially released after successful testing.

2.5 ETSI EN 300 328 regulatory compliance

The software includes updates to the radio driver supporting new requirements in ETSI EN 300 328 v2.2.2. Compliance testing has been performed and the Declaration of Conformity [5] has been updated.

3 Solved issues

Area	Description	Reference
Bluetooth	It is not possible to switch to EDM after establishing a Bluetooth Low Energy connection in AT mode. No data can be transferred. <i>Solution: Clarification in the EDM specification document [6].</i>	UCS_DEV-175
Bluetooth	Receiving advertisement messages where data type flag is not at offset 2 in the packet will result in NINA-B2 interpreting the type wrong when doing a discovery with LIMITED or GENERAL discovery.	UCS_DEV-675
Application	AT+UDCFG=3, < DSR activation bit mask. > is not functional. Only bit 1 (active DSR on peer connected) is implemented.	UCS_DEV-1122
Bluetooth	If a peripheral is set to connectable but non-discoverable, it makes advertisements without the GENERAL or LIMITED flag set.	UCS_DEV-1246
Bluetooth	Long running datapumps over Bluetooth LE could cause the module to crash. Seen with MTU=247 after around 12 hours continuous data transmission.	UCS_DEV-1372
Bluetooth	AT+UBTCFG without specifying param_tag returns param_tag 10 for param_tag 10, 12 and 13.	UCS_DEV-1436
Application	When using more than 3 default remote peers the last of the peers in the list is not automatically connected unless also one of the previous ones is also available.	UCS_DEV-1462
Bluetooth	BLESA (Bluetooth Low Energy Spoofing Attacks) vulnerability.	UCS_DEV-1531
Application	Pin 27 not possible to use as GPIO.	UCS_DEV-1587

4 Known limitations

Area	Description	Reference
Application	UART baud rate higher than 115200 is not supported when Automatic Frequency Adaption is enabled.	UCS_DEV-196
Bluetooth	Setting max Bluetooth BR/EDR links with +UBTCFG does not work.	UCS_DEV-644
Bluetooth	After receiving several incoming SPP connections and doing a Bluetooth inquiry, the module could occasionally restart.	UCS_DEV-1457
Bluetooth	In response to AT+UDLP?, when the own address is a random address, the local Bluetooth LE MAC address is LSB first rather than MSB first.	UCS_DEV-1463
Application	AT+UDLP also lists not connected peers when default remote peer is configured. Workaround: Use Connect peer command, AT+UDCP, to establish connections.	UCS_DEV-1759
Application	AT+USTOP for sleep mode with disallowed pins 11 and 15 responds "valid".	UCS_DEV-1868