Release Note

Topic	**u-connectXpress v3.0.0 for ANNA-B112**
	UBX-20031225
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Contents

1 General Information

1.1 Scope

This release note describes the u-connectXpress v3.0.0 software for ANNA-B112 modules.

1.2 Supported hardware

1.2.1 Ordering codes for the modules upgradeable to u-connectXpress v3.0.0

Product name	Ordering code	Type number	Software version
ANNA-B112	ANNA-B112-01B	ANNA-B112-01B-00	v2.0.0
ANNA-B112	ANNA-B112-00B	ANNA-B112-00B-00	v1.0.0

It is possible to update all ANNA-B112 modules and evaluation kits to u-connectXpress v3.0.0. See the ANNA-B1 System Integration manual [2] for information about the software update procedure.

NOTE: Updating to v3.0.0 will restore the default configuration settings.

1.3 Released software package

File	Description
ANNA-B112_3.0.0.zip	u-connectXpress v3.0.0 software package

The software package is available for download from www.u-blox.com.

1.4 Related documentation

[1] ANNA-B112 Data Sheet, UBX-18011707
[2] ANNA-B112 System Integration Manual, UBX-18009821
[3] Using u-connectXpress software User Guide, UBX-16024251
[4] u-connect AT Commands Manual, UBX-14044127

The documents are available for download from www.u-blox.com

1.5 Released software tools

The s-center version 5.0 or later is recommended for evaluation of u-connectXpress v3.0.0. The s-center application is available for download from www.u-blox.com.

2   New features

u-connectXpress v3.0.0 for ANNA-B112 has all the features of previous software releases, plus improvements and new features such as the main ones described below. For more information about using these features, see the Using u-connectXpress software UserGuide [3] and the u-connect AT commands manual [4].

2.1 Multiple central support

Connections from up to 6 centrals (for example mobile phones) can be accepted and handled simultaneously in peripheral role and up to 4 centrals in combined central/peripheral role. For more information and example of configuration see u-connectXpress User Guide [3] and the AT command AT+UBTCFG.

2.2 Connection status information

It is now possible to read out all active connections and detailed information about each connection, such as connection interval, slave latency, supervision timeout, MTU size, PDU payload length, role, and more. For further details, see the AT command AT+UBTLELIST and AT+UBTLESTAT.

2.3 Changeable MAC address

It is now possible to change the factory programmed MAC address to a customer defined one. For further details, see the AT command AT+UMLA.

2.4 Configurable reconnect timer

It is now possible to configure the reconnect timeout interval for a connection which is using connection scheme "always connected". For further details, see the AT command AT+UDDRP and the new optional parameter <ac-to>.

3   Notes and limitations

3.1 Solved limitations

Description	Reference
LE secure connections with security mode 4 incorrectly outputs event +UUBTUPD and accepts AT+UBTUPE. **NOTE:** *Event +UUBTUPD is replaced with +UUBTUC. Where both AT+UBTUPE and AT+UBTUC can be used for acceptance. For more information and example of configuration see u-connectXpress User Guide [3].*	UCS_DEV-676
The command to read multiple GATT characteristics (AT+UBTGRM) is not functional and returns an error response. *This limitation has been found to be incorrectly reported as a known limitation. The command is defined only for client.*	TE_NINA_NRF_FW-254 UCS_DEV-30
The disconnect command (AT+UDCPC=1) is not functional until reception of the confirm event of the connect command. The workaround is to wait for the connection confirmation before sending the disconnect command.	TE_NINA_NRF_FW-284 UCS_DEV-142

Description	Reference
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.	TE_NINA_NRF_FW-531 UCS_DEV-185
The un-bond command (AT+UBTUB) is not functional until reception of the confirm event of the bonding command. The workaround is to wait for the bonding confirmation before sending the un-bond command.	TE_NINA_NRF_FW-677 UCS_DEV-77
The response to "Maximum allowed output power" (AT+UBTCFG param_tag 4) is the unsigned representation of the configured value.	TE_NINA_NRF_FW-748 UCS_DEV-78
When going from Discoverable mode to Not Discoverable (AT+UBTDM), and then back, the Scan Response data is cleared.	UCS_DEV-176
Extended advertisement (AT+UBTAD) should support up to 252 bytes of data but is limited to maximum 232 bytes of data.	UCS_DEV-79
The module resets when extended advertisements are disabled after enabling them (AT+UBTLECFG parameter tag 29).	UCS_DEV-83
The minimum value for the Connect linkloss timeout (AT+UBTLECFG parameter tag 7) is 100 ms, but setting any value <110 makes the module hang on store and restart.	UCS_DEV-174
It is not possible to switch to EDM after establishing a Bluetooth low energy connection. No data can be transferred. The workaround is to first switch to EDM, and then establish the Bluetooth low energy connection.	UCS_DEV-175
Not possible to send notifications longer than 20 bytes when setting MTU size 247 (AT+UBTGSN).	UCS_DEV-227
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
When using security mode 3 "display only" (AT+UBTSM=3) and the device trying to bond enters the wrong pin code, mitm instead of pairing failed status code is received.	UCS_DEV-1073
When connected to a module over EDM and a remote peer disconnects, normally an EDM disconnect event is received. However, if the module has a default remote peer and starts in EDM mode no disconnect event is received.	UCS_DEV-1057
When a GATT server has more than one client and gets a write long event the connection handle is 0 even though it should be different.	UCS_DEV-952
Connection event is not received when UART is enabled after being disabled.	UCS_DEV-849
User passkey entry +UBTUPE, entering 1234 should be the same as 001234. Pairing with for example an iPhone and with module security mode set to keyboard only (mode 5), if the iPhone displays a passkey which starts with 0's i.e. passkey value is less than 100 000 (for example 001234) entering this using User passkey entry +UBTUPE AT command will result in one of: AT+UBTUPE=<MAC>,001234 => Pairing will fail AT+UBTUPE=<MAC>,1234 => Pairing will succeed	UCS_DEV-815

Description	Reference
+UUBTUPD does not always show 6 digits. When module is in Display or Display Yes/No security mode the passkey display event +UUBTUPD does not always show 6 digits. Some devices e.g. Android phones will fail to pair if not 6 digits are entered including leading 0's in case of passkeys less than 6 digit lengths.	UCS_DEV-814
Error received when checking RSSI value on an incoming connection from a mobile phone.	UCS_DEV-581

3.2 Known limitations

Description	Reference
When using the external pairing functionality (pairing using SWITCH_0, see AT+UBTSM), the LED flashes orange (GPIO pins for red and green LEDs are active) for 60 seconds even after successful bond.	TE_NINA_NRF_FW-426 UCS_DEV-29
The command to discover all characteristic descriptors (AT+UBTGDCD) is missing the response event when using 128 bit UUIDs.	TE_NINA_NRF_FW-910
Possible SPS data loss when L2CAP fragments are small (3 bytes)	UCS_DEV-909