

Release Note

Topic	u-blox Connectivity Software 1.0.0 for NINA-B2 UBX-18069534
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1 Software

1.1 General Information

1.1.1 Scope

This release note describes the u-blox connectivity software version 1.0.0 for the NINA-B2 Bluetooth dual mode module.

1.1.2 Related documentation

Document	UBX number	Audience	Updates
AT Commands manual	UBX-14044127	Public	Updated with NINA-B2 v1.0 information
NINA-B2 Data Sheet	UBX-18006649	Public	Updated with data from product verification
NINA-B2 Product Summary	UBX-17062096	Public	Updated with data from product verification

1.1.3 Released software image

The NINA-B2 software image is available on the product resources page of the NINA-B2 series at u-blox.com. The table below lists the binary and configuration files included in the package.

File	Description
NINA-B22X-SW-1.0.0-058.bin	Software binary
NINA-B22X-CF-1.0.json	Manifest that defines the memory addresses for the binary

1.2 Integrated features

1.2.1 Serial Port Profile (SPP)

The Serial Port Profile that allows to setup a serial data connection between two devices using Bluetooth BR/EDR is supported.

1.2.2 GATT server and client

NINA-B2 supports the Generic Attribute Profile (GATT) in the Bluetooth low energy specification. It can act as both GATT server and GATT client, simultaneously.

1.2.3 Peripheral and central roles

NINA-B2 can have both peripheral and central roles. A module can be peripheral and central simultaneously.

2.3 Serial Port Service

Serial Port Service (SPS) is implemented according to u-blox low energy Serial Port Service. SPS is implemented on top of GATT and provides a serial data connection over Bluetooth low energy similar to the Serial Port Profile (SPP) in Bluetooth BR/EDR. u-blox provides example code for implementation of the SPS protocol in Android and iOS devices.

1.2.4 Bridge functionality

When setting the module to data mode, multiple connections can be configured. Extended Data Mode (EDM) allows individual control of each individual connection. This makes it possible to transmit data to one specific remote device and to know from which remote device the data is received.

1.2.5 Configuration over air

With configuration over air enabled, the module accepts the AT commands sent from a remote device connected via Bluetooth.

1.2.6 Pairing

NINA-B2 supports pairing using the Secure Simple Pairing model with either Just Works or Passkey Entry methods.

1.2.7 GPIO control

GPIO pins available on the NINA-B2 module can be configured, written to, and read from using an AT command from the host over the UART interface. By using the configuration over air functionality, the NINA-B2 GPIO pins can be controlled also from a remote device using Bluetooth low energy.

1.2.8 UART host interface

For communication with the host system, a UART interface is implemented. Baud rate up to 3 Mbps is supported.

1.2.9 Secure boot

The NINA-B2 modules implement a secure boot procedure assuring that the modules boot up only in the presence of a software authorized by u-blox. This ensures that the malicious software cannot be injected in the module. As a consequence, the NINA-B2 series cannot be used by customers developing their own software to run on the module MCU. For this purpose, u-blox provides the NINA-W10 series with open CPU.

1.3 Known limitations

Area	Description	Reference
Bluetooth	When running data pumps over SPS with MTU 247 during several hours, data errors could occur.	UCS_DEV-55
Bluetooth	Master-Slave role switch request from the remote device may in some cases be ignored by NINA-B2.	UCS_DEV-68
Bluetooth	SPP with 7 default remote peers fails; in some cases connection fails to the 7th device.	UCS_DEV-53
Bluetooth	Setting of allowed package type for a Bluetooth BR/EDR connection does not work. Workaround: Set allowed package type from the remote device instead of NINA-B2.	UCS_DEV-62