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Federal Communications Commission
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RE: Certification Application

Product Family / PMN: NINA-B1
FCC ID: XPNINAB1

Request for Part 15 Single-Modular Transmitter Approval

To whom it may concern:

We, u-blox AG, hereby requests for a limited modular transmitter approval of our OEM-Bluetooth low energy module with passive NFC tag functionality, NINA-B1.

Please observe that integration of the module is to be made by the grantee himself thus limited to own use only.

The equipment is described as follows:

Brand name: u-blox
Product family: NINA-B1
HVIN: NINA-B111 and NINA-B112
FCC ID: XPNINAB1

In 47 C.F.R. §15.212 there are eight numbered requirements a single modular transmitter must meet to obtain a modular transmitter approval. Our OEM-Bluetooth low energy module with passive NFC tag functionality NINA-B1 complies with all 8 (eight) of these requirements.

1. The modular transmitter must have its own RF shielding

NINA-B1 has its RF-parts covered by a shield box that is soldered on to the module ground plane.

2. The modular transmitter must have buffered modulation/data inputs

NINA-B1 does not have modulation inputs. The electrical connection consists of power supply and digital and/or analog interfaces. The interface signals are internally buffered by the module SoC (System on Chip) and cannot affect the modulation.

Detailed instruction on how to connect these interface signals are given in the products User Guide.

3. The modular transmitter must have its own power supply regulation

NINA-B1 has its own voltage regulators. In case the supply voltage changes, the internal voltages will be unchanged.

4. The modular transmitter must comply with the antenna requirements of Section 15.203, 15.204(b) and 15.204(c)

NINA-B1 is either equipped with on-board antenna or a unique antenna pin. The antenna pin shall be connected to an antenna via a unique U.FL coaxial connector. The antenna pad design must follow the NINA-B111 Antenna Connector Reference Design to comply with the NINA-B1 modular approval.

For further details about approved antennas please refer to the antenna data sheet included in the filing.



5. The modular transmitter must be tested in a stand-alone configuration

NINA-B1 was tested on a reference design in a stand-alone configuration.

6. The modular transmitter must be labelled with its own FCC ID number

The module outline sizes are 14.0 x 10.0 mm and 10.6 x 10.0 mm and the size of the identifier label located on the shield box is only 7.5 x 7.5 mm. The model name (HVIN) is printed on the identifier label. The size of the module/label makes it impossible to print the FCC ID in a clearly visible (4 pt or larger) way on the identifier label. Instead the FCC and IC IDs are printed on the packaging (cardboard box and sealed dry bag).

The module is a Surface Mount Device soldered onto a carrier board and is not accessible to the end-user. It is not possible for the end-user to replace or remove the module. The modules are shipped to the OEM integrator as components on tape-and-reel in a sealed dry bag. The sealed dry bag is enclosed in a protective cardboard box.

Instructions will be provided to the OEM integrator how the end product must be labeled.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements.

NINA-B1 is compliant with all applicable FCC rules. Detailed instructions are given in the products User Guide.

8. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.

NINA-B1 complies with the RF exposure limits when integrated into host devices categorized as mobile and/or fixed. See separate document for RF exposure calculations.

Thank you for your attention in this matter.



Anders Nordlöf
Senior Certification Manager, u-blox AG

Job Title and Dept.: