

Modular Transmitter Approval Request

Federal Communications Commission
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Company name: u-blox AG
FCC ID: XPYNINAB4

Gentlemen,

In accordance with 47CFR 15.212 Modular Transmitters and KDB 996369 D01 'Module Certification Guide v03'. FCC ID: XPYNINAB4 has been examined against the following requirements.

Items to be covered by Single modular transmitters.

Requirement per 15.212(a)(1) and KDB 996369 D01 'Modular Certification Guide v03	Explanation from Grantee (do not write yes/no, but explain why product complies/how it is achieved)
1. The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.	Shielding is provided by a metal cover over the circuitry.
2. The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.	All modulation and data inputs are buffered by circuitry on the transmitter chip.
3. The modular transmitter must have its own power supply regulation.	Power supply regulation is provided by circuitry on the transmitter chip.
4. The modular transmitter must comply with the antenna and transmission system requirements of §§ 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). The "professional installation" provision of § 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.	The antenna is fixed.
5. The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in § 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see § 15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see § 15.31(i)).	Testing was performed in a stand-alone configuration as shown in the test setup photos.
6. The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number. (A) If using a permanently affixed label, the modular	The modular was labeled with its own FCC ID. The outside of device in to which the module is installed will be labeled Contains TX FCC ID: XPYNINAB4,

<p>transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.</p> <p>(B) If the modular transmitter uses an electronic display of the FCC identification number, the information must be readily accessible and visible on the modular transmitter or on the device in which it is installed. If the module is installed inside another device, then the outside of the device into which the module is installed must display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains FCC certified transmitter module(s)." Any similar wording that expresses the same meaning may be used. The user manual must include instructions on how to access the electronic display. A copy of these instructions must be included in the application for equipment authorization.</p>	<p>Please refer to User Manual.</p>
<p>7. The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.</p>	<p>The modular is comply with all applicable FCC rules.</p> <p>Any modifications, not expressly approved by the manufacturer could void the authority to operate in these regions.</p>
<p>8. Radio frequency devices operating under the provisions of this part are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), 1.1310, 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of modular transmitters under this section must contain a statement confirming compliance with these requirements. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration. Technical information showing the basis for this statement must be submitted to the Commission upon request.</p>	<p>This module operates under Part 15 .247 which is exempt from RF exposure evaluation owing to the very low operating power.</p>

Name: Filip Kruzela

Date: Feb. 03, 2024

Title: Certification Manager

Signature of applicant


