

Single Modular requirements statement

Wireless Module K114 FCC ID: 2AAN2K114

The 2AAN2K114 is a 10mW, 902-928 MHz frequency hopping wireless transceiver with on board sensors.

This document lists the definitive means by which the device complies with the single modular requirements on a point by point basis.

§ 15.212 Modular transmitters.

Single modular transmitters must meet the following requirements to obtain a modular transmitter approval.

(i) 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.

Statement of compliance with this requirement:

The module has a two layer PCB with RF components on the upper (top) layer. The entire upper layer radio elements are enclosed in a screening can. The bottom layer, under the RF section is an all copper ground plane which prevents any significant RF emissions escaping via the bottom of the PCB.

(ii) 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.

Statement of compliance with this requirement:

Data to be transmitted is sent to the device over a TTL 19200 baud serial communications link. The data is stored in a local buffer before transmission. Excessive data rates cannot be presented to the transmitter.

The RF modulation is fixed and cannot be changed. Over modulation cannot occur.

(iii) The modular transmitter must have its own power supply regulation.

Statement of compliance with this requirement:

The module has an on board voltage regulator. This ensures that the RF section is always running with the same RF characteristics independent of varying input voltage.

(iv) 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.

Statement of compliance with this requirement:

The module has a fixed antenna implemented using a copper trace on the PCB. Therefore it is permanently attached and no changes are possible.

(v) 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)).

Statement of compliance with this requirement:

The module has been tested in a standalone configuration.

(vi) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.

Statement of compliance with this requirement:

The module has a permanently affixed label with the artwork shown in an attached document.

(A) If using a permanently affixed label, the modular 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.

Statement of compliance with this requirement:

Labelling instructions are included in the Product Manual attached as a separate document.

Label artwork both for the module itself and for an exterior label is attached as a separate document.

(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.

Statement of compliance with this requirement:

The module does not use an electronic display of the FCC identification number.

(vii) 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.

Statement of compliance with this requirement:

Copies of the Product Manual and Operational Description are attached as separate documents.

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

Statement of compliance with this requirement:

The laboratory test report shows that the module is compliant in this regard.

Signed:



Dr. David Gray

Director

Logpro Ltd.

Dated:

