

Shenzhen RAKwireless Technology Co., Ltd.

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Modular Approval Letter

Date: 2020-11-12

FEDERAL COMMUNICATIONS COMMISSIONS

Authorization and Evaluation Division

7435 Oakland Mills Road

Columbia, MD 21046

Dear Application Examiner,

We, Shenzhen RAKwireless Technology Co., Ltd. is submitting this application for certification of product named as LoRa Module, Model Numbers: RAK4630, RAK4631 (FCC ID: 2AF6B-RAK4630). It is seeking modular approval. The radio meets the requirements for modular approval as detailed in FCC 15.212. Compliance to each of the requirements is described below:

- 1. The modular transmitter must have its own RF shielding.**
Yes. The modular has its own RF shielding. Refer to EUT photo.
- 2. The modular transmitter must have buffered modulation/data inputs.**
Yes. All inputs to the modular are buffered through logic or microprocessor inputs. Refer to Schematics.
- 3. The modular transmitter must have its own power supply regulation.**
Yes. The modular has its own power supply regulation by chip (nRF52840 and SX1262). The supply range is 2.0-3.6V (Nom. 3.3V). Refer to schematics.
- 4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(c).**
Yes. The modular has two antennas arrangement which connected by IPEX connector. One is for BLE, the other is for LoRa. The antenna gain is 2.23dBi and 3.0dBi, respectively. Refer to EUT photos.
- 5. The modular transmitter must be tested in a stand-alone configuration.**
Yes. The modular is configured and attached in test board when testing. Refer to test setup photos.
- 6. The modular transmitter must be labeled with its own FCC ID number.**
Yes. Refer to label and user manual.

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.**

Yes. Refer to user manual.

8. **The modular transmitter must comply with any applicable RF exposure requirements.**

Yes. The device meets RF exposure evaluation greater than 20cm distance specified in §2.1091. If the device built into a host as a portable usage, the additional RF exposure evaluation may be required as specified by §2.1093.

Please contact me if you have additional questions. Your attention to this matter is greatly appreciated.

Sincerely Yours,

Signature: *Ziwei Zhang*

Ziwei Zhang

Title: Engineer