

Modular Approval Letter for FCC and Canada

Date: March 5, 2021

Skydio, Inc
114 Hazel Avenue
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To Whom It May Concern:

Skydio is requesting a Limited Modular Approval for the 5GHz Skydio Link module (FCC ID: 2ATQRSMO5GV1)

The radio module satisfies the below requirements from FCC Section 15.212:

(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.

All primary radio components are located below the shield can, including the Qualcomm QCA6174A radio, two Skyworks SKY85746-11 front end modules. There is an additional shielded area on the bottom side of the module, covering supply capacitors and related support circuitry for two Skywork modules.

The unshielded components located on the bottom of the module are discrete RLC components that support power circuitry of the WLAN SoC i.e QCA6174A .

(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.

Data packets are stored in the host processor memory and the modulation per data packet would be configured by the WLAN SOC (QCA6174A).

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

The modular transmitter has power supply regulation via a Low Dropout Regulator (Texas Instruments LP5912-1.1DRVVR) located at U9200. This component regulates the power supply to the Radio component from 3.3V to 1.1V.

(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.

The modular transmitter uses a ‘unique’ antenna coupler in the form of two u.FL connectors

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

The module will have a label affixed to the upper shield can.

(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.

The modular transmitter follows all specific rules and operating requirements, as validated by the NRTL. An instruction manual is included in the application for equipment Authorization.

(viii) 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.

This modular transmitter is not subject to radio frequency radiation exposure requirements.

The radio module does not satisfies the below requirements from FCC Section 15.212, forming the basis for the limited modular approval:

(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)).

The module will be tested in an 'open' Skydio 2 UAV, using the UAV main logic as the for power and control inputs. Test setup shown below:

Sincerely,



Joe Marcinkowski
Engineering Program Manager