



May 16, 2016

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

Gentlemen:

Synapse Wireless Inc. respectfully requests Part 15 unlicensed modular transmitter approval of the Synapse Wireless Inc. RF220SU product. In accordance with the Part 15.212(a)(1) and IC RSS-GEN7.1.1, here is the response to the items listed for the RF220SU product.

Item 1: The RF220SU module has a metal RF shield that is soldered to the ground plane on all side, enclosing all electronics, and prevents coupling of the RF circuitry with the host board electronics in which the RF220SU is plugged into in order to comply with this item.

Item 2: All input data to the RF220SU is buffered in the microcontroller located on the RF220SU. Firmware in the microcontroller then controls the flow of this data to the transmitter for RF communications to prevent excessive data rates or over-modulations to comply with this item.

Item 3: The RF220SU transmitter is the Atmel ATMEGA128RFA1 series of IEEE 802.15.4 transceiver modems. This modem has internal power supply regulation to comply with Item 3.

Item 4: The RF220SU has support for an external antenna thru a Reverse Polarity SMA style antenna coupler, and a U.FL style antenna coupler which are mounted on the RF220SU which complies with Item 4 requirements.

Item 5: The necessary RF220SU and support hardware was provided to the certification lab to show compliance with this item.

Item 6: The FCC ID label assigned to the RF220SU will be located on the top outside face of the RF220SU. In the case that this label on the RF220SU is not visible after installation, the datasheet will document to the user of the RF220SU that the FCC ID labeling requirements must



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be included on an exterior label of the finished product enclosure using the RF220SU stating that the product contains the FCC ID label for the RF220SU. A copy of the datasheet.pdf will be provided to the FCC to show this compliance.

Item 7: In order to show compliance to this item, a copy of the datasheet.pdf will be provided to the FCC to show that the issues of Item 7 have been properly documented.

Item 8: The RF220SU will be tested to comply with any applicable RF exposure requirements. Also, in order to show compliance to aspects of this item, a copy of the datasheet will be provided to the FCC to show that the issues of Item 8 have been properly documented.

Sincerely,

A handwritten signature in black ink that reads "Christopher L. Messick". The signature is fluid and cursive, with the first name being the most prominent.

Christopher Messick
Compliance Engineer