



3/14/2014

Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046-1609

To Whom It May Concern:

In reference to the application for a Class 2 Permissive Change on FCC ID#: RNW-MD-FH-09-01 radio module. The original approval required a piece of microwave absorber tape to pass radiated emissions (harmonics). This change is the approval of an alternate type of microwave absorber material.

This letter is to attest that this permissive change in no way impacts the radio power output, modulation type, signal and receiver bandwidths, or hopping operation. The circuitry and firmware have not changed. This is strictly an EMC change.

This frequency hopping radio will comply with the following sections of FCC rules during operation. Note that all of this is unchanged from the original certification.

1) Part 15.247(a)(1)

RNW-MD-FH-09-01 is used in a network containing a base station and multiple remote units. The remote units hop in synchronization with the base station at all times. All devices, base station and remote, use the same channel bandwidths for both transmit and receive. Whenever a device in the network is transmitting, all of the other devices in that network are receiving on the same channel. The receiver bandwidth is matched to the transmitted signal bandwidth.

2) Part 15.247(g)

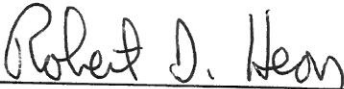
RNW-MD-FH-09-01 is used in a network where all individual transmissions occur within a single hop, and therefore on a single frequency. RNW-MD-FH-09-01 is a module having one wired port and one RF port. Packetized data is implemented on both of these ports. A continuous stream of data arriving at the wired port must be a succession of packets. Each packet would be transmitted during one hop. Successive packets would be transmitted on successive hops (on different channels). If retries of any packet are required, they would be transmitted on a different hop than the original transmission of that packet. The end result is that for continuously arriving data on the wired port, the radio would transmit the data one packet per hop as it sequenced through the 50 channel hopping sequence.

3) Part 15.247(h)

RNW-MD-FH-09-01 uses a data rate of 50 kB/s which results in 75 channels being able to fit in the 902 – 928 MHz ISM band. Only 50 of these channels are required by 15.247(a)(1)(i). This leaves 25 channels for use as substitute channels if interference is detected. The intelligence required to detect interference and substitute a channel is contained only in the base station. Once a substitution is made by the base station it is communicated to the remote units that are a part of that base station's network so that they may remain in hopping synchronization with the base station. The algorithm used to detect interference is looking for relatively constant, fixed frequency sources. It will not react to a hopping interference source.

There is no mechanism that allows two or more base stations to communicate with one another. Thus two overlapping networks cannot cooperate in any way; they cannot jointly select hopping sequences nor can they coordinate on the start of each dwell. Two overlapping networks would be completely independent of one another.

Sincerely,



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