

RE: Microwave Data Systems, Inc.

FCC ID: E5MDS-EL806-24

- 1) It is uncertain how the device is compliant with the EIRP limit of +36 dBi for the +10 dBi gain omni and yagi. Please provide more detail and reference to pages in the manual where this information may be found. Note that page 46 mentions a decrease in power for > 10 dBi gain antenna, however the EIRP for these is +37 dBi for 10 dBi. Please explain. Although the Yagi may be considered as a point to point antenna that allows higher power, the manual does not appear to contain the information necessary for 15.247(b)(4)(iii). The omni antenna appears to exceed the +36 dBi requirement.

Answer:

***In our opinion this is quite clear. We have requested “professional installation” for this product. MDS does NOT sell to the general public and solely relies on the trained system installer to respectively set the transmit power to compensate for RF cable loss. Since there is a MCX connector this unit is for integration into another OEM enclosure and the respective cable loss at 2.4GHz will easily be 1dB thus meeting the +36dBi FCC limit. Our trained professional installers are very familiar with the FCC limit.***

***We have certified 3 other FCC part 15 devices to the FHSS 902-928MHz band and in all cases we are approved for “professional installation”, and the manual is almost identical with respect to setting the FCC maximum EIRP of +36dBi.***

***One FCC ID to use, as an example is the FCC approved, E5MDS-EL806. Our intent for this 2.4GHz approval is to follow the same route as the 902-928MHz version listed above.***

- 2) Given that the output power may adjusted in software, and this may be necessary for compliance, please explain how the device will be compliant to 15.15(b) for the end user(s).

Answer:

***Please refer to the answer to question 1) above***

- 3) For previous question 9, please provide information supporting the input bandwidth of the receivers vs. the TX bandwidth.

Answer:

***This radio uses a 200KHz channel spacing.***

***All hop patterns have a minimum frequency step of 200 kHz, thus the receiver follows in the appropriate bandwidth and channel or the radio will not function.***

***Perhaps we don't understand the question ☺***

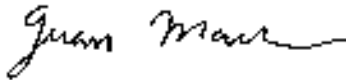
***Can you detail to us a scenario where a transmitter will occupy a wider bandwidth than the receiver and be an effective data communication radio?***

4) Although we agree with your response in Item 13, this doesn't appear consistent with page 8 of 34. Please explain why page 8 of 34 (of the report) states a minimum permitted bandwidth of 1000 kHz (1 MHz)? Shouldn't this be 160 kHz?

Answer:

***The report has been changed to stated 160kHz only. Revised report has been re-uploaded.***

Regards,

A handwritten signature in black ink that reads "Juan Martinez". The signature is written in a cursive style with a long horizontal flourish at the end.

Juan Martinez  
Sr. EMC Engineer