

RE: D Link Corporation  
FCC ID: KA22001120013-1

1) Please provide photographs of both styles of antennas.

***Photographs have been uploaded.***

2) Since the EUT transmits in the 5.15-5.25 MHz band, the EUT is required to meet the antenna requirement for 15.407(d). The FCC defines this as "An antenna that attaches with a connector inside of a case is acceptable, provided that there is no need for the user to ever open the case." The test report states that the EUT contains a non-standard reverse connector, which will be contained within the enclosure of a host device. Please provide a copy of the instructions that D-Link is proposing in regards to this issue.

***D-link has provided a written statement that they will provide instruction to the OEM integrator in regards to compliance with the unique connector requirement. Additional warning in the manual has been placed in regards to how the antenna must be secure on an enclosure to meet the 15.407(d). Refer to "D-link Letter" for customer statement.***

3) Additional information should be added to the manual (page viii) that strongly advises that that module is approved only as a mobile device and clearly advise what the installation criteria must be to maintain compliance with MPE limitations.

***Statement has been included in the manual as requested.***

4) It appears in the manual that the software allows a pull down menu to program the unit for use on different frequency sets for U.S., Canada, and Japan. This control capability should normally not be given to the end user if it will cause the radio to transmit on frequencies not authorized in the U.S. The FCC has recently stated in a Report and Order regarding software defined radios that the manufacturer will be held responsible for keeping the integrity of its programming intact. If the device could be hacked or programmed in an unauthorized manner, the responsibility for such action would rest with the manufacturer, and the FCC would go to the manufacturer for fines or forfeiture actions if either action were necessary. The FCC has further explained to TCBS to also apply the philosophy of the R&O with regard to protecting multiple-capable programming and existing devices that they are approving ([not just software defined radios](#)). Please comment.

***This control capability will not be available to the end-user and will be removed from the manual. Old manual had Chapter 9 for Country selection. This has been removed on the revised user manual.***

5) The sales literature mentions a single + 1.5 dBi gain antenna, the RF exposure & test report states +3 dBi & 4 dBi. Please provide a thorough description of the antennas used and the type they are classified as.

***Brochure has been revised by D-Link to reflect the specified antennas tested with the Mini PCI card.***

6) The EUT seems to have much less power (almost 8 dB) than the level output by the PA (specified in the theory of operation). Please comment.

***The PA is capable of much more power. At the higher power levels the band-edge and harmonics no longer meet the FCC's rules. The power limitation is due, therefore, to the FCC's requirements rather than the limitations of the PA.***

***Taken out from the Revised Theory of Operation (Page 5 of 6): The PA has 29.5dB nominal gain and maximum output power of 22.5dBm. Due to the highly linearity restrict of the high level modulation scheme, The PA normally operating on a linearity region of 10 to 17 dBm output power, This device draws about 180mA when enabled by the XPAA signal.***

7) The test results mention AC conducted emissions, but test data or further information has not been provided in the test report. Also, the 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. The photographs shown for radiated emissions show a power source with a ferrite. Please comment.

***AC conducted emission data included in the Revised Test Report. D-link will provide a power supply that has a permanent ferrite on the DC power input cable. Another power supply was used for the Radio Testing, which was not provided. Uploaded picture with the power supplied used during the Radio Testing.***

8) The power spectral density result on page 4 of 56) for turbo does not match test results (is missing the negative sign). The calculations applied for the bandedge calculations on page 48 of 56 do not match the levels obtained on pages 46-47 of 56. Please correct these errors to ensure consistency in the report.

***Report has been correct and re-uploaded.***

9) Given that the center channel (5250 MHz) is not limited to the 5150-5250 or 5250-5350 band, the grant will be listed as 5210 MHz - 5290 MHz @ 31 mW & 5180 MHz - 5320 MHz @ 14 mW. Please adjust the 731 form to match.

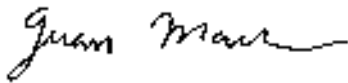
***731 form has been change and uploaded.***

10) Please provide the modular requirements as given on page 7 of 19 as a separate cover letter attachment.

*Modular requirements removed from report and placed on a separate cover letter.  
Cover letter has be uploaded.*

Hopefully this answers all of your questions. Please contact me via [doc@elliottlabs.com](mailto:doc@elliottlabs.com) if you require more information.

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