



American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

December 6, 2004

RE: FCC ID: H4IDG24RF002_ATCB001981

Attention: Ellis Wu

I have a few comments on this Application. Please note that further comments may arise in response to answers provided to the questions below.

1. Please note that the 731 says the operating frequency of the device is 2412 to 2462MHz, yet the block diagram and other documentation states it is 2402 to 2479MHz. Please be consistent in your documentation and please correct all documents to show the same frequency range of the device.
2. What is this device? The operational description says it is a frequency hopping device, however the report presents this as more of a Digital Transmission System. Please provide the appropriate equipment code of the device on the 731 form.
3. Please provide a Block diagram that is in accordance with 2.1033(b)(5). Please have the block diagram explain what this device is.
4. FYI – as this is a computer peripheral you need to show the DoC label on the device as required by part 15.19(b)(1).
5. In conjunction with item 2 and 3, what is this device? Please note that while the operational description calls this a FHSS device, this is not a Bluetooth device and it appears to be more of a DTS device using 78 channels. Please provide an operational description of the device detailing how it operates. What makes it a FHSS system? If it is not an FHSS, then please provide evidence of just what kind of device it is to support your testing.
6. If this is a frequency hopping device as stated in the operational description, please provide the pseudo random frequency list and describe how the hopping is pseudo-random.
7. Please note if this is a FHSS device, please provide the required channel separation data plots and the dwell time plots. If this is not a FHSS device please fully explain what this device is and how it operates so a determination of the required tests can be made and evaluated.
8. Please note that the manual does not contain any of the required FCC statements. Please provide a manual that has all of the required FCC statements. This includes the statements of 15.19(a)(3) and 15.21.
9. It is not clear from the radiated emissions test setup photo if the EUT is plugged into the USB port of the Laptop or not. Please clearly identify the location of the EUT and please clearly show the EUT in the radiated emissions test setup photos.
10. Please provide evidence that the receiver meets the receiver requirements of 15.247(a)(1).
11. Please note that the operational description states the device has 79 operating frequencies but the report states it has 78 frequencies. Please be consistent in your documentation and please correct all documents to show the proper number of operating frequencies used in the device.
12. FYI – please note that the FCC has stated that if you are going to use a peak or QP reading to show compliance of a device to the average conducted limits then you MUST compare the peak or QP to the average limit. For example, this means that on page 13 of the report the 209kHz reading does not have 14.85dB margin but only 4.85dB margin; and 1.297MHz does not have 11.0dB margin but only 1.36dB margin. If you are going to use peak or QP readings to show compliance, then please compare your reading to the proper limits as specified by the FCC. This error occurs on page 14 through 18 as well where some readings only show less than 1dB margin.
13. Please note that on page 20 of the report you state that the minimum 20dB bandwidth is 500kHz. Please also note that your operational description calls this device a Frequency Hopping device. While devices operating in the 902MHz range have a maximum 500kHz 20dB bandwidth limit and while devices operating in the 5GHz range have a maximum 1MHz 20dB bandwidth limit, 2.4GHz range FHSS devices do not have this minimum 20dB bandwidth specification. Please note that from the data and information provided, it is not possible to determine what this device is. It appears to be more of a DSSS than FHSS device. Please explain the operation of this device and apply proper limits.

14.



Dennis Ward
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The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.