



American Telecommunications Certification Body Inc.  
6731 Whittier Ave, McLean, VA 22101

December 7, 2004

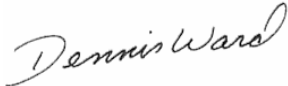
RE: FCC ID: PQRDS540-MPCI4W\_ATCB001984  
Attention: Yukari It

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 you state this is a limited modular approval. Please note that this is not correct. Limited modular approvals are approvals of module that do not meet all 8 requirement and/or that are tested in a specific host or similar hosts. As you tested this device using a laptop, you have not shown compliance of the power regulation requirement nor radiated spurious emissions produced as a result of proper regulation provided by the specific Access Point. As this device was tested for radiated spurious emissions outside the host and as its regulation was provided by the laptop and not the specified host, it is by definition a modular approval and must meet all 8 modular requirements. Please correct your request letter to state modular approval. Alternately, if this is to be a limited modular approval for use only in the specified Wireless Access point, then please retest the radiated spurious emissions with the module inside the specified Wireless LAN Access Point (thus showing compliance in that configuration where power regulation is provided by the specified host) and please provide the corrected test setup photos, external photos of the access point, report and manual showing this module in the specific access point mentioned. Please also provide internal photos showing the Access point and how/where the card is located in the access point.
2. Please note that in your request for modular approval letter you state, "The modular transmitter does not have its own power supply, but regulated power of 3.3V is supplied from host equipment (Wireless LAN Access Point). Therefore, the equipment meets this requirement." Please note that this is not a true statement as it is does not meet the modular requirement for a module nor does it meet the requirements for a Limited Module. Please note that the modular approval process requires that the module itself have power regulation capability and that it does not rely on off module regulation. In order to meet the LMA requirement, the device power regulation must be provided by the specified host in which it is to be located. As you have tested the device in a laptop, and not in the specified host, you have not shown compliance of the power supply regulation requirements of an LMA. In order to meet this requirement the device must be tested in the specified configuration (see item 1). Please provide proper testing of this device as either a modular approval meeting all 8 requirements, or as a limited modular approval with proper host power regulation being provided.
3. Please note that if this is a Limited Modular Approval, then after addressing items 1 and 2, please provide proper device labeling. Please note that a LMA FCC ID is to be placed on the Host, not on the module. Please correct the testing and other documentation to address either a proper modular approval or proper Limited Modular Approval.
4. Please note that the test setup photos show that the device was tested with antennae that were onboard a test fixture and was not apparently tested with the highest gain antenna that would actually be used by the device. Please note that radiated spurious emissions testing MUST be done using the highest gain antenna of the actual antenna(s) that will be used with the device. Please explain and/or please retest radiated emissions using the actual antennae that will be sold with or provided for use with the device.
5. Please note that the DC power supply line to the EUT shows a ferrite on the cable. Please explain how this ferrite is to be implemented in the final product. If this ferrite is not to be part of the final assembly, please retest without the ferrite.
6. Please note that as this module apparently receives regulated power from the specific host, conducted emissions then must be done with the device in that specific host to verify that the ac mains is not affected by faulty regulation etc. Please also note that as this device receives DC

power regulation from the host, conducted emissions needs to be done in that configuration. Please show evidence that the device was tested in the specific host. If this is a modular approval the provide evidence the device has onboard dc power regulation and explain where the ferrite is to be located in the final product.

7. Please note that you state that you followed ANSI C63.4 2003 for test and equipment setup. Please note that ANSI C63.4 2003 states that peak readings are to be performed with the video bandwidth set to at least 3 times the resolution bandwidth. Please explain why the video bandwidth requirements set out in ANSI C63.4 were not applied and followed. Please correct the readings as necessary.
8. Please note that the 731 shows the 5.7GHz frequency range under 15.247, however, the testing for the 5.7GHz range was done under 15.407 rules. Please explain and please verify that all 15.247 necessary testing for this frequency range has been done.
9. Please note that in your radiated emissions test outside the restricted bands on pages 48 through 53 you state that you used the EIRP formula to find the results. Please note however, that in order to use this method you must test with the actual antenna(s) used with the system and you must use the gain of those antenna(s) in the formula  $EIRP = (Ed)^2 / 30G$ . You cannot assume an isotropic gain of 1 in this formula. Alternately you can perform antenna terminal conducted measurements and add the know antenna gains for the actual antennae used to determine EIRP. As you have several margins that are only a few dB under the limit, the method used must be accurate and representative of actual use. Please test radiated emissions using the actual antenna(s) to be used with the device and please recalculate the EIRP using the known antenna gains of these antenna(s). Alternately, please use conducted antenna terminal measurement values and then use the known gains of the actual antennae used to determine EIRP.
10. Does this device have a turbo mode? If so, what frequencies does the device operate in when in turbo mode? If the device does have a turbo mode please provide data on this mode.



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.