



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

December 1, 2005

RE: FCC ID: E2KWM3945ABG\_ATCB002985

Attention: [Johnny Candelas](#)

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 manual mentions wall or pole mounted high gain antenna(s) which are professionally installed. However, the antenna(s) tested with this device are not considered high gain antenna(s). Please note that only those antenna(s) tested with this device or antenna(s) of the same type with equal or lower gain can be used. Any use of the type antenna mentioned in the manual as 'wall mount or pole mounted' high gain antenna(s) is not allowed unless they are tested and shown compliant. Please either remove such notice from the manual or please provide evidence that the rf exposure distances mentioned can be met.
2. Please note that the manual states, "As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use." This indicates that the device frequency may have the possibility of being changed by the end user so that an illegal frequency may be used in the US. Please note that the rules specifically state that a device must be manufactured in such a way that "adjustments of any control that is readily accessible by or intended to be accessible to the user will not cause operation of the device in violation of the regulations." This includes any software or downloadable drivers (Intel only) that will allow the user to change the frequencies so as to operate the device illegally. Please verify and attest (show evidence) how the user cannot change any 'readily accessible or intended accessible control' so as to operate the US version of this device outside allowed US frequencies.
3. Please note that as this is a Modular approval the device must be tested in stand alone mode. Please note that the test set up photos do not clearly show this device as being tested in stand alone configuration. Please clearly show where this device is in the radiated and conducted test setup photos.
4. FYI – no action needed. Please note that the assumed 68.3dBuV/m limit representing -27dBm may not address all situations adequately as it assumes certain factors such as an isotropic gain of 0dBi that may not actually apply. The correct method of determining compliance to the -17dBm limit is to use the formula  $(ed)^2/30G$ . The reason the generic limit 68.3dBuV/m may not address all situations is that it does not include any information about the transmitting device antenna; and this must be considered. For example a spurious emissions reading of 68.3dBuV/m for a 0dBi gain antenna and the same reading for a 5 dBi gain and -5dBi gain antenna does not calculate to be the same EIRP. Even though the 68.3dBuV/m value is obtained from both situations the 0dBi antenna would yield an EIRP of -27dBm, while the EIRP of the 5dBi gain antenna would be -31dBm and the EIRP of an antenna with -5dBi gain would be -21dBm. While the erroneous 68.3dBuV/m limit may work for gains greater than 0dBi, they can be very misleading for any antenna whose gain is less the 0dBi. Please consider these facts in future tests.
5. Please verify that this device does not have a turbo mode at 5.25GHz.
6. Please note that IC testing should be done using the most current RSS210 issue 6. While testing may be similar, the references in the specified standards are different. Please address this issue.

*Dennis Ward*

Dennis Ward

<mailto:dward@AmericanTCB.com>

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.