



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

September 16, 2003

RE: FCC ID: PU5MS2140B

Attention: James Cheng

I have a few comments on this Application.

1. Please note that CFR47 2.1033 specifies that block diagrams must contain the crystal and/or clock frequencies along with their inter block paths. The block diagram provided does not contain frequency information as required by 2.1033. Please provide the clock and frequency information for the block diagram as required, **-ok**
2. Please note that the antenna report is named confidential. However, it is not on the list for information to be held confidential in the request letter. If this exhibit is confidential please include it on the confidentiality request letter. **- not in conf list**
3. Please note that the technical specifications state the device operates on channels 1 through 11. However, it also states that it has full 14 channel support. Please note that in the US this type device may not operate on channels above channel 11 (2.462GHz). The manual for the WLAN card states operation at 2.48GHz. Please explain and provide an attestation that the user of this device cannot make the device operate on channels above channel 11 by either software or other methods. **-ok**
4. Please note that the 2-condition statement of 15.19 is required to be on the device whenever possible. The only exceptions for this are when the device is too small to contain the statement. Please note that the device is more than adequately large to have this 2-condition statement on the device. Please place this label on the device and provide evidence that this has been done. This can be by photo or drawing showing the 2-condition statement on the label or separate label. **-ok**
5. Please note that in your peak power measurement you have not stated the resolution bandwidth of the analyzer used. Please note that when using an analyzer a resolution bandwidth correction factor may have to be added to the reading. This factor is needed when the analyzer resolution bandwidth is not larger than the 6dB bandwidth of the device. In this case 12MHz. For example, if your analyzer maximum resolution bandwidth was 3MHz, a resolution bandwidth correction factor of  $10\log(\text{device bw} / \text{available res bw})$  would be  $10\log(12/3)$  or a correction factor of 6dB. Please provide information on the resolution bandwidth of the analyzer used and please correct the readings accordingly if a resolution bandwidth correction factor is needed. Alternately, please measure the peak power of the device using either a peak power meter or a diode detection network. **- clarified that measurement made with a peak power meter not an analyzer.**
6. Please note that it is not clear from the data or the test procedure if you have included to attenuator loss value in the calculations for peak power. Please provide a sample calculation as required by 47CFR rules and please provide evidence that you have included this attenuation factor in your readings. **-internal attenuator accounted for in reading**
7. Please note that in the data for table 5.5 it is not made clear what the analyzer settings were. Your procedure states that peak is done first and average is done if needed, however, the test procedure on page 37 states "the reading is recorded with peak detector or quasi-peak detector." The report data tables do not indicate if such measurements were needed or if all measurements are Peak or Average. Please specify the analyzer settings and the analyzer mode for the associated data tables. **-ok**
8. Please note that spurious emissions for frequencies above 1 GHz must meet not only the 54dBuV/m limit but the 20dB over the average limit or 74dBuV/m for peak. Please provide test data in peak mode showing compliance with this peak limit requirement of 15.35(b).
9. Perhaps I have overlooked it, but I do not see the required Z-Axis plot in the report. Please explain and/or provide the required Z-axis plot for SAR testing results. **-ok**

*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.