



American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

October 11, 2002

RE: FCC ID: QED-AI108

Attention: Juan Martinez

I have a few comments on this Application.

- 1 Your summary of results states antenna(s) of 18 and 24dBi. Page 8 of the report states 18 and 21dBi as antenna gain and on page 31 it states 24dBi gain. The theory of operations also states 18 and 24dBi. Please note that the reference to using a maximum power out of 250mW (24dBm) + 6dBi antenna or 30dBm total, should be the guide for maximum power given any specific antenna. This means that with an output as measured at 10.9dBm the maximum gain antenna would be 19.1dBi. The 18dBi antenna meets this requirement. For a maximum power of 8.9dBm, the maximum antenna gain would be 21dBi. As mentioned above, your report section "Antenna Requirements" states 21dBi antenna. However, your summary of results and other documentation states 24Bi (3 dB higher than allowed). Please correct the report and/or all other documentation to be consistent about the maximum antenna(s) used and tested. Alternately, please retest your device to show a maximum power of 5.9dBm using a 24dBi antenna. **xxx**
- 2 FYI no response needed. Please note, 15.407(b)(2) states, "For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band." This is not an either or statement and applies to both indoor and outdoor systems. This means that the -27dBm limit outside the 5.15 to 5.35 band applies to both inside and outside use. It also means that any emission in the 5.15-5.25 GHz band, regardless is indoor or outdoor use, must meet the technical requirements for that band or must -27dBm limit in the 5.15-5.25 GHz band. **xxx**
- 3 Please note that as of September 9, 2002 conducted emissions for Part 15 devices is 150kHz to 30MHz. Your report states 450kHz to 30MHz. Please also note that the 13dB relaxation no longer applies under the new rules since an average limit now exists. Your report conflicts with test data. The data states you used EN55022/CISPR22 while the above states you use FCC limits. Please correct your report to be consistent as to what test was done. **xxx**
- 4 In one part of the report, it appears to state that the device is capable of indoor and outdoor use. In another part of the report, it states that the device is indoor use only. Please correct the documentation (all) to be consistent with the intent of the device as tested. **xxx**
- 5 In one part of the documentation and report you state that only integral non accessible antenna(s) are used. In other documentation, it states external detachable antenna(s) are used. In other documentation, you state profession installation. Your summary of results also declares the antenna(s) tested are detachable type and yet the report is only for internal integral antenna(s). The photos appear to show the external portion of the system is the transmitter connected to the 'internal' portion of the system via RJ45 cable. Is the reference to 'external antenna' simply meaning that part of the system which includes the transmitter that is outside. And if so, are the antenna(s) internal to the outside box. On the other hand, does it mean something else? Please clarify antenna usage in all documentation to agree on the type, and purpose of this device as tested. Please provide evidence that the antenna(s) used with this device meet the definition of 'integral' as tested. Please clarify your definition of internal and external as pertains to this device and its antenna(s). **xxx**

- 6 Your report is not clear as to what type of power measurements were made. Please clarify in the power measurements beginning at page 34 of the report are conducted or other. xxx
- 7 The manuals say the AI108 is a Class A device, yet the label on the AI108 is for Class B. This is in violation of the rules for DoC of Part 25 devices. Please correct and clarify as needed. xxx



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.