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

July 17, 2005

RE: Chung Nam Electronics Co., Ltd.

FCC ID: Q72WLANTPBG

After a review of the submitted information, I have a few comments on the above referenced Application.

1) Please note that the FCC no longer desires that the safe distance for mobile devices (devices used with >= 20cm separate distance) to be calculated in the RF exposure exhibit, but instead prefers the power density results to be calculated at 20 cm and compared to the power density limit. This is due to the fact that to show compliance to anything closer than 20 cm requires SAR.
2) Your note mentions you would like this approved as an end-product level certification but not FULL or LIMITED modular approval. Since the device is not an end use device for the user, this is not possible. This should be approved as a modular approval limited to mobile applications only. Please provide a modular approval letter addressing the modular requirements specified in the attached document.
3) The users manual mentions laptop installation. However given the antennas tested for the device this appears unlikely. Please note that general installation into a laptop by an end user has generally not been allowed since these devices are generally not allowed to have user installation without some sort of bio's locking mechanism. Therefore these types of devices are approved for OEM installation only. If the intent of this devices is approval for mobile installations and not laptops, please adjust the manual accordingly to make this clear. Note that portable installations can be considered on a case by case basis only since each host device (> 24.6 mW conducted or EIRP) currently requires SAR evaluation.
4) Users manual appears to show information regarding 802.11a (page 16-labeled 14). However this approval appears to only be for 802.11 b/g. Please review, explain, and correct as necessary.
5) Users manual appears to show information regarding changing of power and possibly to 100 mW or higher (page 16-labeled 14 & 22-labeled 20). However this device is being approved at 331 mW (maximum conducted power measured). To meet FCC requirements (15.15 of the rules), the use can not be given control of adjust power above approved levels. Please review, explain, and correct as necessary.
6) The users manual does not contain appropriate information required by 15.21, 15.105, and RF exposure information. Please update the users manual.
7) Given this is a modular device, additional information in the manual would be recommended as the FCC desires you to provide the OEM installer with relevant information regarding RF exposure, responsibilities, etc. Please see provided attachment which provides guidance as to some of the information likely to be desirable in the users manual. This information may need to be adjusted for you specific application, but provides a good example of the detail desired to be given to the OEM's.
8) The updated RF exposure provided contains information for 0 dBi antenna and 73 mW TX. However this device appears to have a 1.8 dBi antenna and 333 mW TX. Please review and correct as necessary.
9) Please explain the factor of 12.0 dB used in the TX power testing and other antenna conducted tests. What was this for? Why is this factor added back into results for power, but subtracted for results of PSD ? Was this value verified to be correct?
10) Please explain the 4.32 and 4.09 dB offset in plots found on pages 23 – 30. Are the plots corrected for the radiated measurements setup?

11) Test appears to have taken place June 28, 2005 – July 10, 2005. The BiLog on page 45 appears out of calibration. Please review and correct as necessary.
12) Page 45 mentions measurements < 1 GHz were made at 10 m. However limits appear to be shown at 3 meters and test photos seem to support 3 meter. Please explain at what distance measurements were made and if not made at 10 meters, where are correction factors applied.
13) Page 46 mentions measurements > 1 GHz were made at 10 m. Due to FCC rules, limits, and dynamic range issues this is highly unusual. Additionally, limits are cited as 3 meter. Please explain.
14) Section 15.15(b) prohibits adjustments of any control by the user that will cause operation of a device in violation of the regulations. Accordingly, any proposal to allow the end user to choose extended channels on frequencies outside of an allowable frequency band in the USA is not acceptable. For example, a WLAN device operating according to Section 15.247 on channels 1-11 between 2.4 - 2.483.5 GHz must not have any user controls or software to allow the device to operate on channels 12 and 13 which are outside of the allowed USA band. For instance, the user should not be able to select alternative countries which would allow different channel plans outside of the allowed USA band. Please explain how this device is compliant to this requirement.
15) On pages 53 - 55 of the EMC report, the difference between Peak and Average values for many measurements 20 dB or more for measurements at 5 and 7 GHz ranges. Typically the difference between peak and average on this type of transmitter is only 10-12 dB, regardless of 802.11b or g. The larger delta for these measurements tends to suggest that maybe the fundamental was not configured properly for continuous transmission during this test and possibly a larger VBW should be used in order for average measurements to be considered valid. Note that the VBW must be > 1/Ton time. Please explain.

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Examining Engineer

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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.