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

January 31, 2005

RE: RadWin Ltd.

FCC ID: Q3KAMWL1530

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

1) Please adjust the equipment type on section III, 4(a) of the 731 to NII.
2) The Operational description mentions two 5 GHz bands and a 2.4 GHz band, but the application only appears to only cover the 5 GHz. Please explain. Note the schematic and block diagrams show that the mini-PCI card functions on both 5 and 2.4 GHz. Please revise, explain, and correct as necessary.
3) If the device is designed to only function on 5 GHz, please explain compliance to 15.15. What software/hardware precautions make it so that the user can not utilize the 2.4 GHz band?
4) This device appears to incorporate a standard N antenna connection. To meet the requirements of 15.203 using a standard connector, this device must be limited to Professional Installation only. This requires a cover letter requesting and justifying how the applicant ensures professional installation will be applied. The letter should address the following 3 items:

   a) Marketing

   example:
   - The device cannot be sold retail, to the general public or by mail order. It must be sold to dealers or have strict marketing control.

   b) Requires professional installation;

   examples:
   - installation must be controlled.
   - installed by licensed professionals (EUT sold to dealer who hire installers)
   - installation requires special training (special programming, access to keypad, field strength measurements made) What is unique, sophisticated, complex, or specialized about your equipment which REQUIRES it to be installed by a professional installer?

   c) Application
   example:
   -The intended use is generally not for the general public. It is generally for industry/commercial use.

5) Please provide a users manual for this device. It does not appear that this was provided. Note the users manual should include appropriate Part 15, RF exposure statements, and professional installation requirements where applicable.
6) Please add photographs of the antennas for use with this system as part of the external photographs exhibit.
7) Internal photographs must show top and bottom of all boards contained in the TX. Additionally, photographs must be provided to show underneath all shields, especially on the RF mini-PCI board.
8) The application is required to provide a separate RF exposure exhibit (section 4.3 of report). Please provide as a separate exhibit.

9) Spurious emissions must be performed with the antenna attached for approvals performed under Part 15. One test configuration photographs shows the antenna terminal terminated. Please explain. Note that this may required retesting.
10) Please provide a separate operational description exhibit. Please be sure to include a list of tunable frequencies.
11) Most of these types of devices are capable of operating from 5150-5350. It appears this device is only operating in the 5250-5350 band. Please explain what keeps the user from using channels in the 5150-5250 band. Please see 15.15 as well.
12) This device has different output power for internal vs. external power. Please explain compliance to 15.15 for power level settings. The end user should not be capable of adjusting this. Are the units shipped from the factory with set maximum setting depending on internal or external versions. Please explain.
13) Please provide sample calculations and description of losses used in the calculation for power. The equation used appears to be missing watts to mW conversions. and without a sample calculations can not be confirmed Please explain.
14) Please provide power measurements for the External antenna version showing compliance to 2 dBm
15) Usually the high channel for these types of devices is 5320 MHz, not 5335. Please review.
16) Limits for power spectral density have not been reduced by the directional gain. It appears the limits should be -5 and -11 dBm. The current data is shown to be above these limits.
17) Please explain compliance to 15.407(c) and (g).
18) It is uncertain if the peak excursion plots are correct. Results show around 7 – 11 dB. It is uncertain what the second plot is. Additionally, the second plots are all showing clipped peaks. Additionally, it appears that possibly the minimum peak excursion is being measured and not the maximum peak excursion. Most labs provide a single plot with 2 markers showing the proper deltas. Please provide more information as necessary.
19) This device does not operate in the 5150-5250 MHz band. Therefore, Please show out of band compliance measurements in this band to meet the -27 dBm/MHz limit.
20) Radiated emissions should be investigated up to 40 GHz. Were these measurements made? It appears the measurement system used begins to have dynamic range issues with ground floor readings above the limit at about 18 GHz. Usually testing at closer distances and correcting for distance by (20 log (distance measured/ desired distance)) can be accomplished. If this was not previously investigated, further measurements are necessary.
21) Average measurements to 15.205/15.209 must have a VBW > 1/T. This does not appear to have been done with a valid VBW setting. Please correct.

IC related Questions

22) Label does not contain proper IC Certification Number labeling. Please correct.
23) The users manual should contain the following information as specified by RSS-210 section 5.5. Please be sure to include as appropriate:

> **User Manual (for transmitter with detachable antenna):** The user manual of transmitter devices equipped with a detachable antenna shall contain the following information in a conspicuous location:
> *"This device has been designed to operate with an antenna having a maximum gain of [x] dB. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is [y] ohms."* Equipment manufacturer shall provide proper values of x and y to comply with the standard.

24) The users manual should contain the following information as specified by RSS-210 section 5.11. Please be sure to include as appropriate:

> The user manual for the LPD shall contain the following or equivalent statements in a conspicuous position:
> *"Operation is subject to the following two conditions: (1) this device may not cause interference and (2) this device must accept any interference, including interference that may cause undesired operation of the device."*

If the antenna is detachable (selectable by the user), see the user manual requirement in section 5.5. The following instructions in the user manual is also required:
"To reduce potential radio interference to other users, the antenna type and its gain should be sochosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication".
The above statements may be placed on the device instead of in the manual.

25) If necessary, please explain compliance to RSS-210 section 6.2.2 (q1)(iv)(e) if necessary.
26) The users manual should include information on RSS-210 section 6.2.2 (q1)(iv)(g).

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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.