



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

January 31, 2005

RE: RadWin Ltd.

FCC ID: Q3KAMWL1240

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 DTS.
- 2) The Operational description mentions two 5 GHz bands and a 2.4 GHz band, but the application only appears to only cover the 2.4 GHz. Please explain. Note the schematic shows 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 2.4 GHz, please explain compliance to 15.15. What software/hardware precautions make it so that the user can not utilize the 5 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.
- 10) The dish antenna does not appear to be position so that the main lobe could be adequately captured (appears to be tilted upward at a 45 degree angle. It should be positioned in an upright fashion adequate to capture the main lobe as well. Please explain if this was fully investigated. If not, then it is likely due to the close margins on much of the data that the unit will not meet the requirements. If necessary additional retesting may be necessary.
- 11) The EIRP of this device exceeds 36 dBi, so the system may only be use for point to point applications. Please confirm.
- 12) Please provide a separate operational description exhibit.
- 13) Since the EIRP exceed 36 dBi, the users manual should adequately address the following from 15.247(c)(iii):

Fixed, point-to-point operation, as used in paragraphs (c)(1)(i) and (c)(1)(ii) of this section, excludes the use of point-to-multipoint systems, omnidirectional applications, and multiple co-located intentional radiators transmitting the same information. The operator of the spread spectrum or digitally modulated intentional radiator or, if the equipment is professionally installed, the installer is responsible for ensuring that the system is used exclusively for fixed, point-to-point operations. The instruction manual furnished with the intentional radiator shall contain language in the installation instructions informing the operator and the installer of this responsibility.

- 14) It is uncertain if the particular power meter and sensor used is measuring peak power or average power. Please explain.
- 15) Please explain if the power at the bandedge has been purposefully reduced. The output power of the bandedge channels appears lower than the others.
- 16) This device appears to be tested in 802.11g mode of operation. 802.11b mode of operation consists of a different waveform due to the modulation. Typically power, bandedge, and spectral density, and radiated measurements should be investigated in this mode as well. Please review.

IC related Questions

- 17) Label does not contain proper IC Certification Number labeling. Please correct.
- 18) 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.

- 19) 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 so chosen 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.



Timothy R. Johnson
Examining Engineer

[mailto: tjohnson@AmericanTCB.com](mailto:tjohnson@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.