



# Washington Laboratories, Ltd.

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July 19, 2006

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

RE: Comments of July 6, 2006  
APPLICATION: Proxim Corporation HZB-4000LR

Dear Mr. Johnson:

Below are the comments that you have provided regarding the application for certification referenced above. Our responses to those comments are in ***bold italic***. Many responses refer you to additional exhibit(s) which has been uploaded to the application folder at the ATCB website.

Thank you for your attention. Please feel free to contact us for any additional information that you may require.

Regards,

*Gregory M. Snyder*  
Chief EMC Engineer, Wireless/Telco Services Manager

*Brian J. Dettling*  
Documentation Specialist

WLL Project: 9141, 9153, 9176

QUESTION/RESPONSE
1) Please update the 731 form Section III – 6 to report the RF power for each band
<b><i>R. The 731 form has been updated to include the power for each band. Please see” 4000LR Application Form - 731 revised”</i></b>
2) 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 for both bands of operation.
<b><i>R. Using the Internet Explorer based configuration screen, the user can only select one of the 11 IEEE 802.11b/g channels.</i></b>
3) According to recent FCC interpretations, the confidentiality letter must be signed by either the contact given on the FCC site for the applicant (Caroline Yu), or someone listed in the technical or non-technical portions of the 731 form. Geoffry Smith) does not appear to be listed on the FCC site as the appropriate contact. Please help correct the cover letters as necessary.
<b><i>R. Please see revised letter “Confidentiality request letter”</i></b>
4) Please provide internal photographs of the 2.4 GHz bandpass filter. These appear to be missing.
<b><i>R. Please see exhibit “EWT-11-0311 Spec Sheet”</i></b>
5) The labeling shows 2 FCC ID’s. Per various correspondence with the FCC on prior applications, the FCC ID’s given on a device may only be relevant to the configuration of the device (i.e., multiple ID’s allowed for various modular approvals if each module is installed, but can not label 2 different FCC ID’s to cover 2 different configurations). In this case, the labeling photograph shows a 90Y FCC ID which is not particular to this approval as well as a port that shows 4.9 GHz which does not appear relevant here. Please adjust. Also, I’ve included a related discussion from FCC training that although doesn’t directly address this issue, does boarder on this labeling issue.
<b><i>R. Please see exhibit “Label Location revised”.</i></b>
6) Operational description provided only discusses the amplifiers, please update to include a brief description of the entire device.
<b><i>R. Please see exhibit “AP4000MR-LR Product Description Rev 1” and the block diagram for the Access Point located in “AP-AG-AT-Block Diagram”.</i></b>
7) Schematics provided are only for the amplifier portion of the device. Please update to include all the TX circuitry as required by Part 2.
<b><i>R. Please see exhibit “AP-AG-AT-02schematic”.</i></b>
8) Please provide detailed information regarding the antennas being approved (i.e. manufacturer, model, gain, etc.). Note that the 2.4 GHz report appears to mention 3 antenna types.
<b><i>R. Please see exhibit “Antenna Info”.</i></b>
9) The RF exposure does not device dBi or dBd for the antennas. Please review/correct as necessary.
<b><i>R. All gains are in dBi. The RF Exposure document has also been revised.</i></b>

10) RF exposure shows 4.9 GHz which is not the subject of this approval. Please correct/review as necessary
<b><i>R. Please see “4000LR RF Exposure Info – revised”.</i></b>
11) It appears that 5.8 and 2.4 GHz may operate simultaneously – please update RF exposure exhibit as necessary. This may affect reported RF exposure information in the manual as well.
<b><i>R. Please see “4000LR RF Exposure Info – revised”.</i></b>
12) Test Report for 2.4 GHz mentions 4.9 GHz throughout the report (on page 6 of 46, block diagram, etc). This appears incorrect given the 5.8 GHz. Please review.
<b><i>R. Please see revised test report, exhibits “4000LR Test Report - 5.8GHz Revised Part 1”, “4000LR Test Report - 5.8GHz Revised Part 2”, “4000LR Test Report - 5.8GHz Revised Part 3”, and “4000LR Test Report - 5.8GHz Revised Part 4”.</i></b>
13) 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 to be provided. 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.
<b><i>R. Please see exhibit” Professional Installation”</i></b>
14) For 2.4 GHz it is uncertain which method was used for output power for measurement of 2.4 GHz since plots with complete information or identification of the method was not provided. Please identify which method was used according to FCC guidance (attached).
<b><i>R. The revised test report now describes the method for measuring peak power.</i></b>
15) For 2.4 GHz PSD, it is uncertain which method was used given the sweep time did not follow PSD option 1. Note that other important information such as type of detector (peak/sample, etc) and if any trace averaging was performed. Please identify which method was used according to FCC guidance (attached).
<b><i>R. The test report has been revised to describe the method used for the PSD measurement.</i></b>
16) Will this device utilize 802.11g modulation only? Generally 802.11g devices are also capable of 802.11b modulations and data should be supplied in support both modes of operation as well if applicable. Note that manual mentions 802.11b capability.
<b><i>R. Please see reports for the 2.4GHz portion: “4000LR Test Report - 2.4GHz B Mode” and “4000LR Test Report - 2.4GHz G Mode”.</i></b>

17) Test Report for 5.8 GHz mentions 4.9 GHz throughout the report (on page 11, block diagram, etc). This appears incorrect given the 5.8 GHz. Please review.
<b><i>R. Please see revised report and new block diagram.</i></b>
18) For 5.8 GHz, it does not appear that measurements follow now published procedures. Although the substitution method was once usable, the FCC is now insisting on following published procedures where available to assure all TCB's follow the same methods. If correct procedure was not performed, please take worse case result and use a selected method from the published procedure.
<b><i>R. After discussion with the TCB it was determined that this would be a worst case measurement and would be accepted at this time.</i></b>
19) The 731 and beginning of test report cite 5744 – 5831 as frequencies of operation. However data (i.e. page 18) suggest channels outside this band. Please provide list of available frequencies per bandwidth.
<b><i>R. The 731 form and the test report have been revised to show the correct frequency range. Please see page 25 of exhibit "AP4x00MR-LR_QIG_r2.1".</i></b>
20) Some higher frequency radiated data appears to have a higher limit than normal. Please explain.
<b><i>R. Please see revised report.</i></b>
21) It appears that both 2.4 and 5.8 GHz each were tested with 3 antennas, but it appears that the antenna models may vary. Please explain. Are test photos for all antennas provided?
<b><i>R. Datasheets for the antennas have been provided.</i></b>
22) Columns in AC powerline conducted test for 5.8 GHz vs. data appear odd. It appears several columns of data may be incorrectly reported or labeled. Please review.
<b><i>R. Please see revised report.</i></b>
23) Users manual appears to be missing appropriate RF exposure information such as: The antenna(s) used for this transmitter must be installed to provide a separation distance of at least ___ cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.
<b><i>R. Please see page 3 of exhibit "AP4x00MR-LR_QIG_r2.1".</i></b>