



Washington Laboratories, Ltd.

7560 LINDBERGH DRIVE
GAITHERSBURG, MD 20879
(301) 417 - 0220 FAX # (301) 417 - 9069

September 10, 2004

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

RE: Comments of September 9, 2004
APPLICATION: FCC ID: HDCTRC4206L1 Adtran, Inc.

Dear Mr. Graff:

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: 8028

1.) Kindly carefully define all antennas which will be used with this device. Please include in your list antenna gain, type, and part numbers (if available).

R. A new User Manual containing the antenna types and gains has been uploaded. Please see exhibit "4206L1 User Manual Rev 1.pdf". Antenna information is found on page 15 of 66.

2.) The Manual has what appears to be an incorrect reference to 15.407. Will this device be used under 15.247 or 15.407?

R. The device is to be used under 15.247. The reference to 15.407 has been removed from the revised User Manual.

3.) The Manual claims this is a Class A digital device. This is only partially true. The digital circuitry associated with digital signal processing can indeed be Class A. However, any emissions that are directly associated with the transmitter must meet the limitations of 15.207 and 15.209. It is unclear if this requirement has been met. No radiated data has been presented below 1GHz. Please review.

R. No emissions from the transmitter were detected in the restricted bands below 1GHz. All emissions detected below 1GHz were determined to be from the baseband/digital signal processing circuitry.

4.) The FCC no longer recognizes ANSI C63.4–1992 as the preferred standard for radiated emissions testing. Kindly refer to current editions of this document.

R. The incorrect reference located in Section 4.5.1 of the test report has been remedied. Please see exhibit “4206L1 Test Report Rev 1.pdf”.

5.) Section 4.5.1 does not identify the dish antenna used with this filing.

R. Section 4.5.1 of the test report has been revised to identify the antenna used during testing.

6.) The MPE estimation identifies the largest antenna as +44dBi. Please review with regard to item #1 (above) in mind.

R. The largest gain antenna was used during the MPE Evaluation.

7.) Many plots presented in the Test Report do not show any vertical divisions. It is therefore impossible to correlate to the limits. Please review.

R. Markers indicating the bandedges of 5725M and 5850MHz have been placed on the limit line of Figures 16, 24, 29, and 38 of the revised test report. Figures 20 and 34 already have markers on the limit line indicating the bandedge.

8.) The Manual has conflicting information as to the actual frequency plan used for this product. Please help me understand the differences.

R. The revised User Manual now indicates the correct frequencies.

9.) Please provide plots for spectral power density.

R. Plots of the Power Spectral Density have been added to the revised test report.

10.) Is this product designated for professional installation? If so, how is it marketed?

R. The product is for professional installation. The device is marketed to professional network developers. Professional installation is discussed on page 7 of the User's Manual.

11.) The schematics and theory of operation are listed for Confidential treatment. However, the operational description also contains the Block Diagram which is not listed as Confidential. Please either remove the Block Diagram from the Theory of Operations or add Block Diagram to the Confidentiality Request.

R. The Block Diagram was extracted from the Operational Description and submitted as a separate exhibit, which was not requested to be held confidential. Please refer to the previously uploaded exhibit "4206L1 Block Diagram.pdf."

12.) Please remember that all references to safe MPE distances throughout this filing must match.

R. Noted. It appears that the User Manual and MPE evaluation both agree on the distance listed for installation and the distance used for MPE calculations. Please indicate if there are references made to other distances and if so, where they are located.

Please also note that exhibit "4206L1 RF Exposure Info Rev 1.pdf" has been uploaded to remedy editorial errors.