



To: Mr. Tim Johnson, American TCB  
From: David Waitt  
Subject: FCCRVW2330 , IC: 332R-2330 Certification application

Date: 26 September 2005

This letter addresses your technical compliance concerns regarding the IC application for the access point radio referenced above. If there are any questions or if additional information is required, please contact me at [david@waitt.us](mailto:david@waitt.us)

On behalf of Nortel,

David Waitt

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#### Technical Items

1) RF exposure information shows both +13 and +15 dBi as the highest gain antenna for 2.4 GHz which appears inconsistent. Additionally the RF exposure is used to clearly define RF exposure conditions, EIRP, and antennas for the application being submitted. Exhibits should clearly identify antennas and when relevant whether antennas are considered as mobile or fixed. Additionally the information in the RF exposure is expected to support the application and by using the maximum power and maximum antenna gain you are implying that this is an actual use condition (which contradicts the other information in the application since you are using a power and antenna combination not valid for this application). If you only wish to present the worse case calculation, then include the 2 tables from the report (pages 4 showing antennas being approved and power tables from the report) which supports the worse case EIRP for each band. Then provide the worse case calculation based upon the worse case conditions that occur for each band. Please update the RF exposure exhibit as appropriate.

Nortel: The RF exposure calculation has been edited. The parameters are for the highest possible EIRP for each band. In this case that is:

2.4 GHz 'G' 17.9 dBm into 15 dBi = 32.9 dBm EIRP and  
5 GHz (ISM) 19.39 dBm into 14 dBi = 33.39 dBm EIRP

2) New power spectral density plots for DTS 802.11g do not meet the test procedure requirements of sweep > span/3 kHz and VBW > (not >=) to RBW.

Nortel: The error has been corrected

3) AC powerline emissions for this mode do not appear to be provided as required by 15.407(b)(6).

Nortel: AC line conducted emissions test results have been added to the test report

4) Your previous response regarding adding information to the manual for RSS-210 Section 5.5:

Nortel: The following statement will be added to the user manual / installation guide

"This device has been designed to operate with an antenna having a maximum gain of 14dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms."

Appears to be incorrect. Isn't the highest gain 15 dBi?

Nortel: Yes, the maximum 2.4 GHz gain is 15 dBi while the maximum 5 GHz gain is 14 dBi. The statement will be corrected as shown below:

"This device has been designed to operate with an antenna having a maximum gain of 15dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms."

5) FYI....Please note that for UNII the FCC defines power limits based upon a numeric limit of  $X + 10 \log B$ , where  $B = 26$  dB bandwidth. However IC uses the 99% bandwidth for  $B$ . Given the measurements between 26 dB and 99% bandwidths given here, the limits for IC would be 0.8 dB stricter for both the 5150-5250 and 5250-5350 MHz bands. It is noted that the device meets this, but it is not clear in the report.

Nortel: Future reports will be clearer in this respect.