



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

August 26, 2003

RE: Netgear Incorporated

FCC ID: PY3FVM318

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

- 1) The test report states that "the ethernet ports were not connected, as these are not required for normal function of the Radio Portion". The FCC expects Part 15 devices to be tested under worse case conditions/configurations since it is uncertain if cables may contribute to the readings and the number of cables used by the end user is installation dependent. Note that ANSI C63.4 section 13.1.2 for intentional radiators references section 6.2 for configuration of the device. Additionally, please note that the original testing for this unit appears to have tested the device fully configured. Preliminary testing or additional testing should have been performed in order to evaluate the effect (if any) that these cables have on measurements > 1 GHz.
- 2) It is uncertain which antennas may be directly connected to the radio, and which must use a cable without reviewing the RF exposure exhibit. Please update Addendum A OR page 8 of 16 of the test report to clearly show which antennas may be directly connected and which ones require a cable. Additionally, please include the loss of the minimum 1.5 meter length of cable with this information.
- 3) Note: Note all omni-directional antennas are created equal. We have seen where significant differences between 1/4 wave dipoles, 1/2 wave dipoles, monopoles, etc can occur, even for antennas of the same gain antennas. This is usually noticed at harmonic frequencies. Many of the antennas were labeled with 1/4 wave descriptions, but it is not certain on several exactly what type of omni-directional antenna they are. Comparison or additional testing may be necessary to any antennas which are not considered 1/4 wave dipoles. Please explain.
- 4) For the RF exposure exhibit, please provide measurement units for appropriate columns (output power, cable length, cable loss, gain, etc.).
- 5) For mobile devices, the FCC has requested that RF exposure information be calculated for the power density at 20 cm, instead of the safe distance. Please correct the RF exposure exhibit.
- 6) For purposes of bandedge measurements, the power of the fundamental should have been measured with typical RBW = VBW = 1 MHz for peak and RBW = 1 MHz, VBW = 10 Hz for AVG. However the tables on pages 6, 7, 9, 12, 13, 15, 18, 19, and 21 state 100 kHz. It appears that proper settings may have been used but not properly reported. Please explain.
- 7) The polarization listed for the bandedge data on page 12 of 21 appear to listed backwards. In other words, the results at 2390 MHz of 43.5 dBuV/m appear to be calculated from the vertical data, not the horizontal data. Please explain.

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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.