



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

January 28, 2005

RE: AEPTEC Microsystems Inc. / 3e Technologies International

FCC ID: QVT-528

I have a few comments on this Application. Depending on your responses, kindly understand there may be additional comments.

- 1.) This device consists of three identical 802.11g radios set to different channels and directional antennas, and one 802.11b radio connected to a single omnidirectional antenna. Does the Applicant intend for the 802.11g radios to always be connected to 5dBi or less omnidirectional antennas?
- 2.) It is noted that directional antennas are specified exclusively for use with the 802.11g radios. If the Applicant intends for a wide variety of antennas to be used with this system [yagi, parabolic, etc.], you are reminded of the requirement for supplying antenna specifications and photographs for each antenna type. No specifications are currently provided for the 24dBi grid.
- 3.) It is unclear if the RF Exposure exhibit considers the effective total RF "illumination" which would occur when all antennas are transmitting simultaneously and aligned along the same vector.
- 4.) The Manual shows a drawing where the three 802.11g transmitters are terminated with whip antennas mounted directly onto connectors at the NEMA enclosure. Was this configuration tested for intermod and spurious emissions in addition to both the directional antennas? If possible, kindly provide photographs of this setup.
- 5.) Since the 802.11g radio directional antennas can be pointed in any direction, it seems reasonable that worst case radiated intermod could occur with all antennas aligned along the same vector. Was this investigated for both the 14 and 24 dBi antennas?
- 6.) The radiated band edge measurement should be repeated for each antenna type. This means I expect to see data for the 5dBi whips, the 14dBi panel, and the 24dBi grid. Please review.
- 7.) This device claims to use one 802.11b CCK radio and three 802.11g OFDM radios in typical operations. Therefore data for both the 802.11b and 802.11g radios should be presented. This should include all the parameters listed in Part 2 and Part 15C as necessary.
- 8.) Please remember that the video bandwidth of all peak power sensors should be wider than the 6dB bandwidth of the emission to be measured. My memory may be off, but I do not recall the Agilent power meter you use in your Test Report is quick enough to capture the peak emission. Kindly review your procedure. FYI: The FCC has changed some of language in 15.247 to allow the use of RMS power measurements. This may work to the advantage of the Applicant. See 15.247(b)(3). You should also be aware that in general the highest Pout occurs when 802.11b/g radios are transmitting at their slowest bit rate.
- 9.) Because of the potential total EIRP involved, it would be prudent to provide more robust antenna installation instructions. If indoor as well as outdoor installations are possible, this should also be addressed.

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President and Director of Engineering

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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.