



American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

July 19, 2003

RE: Hitachi Keiyo Engineering and Systems LTD

FCC ID: Q9Z-PC5NR3-J

I have a few comments on this Application.

- 1.) Current FCC RF Exposure criteria assume that "Tablet PCs" can be used in the lap while persons are seated. This will necessitate a SAR test for any device with an RF Pout (conducted or radiated EIRP) above 60mW/f(GHz). This equates to a power of 24mW in the 2450MHz spread spectrum bands. If you can prove that the antennas are mounted greater than 2.5cm from all persons when used in the lap of a seated person then a looser limit of 120mW/f(GHz) would apply. I am unable to determine from the photographs where the antenna is located and it's distance to the operator. A copy of the current TCB Exclusion List of July 2002 is included for your reference. FYI: Please note the specification sheet supplied on this card shows this is rated at 31.6mW (+15dBm).
- 2.) Please submit clearer and larger photographs for all interior views. Please be sure to include the underside of the main board as well.
- 3.) Please provide an RF Exposure exhibit – either SAR or MPE estimation - for this device as required by 15.247(b)(5).
- 4.) Current interpretation of RF Pout measurement procedure for RF Exposure finds spectrum analyzers too inaccurate for Pout testing – especially if SAR testing is possibly involved. Please provide more accurate power readings. The optimum way recognized by the Commission is to use the diode detector/signal generator substitution method as illustrated in a separate attachment. Be sure to check power across low, mid, and high channels at all applicable data rates.
- 5.) The Test Report appears to make multiple references to Bluetooth protocols and not exclusively 802.11b. This is confusing to the casual reader. Please review.
- 6.) Test Data for AC Powerline Conducted tests seem to be missing. As a service to your client, please remember to provide test data down to 150KHz.
- 7.) Peak and Average radiated values for the restricted band of 2483.5 to 2500MHz and 2310 to 2390MHz seem to be missing. Please provide this data.
- 8.) Test Setup photographs for AC Conducted and Radiated test configurations must be provided as a separate exhibit. This is an FCC requirement. Please supply.
- 9.) The manual has no instructions for users on how to minimize their RF Exposure. Moreover, I cannot provide for you specific language to be included in the manual because this language is dependent on the question of SAR testing. Please advise at your earliest opportunity.
- 10.) There is no Block Diagram which covers the wireless LAN card. Please supply a functional block diagram conforming to 2.1033(b)(5).
- 11.) The Label and Location photo is inadequate. Please supply a readable exhibit.

William H. Graff
President and Examining Engineer

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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.