



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

April 5, 2004

RE: Vivato, Inc.

FCC ID: QLVNVS24SWP

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

- 1) Previous applications by Vivato contained professional installation information (cover letter addressing the professional installation requirements as shown below. Information regarding professional installation does not appear to be provided with this application although professional installation is given in the manual. Please provide a cover letter addressing the various issues:
 - a) Marketing
example: The device cannot be sold retail, to the general public or by mail order. It must be sold to dealers or have strict marketing control.
 - b) Requires professional installation;
examples:
 - installation must be controlled.
 - installed by licensed professionals (EUT sold to dealer who hire installers)
 - installation requires special training (special programming, access to keypad, field strength measurements made) What is unique, sophisticated, complex, or specialized about your equipment which REQUIRES it to be installed by a professional installer?
 - c) Application
example:
 - The intended use is generally not for the general public. It is generally for industry/commercial use.
- 2) Previous applications contained test plan information correspondence between the FCC and Vivato. Is there any information relevant to this application that is necessary to provide?
- 3) Previous applications contained MPE measurements in addition to calculations. Please provide justification for not providing MPE measurements.
- 4) Plots to support worst case data in section 3.2 do not appear to be provided. If possible, please provide or correct as necessary.
- 5) Data in the plots in section 3.2 & 3.4 appear to match the tables. However, data in the tables of section 3.3 does not appear to match the plots (0-1 & 0-3). Please explain and/or correct as necessary.
- 6) The amplifier in the table on page 47 of 89 appear to be out of calibration. Please explain.
- 7) Please provide further detail/justification of the power measurements made. The device appears to contain multiple feed points to the cavities. Note that the previous applications power was measured as "Output power is the total conducted power from all 16 antenna ports per channel". It appears in this design that only one feed point may be used at any given time, which explains the horizontal rows/feed points. However, how does this affect the vertical x8 array as well. Please justify how power should be measured? Additionally, please provide further information as to the location power was measured, (i.e. output of card, after PA, after BPF, etc.).
- 8) Power spectral density must be taken with the sweep time > than Span/3 kHz. It does not appear that power spectral density has been tested with proper sweep times. Please review and correct.

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- 9) The non-modification statement in the users manual does not appear to void the users authority to use the device due to changes or modifications as required by 15.21. Please review the statements in the manual and adjust accordingly.
- 10) FYI....For Bandedge peak measurements, the cursor does not always appear to be placed on the highest signal in the restricted bands. In take care to watch this in future measurements.



Timothy R. Johnson
Examining Engineer

Direct Phone: 404-414-8071

[mailto: tjohnson@AmericanTCB.com](mailto:tjohnson@AmericanTCB.com)

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.