

From: Claire Hoque  
Sent: Wednesday, July 30, 2003 3:30 PM  
To: Mike Kuo  
Cc: Anne Liang; Steve Cheng; Thu Chan  
Subject: RE: Broadcom Corporation, FCC ID:QDS-BRCM1002-H, AN03T3024

Hi Mike,

Pls see the answers as belows.

Notice\_content

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Question #1: Recently, FCC has issued an notice to TCB about measuring output power for WLAN device with power meter. Please see the notice below:

Output Power Measurements

For all output power measurements using power meters, please assure that the probe video bandwidth is greater than the signal bandwidth. Otherwise measurement errors can result. We have noticed many instances, especially for DTS devices, where the output power measurement probe appeared to have a smaller video bandwidth than the signal bandwidth. When output power probes with sufficient bandwidth are not available to measure a particular signal than the alternate techniques, discussed in Joe Dichoso's "Unlicensed" TCB training material from May 2003, should be used. These techniques include spectrum analyzer channel power functions and power/bandwidth extrapolation. UNII devices have alternate procedures defined in Public Notice DA 02-2138. Remember for all power measurements please use the correct measurement detector peak or average corresponding to the appropriate limit.

Based upon above policy and by reviewing the DTS report, the output power was measured with power meter. Please provide the power meter probe to justify the video bandwidth is large enough for measuring peak output power. Otherwise, please provide peak output power measurement with spectrum analyzer by using channel power function.

<ANSWER>Pls see the attached revised test report.

Question #2: Based on recent FCC instruction about user selectable channel for WLAN device, please refer the following instructions from FCC:

User Selectable Frequencies by Country

At this time, the FCC will not authorize transmitters that have the capability to allow the end user to choose various frequency bands that may be valid for other countries but are not in accordance with the frequency bands permitted by the FCC rules for use in the USA. This includes transmitters that use active or passive listening techniques on these non-USA frequencies. These transmitters must have these end user options disabled.

Section 15.15(b) prohibits adjustments of any control by the user that will cause operation of a device in violation of the regulations. Accordingly, any proposal to allow the end user to choose extended channels on frequencies outside of an allowable frequency band in the USA is not acceptable. For example, a WLAN device operating according to Section 15.247 on channels 1-11 between 2.4 - 2.483.5 GHz must not have any user controls or software to allow the device to operate on channels 12 and 13 which are outside of the allowed USA band. This issue may be addressed in a future rulemaking.

Based upon above instructions and with reference to the user manual submitted. This device is capable of transmit beyond channel 11 and ask the user to find out the channel range that are allowed via Radio Approval link on the applicant web site. Based upon this information, the channel will selectable by the user.

Please provide justification or statement that this device will be marketed in the U.S. with capabilities of transmitting from Channel 1 to Channel 11 only.

<ANSWER>The user will not have access to the any setting which will allow transmission on frequencies outside of FCC limits.

Question #3: Please provide antenna location when the device is installed in HP PP2180.

<ANSWER>The antenna locations were installed in PP2180, please see attached.

Question #4: Please provide clear copies of internal photos. The submitted internal photos file are not clear enough to identify the chip set number.

<ANSWER>Pls see revised internal photos as attached.

Question #5 In the technical description file, the antenna is listed as 3dBi antenna gain. However, such information does not match the antenna specification sheet submitted. Please explain.

<ANSWER>The 3dBi antenna gain is the true gain of the antenna when installed in the platform, as opposed to the gain of a stand alone antenna in free space.

Question #6: By reviewing the user manual, it appears that this mini-PCI card will be allowed for end user installation. It is FCC policy that only if the mini-PCI card is equipped with Bios Locking feature will be allowed for end user installation. Please provide the technical information to justify end-user installation.

<ANSWER>In each case the product will either use bios locking or end user installation will not be allowed and a statement will be included in the user manual to that effect.

Thanks,

Claire