Dear Diane,
The response for the requested technical information in CRN: 24961 has been integrated into your original text below. Please review at your earliest convenience. Thanks.

Best regards,

Steve Cheng
EMC Engineering Manager
Compliance Certification Services
561F Monterey road, Morgan Hill, CA 95037-9001
Tel: (408) 463-0885, Fax: (408) 463-0888
scheng@ccsemc.com

##

To: STEVE CHENG, COMPLIANCE CERTIFICATION SERVICES
From: Diane Poole
dpoole@fcc.gov
FCC Application Processing Branch

Re: FCC ID MCLJ07H06901
Applicant: Ambit Microsystems Corporation
Correspondence Reference Number: 24961
731 Confirmation Number: EA492710

In regards to your recent application referenced above we kindly request that you provide the following additional information.

RT for 2.4 GHz
1) Updated user manual to include appropriate RF exposure user information. The type of host device should be clearly defined. This device is not authorized for use in PDA and other hosts.
<Response>
Revised user manual uploaded in file "CRN 24961 revised User manual.PDF"

2) New SAR data as follows
--in a lap held configuration with 0 gap, and with display both open and closed. 12 Mar telecon between Steve Cheng and Martin Perrine confirmed that the device will transmit with the lid closed.
_ Bystander with lid closed
-- Values for all secondary hot spots in accordance with Supplement C.
_ Appropriate "co-located condition" as mentioned below

<Response>
* Based on telephone conversation between Martin Perrine of FCC and Barbara Judge of CCS on Thursday March 20, 2003, additional testing at 2.4GHz with lid closed will not be required. The FCC has indicated that it would accept the 5GHz SAR data with the lid closed as sufficient.

* Additional Secondary hot spots SAR plots has been uploaded in files
- CRN 24961 additional 2G SAR Test Data_03-20-03.PDF
- CRN 24961 additional 2G SAR Test Plots.PDF

* This application has only one 802.11 transmitter, the Bluetooth device mentioned in 5G SAR report was typo. Thanks.

3) Updated SAR plots to include:
-Contour lines
-Improved perspective of the device layout relative to the measurement grid. It is difficult to determine the orientation of the device using the provided plots.
-Ambient and liquid temperatures.

<Response>
SAR plots have been updated to include the ambient and liquid temperature. Please refer to uploaded file " CRN 24961 revised SAR Test Plots Updated with temperatures.pdf ".

Regarding to the contour and perspective of the device layout relative to the measurement grid. CCS had upgraded its system to DASY4 for better measurement accuracy, and due to the new software limitation the DASY3 style contour and perspective view is no long available in the report plot. We have reflected this shortage to the MFG (SPEAG) and will improve our plot presentation when new software is available from SPEAG.

RT for 5.8 GHz
Attention please: All the data and plots, which related to the 5G SAR is in the uploaded file "5G SAR Response from Utah SAR lab.pdf ".

1) Details of BT transmitter mentioned on page 26. Please include power, antenna location, FCC ID. Also provide "co-located condition" SAR data as appropriate.
<Response>
A wrong photograph was attached as Fig. 2 on p. 26 of the previously submitted SAR test report. This device does not have a blue tooth antenna and none should, therefore, have been shown. A corrected version of Fig is attached herewith. We apologize for this mistake, which occurred due to a miscommunication between various parties.
BT marking on page 26 is a typo, this submission including only a 802.11 a/b/g module only, there is not BT device inside.

2) Additional probe calibration data to include axial and hemispherical isotropicity, and linearity. Also, please provide details of the related uncertainty components.
<Response>
As previously mentioned in Section III, the isotropy of the probe was determined by rotating the probe around its axis. The isotropy of the probe was measured to be less than ± 0.23 dB (± 5.5%). The linearity of the probe is the same as the deviation of the probe output from the square-law behavior. The linearity of the probe has been measured to be less than ± 3%.
3) Steps that are being taken to comply with Supplement C recommendations to perform system verification with 100 MHZ of device frequency. Please provide date when upgrade will be complete.
<Response>
Since it is very hard to fabricate a half-wave dipole with a balun in the 5.0-5.8 GHz band, both because of fairly small dimensions as well as relatively limited bandwidth of such dipoles, we are developing a system verification system by using an open-ended, air-filled waveguide as an irradiation system placed at a distance of 8 mm from the base of the planar phantom (10 mm from the lossy fluid in the phantom). For this application, we have set up a WR 187 rectangular waveguide of internal dimensions 1.872" × 0.872" that is fed with microwave power from a Hewlett Packard Model 83620A Synthesized Sweeper (10 MHz-20 GHz). The operating (TE10 mode) band of this waveguide is from 3.95 to 5.85 GHz. When placed at a distance of 8 mm from the base of the planar phantom, the reflection coefficient is about 10-20%. Even this relatively small amount of reflection can be reduced to less than 0.5% by using a movable slide screw waveguide tuner (Narda Model 22CI). For system verification, we hope to compare the peak 1-g SAR with that obtained using the FDTD-calculated values for such a radiation system.

This work is likely to be completed in the next couple of weeks (first or second week of April 2003).

4) Additional SAR measurement data to include
--values from both antennas A and B for all configurations
--Configuration 3 with display open
--Plot of entire device
--Values for any secondary hot spots in accordance with Supplement C
<Response>
All of the SAR data submitted previously (in the SAR Report dated February 19, 2003) pertained to Antenna B as shown in Fig. a. The additional data measured for Antenna A for all three configurations is added to the previously submitted Table 11 and is resubmitted here as Table a. As expected, the SARs are extremely low for Configuration 1 - Above-lap position.
The coarse scan measurements for Configurations 2 and 3 for Antenna A are given in Figs. b and c, parts 1-4, respectively. The corresponding SAR distributions for the peak 1-g SAR regions are given in Tables b-i, respectively. The z-axis scan plots taken at the highest SAR locations for each for the configurations for Antenna A are given in Figs. d and e, respectively.
Plot of the Entire Device
A photograph of the top cover of the Agency Series Laptop Computer with display open as for Configuration 3 - End-on position is given in Fig. f. Marked here are the various regions 1-12 each of dimension 5.6 × 8.0 cm that have been individually scanned for SAR distributions with a coarse scan resolution of 0.8 cm (8 mm) each. The locations of the individual scan regions on the Agency Series PC Cover of dimensions 28 × 23 cm are given in Fig. g. Since the measured peak 1-g SAR was the highest (0.416 W/kg) for Antenna B for Configuration 3 - End-on position for an irradiation frequency of 5.26 GHz in the base mode, all 12 regions were scanned for the SAR values at a depth of 4 mm in the phantom fluid for the Ambit Microsystems Wireless Antenna B in the base mode at 5.26 GHz. Given in Figs. h to s are the measured SAR distributions for regions 1-12, respectively. For convenience of comparison, all of the measured SAR distributions are shown with the color scale as that in Fig. h for region 1. Also included are the measured SAR distributions for all 12 regions given as Tables j-u, respectively. As expected, the SARs are the highest for region 1 in close proximity to Antenna B. Even for this region 1, the highest SAR region is highly localized occupying an area of approximately 2 × 2.5 cm in physical extent.

5) New SAR plots to include the following information
--Date
--Liquid parameters
--Ambient and liquid temperatures
--Device position and setup
--Outline of device to show hot spot location
--Probe conversion factor
<Response>
Date: March 27, 2003
Liquid parameters: Same as those given in Section V of the SAR test report dated February 19, 2003.
Device positions and set up: Given in various Figs. b, c, parts 1-4, respectively,
Probe conversion factor: Same as for the previous SAR test report; 2.98 (mW/kg)/μV.
SAR system verification: The new data taken for the SAR system verification is attached here as Appendix I. The data for system verification was March 26, 2003. The measured 1-g SAR of 36.429 W/kg is in excellent agreement with the FDTD-calculated 1-g SAR of 35.8 W/kg. Also as expected, the measured SAR plot is quite symmetric.

6) Clarification of frequency used. Fine scan tables mention 5.875 GHz while SAR plots mention 5.785. Power was measured at 5.825 and 5.785 on page 12. Tech specs state maximum frequency is 5.825 GHz.
<Response>

There is a typographical error on p. 15 for fine scan measurements. As given in Figs. 13b and 14b for coarse scans, the frequency should be 5.785 rather than 5.875 GHz.