

Mike Kuo

From: Claire Hoque
Sent: November 11 日 2003 年 Tuesday 5:18 PM
To: Mike Kuo
Cc: Chuck Cowden; Thu Chan
Subject: RE: Itronix Corp. FCC ID: KBCIX260MPIA755BT, AN03T3369

Hi Mike,

Here are the answers.

Question #1: The EUT contains in this application is the notebook computer with three radios built in (WLAN, Dual Band GSM Data modem , and Bluetooth). The internal photos only contain minimum photo to show the internal construction of notebook computer. Please provide additional internal photos to show :

- a. Internal photos of WLAN card (component side and solder side with and without the metal plate)



.DK102042 Internal
Photos.pdf

<Claire>The FCC ID for WLAN card is LDK102042, internal photos attached.

- b. Internal photos of Bluetooth card (component side and solder side with and without the metal plate)



POOWML-C11XX
photos.pdf

<Claire>The FCC ID for Bluetooth card is POOWML-C11XX, photos attached.

- c. Internal photos of Dual band GSM data modem card (component side and solder side with and without the metal plate)



AC755 Internal
Photos.pdf

<Claire>pls see the attachment.

- d. Internal photos of CPU board and all PCB boards (component side and solder side) inside the notebook computer.

- e. AC/DC power adapter external photos and internal photos.



Internal
Photos(revised).pdf

<Claire>pls see revised internal photos for d and e.

Question #2: Proposed FCC ID label only contains the FCC ID number with FCC DoC logo for demonstrate product compliance to FCC Part 15 subpart B . In addition, there is no FCC Part 15 Subpart B Class B test data included in this filing. If this notebook computer is complied with FCC Part 15 Subpart B as Personal computer, please provide FCC DoC statement to justify such compliance and provide revised FCC label format with FCC DoC logo with necessary compliance statement.



FCC Label



IX260 FCC Part15
ocation(revised).PD. DoC statement...

<Claire>pls see FCC DoC statement and revised FCC ID label location as attached.

Question #3: What is the approval status of WLAN radio and Bluetooth Radio ? Have both radios been approved as transmitter modular approval ? If this notebook computer is utilizing WLAN and Bluetooth modular approval, please provide FCC ID number of WLAN and Bluetooth. If both devices have not yet been approved, please provide schematic diagram, functional block diagram, theory of operation for each radio.

<Claire>Both WLAN radio and Bluetooth Radio have been granted as modular approval, pls see attached grants.



3T POOWML-C11XX Cisco LDK102042
Grant.PDF



Grant.PDF

Question #4: Please confirm that AC700 data modem contains in this filing does not equip with GSM function but only with GPRS Class 12 as data modem.

<Sierrawireless>Pls note the model number should be AirCard 755. AirCard 755 wireless modem supports both GSM and GPRS.



03U2244 FCC
report(revised).PD..

<Claire> Our test report has been revised to show the correct model number AirCard 755.

Question #5: During ERP / EIRP measurement, what is the mode of operation for AC700 Data Modem ? Which class of GPRS was used during the tests ? Which GPRS class is the worse case ?

<Sierrawireless>The question is irrelevant as the ERP/EIRP measurement result is not affected by how many time slots are used for TX. There is no worst case here as they are all the same.

Question #6: Output power measurement should be used with RBW great or equal to EBW, since the GSM occupied bandwidths shown on the plots ~300KHz. Please redo the RF conducted output power with RBW > EBW.

<Sierrawireless>the conducted power was measured with RBW=300KHz, which is greater than EBW.

Question#7 : What is the antenna gain for WLAN and Bluetooth used in this notebook computer ?



IX260



IX260Blue tooth

<Itronix>pls see the attachment antenna info. sheets. anAntennaGainPlot.i AntennaGainPlo...

Question #8: User manual does not contain information to address RF exposure compliance. Please include such statement in the user manual.

<Claire>pls see page 27 and 51 of user's manual.

Question #9: Per 2.1091 of FCC rules, for mobile device with fundamental frequency less than 1.5GHz and the ERP is above 1.5W or more, routine evaluation is required to address RF exposure compliance. Please submit MPE measurement report.



RF

<Sierrawireless>posure_AC755_Rev.i

In this document it is demonstrated and concluded that the AirCard 755 will comply with the FCC rules on RF exposure for mobile devices if the antenna gain does not exceed 4.5 dBi in both cellular and PCS band. Your ERP/EIRP measurement has confirmed the Itronix antenna has a gain less than 4.5dBi, therefore the evaluation shows the Itronix EUT complies with the FCC rules on RF exposure for mobile devices. Routine evaluation does not necessarily mean MPE measurement. The MPE calculation is also an accepted form of routine evaluation by FCC.

Question #10: The RF conducted output power measured is 31.5dBm with 0 dBi antenna gain, please justify the measured ERP power is 33.7dBm in 850MHz band. Same for 1900 MHz band.

<Sierrawireless>The 0dBi gain quoted here is the antenna gain in horizontal plane, and this is the gain people are normally interested in. But the ERP/EIRP measurement is a 3D measurement as it requires the height of the receiving antenna to be adjusted while searching for the peak. Therefore the gain in horizontal plane has nothing to do with the ERP/EIRP value. It's not uncommon that the peak gain of an antenna is a few dB higher than the max gain in

horizontal plane.

Thanks,
Claire