Helen Zhao

Subject: FW: Re ? RE: Re : RE: Re : RE: Re : FW: U-MEDIA Communications, Inc., FCC ID: SI5WCB321A, Assessment NO.: AN06T5401, Notice#1

From: lucy.tsai [mailto:lucy.tsai@tw.ccsemc.com]**On Behalf Of** application
Sent: Tuesday, January 17, 2006 2:22 AM
To: Mike Kuo
Cc: application@tw.ccsemc.com; Helen Zhao
Subject: Re ? RE: Re : RE: Re : RE: Re : FW: U-MEDIA Communications, Inc., FCC ID: SI5WCB321A, Assessment NO.: AN06T5401, Notice#1

Hi Mike,

Please refer to attached email for the reply.

Best Regards,

Lucy

"Mike Kuo"
<mike.kuo@ccsemc.com>

2006/01/13 11:21 AM

收件人: "lucy.tsai" <lucy.tsai@tw.ccsemc.com>, "Helen Zhao" <helen.zhao@ccsemc.com>, <application@tw.ccsemc.com>
副本抄送:
主旨: RE: Re : RE: Re : RE: Re : FW: U-MEDIA Communications, Inc., FCC ID: SI5WCB321A, Assessment NO.: AN06T5401, Notice#1

Hi Lucy :

1) Please update the antenna specification to agree with your statement. There are several pages in the revised antenna specification still show Right, Left .
Ans. Revised as attached.

2) Based upon revised theory of operation, "The power is transmitted from the omni antenna located in the center. However, the left or right antenna will be turned on as RF reference of central part to increase the radiated efficiency of the antenna."

This description does not agree with measured antenna gain. Per the revised antenna gain, omni=1.69dBi, Omni+right=1.51dBi and Omni+Left=3.74dBi. Please explain why Omni+right gain is lower than Omni alone ?

Ans. Theory of operation is revised again to address when EUT will switch to other antennas. Besides, regarding the antenna gain, the antenna gain of right+omni measued was lower than omni, it is because antenna performance problem but the value reported did set with three configurations.

3) Are all three antenna configurations (Omni, Omni+Left, Omni+Right) have TX/RX diversity capabilities ?
Ans. Yes, all three antenn configurations have TX/RX diversity capabilities.

4) Please provide a screen shot on the test program used to select specific antenna configuration during the final compliance tests.
Ans. The final test was set with omni+left antennas, and please refer to attached antenna setting for details.
(ps. the left and right antennas indicated in the test plot are left+omni and right+omni.)

5) Please point out Omni antenna location in the schematic diagram.
Ans. Please refer to page 4 of schematic for details.

Best Regards

Mike Kuo

-----Original Message-----
From: Compliance Certification Services [mailto:helen.zhao@ccsemc.com]
Sent: Thursday, January 05, 2006 5:56 PM
To: Helen Zhao
Subject: U-MEDIA Communications, Inc., FCC ID: SI5WCB321A, Assessment NO.: AN06T5401, Notice#1

Question #1: The antenna spec shows there are three sets of PCB antennas: ONMI?, Right and lift? antennas. Please provide internal photos to show location of these three PCB antennas.
Ans. Please refer to attached antenna location photo.

Question #2: The SAR test report indicates the test was done with Antenna A, please indicate which antenna is Antenna A, and how you determine that is the worst case. (please note highest antenna gain not necessarily turns out to be the worst case for SAR testing.)
Ans. Antenna A is just a code, it includes onmi, right and left as indicated in the antenna spec. They are taken as an antenna but not three. In another word, there is only one worst case and it's what we measured.

> (TCB) Per schematic diagram, there are three antennas labeled as Antenna A, Antenna B and Antenna C. In your reply to question, you used same antenna designation to describe the measured antenna RF connector. However, in the antenna location file, you show Antenna Left, antenna Right and Omni Antenna. Please establish antenna A / B and C with Antenna Left/ Right and Omni antenna.
>
> "They are taken as an antenna but not three. In another word, there is only one worst case and it's what we measured."
>
> Above statement is not clear, what do you mean there is only one worst case ? Does it mean that Antenna A and Antenna B will transmitter at the same time ?
>
> Ans. ANTA/B/C in schematic are defined as MAC pin which is used in control transmitting or receiving and as specified in page 3 of schematic, ANTA is defined as RFRST_L and ANTB is defined as RFLOAD.
> This device has three antennas: left, omni, right as antenna specification listed but not the ANTA, ANTB, ANTC. The power can be transmitted with three ways which is depending on the signal strength that device received as below:
> - Middle omni antenna mode only.
> - Middle omni antenna mode plus left antenna mode, controlled by software through U4 switch.
> - Middle omni antenna mode plus right antenna mode, controlled by software through U7 switch.
>
> > (TCB) Please provide the following three new antenna specs (especially antenna gain):
> > - omni antenna
> > - omni antenna plus left antenna.
> > - omni antenna plus right antenna.
> > By the way, please correct typo on "ONMI" and "Lift".
> > Ans: By checking with U-MEDIA, the antenna gain of the three new antennas are the one listed in the submitted antenna spec. They have revised the description, please refer to attached file for details.

Question #3: The SAR test report shows peak output power before and after the test, please explain how you make measurement, do you really take it off phantom and open the case, then do measurement every time?
Ans. Yes, the output power were measured before and after test and did follow the procedure as you mentioned.

Question #4: Please check SAR test report page 18, where you get 18.5mm, the mark is not correct, you may need to convert pdf again.
Ans #4: the mark is not correct because convert file from WORD to PDF the mark has moved. Please refer to attached revised test reprot.

Question #5: Please check SAR test report page 19 & 20, is it 18.5m or 18.5mm?
Ans. "18.5m" is the zoom in/out error. Please refer to attached revised test report.

Question #6: In the RF test report, the data rate used for the final tests are :11Mbps for 802.11b, 6Mbps for 802.11g and 12Mbps for Turbo mode. In the SAR test report, the data rate used for the final tests are : 1 Mbps for 802.11b, 6Mbps for 802.11g and 12Mbps for Turbo mode.
Ans: It's typo, the data rate used for the final test for 802.11b mode is 1Mbps. Test report has been modified in page 6.

Question #7 : As indicated in the block diagram, there is only one antenna listed. The transmitter and / or receiver function for each antenna is not clear. Please provide a detailed functional block diagram and indicate the transmitter/ receiver path associated with each antenna.
Ans. Theory of operation was revised as attached.

> (TCB) Please revise Operational Description to explain design mechanism to control the switches of U4 and U7. In other words, in which situation, U4 or U7 will be triggered, so that left or right antenna will be turned on. Are three situations purely determined automatically by the software, or by something else?

Ans: Three transmitting conditions will switch automatically by software.

Best Regards,
Helen Zhao

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. 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 e-mail address listed below the name of the sender.