

## Chris Harvey

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**From:** 이영택 <yt183@e-ctk.com>  
**Sent:** Thursday, January 27, 2011 7:03 AM  
**To:** 'Chris Harvey'; charvey-tcb@ccsemc.com  
**Cc:** lucy.tsai@ccsemc.com  
**Subject:** RE: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259-1263, Notice#2  
**Attachments:** 3 axis Photos.pdf; Test Report\_GSM\_AdditionSTM-7700\_modified.pdf; Test Report\_RFID\_STM-7700\_—modified.pdf; SAR\_STM-7700.zip

Dear Chris Harvey

I'm sorry this reply is too late.

Attach the SAR Test report.

Please review and reply if you would like to make any corrections.

1. Please confirm which of the transmitter is capable of transmitting simultaneously (DTS WLAN BT, RFID and GPRS transmitters). The RF Exposure for simultaneous transmission must be addressed (for either Portable SAR or Mobile MPE as needed). Please also confirm that users will not be able to use this device as a WiFi to Mobile–Network Hot–Spot device since it has both WiFi and GPRS capabilities.

2. The test setup photos show this device setup in a configuration in a charging cradle in a single position. Please provide information about how the transmitters were tested in the 3 orthogonal axis (x–y–z) to ensure the maximum emissions were measured. Please show/describe how the device was oriented in the 3 axis.

– Take a look at the attached file(3 axis Photos).

3. Are all transmitters capable of operating while the device is in the cradle?

– Yes

4. (Previously asked but copied here for completeness) The form–factor of this device seems to allow it to be used very close to the body while transmitting. Have you contacted the FCC regarding the classification of this device as a Mobile RF Exposure device? It seems that it may be classified as a Portable RF Exposure device requiring SAR compliance, in accordance with FCC KDB # 447498 section 4)c).

5. If this remains as a Mobile device, please ensure that the MPE limit for the 835 MHz band is corrected, and that the calculation for the minimum safe distance is removed (FCC does not recognize any distance less than 20 cm for Mobile devices).

6. The RF reports for the Telit module (FCC ID: RI7GC864Q2) and the Woongjin Industrial PDA do not document the ERP and EIRP measurements using the substitution method found in EIA/TIA 603–C, but rather calculates the

values. The original module was approved as a Mobile RF Exposure condition device without an integral antenna and granted with Conducted power listing. This new PDA device incorporates an internal antenna. Please perform the ERP and EIRP measurements using the substitution method for this final device that uses the Telit module and these ERP/EIRP measurements will be listed on the Grant.

– Attached a corrected GSM Test Report.

RFID application:

7. The RFID report states that the measurements were performed at a distance of 3 meters. FCC Rule 15.31(f)(2) states that at frequencies below 30MHz, the distance correction should be 40dB/decade, unless measurements showing a different factor are performed. Please correct the report accordingly.

– Attached a corrected RFID Test Report(Page 13, Page 14).

8. The Radiated Emission Limits tables in section 2.1 and 2.2 seem not to show the limits but rather the measured values. Please correct these tables.

– Attached a corrected RFID Test Report(Page 13, Page 14).

9. Please provide a more detailed measurement Procedure, especially the testing below 30 MHz and how the loop antenna is oriented and moved about its axis.

– Attached a corrected RFID Test Report(Page 12, Page 13).

10. The Frequency Stability section lists data but not Measurement Procedure, required limit or margin. Please update this section of the report.

– Attached a corrected RFID Test Report(Page 16, Page 17).

11. The field-strength measurements throughout the report should all indicate the measurement distance (i.e. dBuV/m @3m, not just dBuV/m). Please update all data tables in the report to state the distance at which the field-strength measurement or limit is specified.

– Attached a corrected RFID Test Report.

12. The AC Conducted emissions measurement does not have a signal at 13.56 MHz. Please confirm that the RFID transmitter was operating.

– RFID transmitter was operating, but signal was not detected.

Best regards,

Young-Taek



이영택 주임

Lee Young Taek / Assistant  
CTK Co., Ltd. (주)씨티케이

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인증팀

Tel : +82-31-339-9871 Dir : +82-31-330-3372  
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## 사명(社名) 변경 안내

저희 (주)서티텍이 (주)씨티케이로 사명(社名)이 변경 되었음을 알려드립니다.

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**From:** Chris Harvey [mailto:charveyemc@gmail.com] **On Behalf Of** Chris Harvey

**Sent:** Thursday, January 20, 2011 11:35 PM

**To:** '이영택'; charvey-tcb@ccsemc.com

**Cc:** lucy.tsai@ccsemc.com

**Subject:** RE: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259-1263, Notice#2

Dear Young-taek, is there any update for these applications? Have you contacted the FCC Laboratory?

Best regards,

Chris Harvey

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**From:** 이영택 [mailto:yti83@e-ctk.com]

**Sent:** Thursday, December 23, 2010 8:02 PM

**To:** charvey-tcb@ccsemc.com

**Cc:** CHARVEY@ieee.org; lucy.tsai@ccsemc.com

**Subject:** RE: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259-1263, Notice#2

Dear Chris Harvey

I'm sorry this reply is too late.

Surely does this device need to SAR test?

If this device have to SAR test, will take quite some time.

Best regards,

Young-Taek

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-----Original Message-----

From: charvey-tcb@ccsemc.com [<mailto:charvey-tcb@ccsemc.com>]  
Sent: Wednesday, December 22, 2010 1:51 AM  
To: ytl83@e-ctk.com  
Cc: CHARVEY@IEEE.ORG; lucy.tsai@ccsemc.com  
Subject: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259-1263, Notice#2

Dear Young-taek Lee,

You are listed as the Technical Contact for the above referenced TCB applications. The following items need to be resolved before the review can be continued:

1. Please confirm which of the transmitter is capable of transmitting simultaneously (DTS WLAN BT, RFID and GPRS transmitters). The RF Exposure for simultaneous transmission must be addressed (for either Portable SAR or Mobile MPE as needed). Please also confirm that users will not be able to use this device as a WiFi to Mobile-Network Hot-Spot device since it has both WiFi and GPRS capabilities.
2. The test setup photos show this device setup in a configuration in a charging cradle in a single position. Please provide information about how the transmitters were tested in the 3 orthogonal axis (x-y-z) to ensure the maximum emissions were measured. Please show/describe how the device was oriented in the 3 axis.
3. Are all transmitters capable of operating while the device is in the cradle?
4. (Previously asked but copied here for completeness) The form-factor of this device seems to allow it to be used very close to the body while transmitting. Have you contacted the FCC regarding the classification of this device as a Mobile RF Exposure device? It seems that it may be classified as a Portable RF Exposure device requiring SAR compliance, in accordance with FCC KDB # 447498 section 4)c).
5. If this remains as a Mobile device, please ensure that the MPE limit for the 835 MHz band is corrected, and that the calculation for the minimum safe distance is removed (FCC does not recognize any distance less than 20 cm for Mobile devices).
6. The RF reports for the Telit module (FCC ID: RI7GC864Q2) and the Woongjin Industrial PDA do not document the ERP and EIRP measurements using the substitution method found in EIA/TIA 603-C, but rather calculates the values. The original module was approved as a Mobile RF Exposure condition device without an integral antenna and granted with Conducted power

listing. This new PDA device incorporates an internal antenna. Please perform the ERP and EIRP measurements using the substitution method for this final device that uses the Telit module and these ERP/EIRP measurements will be listed on the Grant.

RFID application:

7. The RFID report states that the measurements were performed at a distance of 3 meters. FCC Rule 15.31(f)(2) states that at frequencies below 30MHz, the distance correction should be 40dB/decade, unless measurements showing a different factor are performed. Please correct the report accordingly.

8. The Radiated Emission Limits tables in section 2.1 and 2.2 seem not to show the limits but rather the measured values. Please correct these tables.

9. Please provide a more detailed measurement Procedure, especially the testing below 30 MHz and how the loop antenna is oriented and moved about its axis.

10. The Frequency Stability section lists data but not Measurement Procedure, required limit or margin. Please update this section of the report.

11. The field-strength measurements throughout the report should all indicate the measurement distance (i.e. dBuV/m @3m, not just dBuV/m). Please update all data tables in the report to state the distance at which the field-strength measurement or limit is specified.

12. The AC Conducted emissions measurement does not have a signal at 13.56 MHz. Please confirm that the RFID transmitter was operating.

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. Revised documentation should not be emailed, but instead should be submitted through "Add Attachment" function at the UL-CCS website. Please have your Assessment Number and FCC ID/IC Certification number handy. You may use the following link: <https://cert.ccsemc.com/filing/>

Best regards,

Chris Harvey  
Charvey-tcb@ccsemc.com

No virus found in this message.

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Version: 10.0.1170 / Virus Database: 426/3333 – Release Date: 12/23/10