

Re: FCC ID: XCNPXU1900

Applicant: Ubee Interactive Corp.  
Correspondence Number: 79532  
731 Confirmation Number: TC954165  
Date of Original E-Mail: 01/06/2010

Subject: FCC Equipment Authorization System

Since your test report is identical to your EUT model 25200, the following concerns regarding the model 25200 applies to model 1900 as previously given to you during the PBA application:

2. Please provide detail justification for requested test reduction? Test reduction must be requested, justified and approved by FCC through separate kdb, otherwise all tests for each position/modulation/channel bandwidth must be provided in test report.

Reply : Please note that both antennas are fully tested in all configurations approved in submitted lab PBA.

2. Can the device model PXU1900) transmit in 1900 RF range too? Please clarify.

Reply : No, it can only operate at 2.5GHz band.

3. The reported PAR and time vector plots for 10MHz bandwidth of the SAR report are missing, only 5MHz BW are provided. Please provide the missing plots for 10MHz B/W

Reply : Please check PAR measurement record.pdf

5. How many transmit antennas are used in MIMO operation. Please clarify.

Reply : The EUT supports 1 TX / 2RX with tx diversity function. Only one antenna can transmit at a time.

7. In your SAR report, the area scans measurement determination grid separation of 15mm which is not consistent with dongle procedures. Please correct.

Reply : 15mm was used only for area scan for probing the potential area and the setting is within the manufacture suggested range. The zoom scan is with 5mm and 2.5mm grid size as suggested in the USB dongle guidance.

8. Zoom scan in page 52-57, 71-76 show double hot spots. Please explain?

Reply : The double hot spots may caused by signal pick up or re-radiation from the metal shielding box right next to the radiating antenna. Only one antenna can transmit at a time due to the limitation of hardware design

9. Clarify antenna location(s).



10. Explain how DUT is positioned.

Reply : The EUT position follow dongle guidance with no deviation. Please see setup photo for detail

11. Measured SAR results in tables of your report need SAR drift from SAR measurement. Are the

data on power drift column representing power drift or SAR drift? Please clarify. Measured 1g SAR data need rescaling. Is correct power used in SAR scaling, actual measured power for each test channel must be used.

Reply : Power drift. This value is measured by DASY system.

12. The SAR report shows either antenna transmitting during SAR measurement. Please explain the discrepancy.

Reply :The EUT supports 1 tx /2 rx with TX diversity function. Therefore, SAR of both antennas were measured. However, only one antenna can be active at a time.

13. Your report shows that the ESG power is 32dB lower than MS power and not 80dB as report. Please explain.

Reply: The distance between ESG and EUT is 4 meter. Consider that with free space loss, power of ESG will be attenuated at least 15~20dB and also, the radiation lobe of ESG antenna was adjust to illuminate off the phantom on purpose during the test to further reduce the signal pickup by SAR measurement system. Radiated power of ESG will became at least 40dB lower than EUT. At this level it will not affect the SAR measurement result.

14. Summary of the SAR test result table shows that WiMAX procedures were not followed in determining scaling factor with respect to actual channel power. Please correct.

Reply : The max SAR is 1.1 W/kg and has reasonable margin to the limit. We will pay attention to this in all future applications. Thanks.

15. Please provide more detail explanation of the tables in "worst case SAR determination" page. What do they support, what is the DUT/dongle test position? What are the "two types of scans" used as reported. What does the data in scan resolution table represent? Area or zoom. Please clarify.

Reply : Test position is Horizontal-Front. Tested 4 UL modulation at this position to find the worst modulation type. Since this position is the worst position for all test position. Different scan resolution (5mm and 2.5mm) is used to find if there is any impact on the SAR value. The scan type is standard 1g SAR which consist both Area & Zoom scan.

16. Was test reduction requested for, in lab KDB/PBA?

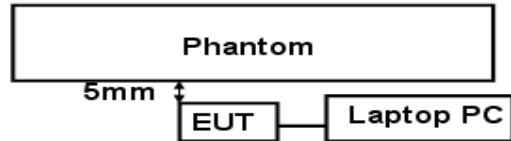
Reply : specific test configuration is approved in lab PBA and we fully tested all approved configurations.

17. Please clarify how the data in Test mode descriptions for both AMC are determined. How was antenna 1 and 2 chosen? Was test reduction requested? Test reduction needs separate KDB approval as described in WiMAX procedures.

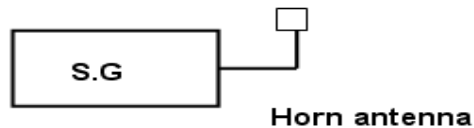
Reply :AMC zone type is not supported for this EUT. Due to Tx diversity, Both antenna 1 and antenna 2 are tested individually as explain above.

18. Clarify on how the test set up and signal was configured. Dynamic does not work for testing.

Reply: The test set-up is shown in the below picture. The USB Adapter (EUT) is plugged into the notebook computer and configured exactly as it would be in the field on a normal network.



#### Linking up through air interface



Output power of S.G is - 20dBm

Horn antenna has 10.6dBi gain at 2.5GHz

Distance between horn antenna and EUT is 4m

The Beceem test tool is used on the laptop.

Beceem test tool is used to instruct the USB dongle to go to full power. Under normal operating conditions the BS would be responsible for controlling the MS Tx power. When working with a BS, the MS cannot Tx at a power greater than the max power requested by Beceem test tool.

Note : Beceem test tool is a specific tool provided by client. This tool can control EUT to transmit at specific channel, power , channel bandwidth.

On the network side, there is a vector signal generator as below:

Agilent E4438C ESG with below options:

N7613A: Signal Studio for 802.16-2004 WiMAX

N7615B: Signal studio for 802.16 WiMAX

Software is loaded into the E4438C ESG that produces an output signal that looks like a 29:18 WiMAX frame, the EUT detects the “network” and begins to transmit based on the commands from the ESG signal and the measurements are then taken on the EUT.

19. Were UL and DL configured to operate at 29:18? What are the control symbol configurations?

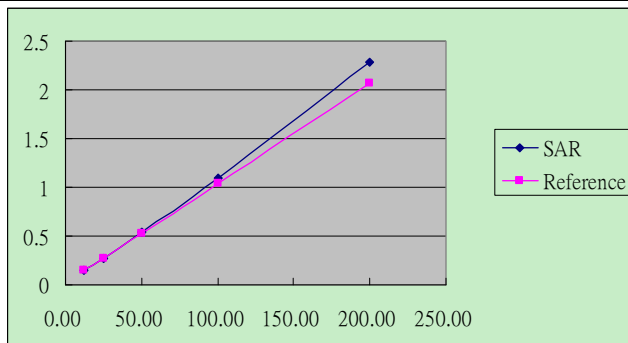
. Reply : Yes , the 29: 18 ration was configured for the test, please refer to P22-23 of SAR test report for detail signal configuration

20. Please provide SAR/Power test linearity plot for both 5MHz and 10 MHz in page 16.

Reply : Please check following table

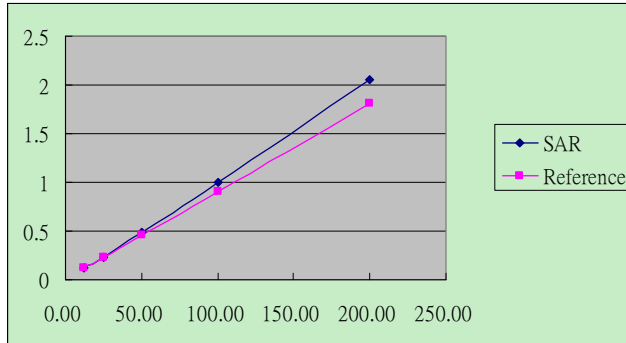
#### PUSC 5M QPSK1/2

WiMAX Peak RMS output power (mW)	12.5	25	50	100	200
Measured SAR ( mW /g )	0.144	0.272	0.537	1.1	2.29
Value from 12.5-25mw reference line	0.144	0.272	0.528	1.04	2.064
Difference	0	0	0.009	0.06	0.226
Percentage of Difference %	0.00	0.00	1.70	5.77	10.95



PUSC 5M QPSK1/2

WiMAX Peak RMS output power (mW)	12.5	25	50	100	200
Measured SAR ( mW /g )	0.121	0.234	0.491	0.999	2.05
Value from 12.5-25mw reference line	0.121	0.234	0.46	0.912	1.816
Difference	0	0	0.031	0.087	0.234
Percentage of Difference %	0.00	0.00	6.74	9.54	12.89



21. Please explain how the reference was determined in both linearity plots.

Reply :Based on slope of Measured SAR value of 12.5 and 25 mW.

22. The SAR value in SAR/power linearity table are not 1g SAR. Please explain/correct.

Reply : as suggested we have redo the linearity check with standard single point SAR at worst SAR configuration (5mm from the phantom)

23. How was SAR estimated to 5.42%?(show calculation). SAR appears to be underestimated. Please explain.

Reply : We have redo the test with correct procedure documented in WiMAX guidance. and the result is about 10.95-12.89% overestimated depends on the BW

24. Please explain why EUT has to touch the phantom in determining SAR/power linearity in page; this is inconsistent with WiMAX procedures. What are the test results for AMC? Plots need to show 29:18 conditions.

Reply : We have redo the test with correct procedure documented in WiMAX guidance. and the result is about 10.95-12.89% overestimated depends on the BW. AMC zone type is not supported for this EUT.

27. The power plots for all modulation are not needed. You only need representative plots for each channel bandwidth at mid-band channel to show test set up.

.Reply : Please check PAR measurement record.pdf

28. From your submitted summary measured result of PAR/ power measurement, please explain the following:

29. Are control symbols active?

Reply : No, the 3 control symbols was not active during the test.

30. Is 64QAM for DL only?

Reply :Yes , 64QAM is for DL only. UL doesn't support 64QAM.

31. Where are the data for 10MHz. Need general description for test set ups for these data's and plots?

Reply : Please check p29~36 of test report

There are 5 test positions and relative name of test report as below :

Horizontal-Up (Front side)

Horizontal-Down(Bottom side)

Vertical-Front (Right edge)

Vertical-Back (Left edge )

Tail (Tip)

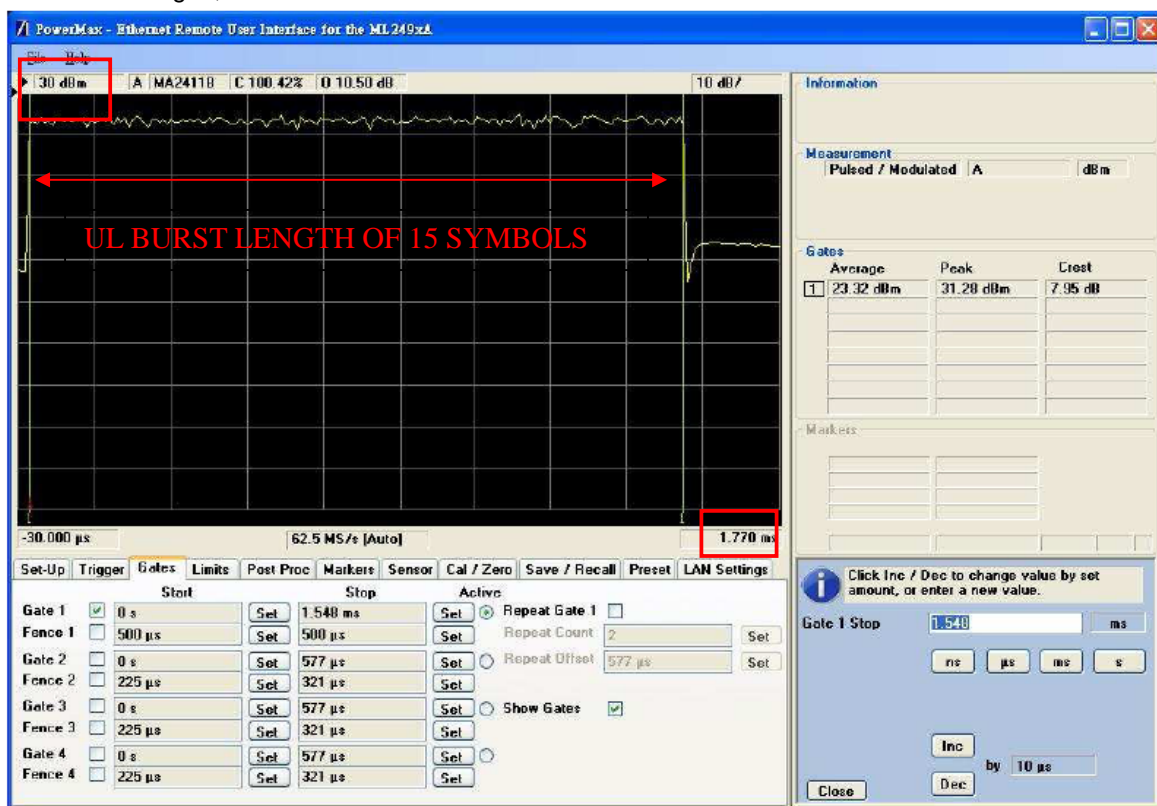
32. Are the reported conducted power for burst or frame? Which antenna is in use? Need to match this in SAR report.

Reply : A Agilent spectrum analyzer was used for measuring conducted power. The power indicated is rms average over the burst-on period by means of triggering and gating function. The EUT supports TX diversity function , conducted power of both antenna are measured. The SAR test does indicate which antenna was active during the test

33. What scales are used in the power plots for x/y axis? Plots do not show 7-8dB Par as claimed. Please explain.

Reply : The displayed waveform is average power profile, the instrument can display one waveform at a time only. However, related average power , peak power and crest factor are measured simultaneously and show on the plot.

X axis: Time length , Y axis :Power level



34. From page 5 table 4 of your power report, it appears both antennas co-transmit, is simultaneous transmission supported. Need explanation to support test set-up.

Reply : The EUT supports 1 TX / 2RX with tx diversity function. Only one antenna can transmit at a time.

35. Please provide representative plots to support PAR, DL: DU ratio, duty factor, control symbol for each channel bandwidth and modulation at mid-channel.

.Reply : Please check PAR measurement record.pdf

36. Include both peak and average power data, identify setup conditions, control symbol status in table of PUSC/AMC.

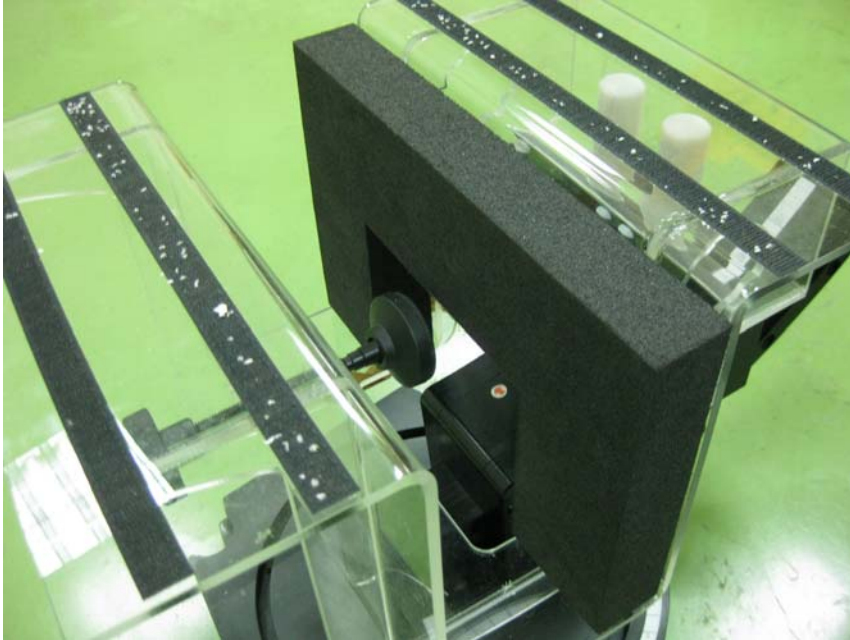
.Reply : Please check PAR measurement record.pdf  
AMC zone type is not supported for this EUT.

38. You stated that the swivel orientation is 180 degrees. Is this the only angle the dongle can transmit from users? Capability. Any other orientation capability?

Reply : The EUT can swivel from 0 to 180 degrees, and we tested the 180 degrees as approved in the lab PBA.

39. There appears to be connection button stow on bottom side of the dongle. What is that? Does it have any SAR impact? Please explain.

The SAR supporting device is manufactured by SPEAG for SAR test usage. Per SPEAG spec it will not affect SAR test



<b>s p e a g</b>
<b>MEASUREMENT</b>
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DASY5 Systems
DASY5 Components
DASY5 HAC Extension
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TWIN SAM V4.0
ELI4
Flat Phantom V4.4
Modular Flat Phantom V4.9
Modular Flat Phantom V5.1
Whole-body Mannequin V2.0
SAM V6.0 Freedom Head

## Phantoms solutions for any standard

### Laptop Extensions Kit for Mounting Device

<b>Construction</b>	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.) It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI4 and SAM v6.0 Phantoms.
<b>Material</b>	POM Acrylic glass Foam

