

RADIO FREQUENCY RADIATION EXPOSURE REPORT

Mobiles /Fixed Base Station Maximum Permissible Exposure (MPE)

OF

Product Name: WLAN 11n PCI
Brand Name: CC&C
Model Name: WL-6400-V2
Model Different: N/A
FCC ID: WKLWL6400V2
Report No.: ER/2009/10006
Issue Date: Jan. 10, 2009
Prepared for: CC&C Technologies, Inc.
No.9 Building,3 rd Main Street, Kunshan
Export Processing Zone, Jiangsu, P.R. of China
Prepared by: SGS Taiwan Ltd.
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VERIFICATION OF COMPLIANCE

Applicant: CC&C Technologies, Inc.
No.9 Building,3 rd Main Street, Kunshan Export Processing Zone,
Jiangsu, P.R. of China

Product Name: WLAN 11n PCI

Brand Name: CC&C

FCC ID: WKLWL6400V2

Model No.: WL-6400-V2

Model Difference: N/A

File Number: ER/2009/10006

Date of Test: Jan. 05, 2009 ~ Jan. 10, 2009

Date of EUT Received: Jan. 05, 2009

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd., Electronics & Communication Laboratory. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in FCC OET Bulletin 65 Supplement C and 47 CFR §2.1091.

The test results of this report relate only to the tested sample identified in this report.

Test By:**Date:**

Jan. 10, 2009

*Jason Wu / Asst. Supervisor***Prepared By:****Date:**

Jan. 10, 2009

*Elisa Chen / Asst. Supervisor***Approved By:****Date:**

Jan. 10, 2009

Vincent Su / Manager

Version

Version No.	Date	Description
00	Jan. 10, 2009	Initial creation of document

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1. GENERAL INFORMATION

General:

Product Name:	WLAN 11n PCI
Brand Name:	CC&C
Model Number:	WL-6400-V2
Model Difference:	N/A
Power Supply:	3.3Vdc from PCI of host PC
Hardware Version:	N/A
Software Version:	N/A

802.11 b/g/n WLAN:

Frequency Range & Channel number:	802.11 b/g/n_20MHz: 2412 – 2462 MHz, 11 channels 802.11 n_40MHz: 2422 – 2452 MHz, 7 channels
Rated Power:	802.11 b: 17.68 dBm (peak) 802.11 g: 14.90 dBm (peak) 802.11 n_20MHz: 12.79 dBm (peak) 802.11 n_40MHz: 12.97 dBm (peak)
Modulation type:	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Transmission Rate:	802.11 b: 1/2/5.5/11 Mbps; 802.11 g: 6/9/12/18/24/36/48/54 Mbps 802.11 n_20MHz: 6.5 - 65Mbps 802.11 n_40MHz: 13.5 - 135Mbps
Antenna Designation:	2 reversed SMA type, 1TX and 2RX, Dipole Antenna, 2.0 dBi
Type of Emission:	802.11 b: 14M7G1D 802.11 g: 16M4D1D 802.11 n_20MHz: 17M6D1D 802.11 n_40MHz: 35M9D1D

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1.1 Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

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1.2 Maximum Permissible Exposure (MPE) Evaluation

1.2.1 Peak Power Measurement Result:

Test Results (802.11b) 1M:

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	17.04	0.00	17.04	30	PASS
MID	2437.00	17.68	0.00	17.68	30	PASS
HIGH	2462.00	17.48	0.00	17.48	30	PASS

offset: 0.3dB

Test Results (802.11g) 6M:

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	14.81	0.00	14.81	30	PASS
MID	2437.00	14.73	0.00	14.73	30	PASS
HIGH	2462.00	14.90	0.00	14.90	30	PASS

offset: 0.3dB

Test Results (802.11n 20M) 6.5M:

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2412.00	12.79	0.00	12.79	30	PASS
MID	2437.00	12.75	0.00	12.75	30	PASS
HIGH	2462.00	12.68	0.00	12.68	30	PASS

offset: 0.3dB

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Test Results (802.11n 40M) 13.5M:

CH	Frequency (MHz)	Reading Power (dBm)	Cable Loss (dB)	Output Power (dBm)	Limit (dBm)	Result
LOW	2422.00	12.97	0.00	12.97	30	PASS
MID	2437.00	12.86	0.00	12.86	30	PASS
HIGH	2452.00	12.80	0.00	12.80	30	PASS

offset: 0.3dB

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1.2.2.MPE Prediction (802.11b/g/n)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

The Worst Case at Middle channel of 802.11 b mode:

Maximum peak output power at antenna input terminal:	17.68	(dBm)
Maximum peak output power at antenna input terminal:	58.61381645	(mW)
Duty cycle:	100	(%)
Maximum Pav :	58.61381645	(mW)
Antenna gain (typical):	2	(dBi)
Maximum antenna gain:	1.584893192	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2437	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm ²)
Power density at predication frequency 2437MHz at 20 (cm) distance	0.0184906	(mW/cm ²)
The predicted power density level at 20 cm is	0.18490573	(W/m ²)

Measurement Result

The predicted power density level at 20 cm is 0.01849 mW/cm². This is below the uncontrolled exposure limit of 1 mW/cm² at 2437MHz.

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APPENDIX 1

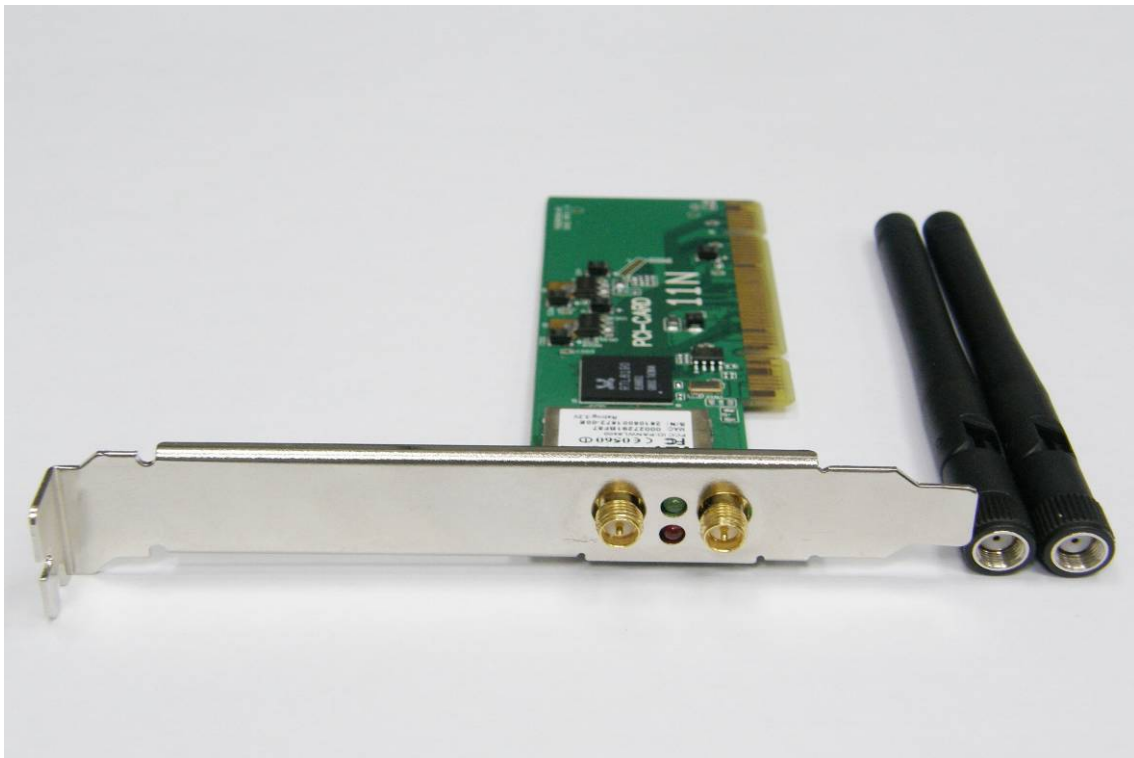
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All of EUT



Antenna



~ End of Report ~

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