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RF EXPOSURE REPORT

REPORT NO.: SA120314E09A

MODEL NO.: SMCD3GN4xxxxx (x =0-9, A-Z, a-z, “-“, “.”, or blank for marketing purpose only)

FCC ID: JI5-D3GN4

RECEIVED: Mar. 27, 2012

TESTED: Apr. 12, 2012

ISSUED: June 12, 2012

APPLICANT: SMC Networks Inc.

ADDRESS: 20 Mason, Irvine, CA 92618, USA

ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA120314E09A	Original release	June 12, 2012



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1. CERTIFICATION

PRODUCT: Wireless Gateway

BRAND NAME: SMC

MODEL NO.: SMCD3GN4xxxx (x =0-9, A-Z, a-z, “-”, “.”, or blank for marketing purpose only)

TEST SAMPLE: ENGINEERING SAMPLE

APPLICANT: SMC Networks Inc.

TESTED: Apr. 12, 2012

STANDARDS: FCC Part 2 (Section 2.1091)

FCC OET Bulletin 65, Supplement C (01-01)

IEEE C95.1

The above equipment (Model: SMCD3GN4) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Phoenix Huang, DATE: June 12, 2012
(Phoenix Huang, Specialist)

APPROVED BY : May Chen, DATE: June 12, 2012
(May Chen, Deputy Manager)



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2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

r = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.



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5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

For 2.4GHz					
Transmitter Circuit	Brand	Model	Peak Gain (dBi)	Antenna Type	Connector Type
Chain (0)	Wanshih	SI6WFI0094	2.39	PIFA	U.FL
Chain (1)	Wanshih	SI6WFI0094	2.46	PIFA	U.FL
For 5GHz					
Transmitter Circuit	Brand	Model	Peak Gain (dBi)	Antenna Type	Connector Type
Chain (0)	Wanshih	SI6WFI0094	6.41	PIFA	U.FL
Chain (1)	Wanshih	SI6WFI0094	4.22	PIFA	U.FL



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6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For 15.247(2.4GHz):

802.11b:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	34.674	2.46	20	0.012	1.00

802.11g:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	933.254	2.46	20	0.327	1.00

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	957.514	2.46	20	0.336	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2422-2452	991.491	2.46	20	0.348	1.00



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For 15.247(5GHz):

802.11a:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	851.138	6.41	20	0.741	1.00

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	863.096	6.41	20	0.751	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5755 ~ 5795	833.960	6.41	20	0.726	1.00



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For 15.407(5GHz):

802.11a:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	31.623	6.41	20	0.028	1.00

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	32.067	6.41	20	0.028	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5190 ~ 5230	43.767	6.41	20	0.038	1.00

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