RF EXPOSURE REPORT

REPORT NO.: SA130514C29

MODEL NO.: XR520H

FCC ID: SK6-XR520H

RECEIVED: May 10, 2013

TESTED: Jun. 04 ~ Sep. 10, 2013

ISSUED: Sep. 24, 2013

APPLICANT: Xirrus, INC.

ADDRESS: 2101 Corporate Center Drive Thousand Oaks, California 91320

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

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130514C29	Original release	Sep. 24, 2013

1. CERTIFICATION

PRODUCT: Hardened Wireless Access Point

MODEL NO.: XR520H

BRAND: Xirrus

APPLICANT: Xirrus, INC.

TESTED: Jun. 04 ~ Sep. 10, 2013

TEST SAMPLE: ENGINEERING SAMPLE

STANDARDS: **FCC Part 2 (Section 2.1091)**

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

IEEE C95.1

The above equipment (model: XR520H) 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 : _____ **, DATE :** _Sep. 24, 2013_

Ivy Lin / Specialist

APPROVED BY : _____ **, DATE :** _Sep. 24, 2013_

Ken Liu / Senior Manager

2. RF EXPOSURE

2.1 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

2.2 MPE CALCULATION FORMULA

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

where

Pd = power density in mW/cm^2

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

2.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 26cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4   CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

Antenna model: EHS1GA202A (Top and bottom modules)

Top module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	26.01	9.8	26	0.449	1
5180-5240	14.04	8.8	26	0.023	1
5745-5825	27.19	8.8	26	0.468	1

Bottom module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	26.19	9.8	26	0.468	1
5180-5240	14.12	8.8	26	0.023	1
5745-5825	27.19	8.8	26	0.468	1

CONCULSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G (Top module) + WLAN 5.0G (bottom module) = 0.449 + 0.468 = 0.917

2. WLAN 2.4G (bottom module) + WLAN 5.0G (Top module) = 0.468 + 0.468 = 0.936

Therefore, the maximum calculation of this situation is 0.936, which is less than the "1" limit.

Antenna model: EHS1GA047A (Top and bottom modules)

Top module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	29.51	3.8	26	0.252	1
5180-5240	16.93	2.8	26	0.011	1
5745-5825	28.84	2.8	26	0.172	1

Bottom module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2412-2462	29.38	3.8	26	0.245	1
5180-5240	16.80	2.8	26	0.11	1
5745-5825	28.54	2.8	26	0.160	1

CONCULSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G (Top module) + WLAN 5.0G (bottom module) = 0.252 + 0.160 = 0.412

2. WLAN 2.4G (bottom module) + WLAN 5.0G (Top module) = 0.245 + 0.172 = 0.417

Therefore, the maximum calculation of this situation is 0.417, which is less than the "1" limit.

Antenna model: MPMI2458-4-RPC (Top and bottom modules)

Top module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm²)	LIMIT (mW/cm²)
2412-2462	28.97	1.7	26	0.137	1
5180-5240	16.93	1.7	26	0.009	1
5745-5825	28.84	1.7	26	0.133	1

Bottom module

FREQUENCY BAND (MHz)	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm²)	LIMIT (mW/cm²)
2412-2462	29.98	1.7	26	0.173	1
5180-5240	16.80	1.7	26	0.008	1
5745-5825	28.54	1.7	26	0.124	1

CONCULSION:

Both of the WLAN 2.4G & 5.0G can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN 2.4G (Top module) + WLAN 5.0G (bottom module) = 0.137 + 0.124 = 0.261

2. WLAN 2.4G (bottom module) + WLAN 5.0G (Top module) = 0.173 + 0.133 = 0.306

Therefore, the maximum calculation of this situation is 0.306, which is less than the "1" limit.

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