

RF EXPOSURE REPORT

REPORT NO.: SA110219C05D

MODEL NO.: MR24

FCC ID: UDX-60014010

RECEIVED: Feb. 02, 2013

TESTED: Feb. 08 ~ Apr. 13, 2013

ISSUED: Apr. 15, 2013

APPLICANT: Cisco Systems

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA110219C05D	Original release	Apr. 15, 2013

1. CERTIFICATION

PRODUCT: Wireless 802.11 abgn AP

MODEL: MR24

BRAND: Meraki

APPLICANT: Cisco Systems

TESTED: Feb. 08 ~ Apr. 13, 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: MR24) 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.

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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

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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 25cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MODULATION MODE	MAX POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	802.11b	25.78	9.77	25	0.457	1
	802.11g	25.97	9.77	25	0.477	1
	802.11n (20MHz)	29.07	5	25	0.325	1
	802.11n (40MHz)	26.87	5	25	0.196	1
5180-5240	802.11a	11.61	10.77	25	0.022	1
	802.11n (20MHz)	16.76	6	25	0.024	1
	802.11n (40MHz)	16.54	6	25	0.023	1
5745-5825	802.11a	24.66	10.77	25	0.445	1
	802.11n (20MHz)	25.55	6	25	0.182	1
	802.11n (40MHz)	26.06	6	25	0.205	1

2.4GHz:

802.11b/g: Directional gain = 5dBi + 10log(3/1) = 9.77dBi

5.0GHz:

802.11a: Directional gain = 6dBi + 10log(3/1)=10.77dBi

CONCLUSION:

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

$CPD1 / LPD1 + CPD2 / LPD2 + \dots \text{etc.} < 1$

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4G + WLAN 5.0G = 0.477 + 0.445 = 0.922

Therefore, the maximum calculation of this situation is 0.922, which is less than the “1” limit.