

## RF Exposure Report

**Report No.:** SA170411C19

**FCC ID:** SLYWR1X22

**Test Model:** WR-1

**Series Model:** WR-1-1

**Received Date:** Apr. 11, 2017

**Test Date:** Jun. 12 ~ Aug. 10, 2017

**Issued Date:** Aug. 11, 2017

**Applicant:** Control4 Corporation

**Address:** 11734 S. Election Road, Draper, UT 84020, USA

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

**Lab Address:** No. 47-2, 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 Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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### Release Control Record

Issue No.	Description	Date Issued
SA170411C19	Original release.	Aug. 11, 2017

## 1 Certificate of Conformity

**Product:** 802.11ac Dual Band Wireless Router

**Brand:** pakedge

**Test Model:** WR-1

**Series Model:** WR-1-1

**Sample Status:** Engineering sample

**Applicant:** Control4 Corporation

**Test Date:** Jun. 12 ~ Aug. 10, 2017

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

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1

The above equipment 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 :** Suntee Liu, **Date:** Aug. 11, 2017

Suntee Liu / Specialist

**Approved by :** Ken Liu, **Date:** Aug. 11, 2017

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 <sup>2</sup> )	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<sup>2</sup>

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 21cm away from the body of the user. So, this device is classified as Mobile Device.

## 3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
CDD Mode					
WLAN 2412~2462	25.75	7.60	21	<b>0.390</b>	1
WLAN 5180~5240	25.40	8.29	21	0.422	1
WLAN 5745~5825	26.51	8.29	21	<b>0.545</b>	1
Beamforming Mode					
WLAN 2412~2462	21.97	7.60	21	0.163	1
WLAN 5180~5240	22.39	8.29	21	0.211	1
WLAN 5745~5825	23.50	8.29	21	0.272	1

Note:

2.4GHz Max. directional gain = 4.59dBi + 10log(2) = 7.60dBi

5GHz Max. directional gain = 5.28dBi + 10log(2) = 8.29dBi

Conclusion:

The formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

Max.: WLAN 2.4GHz + WLAN 5GHz = 0.390 + 0.545 = 0.935 < 1

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