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

Suntee Liu / Specialist

Approved by : _____ , **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^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 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^2)	Limit (mW/cm^2)
CDD Mode					
WLAN 2412~2462	25.75	7.60	21	**0.390**	1
WLAN 5180~5240	25.40	8.29	21	0.422	1
WLAN 5745~5825	26.51	8.29	21	**0.545**	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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