

## RF Exposure Report

**Report No.:** SA171006C01

**FCC ID:** CFS8DLRCHS5200W

**Test Model:** RCHS5200W

**Received Date:** Oct. 06, 2017

**Test Date:** Oct. 20 ~ Nov. 02, 2017

**Issued Date:** Nov. 09, 2017

**Applicant:** Honeywell International Inc.

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**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
SA171006C01	Original release.	Nov. 09, 2017

## 1 Certificate of Conformity

**Product:** Smart Home Security Base Station

**Brand:** Honeywell

**Test Model:** RCHS5200W

**Sample Status:** Engineering sample

**Applicant:** Honeywell International Inc.

**Test Date:** Oct. 20 ~ Nov. 02, 2017

**Standards:** FCC Part 2 (Section 2.1091)  
KDB 447498 D03 (January 17, 2014)  
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:** Nov. 09, 2017  
Pettie Chen / Senior Specialist

**Approved by :**  , **Date:** Nov. 09, 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

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

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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 20cm 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> )
<b>WLAN</b>					
2412-2462	19.64	2.1	20	0.030	1
5180-5240	20.08	2.4	20	0.035	1
5260-5320	20.34	2.4	20	0.037	1
5500-5700	20.71	2.4	20	0.041	1
5745-5825	20.46	2.4	20	0.038	1
<b>BT LE</b>					
2402-2480	3.53	1.3	20	0.001	1
<b>Wise Link</b>					
904.5~926.1	19.99	1.7	20	0.029	1

Mode	Electric field (dBuV/m) @3m	Electric field (dBuV/m) @0.2m	Max Power (dBm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Z wave	92.3	115.82	-2.93	0.0001	0.601

$$902\text{MHz} = 92.3 + 20\log(3/0.2) = 115.82\text{dBuV/m}$$

Frequency Band	Max. Power (dBm)		Total Power (dBm)	Power Limit (dBm)
	WLAN	BT LE		
2.4GHz	19.64	3.53	19.75	30

#### CONCLUSION:

The WLAN & Wise Link can transmit simultaneously, the formula of calculated the MPE is:

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

CPD = Calculation power density

LPD = Limit of power density

$$\text{WLAN} + \text{Wise Link} = 0.041 + 0.029 = 0.07$$

\* WLAN & BT cannot transmit simultaneously.

Therefore, the maximum calculation of this situation is 0.07, which is less than the "1" limit.

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