KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091

RF EXPOSURE REPORT

For

Product name:	Model name:	Brand name:
Extender+Chime	RP200Nxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose)	Sercomm
Alarm.com Smart Chime	ADC-W115C	ALARM.COM

Issued to

Sercomm Corporation
8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City, Taiwan. (R.O.C.)
Issue Date: August 26, 2020

Note: This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by TAF, A2LA, NIST or any government agencies. The test results in the report only apply to the tested sample.

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	August 20, 2020	Initial Issue	ALL	Allison Chen
01	August 26, 2020	See the following note Rev.(01)	P.6, P.9	Allison Chen

Rev.(01)

1. Revised antenna specification for b mode numeric gain.

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1. TEST RESULT CERTIFICATION

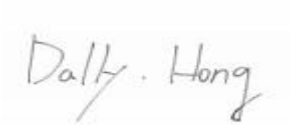
We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:



Dally Hong
Sr. Engineer
Compliance Certification Services Inc.

2. LIMIT

According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

3. EUT SPECIFICATION

EUT	1. Extender+Chime 2. Alarm.com Smart Chime
Model	1. RP200Nxxxxxxxx (the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose) 2. ADC-W115C
Model Discrepancy	All the above models are identical except for the designation of model numbers. The suffix of the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-" , for marketing purpose) on model number is just for marketing purpose only.
Frequency band (Operating)	☐ Bluetooth: 2402MHz-2480MHz ☒ 802.11b/g/n HT20: 2412MHz ~ 2462 MHz ☒ 802.11n HT40: 2422MHz ~ 2452MHz ☐ 802.11a/n HT20: 5180MHz ~ 5240MHz / 5745MHz ~ 5825MHz ☐ 802.11n HT40: 5190MHz ~ 5230MHz / 5755MHz ~ 5795MHz ☐ 802.11ac VHT80: 5210MHz / 5775MHz ☐ Others
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation) ☐ Others
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna Specification	Dipole Antenna 1. IEEE 802.11 b mode: Chain 1: 2.3 dBi Chain 2: 2.7 dBi b mode Gain : 2.70 dBi (Numeric gain: 1.86) Worst 2. IEEE 802.11 g mode & HT20/HT40 mode: Chain 1: 2.3 dBi Chain 2: 2.7 dBi Power Directional gain: 2.5 dBi MIMO Directional Gain : 2.50 dBi (Numeric gain: 1.78) Worst

<table>
<tr><td>Maximum Measurement Average Power</td><td>
<table>
<tr><td>2.4GHz</td><td></td><td></td></tr>
<tr><td>IEEE 802.11b Mode:</td><td>16.20 dBm</td><td>(41.687 mW)</td></tr>
<tr><td>IEEE 802.11g Mode:</td><td>20.84 dBm</td><td>(121.339 mW)</td></tr>
<tr><td>IEEE 802.11n HT 20 Mode:</td><td>20.46 dBm</td><td>(111.173 mW)</td></tr>
<tr><td>IEEE 802.11n HT 40 Mode:</td><td>19.56 dBm</td><td>(90.365 mW)</td></tr>
</table>
</td></tr>
<tr><td>Maximum tune up power</td><td>
<table>
<tr><td>2.4GHz</td><td></td><td></td></tr>
<tr><td>IEEE 802.11b Mode:</td><td>17.80 dBm</td><td>(60.256 mW)</td></tr>
<tr><td>IEEE 802.11g Mode:</td><td>22.50 dBm</td><td>(177.828 mW)</td></tr>
<tr><td>IEEE 802.11n HT 20 Mode:</td><td>22.40 dBm</td><td>(173.780 mW)</td></tr>
<tr><td>IEEE 802.11n HT 40 Mode:</td><td>21.50 dBm</td><td>(141.254 mW)</td></tr>
</table>
</td></tr>
<tr><td>Evaluation applied</td><td>☒ MPE Evaluation*
☐ SAR Evaluation
☐ N/A</td></tr>
</table>

4. TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where *P = Power in mW*
G = Numeric antenna gain
S = Power density in mW / cm²

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
11	2462	60.256	1.86	20	0.0223	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	177.828	1.78	20	0.0630	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	173.78	1.78	20	0.0616	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	141.254	1.78	20	0.0500	1

--End of Report--