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Report No.: T191104D01-MF

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Rev.: 00

**IEEE C95.1 2005  
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**

**Extender + Chime**

**Model: SCB1R0-29xxxxx(the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-", for the marketing purpose)**

**Trade Name: ADT**

*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 24891, Taiwan. (R.O.C.)  
Issue Date: December 10, 2019**

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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### Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	December 6, 2019	Initial Issue	ALL	Allison Chen
01	December 10, 2019	See the follow note Rev.(01)	P.7, P.9	Allison Chen

*Rev.(01)*

*1. Revised maximum tune up power.*



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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
IEEE C95.1 2005 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.	

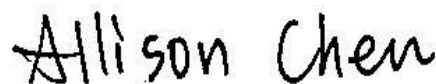
Approved by:




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Kevin Tsai  
Deputy Manager  
Compliance Certification Services Inc.

Reporter:




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Allison Chen  
Report coordinator  
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

<b>EUT</b>	Extender + Chime
<b>Model</b>	SCB1R0-29xxxxx(the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z, "blank" or "-", for the marketing purpose)
<b>Model Discrepancy</b>	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 the marketing purpose) on model number is just for marketing purpose only.
<b>Frequency band (Operating)</b>	<input checked="" type="checkbox"/> Bluetooth: 2402MHz-2480MHz <input checked="" type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462 MHz <input checked="" type="checkbox"/> 802.11n HT40: 2422MHz ~ 2452MHz <input type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5260MHz ~ 5320MHz / 5500MHz ~ 5700MHz / 5745MHz ~ 5825MHz <input type="checkbox"/> 802.11n HT40: 5190MHz ~ 5230MHz / 5270MHz ~ 5310MHz / 5510MHz ~ 5670MHz / 5755MHz ~ 5795MHz <input type="checkbox"/> 802.11ac VHT80: 5210MHz / 5290MHz / 5530MHz / 5775MHz <input type="checkbox"/> Others
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna Specification</b>	<b>PIFA Antenna (For Bluetooth)</b> Antenna Gain : 0.40 dBi (Numeric gain 1.10)  <b>Dipole Antenna (For 2.4GHz)</b> Chain 0 Antenna Gain : 2.30 dBi (Numeric gain 1.70) Chain 1 Antenna Gain : 2.70 dBi (Numeric gain 1.86) <b>MIMO Directional Gain</b> Antenna Gain : 2.50 dBi (Numeric gain 1.78)

<b>Maximum average output power</b>	Bluetooth:	-0.91 dBm	(0.811 mW)
	WIFI 2.4GHz		
	IEEE 802.11b Mode:	22.88 dBm	(194.089 mW)
	IEEE 802.11g Mode:	22.88 dBm	(194.089 mW)
	IEEE 802.11n HT 20 Mode:	23.45 dBm	(221.309 mW)
	IEEE 802.11n HT 40 Mode:	20.80 dBm	(120.226 mW)
<b>Maximum tune up power</b>	Bluetooth:	2.00 dBm	(1.585 mW)
	IEEE 802.11b Mode:	24.80 dBm	(301.995 mW)
	IEEE 802.11g Mode:	24.80 dBm	(301.995 mW)
	IEEE 802.11n HT 20 Mode:	25.40 dBm	(346.737 mW)
	IEEE 802.11n HT 40 Mode:	22.80 dBm	(190.546 mW)
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A		

## 4. TEST RESULTS

**No non-compliance noted.**

### Calculation

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

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:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

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

Where  $d$  = Distance in cm

$P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>



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## 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 / cm<sup>2</sup>

### Bluetooth:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
39	2480	1.585	1.1	20	0.0003	1

### IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
11	2462	301.995	1.86	20	0.1118	1

### IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
11	2462	301.995	1.78	20	0.1070	1

### IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
11	2462	346.737	1.78	20	0.1228	1

### IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
3	2422	190.546	1.78	20	0.0675	1

--End of Report--