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Report No.: T200103D07-MF

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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

FHD Wireless Doorbell Camera

Model:

DBC845xxxxxxxxx(the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, "blank" or "-" , for marking 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: February 12, 2020

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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	February 12, 2020	Initial Issue	ALL	Allison Chen



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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:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.



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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	FHD Wireless Doorbell Camera												
Model	DBC845xxxxxxxx(the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, "blank" or "-", for marking purpose)												
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, "blank" or "-") 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 Gain: 1.82 dBi Directional Gain : 1.82 dBi (Numeric gain: 1.52) Worst												
Maximum Measurement Average Power	<table border="1"> <tr> <td>2.4GHz</td><td></td><td></td></tr> <tr> <td>IEEE 802.11b Mode:</td><td>23.71 dBm</td><td>(234.963 mW)</td></tr> <tr> <td>IEEE 802.11g Mode:</td><td>21.89 dBm</td><td>(154.525 mW)</td></tr> <tr> <td>IEEE 802.11n HT 20 Mode:</td><td>21.74 dBm</td><td>(149.279 mW)</td></tr> </table>	2.4GHz			IEEE 802.11b Mode:	23.71 dBm	(234.963 mW)	IEEE 802.11g Mode:	21.89 dBm	(154.525 mW)	IEEE 802.11n HT 20 Mode:	21.74 dBm	(149.279 mW)
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IEEE 802.11n HT 20 Mode:	21.74 dBm	(149.279 mW)											
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2.4GHz													
IEEE 802.11b Mode:	25.70 dBm	(371.535 mW)											
IEEE 802.11g Mode:	23.80 dBm	(239.883 mW)											
IEEE 802.11n HT 20 Mode:	23.70 dBm	(234.423 mW)											
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A												

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:

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

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

Yields

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²



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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 / cm²

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	371.535	1.52	20	0.1124	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	239.883	1.52	20	0.0726	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	234.423	1.52	20	0.0709	1

--End of Report--