



FCC ID: P27MDC845
Report No.: T191003D02-MF

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Rev.: 01

**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 WiFi Mini Dome Camera

Model:

MDC845xxxxxxxx (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)

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 30, 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 30, 2019	Initial Issue	ALL	Doris Chu



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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.

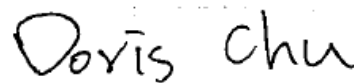
APPLICABLE STANDARDS	
STANDARD	TEST RESULT
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

Approved by:



Kevin Tsai
 Deputy Manager
 Compliance Certification Services Inc.

Reporter:



Doris Chu
 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

EUT	FHD WiFi Mini Dome Camera																		
Model	MDC845xxxxxxx (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)																		
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 "-") on model number is just for marketing purpose only.																		
Frequency band (Operating)	<input 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 checked="" type="checkbox"/> 802.11a/n HT20: 5180MHz ~ 5240MHz / 5745MHz ~ 5825MHz 802.11n HT40: 5190MHz ~ 5230MHz / 5755MHz ~ 5795MHz 802.11ac VHT80: 5210MHz / 5775MHz <input type="checkbox"/> Others																		
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others																		
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²)																		
Antenna Specification	<p>2.4G</p> <table border="1"> <thead> <tr> <th>Ant No.</th> <th>Type</th> <th>Peak Gain</th> </tr> </thead> <tbody> <tr> <td>Ant 1</td> <td>Dipole</td> <td>4.7 dBi</td> </tr> <tr> <td>Ant 2</td> <td>Dipole</td> <td>1.9 dBi</td> </tr> </tbody> </table> <p>1. Power Directional Gain: 3.52</p> <p>5G</p> <table border="1"> <thead> <tr> <th>Ant No.</th> <th>Type</th> <th>Peak Gain</th> </tr> </thead> <tbody> <tr> <td>Ant 1</td> <td>Dipole</td> <td>4.3 dBi</td> </tr> <tr> <td>Ant 2</td> <td>Dipole</td> <td>3.8 dBi</td> </tr> </tbody> </table> <p>1. Power Directional Gain: 4.06</p> <p>2.4GHz: Directional Gain : 3.52 dBi (Numeric gain: 2.25) Worst 5GHz: Directional Gain : 4.06 dBi (Numeric gain: 2.55) Worst</p>	Ant No.	Type	Peak Gain	Ant 1	Dipole	4.7 dBi	Ant 2	Dipole	1.9 dBi	Ant No.	Type	Peak Gain	Ant 1	Dipole	4.3 dBi	Ant 2	Dipole	3.8 dBi
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<p>Maximum Measurement Average Power</p>	<table border="1"> <tr> <td colspan="3">2.4GHz</td> </tr> <tr> <td>IEEE 802.11b Mode:</td> <td>27.03 dBm</td> <td>(504.661 mW)</td> </tr> <tr> <td>IEEE 802.11g Mode:</td> <td>24.69 dBm</td> <td>(294.442 mW)</td> </tr> <tr> <td>IEEE 802.11n HT 20 Mode:</td> <td>22.34 dBm</td> <td>(171.396 mW)</td> </tr> <tr> <td>IEEE 802.11n HT 40 Mode:</td> <td>22.41 dBm</td> <td>(174.181 mW)</td> </tr> <tr> <td colspan="3">5GHz</td> </tr> <tr> <td>IEEE 802.11a Mode:</td> <td>22.74 dBm</td> <td>(187.932 mW)</td> </tr> <tr> <td>IEEE 802.11n HT 20 Mode:</td> <td>27.03 dBm</td> <td>(504.661 mW)</td> </tr> <tr> <td>IEEE 802.11n HT 40 Mode:</td> <td>27.21 dBm</td> <td>(526.017 mW)</td> </tr> <tr> <td>IEEE 802.11ac VHT 80 Mode:</td> <td>24.02 dBm</td> <td>(252.348 mW)</td> </tr> </table>	2.4GHz			IEEE 802.11b Mode:	27.03 dBm	(504.661 mW)	IEEE 802.11g Mode:	24.69 dBm	(294.442 mW)	IEEE 802.11n HT 20 Mode:	22.34 dBm	(171.396 mW)	IEEE 802.11n HT 40 Mode:	22.41 dBm	(174.181 mW)	5GHz			IEEE 802.11a Mode:	22.74 dBm	(187.932 mW)	IEEE 802.11n HT 20 Mode:	27.03 dBm	(504.661 mW)	IEEE 802.11n HT 40 Mode:	27.21 dBm	(526.017 mW)	IEEE 802.11ac VHT 80 Mode:	24.02 dBm	(252.348 mW)
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<p>Evaluation applied</p>	<p> <input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A </p>																														

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

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

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)
1	2412	758.578	2.25	20	0.3397	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
1	2412	426.580	2.25	20	0.1910	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
1	2412	263.027	2.25	20	0.1178	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
6	2437	263.027	2.25	20	0.1178	1

IEEE 802.11a mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
149	5745	288.403	2.55	20	0.1464	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
157	5785	724.436	2.55	20	0.3676	1

IEEE 802.11n HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
159	5795	794.328	2.55	20	0.4031	1

IEEE 802.11ac VHT80 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
155	5775	398.107	2.55	20	0.2020	1

--End of Report--