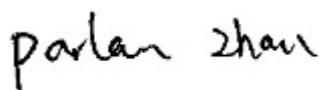


1 Cover Page***RF Exposure Evaluation Report***

Application No.: SHEM2106005977CR
FCC ID: ZZ2-AMZ001
Applicant: Amcrest Technologies LLC
Address of Applicant: 16727 Park Row Dr. Houston, Texas, United States 77084
Manufacturer: Amcrest Technologies LLC
Address of Manufacturer: 16727 Park Row Dr. Houston, Texas, United States 77084
Equipment Under Test (EUT):
EUT Name: NETWORK PT CAMERA
Model No.: IP5M-1190W
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-06-11
Date of Test: 2021-06-11 to 2021-06-14
Date of Issue: 2021-06-14

| | |
|---------------------|--------------|
| Test Result: | Pass* |
|---------------------|--------------|

* In the configuration tested, the EUT complied with the standards specified above.



Parlam Zhan
E&E Section Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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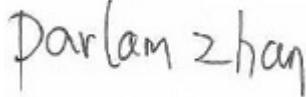


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| Revision Record | | | |
|-----------------|-------------|------------|--------|
| Version | Description | Date | Remark |
| 00 | Original | 2021-06-14 | / |
| | | | |
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|--------------------------|--|--|--|
| Authorized for issue by: | | | |
| | |  | |
| | | Micheal Niu / Project Engineer | |
| | |  | |
| | | Parlam Zhan / Reviewer | |

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3 General Information

3.1 General Description of E.U.T.

| | |
|---------------|-------------------|
| Power supply: | DC 12V by Adapter |
|---------------|-------------------|

3.2 Technical Specifications

2.4GHz

| | |
|----------------------|---|
| Antenna Gain: | Ant 1:2.41dBi (Provided by manufacturer) Ant 2:2.41dBi (Provided by manufacturer) Directional Gain: 5.42dBi |
| Antenna Type: | Dipole Antenna |
| Channel Spacing: | 5MHz |
| Data Rate: | 802.11b: 1/2/5.5/11Mbps, 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: MCS 0 to 7 for HT20MHz; MCS 0 to 7 for HT40MHz |
| Modulation Type: | 802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Number of Channels: | 802.11b/g/n(HT20):11 802.11n(HT40):7 |
| Operation Frequency: | 802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz |



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3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

3.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• **CNAS (No. CNAS L4354)**

CNAS has accredited Compliance Certification Services (Kunshan) Inc. to ISO/IEC 17025:2017

General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01

Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

• **A2LA (Certificate No. 2541.01)**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

• **FCC (Designation Number: CN1172)**

Compliance Certification Services Inc. has been recognized as an accredited testing laboratory.

Designation Number: CN1172.

• **ISED (CAB identifier: CN0072)**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

CAB Identifier: CN0072.

• **VCCI (Member No.: 1938)**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1600, C-1707, T-1499, G-10216 respectively.

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4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

| Frequency | Power density(mW/cm ²) | Averaging time(minutes) |
|---------------|------------------------------------|-------------------------|
| 300MHz~1.5GHz | f/1500 | 30 |
| 1.5GHz~100GHz | 1.0 | 30 |

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM210600597701

| Test Mode | Channel | Antenna 1 Power[dBm] | Antenna 2 Power[dBm] | MIMO Power[dBm] | Antenna 1 Power[mW] | Antenna 2 Power[mW] | MIMO Power[mW] |
|-----------|---------|----------------------|----------------------|-----------------|---------------------|---------------------|----------------|
| 11B | 2412 | 15.10 | 15.47 | NA | 32.36 | 35.24 | N/A |
| 11B | 2437 | 15.14 | 15.35 | NA | 32.66 | 34.28 | N/A |
| 11B | 2462 | 14.89 | 15.08 | NA | 30.83 | 32.21 | N/A |
| 11G | 2412 | 15.31 | 15.49 | NA | 33.96 | 35.40 | N/A |
| 11G | 2437 | 15.22 | 15.40 | NA | 33.27 | 34.67 | N/A |
| 11G | 2462 | 14.87 | 15.19 | NA | 30.69 | 33.04 | N/A |
| 11N20MIMO | 2412 | 12.40 | 11.97 | 15.20 | 17.38 | 15.74 | 33.11 |
| 11N20MIMO | 2437 | 12.21 | 11.59 | 14.92 | 16.63 | 14.42 | 31.05 |
| 11N20MIMO | 2462 | 11.77 | 11.26 | 14.53 | 15.03 | 13.37 | 28.38 |
| 11N40MIMO | 2422 | 12.63 | 12.44 | 15.55 | 18.32 | 17.54 | 35.89 |
| 11N40MIMO | 2437 | 12.53 | 12.13 | 15.34 | 17.91 | 16.33 | 34.20 |
| 11N40MIMO | 2452 | 12.34 | 11.91 | 15.14 | 17.14 | 15.52 | 32.66 |

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5.2 MPE Calculation

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in meter) = 20cm
- 3) MPE limit = 1mW/cm²

For 2.4G WiFi –Antenna1:

The max. antenna gain is 2.41 dBi

| Max. Conducted Power P(mW) | Gain in Linear Scale G | Operation Distance R(cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) | Result |
|----------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------|--------|
| 33.96 | 1.742 | 20 | 0.01177 | 1 | Pass |

For 2.4G WiFi –Antenna2:

The max. antenna gain is 2.41 dBi

| Max. Conducted Power P(mW) | Gain in Linear Scale G | Operation Distance R(cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) | Result |
|----------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------|--------|
| 35.4 | 1.742 | 20 | 0.01227 | 1 | Pass |

In MIMO mode:

The max. antenna gain is 5.42 dBi

| Max. Conducted Power P(mW) | Gain in Linear Scale G | Operation Distance R(cm) | Power Density (mW/cm ²) | Limit (mW/cm ²) | Result |
|----------------------------|------------------------|--------------------------|-------------------------------------|-----------------------------|--------|
| 35.89 | 3.483 | 20 | 0.02487 | 1 | Pass |

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test

--End of the Report--



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