TCT 通测检测
TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. .... :	ZZ2-P402W
Test Report No................ :	TCT241016E014
Date of issue................... :	Oct. 26, 2024
Testing laboratory .... :	SHENZHEN TONGCE TESTING LAB
Testing location/ address:	2101 & 2201, Zhenchang Factory, Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
Applicant's name............ :	Amcrest Technologies LLC
Address........................... :	16727 Park Row Dr. Houston, Texas 77084, United States
Manufacturer's name ... :	Amcrest Industries LLC.
Address........................... :	16727 Park Row Dr. Houston, Texas 77084, United States
Standard(s) .... :	FCC CFR Title 47 Part 1.1307
Product Name................. :	1080P HD Dual-Lens Pan/Tilt Wi-Fi Outdoor Security Camera
Trade Mark .... :	N/A
Model/Type reference..... :	P402W
Rating(s)........................... :	Refer to EUT description of page 3
Date of receipt of test item .... :	Oct. 16, 2024
Date (s) of performance of test................................. :	Oct. 16, 2024 ~ Oct. 26, 2024
Tested by (+signature) ... :	Ronaldo LUO
Check by (+signature).... :	Beryl ZHAO
Approved by (+signature):	Tomsin
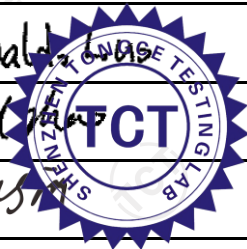
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1. General Product Information

1.1. EUT description

Product Name.......................:	1080P HD Dual-Lens Pan/Tilt Wi-Fi Outdoor Security Camera
Model/Type reference............:	P402W
Sample Number.....................:	TCT241016E007-0101
Operation Frequency ....:	For BLE: 2402MHz~2480MHz For 2.4G WIFI: 2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20)/802.11ax(HE20)) 2422MHz~2452MHz (802.11n(HT40)/802.11ax(HE40)) For 5G WIFI: Band 1: 5180 MHz ~ 5240 MHz Band 3: 5745 MHz ~ 5825 MHz
Modulation Type....................:	For BLE: GFSK For 2.4G WIFI: 802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing(OFDM) For 5G WIFI: 256QAM, 64QAM, 16QAM, BPSK, QPSK
Antenna Type........................:	Rod Antenna
Antenna Gain........................:	For BLE/ 2.4G WIFI: 1.58dBi For 5G WIFI: Band 1: 1.60dBi Band 3: 5.46dBi
Rating(s)...............................:	Adapter 1 Information: MODEL: BS12A-1201000US Input: AC 100-240V, 50/60Hz, 0.4A Max. Output: DC 12V, 1000mA Adapter 2 Information: MODEL: TPQ-368D120100UW01 Input: AC 100-240V, 50/60Hz, 0.4A Max. Output: DC 12.0V, 1.0A

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

None.

2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25⁰C
Voltage	AC 120V
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Transmitting Mode:	Keep the EUT in continuous transmitting by select channel

2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

   1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

   2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

   3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

3.   Facilities and Accreditations

3.1. Facilities

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

- FCC - Registration No.: 645098
  SHENZHEN TONGCE TESTING LAB
  Designation Number: CN1205
  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A
  SHENZHEN TONGCE TESTING LAB
  CAB identifier: CN0031
  The testing lab has been registered by Innovation, Science and Economic Development Canada for radio equipment testing.

3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) **For BLE:** The maximum output power for antenna is 5.36dBm (3.44mW) at 2402MHz, 1.58dBi antenna gain(with 1.44 numeric antenna gain.)
   For 2.4G WIFI: The maximum output power for antenna is 14.31dBm (26.98mW) at 2437MHz, 1.58dBi antenna gain(with 1.44 numeric antenna gain.)
   For 5G WIFI: The maximum output power for antenna is 14.97dBm (31.41mW) at 5745MHz, 5.46dBi antenna gain(with 3.52 numeric antenna gain.)
   2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

Given $E = \dfrac{\sqrt{30 \times P \times G}}{d}$ & $S = \dfrac{E^2}{3770}$

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

Substituting the MPE safe distance using d=20cm into above equation.
Yields: $S = 0.000199 \times P \times G$

Mode	Power(mW)	numeric antenna gain	Power density (mW/cm^2)	Limit (mW/cm^2)	Result
BLE	3.44	1.44	0.00099		
2.4G WIFI	26.98	1.44	0.00773	1.0	PASS
5G WIFI	31.41	3.52	0.02200		

*****END OF REPORT*****