1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

1.1 General Information

Client Information

Applicant:	ShenZhen Foscam Intelligent Technology Co., Limited
Address of applicant:	Room A, 9/F, Block F5, TCL International E City, No. 1001 Zhongshanyuan Road, Xili, Shenzhen, China
Manufacturer:	ShenZhen Foscam Intelligent Technology Co., Limited
Address of manufacturer:	Room A, 9/F, Block F5, TCL International E City, No. 1001 Zhongshanyuan Road, Xili, Shenzhen, China

General Description of EUT:

Product Name:	Outdoor HD IP Camera
Trade Name:	FOSCAM
Model No.:	G2
Adding Model(s):	G2VX、G2C VX、G2E VX、G2 Plus VX、G2 Lite VX、G4 VX、G4C VX、G4E VX、G4 Plus VX、G4 Lite VX、FI9900P VX、FI9900EP VX、FI9901P VX、FI9901EP VX、FI9902P VX、FC5415P VX、FC5618P VX、FC5618EP VX、FC5718EP VX（which “X”can be from 0 to 9,the default state is null while it is V0）
FCC ID:	ZDEG2
Rated Voltage:	Power Port:DC12V

Technical Characteristics of EUT:

Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 802.11b/g/n(HT20) 2422-2452MHz for 802.11n(HT40)
RF Output Power:	9.66dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)
Channel Separation:	5MHz
Type of Antenna:	External Antenna
Antenna Gain:	2.0dBi

Note 1: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model MOPLUS, but the circuit and the electronic construction do not change, declared by the manufacturer.

1.2 Standard Applicable

According to § 1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(a) Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density

1.3 MPE Calculation Method

$S = (30*P*G) / (377*R^2)$

S = power density (in appropriate units, e.g., mw/cm^2)

P = power input to the antenna (in appropriate units, e.g., mw)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

1.4 MPE Calculation Result

WIFI2.4G:
Maximum Tune-Up output power: 9.66 (dBm)
Maximum peak output power at antenna input terminal: 9.25 (mW)
Prediction distance: >20(cm)
Prediction frequency: 2437 (MHz)
Antenna gain: 2.0 (dBi)
Directional gain (numeric gain): 1.58
The worst case is power density at prediction frequency at 20cm: 0.003(mw/cm^2)
MPE limit for general population exposure at prediction frequency: 1 (mw/cm^2)

Result: Pass

1.5 Test Setup Photos