



Test Report No.: FM180413N066



RF EXPOSURE REPORT

Applicant	Swann Communications Ltd
Address	RM1601, 249-255 DES VOEUX ROAD CENTRAL, HONG KONG

Manufacturer or Supplier	SHENZHEN AONI ELECTRONIC CO., LTD
Address	building 5, Honghui Industrial Park, Baoan District, Shenzhen, China
Product	IP Camera
Brand Name	Swann
Model	SWWHD-OUTCAM
Additional Model & Model Difference	E976, E975, E977, E974, E952, E953, E954, E97A, D1,
Date of tests	Apr. 13, 2018 ~ Jul. 2, 2018

- FCC Part 2 (Section 2.1091)
- KDB 447498 D01
- IEEE C95.1

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Tested by Breeze Jiang Project Engineer / EMC Department	Approved by Glyn He Supervisor / EMC Department
	 Date: Jul. 25, 2018

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FM180413N066	Original release	Jul. 25, 2018

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1. CERTIFICATION

FCC ID:	2AKPISWWHDOUTCAM
PRODUCT:	IP Camera
BRAND NAME:	Swann
MODEL NO.:	SWWHD-OUTCAM
ADDITIONAL NO.:	E976, E975, E977, E974, E952, E953, E954, E97A, D1,
TEST SAMPLE:	Engineering Sample
APPLICANT:	Swann Communications Ltd
STANDARDS:	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1

Additional models (see above table) are identical with the test model SWWHD-OUTCAM except the model name for trading purpose.

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	F/1500	30
1500-100,000	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	3	Dipole Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
802.11b	2412-2462	12	+2	10	14
802.11g	2412-2462	10	+2	8	12
802.11n(HT20)	2412-2462	9	+2	7	11
802.11n(HT40)	2422-2452	9	+2	7	11

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
802.11b	2462	13.37
802.11g	2437	11.08
802.11n(HT20)	2412	10.64
802.11n(HT40)	2422	10.44

FREQUENCY BAND (MHz)	MAX AVERAGE POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412-2462	14	3	20	0.009971	1.0

--- END ---