



RF EXPOSURE EVALUATION REPORT

APPLICANT : Hangzhou Konke Information Technology Co.,Ltd.
PRODUCT NAME : Konke Smart Camera
MODEL NAME : CAMERA-1080CU
BRAND NAME : KONKE
FCC ID : 2AJZ4-CAM1080CUA
STANDARD(S) : 47CFR 2.1091
KDB 447498
ISSUE DATE : 2018-04-23

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Gan Yueming (Test engineer)

Approved by: Peng Huarui
Peng Huarui (Supervisor)

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Change History		
Issue	Date	Reason for change
1.0	2018-04-23	First edition



1. Technical Information

Note: Provide by manufacturer.

1.1 Applicant and Manufacturer Information

Applicant:	Hangzhou Konke Information Technology Co.,Ltd.
Applicant Address:	28F Huafeng international mansion, No.200 Xinye Road Jiangan District, Hangzhou
Manufacturer:	Hangzhou Konke Information Technology Co.,Ltd.
Manufacturer Address:	28F Huafeng international mansion, No.200 Xinye Road Jiangan District, Hangzhou

1.2 Equipment Under Test (EUT) Description

EUT Type:	Konke Smart Camera
Hardware Version:	BLK18EV-0237-WK-WIFI-DH-V1_01
Software Version:	S15F-32HW702-D5PT_FW18.1.5.3423_APP1.3.37.9153
Frequency Bands:	WLAN 2.4GHz: 802.11b/g/n-20MHz: 2.412GHz - 2.462GHz 802.11n-40MHz: 2.422GHz - 2.452GHz
Modulation Mode:	WLAN 2.4GHz:802.11b/g/n HT-20/HT-40 ;
Antenna type:	Metal Antenna
Antenna gain:	3.0dBi

1.3 Photographs of the EUT

1. EUT front view



2. EUT rear view





1.3.1 Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	BLK18EV-0237-WK- WIFI-DH-V1_01	S15F-32HW702-D5PT_FW18.1.5.34 23_APP1.3.37.9153

1.4 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1091	Radio frequency Radiation Exposure Evaluation: mobile devices
2	KDB 447498 D01v06	General RF Exposure Guidance



2. Device Category And RF Exposure Limit

Per user manual, Based on 47CFR 2.1091, this device belongs to mobile device category with General Population/Uncontrolled exposure.

Mobile Devices:

47CFR 2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. In this context, the term "fixed location" means that the device is physically secured at one location and is not able to be easily moved to another location. Transmitting devices designed to be used by consumers or workers that can be easily re-located, such as wireless devices associated with a personal computer, are considered to be mobile devices if they meet the 20 centimeter separation requirement.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity. Warning labels placed on low-power consumer devices such as cellular telephones are not considered sufficient to allow the device to be considered under the occupational/controlled category, and the general population/uncontrolled exposure limits apply to these devices.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

3. Measurement Of conducted Peak Output Power

1. Wifi Peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			802.11b	802.11g	802.11n20
2.4GHz	1	2412	12.45	13.81	12.71
	6	2437	12.35	15.15	13.76
	11	2462	11.52	13.99	13.63

Band	Channel	Frequency (MHz)	Output Power(dBm)
			802.11n40
2.4GHz	3	2422	12.89
	6	2437	13.21
	9	2452	12.76

4. RF Exposure Evaluation

Standalone transmission MPE evaluation

Bands	Frequency (MHz)	Antenna Gain (dBi)	Conducted Peak Power (dBm)	EIRP (mW)	Power density (mW/cm ²)	Limit for MPE (mW/cm ²)
2.4GHz	2437	3.0	15.15	65.31	0.013	1.0

1. MPE calculation method

$$\text{Power Density} = \text{EIRP}/4\pi R^2$$

Where: $\text{EIRP} = P \cdot G$

P = Peak output power

G = Antenna gain

R = Separation distance (20cm)



Annex A General Information

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
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2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

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