



RF Exposure Evaluation Report

Application No.: SZEM2012012652CR
Applicant: KanDao Technology Co., Ltd.
Address of Applicant: 201 Sino-Steel building, Maqueling Industrial District, Maling Area, Yuehai Street, Nanshan, Shenzhen
Manufacturer: KanDao Technology Co., Ltd.
Address of Manufacturer: 201 Sino-Steel building, Maqueling Industrial District, Maling Area, Yuehai Street, Nanshan, Shenzhen
Factory: SKY LIGHT ELECTRONIC (SHENZHEN) LIMITED
Address of Factory: 1F-2F OF NO.9, 1F-5F OF NO.8, ANTUOSHAN HIGH-TECH. INDUSTRIAL PARK, SHAER COMMUNITY, SHAJING STREET, BAO'AN DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE

Equipment Under Test (EUT):
Product Name: Kandao Meeting Pro 360 Conferencing Camera
Model No.: MT0822
Trade mark: KanDao
FCC ID: 2ATPV-KDMT
Standards: 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
Date of Receipt: 2020-12-10
Date of Test: 2020-12-14 to 2020-12-25
Date of Issue: 2020-12-25

Test Result :	PASS*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu

Keny Xu
EMC Laboratory Manager



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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-12-25		Original

Authorized for issue by:				
				
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		Damon Su/Project Engineer		
				
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		Eric Fu /Reviewer		



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4 General Information

4.1 General Description of EUT

Product Name:	Kandao Meeting Pro 360 Conferencing Camera
Power Supply	AC 120V
Power adapter:	Adapter1 Model No: ASSA112w-P60W20 Input: AC 100-240V 50/60Hz 1.5A Output: DC 5V 3A or 9V 3A or 12V 3A or 15V 3A or 20V 3A Adapter2 Model No.: P0571-BZ Input: AC 100-240V 50/60Hz 1.5A PD Output: 60W(5V 3A, 9V 3A, 12V 3A, 15V 3A, 20V 3A)
For BT:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.2 Dual mode
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Antenna Type:	PIFA Antenna
Antenna Gain:	3dBi
For BLE:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V4.2 Dual mode
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	3dBi
For 2.4G:	
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz, 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)



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Channel Spacing:	5MHz			
Number of Channels:	802.11b/g/n(HT20): 11, 802.11n(HT40):7			
Antenna Type:	PIFA Antenna			
Antenna Gain:	3dBi			
For 5G:				
Operation Frequency:	Band	Mode	Frequency Range(MHz)	Number of channels
	Band 1	802.11a/n(HT20)/ac(HT20)	5180-5240	4
		802.11n(HT40)/ac(HT40)	5190-5230	2
		802.11ac(HT80)	5210	1
Modulation Type:	802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11n: OFDM (BPSK, QPSK, 16QAM, 64QAM) 802.11ac: OFDM (BPSK, QPSK, 16QAM, 64QAM, 256QAM)			
Channel Spacing:	802.11a/n(HT20)/ac(HT20): 20MHz 802.11n(HT40)/ac(HT40): 40MHz 802.11ac(HT80): 80MHz			
Antenna Type:	PIFA Antenna			
Antenna Gain:	3dBi			



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Member of the SGS Group (SGS SA)

4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

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

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



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5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in part1.1307(b)

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)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(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

Friis Formula

Friis transmission 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

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For BT:

Antenna Gain: 3dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Tx Type	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
2441 MHz	SISO	9.12	8.17	0.0032	1.0	PASS

Note: Refer to report No. SZEM201201265202 for EUT test Max Conducted Peak Output Power value. The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

For BLE:

Antenna Gain: 3dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Tx Type	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
2440 MHz	SISO	6.04	4.02	0.0016	1.0	PASS

Note: Refer to report No. SZEM201201265203 for EUT test Max Conducted Peak Output Power value. The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.



For 2.4G WIFI:

Antenna Gain 3dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Tx Type	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
2462 MHz	SISO	22.07	161.06	0.064	1.0	PASS

Note: Refer to report No. SZEM201201265204 for EUT test Max Conducted Peak Output Power value.
The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

For 5G WIFI:

Antenna Gain 3dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.99 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Frequency (MHz)	Tx Type	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
5180 MHz	SISO	13.13	20.56	0.008	1.0	PASS

Note: Refer to report No. SZEM201201265205 for EUT test Max Conducted Peak Output Power value.
The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation requirement.

- End of the Report -

