RF Exposure Evaluation Report

Product	:	10 inch WIFI Digital Photo Frame
Trade mark	:	N/A
Model/Type reference	:	Skylight 2, D104S
Serial Number	:	N/A
Report Number	:	EED32M00246404
FCC ID	:	2AABK-SKYLIGHT2
Date of Issue	:	Sep. 08, 2020
Test Standards	:	47 CFR Part 1.1307 47 CFR Part 2.1091 KDB447498D01v06
Test result	:	PASS

Prepared for:

Shenzhen Chuangwei Electronic Appliance Tech Co., Ltd.
4F & 6F, Overseas plant south, Skyworth Industrial Park,
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Prepared by:

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Approved by:	Sam Chuang	Date:	Sep. 08, 2020
	Sam Chuang		

Check No.:3096322823

2 Version

Version No.	Date	Description
00	Dec. 19, 2018	Original
01	Aug.14, 2019	Add an adapter
02	Sep. 08, 2020	Change the new motherboard, adapter, and data line to change color.

3 Contents

4 General Information

4.1 Client Information

Applicant:	Shenzhen Chuangwei Electronic Appliance Tech Co., Ltd.
Address of Applicant:	4F & 6F, Overseas plant south, Skyworth Industrial Park, Shiyan Street, Bao'an District, Shenzhen, P. R. China
Manufacturer:	Shenzhen Chuangwei Electronic Appliance Tech Co., Ltd.
Address of Manufacturer:	4F & 6F, Overseas plant south, Skyworth Industrial Park, Shiyan Street, Bao'an District, Shenzhen, P. R. China
Factory:	Shenzhen Chuangwei Electronic Appliance Tech Co., Ltd.
Address of Factory:	4F & 6F, Overseas plant south, Skyworth Industrial Park, Shiyan Street, Bao'an District, Shenzhen, P. R. China

4.2 General Description of EUT

Product Name:	10 inch WIFI Digital Photo Frame
Model No.(EUT):	Skylight 2, D104S
Test Model No.:	Skylight 2
Trade Mark:	N/A
EUT Supports Radios application:	2.4GHz: Wi-Fi:802.11b/g/n(HT20): 2412MHz ~2462 MHz ; 5GHz Wi-Fi: U-NII-1: 5.15-5.25GHz; U-NII-2A: 5.25-5.35GHz U-NII-2C: 5.470-5.725GHz; U-NII-3: 5.725-5.850GHz

4.3 Product Specification subjective to this standard

Frequency Range:	2.4GHz: Wi-Fi:802.11b/g/n(HT20): 2412MHz ~2462 MHz ; 5GHz Wi-Fi: U-NII-1: 5.15-5.25GHz; U-NII-2A: 5.25-5.35GHz U-NII-2C: 5.470-5.725GHz; U-NII-3: 5.725-5.850GHz
Test Power Grade:	Default
Test Software of EUT:	RFTestTool
Antenna Type:	Integral antenna
Antenna Specification	2.4GHz Antenna Gain : 4.00 dBi (Numeric gain: 2.51) 5GHz Antenna Gain : 2.00 dBi (Numeric gain: 1.58)
Maximum tune up power	IEEE 802.11b Mode: 14.50 dBm (28.184 mW) IEEE 802.11g Mode: 18.50 dBm (70.795 mW) IEEE 802.11n HT 20 Mode: 18.50 dBm (70.795 mW) IEEE 802.11a Mode: 12.00 dBm (15.849 mW) IEEE 802.11n HT 20 Mode: 11.50 dBm (14.125 mW) IEEE 802.11n HT 40 Mode: 11.50 dBm (14.125 mW) IEEE 802.11ac VHT 20 Mode: 12.00 dBm (15.849 mW) IEEE 802.11ac VHT 40 Mode: 11.50 dBm (14.125 mW) IEEE 802.11ac VHT 80 Mode: 6.00 dBm (3.981 mW)

Power Supply:	AC Adapter	Model:S85A22 Input:100~240V~ 50/60Hz, 0.5A Output:5V⎓2A
Sample Received Date:	Aug. 14, 2020	
Sample tested Date:	Aug. 14, 2020 to Aug. 31, 2020	
The tested sample(s) and the sample information are provided by the client. Model No.: Skylight 2, D104S Only the model Skylight 2 was tested, Their electrical circuit design, layout, components used and internal writing are identical, Only the modes are different.		

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

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

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and

d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using d = 20 cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

2.4G WIFI:

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	28.184	2.51	20	0.0141	1

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	70.795	2.51	20	0.0354	1

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm2)
6	2437	70.795	2.51	20	0.0354	1

5G WIFI

IEEE 802.11a mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
116	5580	15.849	1.58	20	0.0050	1

IEEE 802.11 HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
64	5320	14.125	1.58	20	0.0044	1

IEEE 802.11 HT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
62	5310	14.125	1.58	20	0.0044	1

IEEE 802.11ac VHT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm²	Limit (mW/cm²)
64	5320	15.849	1.58	20	0.0050	1

IEEE 802.11ac VHT40 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
62	5310	14.125	1.58	20	0.0044	1

IEEE 802.11ac VHT80 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm^2	Limit (mW/cm^2)
106	5530	3.981	1.58	20	0.0013	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32M00246401 for EUT external and internal photos.

*** End of Report ***