RADIO TEST REPORT

Report No: STS2212326H01

Issued for

Shenzhen Xianku Intelligent Co.,Ltd.

Rm.201,Bldg.A,No.1,Qianwan 1st Rd.,Qianhai
Shenzhen-Hong Kong Cooperation Zone,Shenzhen,China

Product Name:	3D Smart Body Measurement Mirror
Brand:	XIANKU
Model Number:	XK-H003
Series Model(s):	XK-H00**(“*”=0-9、A-Z、a-z)
FCC ID:	2A9EU-XKH003
Test Standard:	FCC 47CFR §2.1091

Shenzhen STS Test Services Co., Ltd.
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Test Report Certification

Applicant's Name	:	Shenzhen Xianku Intelligent Co.,Ltd.
Address	:	Rm.201,Bldg.A,No.1,Qianwan 1st Rd.,Qianhai Shenzhen-Hong Kong Cooperation Zone,Shenzhen,China
Manufacturer's Name	:	Shenzhen Xianku Intelligent Co.,Ltd.
Address	:	Rm.201,Bldg.A,No.1,Qianwan 1st Rd.,Qianhai Shenzhen-Hong Kong Cooperation Zone,Shenzhen,China

Product Description

Product Name	:	3D Smart Body Measurement Mirror
Brand	:	XIANKU
Model Number	:	XK-H003
Series Model(s)	:	XK-H00**("*"=0-9、A-Z、a-z)
Standards	:	FCC 47CFR §2.1091 447498 D04 Interim General RF Exposure Guidance v01

Date of Test:

Date of receipt of test item	:	20 Dec. 2022
Date (s) of performance of tests	:	20 Dec. 2022 ~ 21 Dec. 2022
Date of Issue	:	21 Dec. 2022
Test Result	:	**Pass**

Testing Engineer : Chris Chen

(Chris Chen)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Bovey Yang

(Bovey Yang)

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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	21 Dec. 2022	STS2212326H01	ALL	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	3D Smart Body Measurement Mirror
Brand	XIANKU
Model Number	XK-H003
Series Model(s)	XK-H00**(“*” =0-9、A-Z、a-z)
Model Difference	The external color is different, and the internal structure is unchanged.
Product Description	The EUT is GPON ONT
Operation Frequency:	Bluetooth: 2402~2480MHz 2.4G WIFI: 802.11b/g/n/ax 20: 2412~2462 MHz 802.11n/ax(40MHz):2422~2452MHz 5G WIFI: 802.11a/n/ax (20MHz): 5180~5240MHz 802.11n/ax (40MHz):5190~5230MHz 802.11ac/ax (80MHz):5210MHz
Modulation Type:	BLE: GFSK BT: GFSK(1Mbps), π/4-DQPSK(2Mbps), 8DPSK(3Mbps) 2.4G WIFI: 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 5G WIFI: 802.11a/n(OFDM): BPSK,QPSK,16QAM,64QAM 802.11ac(OFDM): BPSK,QPSK,16QAM,64QAM,256QAM 802.11ax(OFDM, OFDMA): BPSK,QPSK,16QAM,64QAM,256QAM, 1024QAM
Antenna gain:	Bluetooth,2.4G WIFI: 1.45dBi 5G WIFI: 3.01dBi
Antenna Designation:	PCB
Rating	Input: 100-240V Output: 19V 3A
Hardware Version	HDF621013_P03
Software Version	V1.1.8_V2.3.0.0

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao’an District, Shenzhen, Guang Dong, China
FCC test Firm Registration Number: 625569
IC test Firm Registration Number: 12108A
A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

Follow the maximum permissible exposure (MPE) limits specified in 447498 D04 Interim General Radio Frequency Exposure Guidelines v01. The gain of the antenna used in the product was extracted from the supplied antenna data sheet and the maximum total power input to the antenna was also measured. Calculate the distance from the product to the MPE limit by the formula.

2.2 LIMIT

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold Pth (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by:

$$P_{th}\ (\text{mW}) = \begin{cases} ERP_{20\,cm}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,cm} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases}$$

Where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,cm}\sqrt{f}}\right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20\,cm}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases}$$

d = the separation distance (cm);

(C) Or using below table and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least λ/2π, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP(watts)
0.3-1.34	1,920 R^2.
1.34-30	3,450 R^2/f^2.
30-300	3.83 R^2.
300-1,500	0.0128 R^2f.
1,500-100,000	19.2R^2.

For multiple RF sources: Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those is paragraph (b)(3)(i)(A) of Part 1.1307. Medical implant devices may only use this exemption and that in paragraph (b)(3)(i)(A).

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^{a} \frac{P_i}{P_{th,i}} + \sum_{j=1}^{b} \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^{c} \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of Part 1.1307 for Pth, including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of Part 1.1307 for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

Pi = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

Pth,i = the exemption threshold power (Pth) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.

ERPj = the ERP of fixed, mobile, or portable RF source j.

ERPth,j = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least λ/2π according to the applicable formula of paragraph (b)(3)(i)(C) of Part 1.1307.

Evaluatedk = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limitk = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from § 1.1310.

2.3 TEST RESULT

Turn up

Mode	Detector	Turn up Power
BT	AV	10±1dBm
BLE	AV	10±1dBm
2.4G WIFI	AV	22±1dBm
5G WIFI Band1	AV	18±1dBm
	AV	17±1dBm
	AV	15±1dBm

Protocol	Mode	Fre. (GHz)	Separation distance (cm)	Max Turn up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Limit (mW)	Ratio	Result
BT	GFSK	2.402	20	11	1.45	12.45	17.58	3060	0.0057	Pass
BLE	GFSK	2.48	20	11	1.45	12.45	17.58	3060	0.0057	Pass
2.4G WIFI	802.11b	2.462	20	23	1.45	24.45	278.61	3060	0.0910	Pass
5G WIFI	802.11a	5.24	20	19	3.01	22.01	158.85	3060	0.0519	Pass
	802.11n40	5.23	20	18	3.01	21.01	126.19	3060	0.0412	Pass
	802.11ax80	5.21	20	16	3.01	19.01	79.62	3060	0.0260	Pass

Multiple transmission:

BT+2.4G WLAN=0.0057+0.0910=0.0967＜1

BT+5G WLAN=0.0057+0.0519=0.0576＜1

Note: 1. The Maxinum power is less than the limit, complies with the exemption requirements.

2. The 2.4G WLAN and 5G WLAN can’t simultaneous transmission at the same time.

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