

Radio Exposure Evaluation Report

FCC ID : 2AHIS-VH02R03

Equipment : Vayyar Home

Brand Name : Vayyar

Model Name : Vayyar Home

Applicant : Vayyar Imaging Ltd.
26 Shabazi St., Yehud 56230000, Israel

Manufacturer : XAVi Technologies Corporation
22F., No.69, Sec. 2, Guangfu Rd., Sanchong Dist., New
Taipei City 241, Taiwan (R.O.C.)

Standard : 47 CFR FCC Part 2 Subpart J, section 2.1091

The product was received on Jul. 21, 2020, and testing was started from Jul. 24, 2020 and completed on Aug. 10, 2020. We, SPORTON INTERNATIONAL INC. Hsinhua Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in 47 CFR FCC Part 2 Subpart J, section 2.1091 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Hsinhua Laboratory, the test report shall not be reproduced except in full.



Approved by: Allen Lin

SPORTON INTERNATIONAL INC. Hsinhua Laboratory
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Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
2	-	Exposure evaluation	PASS	-

Note: From Sporton Project No.: FA052115-01.

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
None

Reviewed by: Sam Tsai

Report Producer: Amber Chiu

1 General Description

1.1 Information

1.1.1 EUT General Information

RF General Information			
Evaluation Mode	Frequency Range (MHz)	Operating Frequency (MHz)	Modulation Type
2.4GHz WLAN	2400-2483.5	2412-2462	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM)
Bluetooth	2400-2483.5	2402-2480	LE: DSSS (GFSK)
60GHz	57000-66000	62000-63100	Stepped-Frequency Continuous-Wave

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector
1	Chilisin Electronics Corp.	BTCA0032160 9002G4F	Chip antenna	N/A
2	Walsin (Inpaq)	ACM0-3216-A1-CC-S-P1	Chip antenna	N/A

Ant.	Gain (dBi)	
	2.4G	BT
1	3.32	3.32
2	1.54	1.54

Note 1: EUT can match with above antennas for using. Higher gain of antenna was used to perform the worst configuration and result of that was recorded as the final test result.

For 2.4GHz function:

For IEEE 802.11 b/g/n mode (1TX/1RX)

Ant. 1 and Ant. 2 could be used as transmitting/receiving antenna.

For BT function:

For IEEE 802.15.1 Bluetooth mode (1TX/1RX)

Ant. 1 and Ant. 2 could be used as transmitting/receiving antenna.

1.1.3 Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory		
☒	Hsinhua (TAF: 3785)	ADD: No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)
		TEL: 886-3-327-3456 FAX: 886-3-327-0973
Test site Designation No. TW3785 with FCC.		
☐	Wen 33rd.St. (TAF: 3785)	ADD: No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)
		TEL: 886-3-318-0787 FAX: 886-3-318-0287
Test site Designation No. TW0008 with FCC.		

Laboratory number TAF 3785 is a spin-off from the original Laboratory number TAF 1190.

2 Maximum Permissible Exposure

2.1 Limit of Maximum Permissible Exposure

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Method

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

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



2.3 Calculated Result and Limit

Exposure Environment: General Population / Uncontrolled Exposure

Mode	DG (dBi)	Power (dBm)	EIRP (dBm)	Tolerance (dB)	Tune-up EIRP (dBm)	Tune-up EIRP (W)	Distance (cm)	S (mW/cm ²)	S Limit (mW/cm ²)	Ratio (S/Limit)
2.4G;G1D	3.32	19.40	22.72	0.50	23.22	0.20989	20	0.04176	1.00000	0.04176
2.4G;BT-LE	3.32	11.90	15.22	0.50	15.72	0.03733	20	0.00743	1.00000	0.00743
62G	16.50	-10.76	5.74	0.50	6.24	0.00421	20	0.00084	1.00000	0.00084
									Sum Ratio	0.05003
									Ratio Limit	1

—————THE END—————