

1 Cover Page

RF Exposure Evaluation Report

Application No.: SHEM2107008380CR
FCC ID: 2ARYN-MAX-S
Applicant: Shenzhen Trifo Technology Co., Ltd.
Address of Applicant: Room 201, Building A, No.1, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China
Manufacturer: Shenzhen Trifo Technology Co., Ltd.
Address of Manufacturer: Room 201, Building A, No.1, Qianwan Road 1, Qianhai Shenzhen-Hong Kong Cooperation Zone, Shenzhen, China
Factory: Flextronics computing (Suzhou) Co., Ltd.
Address of Factory: No.1 Guanpu Road, Guoxiang Street, WuZhong District, Suzhou, Jiangsu, China
Equipment Under Test (EUT):
EUT Name: AI Home Robot
Model No.: OLL-U
Add Model No.: OLL-P, OLL-M, OLL-S
Trade Mark: Trifo
Standard(s) : FCC Rules 47 CFR §2.1091
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2021-07-28
Date of Test: 2021-08-03 to 2021-09-07
Date of Issue: 2021-09-08

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

Parlan Zhan

Parlan Zhan
Laboratory Manager

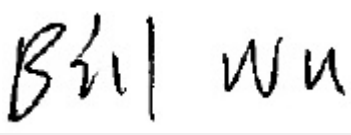
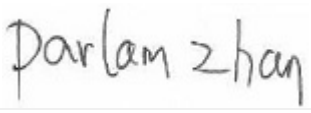
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Revision Record			
Version	Description	Date	Remark
00	Original	2021-09-08	/

Authorized for issue by:			
			
		Bill Wu / Project Engineer	
			
		Parlam Zhan / Reviewer	



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SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing Center Elm Road, Songjiang District, Shanghai, China

NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612
中国·上海·松江区金都西路588号 邮编: 201612

t(86-21) 61915666 f(86-21) 61915678 www.sgsgroup.com.cn
t(86-21) 61915666 f(86-21) 61915678 e sgs.china@sgs.com



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SGS-CSTC Standards Technical Services Co., Ltd.
Testing Center EMC Lab (Shanghai) Co., Ltd.

NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612
中国·上海·松江区金都西路588号 邮编: 201612

t:(86-21) 61915666 f:(86-21) 61915678 www.sgsgroup.com.cn
t:(86-21) 61915666 f:(86-21) 61915678 e sgs.china@sgs.com



3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 14.4V 5200mAh rechargeable battery Charging adapter: Model: SUN-INTE-267 Input:100-240V~50/60Hz Output:20V 2000mA
Antenna Gain:	3.3dBi (Provided by manufacturer)
Antenna Type:	PCB Antenna
Channel Spacing:	5MHz
Data Rate:	802.11b:1/2/5.5./11Mbps 802.11g:6/9/12/18/24/36/48/54Mbps 802.11n:MCS0-MCS7
Modulation Type	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels	802.11b/g/n(HT20):11 802.11n(HT40):7
Operation Frequency	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz





3.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. E&E Lab

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

3.3 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 6332.01)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the American Association for Laboratory Accreditation(A2LA).

- **FCC (Designation Number: CN1301)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.

- **ISED (CAB Identifier: CN0020)**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory
Company Number: 8617A

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-13868, C-14336, T-12221, G-10830 respectively.



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Testing Center EMC Lab (Songjiang)

NO.588 West Jindu Road, Songjiang District, Shanghai, China 201612
中国·上海·松江区金都西路588号 邮编: 201612

t:(86-21) 61915666 f:(86-21) 61915678 www.sgsgroup.com.cn
t:(86-21) 61915666 f:(86-21) 61915678 e sgs.china@sgs.com

4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM191001797002

Test Mode	Test Channel	Ant	Power [dBm]	Power [mW]
11B	2412	Ant1	13.46	22.18
11B	2442	Ant1	15.34	34.20
11B	2462	Ant1	16.24	42.07
11G	2412	Ant1	11.37	13.71
11G	2442	Ant1	13.35	21.63
11G	2462	Ant1	14.52	28.31
11N20SISO	2412	Ant1	11.10	12.88
11N20SISO	2442	Ant1	13.07	20.28
11N20SISO	2462	Ant1	14.38	27.42
11N40SISO	2422	Ant1	10.40	10.96
11N40SISO	2437	Ant1	11.28	13.43
11N40SISO	2452	Ant1	12.09	16.18



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5.2 MPE Calculation

According to the formula $S=P/4\pi R^2$, we can calculate S which is MPE.

Note:

- 1) P (mW)
- 2) R = distance to the center of radiation of antenna (in meter) = 20cm
- 3) MPE limit = 1mW/cm²

The max. antenna gain is 3.3 dBi

Max. Conducted Power P(mW)	Gain in Linear Scale G	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
42.07	2.138	20	0.01789	1	Pass

So the device is exclusion from SAR test.

--End of the Report--



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