



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

SZEMC-TRF-01 Rev. A/1

Report No.: SZCR231200427603

Page: 1 of 9

RF EXPOSURE EVALUATION REPORT

Application No.:	SZCR2312004276AT
Applicant:	WASION S DE R.L. DE C.V.
Address of Applicant:	AV. MINA DE GUADALUPE 930. PUERTO INTERIOR, SILAO 36275 Mexico
Manufacturer:	WASION S DE R.L. DE C.V.
Address of Manufacturer:	AV. MINA DE GUADALUPE 930. PUERTO INTERIOR, SILAO 36275 Mexico
Factory:	WASION S DE R.L. DE C.V.
Address of Factory:	AV. MINA DE GUADALUPE 930. PUERTO INTERIOR, SILAO 36275 Mexico
Equipment Under Test (EUT):	
EUT Name:	Socket Gateway
Model No.:	WFCT-960S
FCC ID:	2BEB0A0101WFCT960S
Standard(s) :	FCC Rules 47 CFR §2.1091
	KDB 447498 D04 interim General RF Exposure Guidance v01
Date of Receipt:	2023-12-27
Date of Evaluation:	2023-12-27 to 2024-01-03
Date of Issue:	2024-01-03

Evaluation Result: **Pass***

* In the configuration evaluated, the EUT complied with the standards specified above.

Keny Xu

EMC Laboratory Manager



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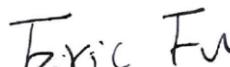
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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2024-01-03		Original

Authorized for issue by:			
		 Frank Chen	
		Frank Chen/Project Engineer	
		 Eric Fu	
		Eric Fu/Reviewer	

SGS-CSTC Standards Technical Services Co., Ltd.
Shenzhen Branch Inspection & Testing Services Laboratory

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3 General Information

3.1 General Description of E.U.T.

Product Type:	<input type="checkbox"/> Portable device
	<input checked="" type="checkbox"/> Mobile device
	<input type="checkbox"/> Fixed device

3.2 Details of E.U.T.

For 2.4G WIFI	
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz,
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channels:	802.11b/g/n(HT20)
Channel Spacing:	5MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	2.85dBi

The Power Data is based on the RF Test Report SZCR231200427602.

For WI-SUN (FCC ID:2BEBA0101TRLZ6V32)	
Operation Frequency:	For 50kbps: 902.2MHz to 927.8MHz; For 150kbps: 902.4MHz to 927.6MHz;
Modulation Type:	FSK
Number of Channels:	For 50kbps: 129 Channels; For 150kbps: 64 Channels;
Channel Spacing:	For 50kbps: 200KHz; For 150kbps: 400KHz
Antenna Type:	PIFA Antenna
Antenna Gain:	-2.25dBi

The Power Data is based on the RF Test Report SZCR231200427702.

For Freewave (FCC ID:KNYPMT0101AB)	
Operation Frequency:	For DTS: For 500kbps: 902.707MHz to 927.360MHz; For 1Mbps: 903.053MHz to 927.014MHz; For 2Mbps: 904.550MHz to 925.747MHz; For FHSS: For 115.2kbps: 902.477MHz to 927.821MHz; For 250Kbps: 902.534MHz to 927.418MHz;
Antenna Type:	PIFA Antenna



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Antenna Gain:	6dBi
The Power Data is based on the FCC ID: KNYPMT0101AB.	
For SIM7600G-H (FCC ID:2AJYU-8PYA007)	
Operation Frequency:	LTE Band 2: 1850-1910MHz LTE Band 4: 1710-1785MHz
Antenna Type:	Dipole Antenna
Antenna Gain:	For LTE Band 2: 8dBi; For LTE Band 4: 5dBi;
The Power Data is based on the RF Test Report STS2111044W01	

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

3.3 Separation Distance

Minimum test separation distance:	30cm
Remark: This minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.	

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Shenzhen Branch FCC Test & Lab Laboratory

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3.4 Test Location

All tests were performed at:

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Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.5 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 (Member No. 1937)**

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. Shenzhen EMC laboratory 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: CN1336**

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

Designation Number: CN1336. Test Firm Registration Number: 787754.

- **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.

3.6 Deviation from Standards

None

3.7 Abnormalities from Standard Conditions

None



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4 FCC Radiofrequency radiation exposure limits

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

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
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



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5 Measurement and Calculation

5.1 Maximum transmit power

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 centimeter)

3)MPE limit = 1mW/cm²

Test Mode	Frequency Band (MHz)	Max Conducted power (dBm)	Operation Distance R(cm)	Power Density (mW/cm ²)	Limit of Power Density S(mW/cm ²)	Ratio	Result
2.4G WIFI	2412-2462	15.79	30	0.0065	1	0.006	Pass
WI-SUN	902-928	28.14	30	0.0343	0.6	0.057	Pass
Freewave	902-928	30	30	0.3522	0.6	0.586	Pass
LTE Band 2	1850-1910	24	30	0.1402	1	0.140	Pass
LTE Band 4	1710-1785	24	30	0.0703	1	0.070	Pass

For simultaneous transmission operations:

The sum of the ratios =2.4G WiFi + WI-SUN+ Freewave+ LTE Band 2= 0.006+0.057+0.586+0.140=0.789 < 1

So, the device is to qualify for SAR test exemption, the exemption report is in lieu of the SAR report.



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6 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SZCR2312004276AT

-End of the Report-



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