



#### FCC RF EXPOSURE REPORT

For

### WIFI+BT Module

**MODEL NUMBER: WXT2LM2611** 

REPORT NUMBER: 4790862042.1-1-RF-6

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Prepared for

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Prepared by

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REPORT NO.: 4790862042.1-1-RF-6 Page 2 of 9

# **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	October 10, 2023	Initial Issue	



# **TABLE OF CONTENTS**

1.	ATTESTATION OF TEST RESULTS	. 4
2.	TEST METHODOLOGY	. 5
3.	FACILITIES AND ACCREDITATION	. 5
	DESCRIPTION OF EUT	
	REQUIREMENT	



### 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

Address: No.2, Jin-da Road, Huinan High-tech Industrial Park, Huizhou,

Guangdong, China

**Manufacturer Information** 

Company Name: Hui Zhou Gaoshengda Technology Co.,LTD

Address: No.2, Jin-da Road, Huinan High-tech Industrial Park, Huizhou,

Guangdong, China

**EUT Information** 

EUT Name: WIFI+BT Module Model: WXT2LM2611

Brand: GSD

Sample Received Date: May 29, 2023

Sample Status: Normal Sample ID: 6134977

Date of Tested: May 29, 2023 to September 26, 2023

APPLICABLE STANDARDS			
STANDARD TEST RESULTS			
FCC 47CFR§2.1091	PASS		
KDB-447498 D01 V06	PASS		

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#### 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 and KDB 447498 D01 General RF Exposure Guidance v06.

## 3. FACILITIES AND ACCREDITATION

	A2LA (Certificate No.: 4102.01)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with A2LA.
	FCC (FCC Designation No.: CN1187)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	Has been recognized to perform compliance testing on equipment subject
	to the Commission's Delcaration of Conformity (DoC) and Certification
	rules
	ISED (Company No.: 21320)
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Certificate	has been registered and fully described in a report filed with ISED.
	The Company Number is 21320 and the test lab Conformity Assessment
	Body Identifier (CABID) is CN0046.
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with VCCI, the
	Membership No. is 3793.
	Facility Name:
	Chamber D, the VCCI registration No. is G-20019 and R-20004
	Shielding Room B, the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.



# 4. DESCRIPTION OF EUT

EUT Name:		WIFI+BT Module
Model:		WXT2LM2611
Product	Frequency Range:	2402 MHz to 2480 MHz
Description (BLE)	Type of Modulation:	GFSK
	Data Rate:	1Mbps/2Mbps
Product	Frequency Range:	2402 MHz to 2480 MHz
Description (BT)	Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
(61)	Type of Modulation:	GFSK, ∏/4DQPSK, 8DPSK
	Frequency Range:	2412 MHz to 2462 MHz
Product Description (2.4G WLAN)	Type of Modulation:	IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g/n: OFDM(64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11ax: OFDMA(1024-QAM, 64-QAM, 16-QAM, QPSK, BPSK)
	Radio Technology:	IEEE802.11a/n HT20/n HT40/ax HE20/ax HE40
	Frequency Range:	5180 MHz to 5240 MHz (U-NII-1) 5260 MHz to 5320 MHz (U-NII-2A) 5500 MHz to 5720 MHz (U-NII-2C) 5745 MHz to 5825 MHz (U-NII-3)
Product Description (5G RLAN)	Type of Modulation:	IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ax: OFDMA(1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)
	Radio Technology:	IEEE802.11a 20/n HT20/n HT40/ ac VHT20/ac VHT40/ac VHT80/ ax HE20/ax HE40/ax HE80
Product Description (6G RLAN)	Operation Frequency:	UNII-5 Band: 5925MHz ~ 6425 MHz UNII-6 Band: 6425MHz ~ 6525 MHz UNII-7 Band: 6525MHz ~ 6875 MHz UNII-8 Band: 6875MHz ~ 7125 MHz
	Type of Modulation:	IEEE 802.11ax: OFDMA (BPSK, QPSK,16QAM,64QAM, 256QAM, 1024QAM)
	Radio Technology:	IEEE802.11ax HE20/HE40/HE80
Normal Test Vo	oltage:	DC 3.3 V



#### 5. REQUIREMENT

#### **LIMIT AND CALCULATION METHOD**

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with. Limits for General Population/Uncontrolled Exposure

#### RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	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 <sup>2</sup> )*	30
30 300	27.5	0.073	0.2	30
300 1500			f/1500	30
1500 100,000			1.0	30

## **CALCULATION METHOD**

 $S=PG/4\pi R^2$ 

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna



# **CALCULATED RESULTS**

### Radio Frequency Radiation Exposure Evaluation

(Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit	
Mode	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )		
BLE	13	4.09	0.01018	1	

(Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit	
Wode	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )		
ВТ	12	4.09	0.00809	1	

(Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit	
Wode	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )		
WIFI 2.4G	19	4.09	0.04053	1	

(Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit	
Wiode	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )		
WIFI 5G	26	5.17	0.26045	1	

(Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit	
IVIOGE	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )		
WIFI 6G	6	6	0.00315	1	



#### Note:

- 1. The calculated distance is 20 cm.
- 2. The power comes from operation description.
- 3. BT and WIFI cannot support simultaneous emission.

Therefor the maximum calculations of above situations are less than the "1" limit.

END OF REPORT