

# Qingdao Intelligent&Precise Electronics Co., Ltd MPE ASSESSMENT REPORT

#### **Report Type:**

FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

Model: ZDGFMT7601U-B

**REPORT NUMBER:** 200401438SHA-002

**ISSUE DATE:** May 18, 2020

**DOCUMENT CONTROL NUMBER:** TTRFFCCMPE-01\_V1 © 2018 Intertek



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**TEST REPORT** 

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Report no.: 200401438SHA-002

Applicant:	Qingdao Intelligent&Precise Electronics Co., Ltd No.218, Qianwangang Road, Qingdao Economic&Technological Development Zone, Shandong, China.				
Manufacturer:	Qingdao Intelligent&Precise Electronics Co., Ltd				
	No.218, Qianwangang Road, Qingdao Economic&Technological Development Zone, Shandong, China.				
Manufacturing site:	Qingdao Intelligent&Precise Electronics Co., Ltd				
	No.218, Qianwangang Road, Qingdao Economic&Technological Development Zone, Shandong, China.				
FCC ID:	2AJVQ-MT7601UB				

#### SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:KDB447498 D01 General RF Exposure Guidance v06FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

#### PREPARED BY:

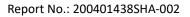
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Project Engineer Nemo Li

**REVIEWED BY:** 

Reviewer Daniel Zhao

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# **Revision History**

Report No.	Version	Description	Issued Date
200401438SHA-002	Rev. 01	Initial issue of report	May 18, 2020

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## **1 GENERAL INFORMATION**

## **1.1** Description of Equipment Under Test (EUT)

Product name:	WLAN module			
Type/Model:	ZDGFMT7601U-B			
Description of EUT:	EUT is a WLAN Module with WiFi function, and has only one model.			
Rating:	DC 3.3V			
EUT type:	Table top 🔲 Floor standing			
Software Version:	/			
Hardware Version:	/			
Sample received date:	April 15, 2020			
Date of test:	April 15, 2020 ~ May 15, 2020			

### **1.2 Technical Specification**

Frequency Band:	2400MHz ~ 2483.5MHz			
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20), IEEE 802.11n(HT40)			
	2412MHz to 2462MHz for IEEE 802.11b/g/n(HT20)			
Operating Frequency:	2422MHz to 2452MHz for IEEE 802.11n(HT40)			
	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)			
	IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK)			
	IEEE 802.11n(HT20): OFDM (64-QAM, 16-QAM, QPSK, BPSK)			
Type of Modulation:	IEEE 802.11n(HT40): OFDM (64-QAM, 16-QAM, QPSK, BPSK)			
	11 Channels for 802.11b, 802.11g and 802.11n(HT20)			
Channel Number:	9 Channels for 802.11n(HT40)			
Channel Separation:	5 MHz			
Antenna Information:	PCB Antenna, 1.02dBi			

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## **1.3 Description of Test Facility**

Name:	Intertek Testing Services Shanghai
Name.	
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L0139
certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab CAB identifier.: CN0051
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

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#### 2 MPE Assessment

Test result: Pass

#### 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength	H-field strength	B-field	Equivalent plane wave	
	(V/m)	(A/m) (uT) power d		power density	
				S <sub>eq</sub> (W/m²)	
0-1 Hz	-	3,2 × 10 <sup>4</sup>	$4 \times 10^{4}$	-	
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-	
8-25 Hz	10 000	4 000/f	5 000/f	-	
0,025-0,8 kHz	250/f	4/f	5/f	-	
0,8-3 kHz	250/f	5	6,25	-	
3-150 kHz	87	5	6,25	-	
0,15-1 MHz	87	0,73/f	0,92/f	-	
1-10 MHz	87/f <sup>1/2</sup>	0,73/f	0,92/f	-	
10-400 MHz	28	0,073	0,092	2	
400-2 000 MHz	1,375 f <sup>1/2</sup>	0,0037 f <sup>1/2</sup>	0,0046 f <sup>1/2</sup>	f/200	
2-300 GHz	61	0,16	0,20	10	

Mobile device exposure for simultaneous transmission operations: the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq$  1.0

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#### 2.2 Assessment Results

Power density (S) is calculated according to the formula:  $S = PG / (4\pi R^2)$ Where S = power density in mW/cm<sup>2</sup> P = Radiated transmit power in mW G = numeric gain of transmit antennaR = distance (cm)

As we can see from the test report 191102802SHA-001:

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Mode	Frequency band	Max Power	Antenna Gain	R	S	Limits
	(MHz)	dBm	dBi	(cm)	(mW/cm2)	(mW/cm2)
WiFi	2400 -2483.5	17.63	1.02	20	0.0146	1

Note: 1 mW/cm2 from 1.310 Table 1



# **Appendix I**

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended.