

# FCC RF Exposure Report

**FCC ID** : I8811AXAP246E  
**Equipment** : 802.11ax (WiFi 6E) Triple-Radio Unified Pro  
Access Point  
**Model No.** : WAX640S-6E  
**Brand Name** : ZYXEL  
**Applicant** : Zyxel Communications Corporation  
**Address** : No.2 Industry East RD. IX, Hsinchu Science  
Park, Hsinchu 30075, Taiwan, R.O.C  
**Standard** : 47 CFR FCC Part 2.1091  
**Received Date** : May 10, 2022  
**Tested Date** : May 10 ~ Jul. 13, 2022

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:

Approved by:

  
Along Chen / Assistant Manager

  
Gary Chang / Manager

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## Release Record

Report No.	Version	Description	Issued Date
FA251701	Rev. 01	Initial issue	Aug. 02, 2022

# 1 MPE EVALUATION OF MOBILE DEVICES

## 1.1 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

Frequency Range (MHz)	Power Density (mW /cm <sup>2</sup> )	Averaging Time (minutes)
300~1500	F/1500	30
1500~100000	1.0	30

## 1.2 MPE EVALUATION FORMULA

$$Pd = \frac{Pt}{4 * Pi * R^2}$$

Where

Pd= Power density in mW/cm<sup>2</sup>

Pt= EIRP in mW

Pi= 3.1416

R= Measurement distance

## 1.3 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

## 1.4 MEASUREMENT UNCERTAINTY

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Parameters	Uncertainty
Conducted power	±0.808 dB

### 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:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

## 1.5 MPE EVALUATION RESULTS

### Non-beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	*Ratio	Pass / Fail
WLAN								
2412-2462	25.43	25.5	1.2	20	0.093	1	0.093	Pass
5180-5240	25.44	25.5	4.87	20	0.217	1	0.217	Pass
5260-5320	23.89	24	5.92	20	0.195	1	0.195	Pass
5500-5720	23.72	24	4.08	20	0.128	1	0.128	Pass
5745-5825	25.48	25.5	5.21	20	0.234	1	0.234	Pass
5925-6425	23.20	23.5	3.29	20	0.095	1	0.095	Pass
6425-6525	23.02	23.5	3.34	20	0.096	1	0.096	Pass
6525-6875	23.47	23.5	2.64	20	0.082	1	0.082	Pass
6875-7125	23.09	23.5	3.35	20	0.096	1	0.096	Pass
BT								
2402-2480 (BT-LE)	3.02	3.5	3	20	0.001	1	0.001	Pass

\*Ratio = Power density / Limit.

### Beamforming mode

Frequency Range (MHz)	Maximum Conducted Power (dBm)	Rated Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	*Ratio	Pass / Fail
WLAN								
2412-2462	22.23	22.5	1.17	20	0.046	1	0.046	Pass
5180-5240	22.43	22.5	4.87	20	0.109	1	0.109	Pass
5260-5320	20.88	21	5.92	20	0.098	1	0.098	Pass
5500-5720	20.71	21	4.08	20	0.064	1	0.064	Pass
5745-5825	22.47	22.5	5.21	20	0.117	1	0.117	Pass
5925-6425	17.18	17.5	3.29	20	0.024	1	0.024	Pass
6425-6525	17.00	17.5	3.34	20	0.024	1	0.024	Pass
6525-6875	17.45	17.5	2.64	20	0.021	1	0.021	Pass
6875-7125	17.07	17.5	3.35	20	0.024	1	0.024	Pass

\*Ratio = Power density / Limit.

## 1.6 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

### *Non-beamforming mode*

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.093
BLE	0.001
WLAN 5GHz	0.234
WLAN 6GHz	0.096
Sum	0.424
Limit	1
Pass / Fail	Pass

### *Beamforming mode*

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.046
BLE	0.001
WLAN 5GHz	0.117
WLAN 6GHz	0.024
Sum	0.188
Limit	1
Pass / Fail	Pass

## 2 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

### **Linkou**

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(R.O.C.)

### **Kwei Shan**

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City 33381, Taiwan (R.O.C.)  
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If you have any suggestion, please feel free to contact us as below information.

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