

# FCC RF Exposure Report

**FCC ID** : I8811AXAP246E  
**Equipment** : 802.11ax (WiFi 6E) Dual-Radio Unified Pro  
Access Point  
(Refer to item 1.1.1 for more details)  
**Model No.** : WAX620D-6E  
(Refer to item 1.1.1 for more details)  
**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 17, 2022  
**Tested Date** : May 19 ~ Jun. 15, 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

  
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Gary Chang / Manager

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## Release Record

Report No.	Version	Description	Issued Date
FA251702	Rev. 01	Initial issue	Jul. 20, 2022

# 1 General Description

## 1.1 Information

### 1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
ZYXEL	WAX620D-6E	802.11ax (WiFi 6E) Dual-Radio Unified Pro Access Point	Main tested model
ZYXEL	NWA220AX-6E	802.11ax (WiFi 6E) Dual-Radio PoE Access Point	Software difference

✦ The above models, model **WAX620D-6E** was selected as a representative one for the final test and only its data was recorded in this report.

## 2 MPE EVALUATION OF MOBILE DEVICES

### 2.1 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

### 2.2 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

### 2.3 DEVIATION FROM TEST STANDARD AND MEASUREMENT PROCEDURE

None

### 2.4 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

<b>Declaration of Conformity:</b>
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
<b>Comments and Explanations:</b>
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.

## 2.5 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	25.68	26	2.3	20	0.135	1	0.135	Pass
5180-5240	28.52	29	3.87	20	0.385	1	0.385	Pass
5260-5320	23.84	24	3.96	20	0.124	1	0.124	Pass
5500-5720	23.67	24	4.54	20	0.142	1	0.142	Pass
5745-5825	28.38	28.5	4	20	0.354	1	0.354	Pass
5925-6425	22.65	23	3.86	20	0.097	1	0.097	Pass
6425-6525	19.70	20	4.27	20	0.053	1	0.053	Pass
6525-6875	21.27	21.5	5.33	20	0.096	1	0.096	Pass
6875-7125	22.77	23	3.38	20	0.086	1	0.086	Pass
BT								
2402-2480 (BT-LE)	1.97	2	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	22.37	22.5	1	20	0.045	1	0.045	Pass
5180-5240	22.50	23	3.87	20	0.097	1	0.097	Pass
5260-5320	17.82	18	3.96	20	0.031	1	0.031	Pass
5500-5720	17.65	18	4.54	20	0.036	1	0.036	Pass
5745-5825	22.36	22.5	4	20	0.089	1	0.089	Pass
5925-6425	16.63	17	3.86	20	0.024	1	0.024	Pass
6425-6525	13.68	14	4.27	20	0.013	1	0.013	Pass
6525-6875	15.25	15.5	5.33	20	0.024	1	0.024	Pass
6875-7125	16.75	17	3.38	20	0.022	1	0.022	Pass

\*Ratio = Power density / Limit.

## 2.6 MPE EVALUATION OF SIMULTANEOUS TRANSMISSION

### *Non-beamforming mode*

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.135
BLE	0.001
WLAN 6GHz	0.097
Sum	0.233
Limit	1
Pass / Fail	Pass

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.135
BLE	0.001
WLAN 5GHz	0.385
Sum	0.521
Limit	1
Pass / Fail	Pass

### *Beamforming mode*

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.045
BLE	0.001
WLAN 6GHz	0.024
Sum	0.07
Limit	1
Pass / Fail	Pass

Mode	Max Ratio of Each Mode
WLAN 2.4GHz	0.045
BLE	0.001
WLAN 5GHz	0.097
Sum	0.143
Limit	1
Pass / Fail	Pass

### 3 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**

Tel: 886-2-2601-1640

No.30-2, Ding Fwu Tsuen, Lin Kou  
District, New Taipei City, Taiwan  
(R.O.C.)

#### **Kwei Shan**

Tel: 886-3-271-8666

No.3-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)  
No.2-1, Lane 6, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 33381, Taiwan (R.O.C.)

#### **Kwei Shan Site II**

Tel: 886-3-271-8640

No.14-1, Lane 19, Wen San 3rd  
St., Kwei Shan Dist., Tao Yuan  
City 333, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666

Fax: 886-3-318-0345

Email: ICC\_Service@icertifi.com.tw

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