

**AsiaRF Co., Ltd.**  
**1F, 7, Houde Street, Yonghe Dist., New Taipei City 23455, Taiwan R.O.C.**

Federal Communications Commission  
Authorization and Evaluation Division  
Equipment Authorization Branch  
7435 Oakland Mills Road  
Columbia, MD 21046

### **Applicant's declaration concerning RF Radiation Exposure**

We hereby indicate that the product  
Product description: 11ac WiFi Router  
Model No: AP7632-EC1-3B1, AP7632-EC1-3B2

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the  
Product: 11ac WiFi Router  
will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6M22111-21376-C-1, W6M22111-21376-C-54 and the accompanying calculations.

Company: AsiaRF Co., Ltd.  
Address: 1F, 7, Houde Street, Yonghe Dist., New Taipei City 23455, Taiwan R.O.C.

Date: 2022-02-08

Signature





Registration number: W6M22111-21376-C-1

FCC ID: TKZAP7632EC1

## 3.2 Equivalent isotropic radiated power (EIRP)

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 16.65 dBm + 5.51 dBi [antenna gain claimed by manufacturer] = 22.16 dBm = 164.44 mW

## 3.3 Exemption Limits for Routine Evaluation

according to 47 CFR FCC Part 2 Subpart J, section 2.1091

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20 cm normally can be maintained between the user and the device.

### MPE Calculation Method

#### (A) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                 |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f <sup>2</sup> )*                  | 6                                                                 |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                 |
| 300-1500              | --                                | --                                | f/300                                   | 6                                                                 |
| 1500-100,000          | --                                | --                                | 5                                       | 6                                                                 |

#### (B) Limits for General Population/Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> 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                                                                |

f = frequency in MHz

\*Plane-wave equivalent power density



## **Worldwide Testing Services(Taiwan) Co., Ltd.**

Registration number: W6M22111-21376-C-1

FCC ID: TKZAP7632EC1

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$

mW/cm<sup>2</sup>.

Established separation distance is 20 cm.

Operating frequency band: 2412-2462 MHz, 2422-2452 MHz

The product meets RF exposure requirement.

Because the power density of 0.0327 mW/cm<sup>2</sup> at 2437 MHz is below the power density limit of 1 mW/cm<sup>2</sup>.

Limits:

| Limit for General Population / Uncontrolled Exposure |                                        |
|------------------------------------------------------|----------------------------------------|
| Frequency<br>(MHz)                                   | Power Density<br>(mW/cm <sup>2</sup> ) |
| 1500 – 100.000                                       | 1.0                                    |



Registration number: W6M22111-21376-C-54  
FCC ID: TKZAP7632EC1

## 3.10 Exemption Limits for Routine Evaluation according to 47 CFR FCC Part 2 Subpart J, section 2.1091

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20 cm normally can be maintained between the user and the device.

(A) Limits for Occupational/Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|-----------------------------------------|-------------------------------------------------------------------|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6                                                                 |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f <sup>2</sup> )*                  | 6                                                                 |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6                                                                 |
| 300-1500              | --                                | --                                | f/300                                   | 6                                                                 |
| 1500-100,000          | --                                | --                                | 5                                       | 6                                                                 |

(B) Limits for General Population/Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> 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                                                                |

f = frequency in MHz

\*Plane-wave equivalent power density

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to mW/m<sup>2</sup>.

$$Pd = \frac{30 \times P \times G}{377 \times d^2}$$



Registration number: W6M22111-21376-C-54  
FCC ID: TKZAP7632EC1

**Band 1**

Established separation distance is 20 cm.

Operating frequency band: 5180-5240 MHz

The product meets RF exposure requirement.

Because the power density of  $0.0224 \text{ mW/cm}^2$  at 5220 MHz is below the power density limit of  $1 \text{ mW/cm}^2$ .

**Band 4**

Established separation distance is 20 cm.

Operating frequency band: 5745-5825 MHz

The product meets RF exposure requirement.

Because the power density of  $0.0163 \text{ mW/cm}^2$  at 5825 MHz is below the power density limit of  $1 \text{ mW/cm}^2$ .

Limits:

| Limit for General Population / Uncontrolled Exposure |                                       |
|------------------------------------------------------|---------------------------------------|
| Frequency<br>(MHz)                                   | Power Density<br>( $\text{mW/cm}^2$ ) |
| 1500 – 100.000                                       | 1.0                                   |