



RF Exposure Evaluation Declaration

FCC ID: LNQWF672
Applicant: Actiontec Electronics Inc.
Product: Wi-Fi 7 Outdoor Mesh AP
Model No.: WF-672A
Brand Name: Actiontec
FCC Rule Part(s): FCC Part 2.1091
Result: Complies
Evaluation Date: 2025-09-24

Reviewed By:

Kevin Guo

Kevin Guo

Approved By:

Robin Wu

Robin Wu



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report. Testing was performed in accordance with the applicable measurement procedures. The test results reported herein apply only to the specific item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.



Revision History

Report No.	Version	Description	Issue Date	Note
R25S1040063-U401	V01	Initial Report	2025-12-05	Valid

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1. General Information

1.1. Applicant

Actiontec Electronics Inc.

2445 Augustine Drive Suite 501, Santa Clara, California 95054, United States

1.2. Manufacturer

Actiontec Electronics Inc.

2445 Augustine Drive Suite 501, Santa Clara, California 95054, United States

1.3. Testing Facility

☒	Test Site - MRT Suzhou Laboratory	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Location (Suzhou - Wujiang)	
	Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People's Republic of China	
☐	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	Test Site - MRT Shenzhen Laboratory	
	Laboratory Location (Shenzhen)	
☐	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
	Test Site - MRT Taiwan Laboratory	
☐	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: 3261	
	FCC: 291082, TW3261	ISED: TW3261

1.4. Product Information

Product Name	Wi-Fi 7 Outdoor Mesh AP
Model No.	WF-672A
Brand Name	Actiontec
Wi-Fi Specification	802.11a/b/g/n/ac/ax/be
Bluetooth Specification	Bluetooth_LE
Antenna Specification	Refer to clause 1.5
Operating Temp.	-40 ~ 65 °C
Power Type	PoE Adapter
Operating Environment	Outdoor Use
Accessory(ies)	
PoE Adapter #1	Model No.: PoE 35-54 A Input: 100-240 V ~ 50/60 Hz, Max.1.0 A Output: 54 V = 0.65 A
PoE Adapter #2	Model No.: EN30GT Input: 100-240 V ~ 50/60 Hz, Max.1.0 A Output: 52 V = 0.58 A
Notes: - The information of the EUT (Equipment Under Test) was provided by the manufacturer. The accuracy, completeness, and validity of the information are solely the responsibility of the manufacturer. - The product is available in two configurations. Configuration 1 can be powered by AC 120 V/60 Hz or by 802.3 at PoE, while Configuration 2 supports PoE power only. The difference between the two configurations lies in the AC power module, all other aspects are identical.	

1.5. Antenna Details

Antenna Type	Frequency Band (MHz)	Antenna Gain (dBi)
BLE Antenna		
PIFA	2400 ~ 2483.5	4.14

Antenna Type	Frequency Band (MHz)	N _{SS}		Antenna Gain (dBi)				STBC	CDD		Elevation angle	
								Directi onal Gain (dBi)	Directional Gain (dBi)		above 30° (dBi)	
	Gain (dBi)	For Power	For PSD	Correla ted	Uncorr elated							
2.4G Wi-Fi Antenna												
Dipole	2400 ~ 2483.5	2	1	7.51	6.80	--	--	6.88	6.88	9.88	--	--
5G Wi-Fi Antenna for Tri-band mode												
Dipole	5150 ~ 5250	2	1	10.86	10.82	--	--	10.81	10.81	13.82	-1.55	-4.55
	5250 ~ 5350	2	1	10.86	10.82	--	--	10.81	10.81	13.82	--	--
	5470 ~ 5725	2	1	9.77	9.76	--	--	9.53	9.53	12.54	--	--
	5725 ~ 5850	2	1	9.47	10.82	--	--	9.23	9.23	12.23	--	--
5G Wi-Fi Antenna for Dual-band mode												
Dipole	5150 ~ 5250	4	1	10.86	10.82	11.83	10.61	11.01	11.01	17.02	1.26	-4.75
	5250 ~ 5350	4	1	10.86	10.82	11.83	10.61	11.01	11.01	17.02	--	--
	5470 ~ 5725	4	1	9.77	9.76	10.44	9.87	9.68	9.68	15.70	--	--
	5725 ~ 5850	4	1	9.47	10.82	10.58	10.55	9.90	9.90	15.90	--	--
6G Wi-Fi Antenna												
Dipole	5925 ~ 6425	2	1	10.56	9.85	--	--	10.55	10.55	13.54	-1.25	-4.24
	6525 ~ 6875	2	1	10.05	10.69	--	--	10.35	10.35	13.35	-1.46	-4.45
Notes:												
1. The EUT supports CDD mode for 802.11a/b/g.												
2. The EUT supports STBC mode for 802.11n/ac/ax/be.												
3. All antenna information is provided by the manufacturer.												

1.6. Device Classification

According to the user manual, this device is classified as a Mobile Device. So, the RF exposure evaluation requirements of § 2.1091 for mobile device exposure conditions subject to MPE limits.

1.7. Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:



- FCC Part 2.1091
- KDB 447498 D04 Interim General RF Exposure Guidance v01

2. RF Exposure Evaluation

2.1. Limits

According to FCC §1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in §1.1307(b)

Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
0.3 ~ 3.0	614	1.63	*(100)	≤6
3.0 ~ 30	1842/f	4.89/f	*(900/f ²)	<6
30 ~ 300	61.4	0.163	1.0	<6
300 ~ 1500	--	--	f/300	<6
1500 ~ 100000	--	--	5	<6
(B) Limits for General Population/ Uncontrolled Exposures				
0.3 ~ 1.34	614	1.63	*(100)	<30
1.34 ~ 30	824/f	2.19/f	*(180/f ²)	<30
30 ~ 300	27.5	0.073	0.2	<30
300 ~ 1500	--	--	f/1500	<30
1500 ~ 100000	--	--	1.0	<30

f= frequency in MHz. * = Plane-wave equivalent power density.

2.2. MPE Exemptions

For single RF sources (i.e., any single fixed RF source, mobile device, or portable device, as defined in paragraph §1.1307(b)(2) of this section): A single RF source is exempt if:

(Option A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph §1.1307(b)(3)(ii)(A) of this section.

Medical implant devices may only use this exemption and that in paragraph §1.1307(b)(3)(ii)(A);

(Option B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P is given by:

$$P_{th}(mW) = \{ERP_{20cm}(d/20 \text{ cm})^x \quad d \leq 20 \text{ cm}$$

$$P_{th}(mW) = \{ERP_{20cm} \quad 20 \text{ cm} < d \leq 40 \text{ cm}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20cm}\sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20cm}(mW) = \{2040f \quad 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz}$$

$$ERP_{20cm}(mW) = \{3060 \quad 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz}$$

(Option C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to §1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source Frequency (MHz)	Threshold ERP (watts)
0.3 ~ 1.34	1920R ²
1.34 ~ 30	3450R ² /f ²
30 ~ 300	3.83R ²
300 ~ 1500	0.0128R ² f
1500 ~ 100000	19.2R ²

For multiple RF sources: Multiple RF sources are exempt if:

(A) The available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required). This exemption may not be used in conjunction with other exemption criteria other than those in paragraph §1.1307(b)(3)(i)(A) of this section. Medical implant devices may only use this exemption and that in paragraph §1.1307(b)(3)(i)(A).

(B) in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(B) of this section for P_{th} , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph §1.1307(b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

$P_{th,i}$ = the exemption threshold power (P_{th}) according to paragraph §1.1307(b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i .

ERP_j = the ERP of fixed, mobile, or portable RF source j .

$ERP_{th,j}$ = exemption threshold ERP for fixed, mobile, or portable RF source j , at a distance of at least $\lambda/2\pi$ according to the applicable formula of paragraph §1.1307(b)(3)(i)(C) of this section.

$Evaluated_k$ = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

$Exposure Limit_k$ = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k , as applicable from §1.1310 of this chapter.

2.3. Calculated Result

Product	Wi-Fi 7 Outdoor Mesh AP
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Tune-up Conducted Power (dBm)	Antenna Gain (dBi)	Tune-up ERP (dBm)	Tune-up ERP (mW)
2.4G Wi-Fi	2412 ~ 2462	27.00	6.88	31.73	1489.36
5G Wi-Fi	5180 ~ 5825	27.00	9.90	34.75	2985.38
Bluetooth-LE	2402 ~ 2480	12.00	4.14	13.99	25.06

Notes:

1. The Tune-up Power of Bluetooth-LE (dBm) is referenced from report No.: R25S1040063-U201.
2. The Tune-up Power of 2.4G Wi-Fi (dBm) is referenced from report No.: R25S1040063-U202.
3. The Tune-up Power of 5G Wi-Fi (dBm) is referenced from report No.: R25S1040063-U203.
4. Tune-up ERP (dBm) = Tune up Conducted Power (dBm) + Antenna Gain (dBi) - 2.15.

For single RF source, Option C

Test Mode	Frequency Band (MHz)	$\lambda / 2 \pi$ (m)	R (m)	Tune-up ERP (mW)	Thresholds ERP (mW)
2.4G Wi-Fi	2412 ~ 2462	0.02	0.40	1489.36	3072
5G Wi-Fi	5180 ~ 5825	0.01	0.40	2985.38	3072
Bluetooth-LE	2402 ~ 2480	0.02	0.40	25.06	3072

Note: The distance R used in the MPE calculation is specified in the user manual.

CONCLUSION:

The device qualifies for RF exposure test exemption at 40 cm distance.

The End