



RF Exposure Evaluation Declaration

FCC ID: LNQWEB7200
Applicant: Actiontec Electronics, Inc.
Application Type: Certification
Product: WiFi 6 Extender
Model No.: WEB7200
Brand Name: Actiontec
FCC Classification: Digital Transmission System (DTS)
Unlicensed National Information Infrastructure (NII)
Test Procedure(s): FCC part 2.1091

Reviewed By: 

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Approved By: 

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The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2102RSU047-U5	Rev. 01	Initial Report	07-08-2021	Valid

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1.4. Product Information

Product Name	WiFi 6 Extender
Model No.	WEB7200
Brand Name	Actiontec
Operating Temperature	0 ~ 40°C
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Antenna Information	Refer to section 1.6
Accessories	
AC/DC Adapter 1#	Model: MS-V1500R120-018H0-US Input: 100-240V ~ 50/60Hz, 0.6A MAX Output: 12V, 1.5A
AC/DC Adapter 2#	Model: RD1201500-C55-153MG Input: 100-240V ~ 50-60Hz 0.6A Output: 12V, 1.5A
AC/DC Adapter 3#	Model: ADS024T-W 120150 Input: 100-240V ~ 50-60Hz 0.6A Output: 12V, 1.5A

1.5. Description of Available Antennas

Antenna Type	Ant Port	Frequency Band (GHz)	Tx Paths	Antenna Gain (dBi)	Directional Gain (dBi)	
					For Power	For PSD
PCB Antenna	DB1	2.4 ~ 2.5	2	4.56	4.56	7.57
	DB2	5.1 ~ 5.85		4.32	4.32	7.33
Onboard Metal DFS Antenna	DFS	5.1 ~ 5.85	N/A	4.32	--	--

Remark:

1. The EUT supports Cyclic Delay Diversity (CDD) mode.
2. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.
3. Onboard Metal DFS Antenna only for receive to detect radar signals.

2. RF Exposure Evaluation

2.1. Limit of Maximum Permissible Exposure

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				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

r = distance between observation point and center of the radiator in cm

P_d is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Calculated Results

Product	WiFi 6 Extender
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
Wi-Fi	2412 ~ 2462	30.28	0.2122	1
	5150 ~ 5350	28.26	0.1333	1
	5470 ~ 5725			
	5725 ~ 5850			

CONCLUSION:

Therefore, the Max Power Density at R (20 cm) = $0.2122 \text{ mW/cm}^2 + 0.1333 \text{ mW/cm}^2 = 0.3455 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$.

So the safety distance is 20cm for WiFi 6 Extender installed without any other radio equipment.

_____ The End _____

Appendix A - EUT Photograph

Refer to "2102RSU047-UE" file.