



RF Exposure Evaluation Declaration

FCC ID: LNQF3295SEV

Applicant: Actiontec Electronics, Inc.

Application Type: Certification

Product: Kinetic VoIP Modem

Model No.: T3280V

Brand Name: Actiontec

FCC Classification: Digital Transmission System (DTS)
Unlicensed National Information Infrastructure (NII)

Test Procedure(s): FCC part 2.1091

Reviewed By:

Sunny Sun

Approved By:

Robin Wu



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.

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
2103RSU011-U5	Rev. 01	Initial Report	06-11-2021	Valid

CONTENTS

Description	Page
1. General Information	4
1.1. Applicant.....	4
1.2. Manufacturer	4
1.3. Testing Facility	4
1.4. Product Information	5
1.5. Description of Available Antennas	5
2. RF Exposure Evaluation	6
2.1. Limit of Maximum Permissible Exposure.....	6
2.2. Calculated Results	7
Appendix A - EUT Photograph	8

1. General Information

1.1. Applicant

Actiontec Electronics, Inc.
3301 Olcott St, Santa Clara, CA 95054, United States

1.2. Manufacturer

Actiontec Electronics, Inc.
3301 Olcott St, Santa Clara, CA 95054, United States

1.3. Testing Facility

<input checked="" type="checkbox"/>	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 Accreditations
	A2LA: 3628.01 CNAS: L10551
	FCC: CN1166 ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020
<input type="checkbox"/>	Test Site – MRT Suzhou Laboratory
	Laboratory Location (Suzhou)
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Suzhou, China
	Laboratory Accreditations
	A2LA: 3628.02 CNAS: L10551
	FCC: CN1284 ISED: CN0105
<input type="checkbox"/>	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: L3261-190725
	FCC: 291082, TW3261 ISED: TW3261

1.4. Product Information

Product Name	Kinetic VoIP Modem
Model No.	T3280V
Brand Name	Actiontec
Operating Temperature	0 ~ 40°C
Wi-Fi Specification	802.11a/b/g/n/ac/ax
Accessories	
AC/DC Adapter 1#	Model: RD1203000-C55-195MG Input: 100-240V ~ 50/60Hz, 1.5A MAX Output: 12VDC, 3.0A
AC/DC Adapter 2#	Model: CDS036-W120U Input: 120VAC, 50/60Hz, 0.8A Output: 12VDC, 3.0A

1.5. Description of Available Antennas

Antenna Type	Ant Port	Freq. Band (MHz)	T _x Paths	Max Antenna Gain (dBi)	Directional Gain (dBi)	
					For Power	For PSD
PCB Antenna	Ant 0	2412 ~ 2462	3	4.86	4.86	6.49
PIFA Antenna	Ant 1					
PCB Antenna	Ant 2					
PIFA Antenna	Ant 0	5150 ~ 5250	4	5.32	5.32	6.19
PIFA Antenna	Ant 1	5250 ~ 5350		5.38	5.38	6.19
PIFA Antenna	Ant 2	5470 ~ 5725		5.64	5.64	6.12
PCB Antenna	Ant 3	5725 ~ 5850		5.89	5.89	6.63

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. For PSD directional gain calculation refer to FCC Inquiry Tracking Number: 926285.

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	Kinetic VoIP Modem
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 25 cm (mW/cm ²)	Limit (mW/cm ²)
Wi-Fi	2412 ~ 2462	33.31	0.2728	1
	5150 ~ 5350	34.98	0.4008	1
	5470 ~ 5725			
	5725 ~ 5850			

CONCLUSION:

Therefore, the Max Power Density at R (25 cm) = $0.2728 \text{ mW/cm}^2 + 0.4008 \text{ mW/cm}^2 = 0.6736 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$.

So the safety distance is 25cm for Kinetic VoIP Modem installed without any other radio equipment.

_____ The End _____

Appendix A - EUT Photograph

Refer to "2103RSU011-UE" file.