



RF Exposure Evaluation Declaration

FCC ID: PIDAV2700CBM
Applicant: Airspan Networks Inc
Product: AirVelocity2700, 3.7-4.0GHz (n77P/78P),FM,PoE/DC
Model No.: AV27-F370-P4CXP-FM-C
AV27-F370-P4CXP-CN-C
Brand Name: Airspan
Test Procedure(s): FCC part 2.1091

Reviewed By:

Kevin Guo

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.

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Revision History

Report No.	Version	Description	Issue Date	Note
2111RSU018-U2	Rev. 01	Initial Report	03-04-2022	Valid

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1. General Information

1.1. Applicant

Airspan Networks Inc

777 Yamato Road Suite 310 Boca Raton FL 33431 USA

1.2. Manufacturer

Airspan Networks Inc

777 Yamato Road Suite 310 Boca Raton FL 33431 USA

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:	<input type="checkbox"/> R-20025	<input type="checkbox"/> G-20034	<input type="checkbox"/> C-20020	<input type="checkbox"/> T-20020	
	<input type="checkbox"/> R-20141	<input type="checkbox"/> G-20134	<input type="checkbox"/> C-20103	<input type="checkbox"/> T-20104	
<input type="checkbox"/>	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		
<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	AirVelocity2700, 3.7-4.0GHz (n77P/78P),FM,PoE/DC
Model No.	AV27-F370-P4CXP-FM-C, AV27-F370-P4CXP-CN-C
Test Device Serial No.	1EU214500011
Operating Band	5G NR n77/n78
Antenna Information	Refer to section 1.5
Voltage Range	DC 42-57V/1A PoE 41.1-57V/1A
<p>Remark:</p> <ol style="list-style-type: none"> The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer. The difference between the models is only the different antennas, AV27-F370-P4CXP-FM-C configures with internal antenna, AV27-F370-P4CXP-CN-C configures with external antenna. 	

1.5. Antenna Details

Frequency Range	Antenna Type	Antenna Gain
3700 ~ 3980	Omni	5.00 dBi
<p>Remark:</p> <ol style="list-style-type: none"> This device can operate with 2Tx and 4Tx mode. This device operates with Multiple Antennas Using Multiple-input, Multiple-output (MIMO) Technology for Uncorrelated Transmission. 		

2. RF Exposure Evaluation

2.1. Test 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				
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: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

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. Test Result

Product	AirVelocity2700, 3.7-4.0GHz (n77P/78P),FM,PoE/DC
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to clause 1.5.

Test Mode	Frequency Band (MHz)	Max. Tune-up Power as Per Chain (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	Compliance Distance (cm)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)
n77/n78	3700 ~ 3980	25.5	5.0	36.52	20.00	0.8927	1

Note: Maximum EIRP = $10 \cdot \log(4 \cdot 10^{\text{Max. Tune-up Power as Per Chain}/10}) + \text{Antenna Gain}$

CONCLUSION:

The Power Density at R (20 cm) = $0.8927 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$.

So the compliance distance is 20cm for device installed without any other radio equipment.

Appendix A - EUT Photograph

Refer to “2111RSU018-UE” file.

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