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Report No.: 2111RSU018-U2 Report Version: V01 Issue Date: 03-04-2022

# **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:

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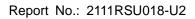
ACCREDITED

TESTING LABORATORY
CERTIFICATE #3628.01

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 Valid	
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

$\boxtimes$	Test Site – MRT Suzhou Laboratory  Laboratory Location (Suzhou - Wuzhong)						
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China						
	Laboratory Loca	tion (Suzhou - SIF	<b>'</b> )				
	4b Building, Liand	do U Valley, No.200	Xingpu Rd., Shengpe	u Town, Suzhou Indu	ıstrial Park, China		
	Laboratory Accreditations						
	A2LA: 3628.01 CNAS: L10551						
	FCC: CN1166		ISED:	CN0001			
		□R-20025	□G-20034	□C-20020	□T-20020		
	VCCI:	□R-20141	□G-20134	□C-20103	□T-20104		
	Test Site - MRT	Shenzhen Laborat	tory				
	Laboratory Loca	tion (Shenzhen)					
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, C						
	Laboratory Accreditations						
	A2LA: 3628.02		CNAS	: L10551			
	FCC: CN1284		ISED:	CN0105			
	Test Site - MRT	Taiwan Laboratory	1				
	Laboratory Loca	tion (Taiwan)					
	No. 38, Fuxing 2n	nd Rd., Guishan Dis	t., Taoyuan City 333,	Taiwan (R.O.C.)			
Laboratory Accreditations							
	TAF: L3261-1907	25					
	FCC: 291082, TW	/3261	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	

#### Remark:

- The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.
- 2. The difference between the models is only the different antennas, AV27-F370-P4CXP-FM-C configurates with internal antenna, AV27-F370-P4CXP-CN-C configurates with external antenna.

#### 1.5. Antenna Details

Frequency Range	Antenna Type	Antenna Gain
3700 ~ 3980	Omni	5.00 dBi

#### Remark:

- 1. This device can operate with 2Tx and 4Tx mode.
- 2. 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	Electric Field	Magnetic Field	Power Density	Average Time (Minutes)			
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm <sup>2</sup> )				
	(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:  $Pd = (Pout*G)/(4*pi*r^2)$ 

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd is the limit of MPE, 1mW/cm<sup>2</sup>. 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.

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

Note: Maximum EIRP = 10\*Log(4\*10 Max. Tune-up Power as Per Chain/10) + Antenna Gain

#### **CONCLUSION:**

The Power Density at R (20 cm) = 0.8927mW/cm<sup>2</sup> < 1mW/cm<sup>2</sup>.

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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