# RF Exposure Evaluation Declaration

**FCC ID:** PIDAV2700

**Applicant:** Airspan Networks Inc

**Application Type:** Certification

**Product:** AirVelocity2700, 3.55-3.7GHz (n48),FM,PoE/DC

**Model No.:** AV27-N48-P4CXP-FM-C

**Brand Name:** Airspan

**Test Procedure(s):** FCC part 2.1091

Reviewed By: Sunny Sun

Approved By: Robin Wu

# Revision History

| Report No. | Version | Description | Issue Date | Note |
|---|---|---|---|---|
| 2106RSU047-U3 | Rev. 01 | Initial Report | 10-18-2021 | Valid |
| | | | | |

# CONTENTS

# 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

| | | |
|---|---|---|
| ☒ | **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 | |
| ☐ | **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 |
| ☐ | **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, 3.55-3.7GHz (n48),FM,PoE/DC |
| Model No. | AV27-N48-P4CXP-FM-C |
| Operating Band (s) | 5G NR n48 Band |
| CBSD Category | Category A CBSD |
| Frequency Range | 3550 ~ 3700 MHz |
| Modulation Type | QPSK, 16QAM, 64QAM, 256QAM |
| Max EIRP Density | 2Tx Mode: 26.56 dBm/10MHz; 4Tx Mode: 23.51 dBm/10MHz |
| Antenna Information | Refer to section 1.5 |

## 1.5. Description of Available Antennas

| Band Support | Antenna Type | Manufacturer | Antenna Gain |
|---|---|---|---|
| n48 | Omni Internal | Galtronics | 5.00 dBi |

Remark:

1. This device can operate with 2Tx and 4Tx mode.
2. This device operate with Multiple Antennas Using Multiple-input, Multiple-output (MIMO) Technology for Uncorrelated Transmission.
3. The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.

# 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: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in $mW/cm^2$

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, $1mW/cm^2$. 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 | AirVelocity2700, 3.55-3.7GHz (n48),FM,PoE/DC |
| Test Item | RF Exposure Evaluation |

| Test Mode | Frequency Band (MHz) | Maximum EIRP (dBm) | Tune-up Factor | Pd ($mW/cm^2$) | Limit ($mW/cm^2$) | Compliance Distance (cm) |
|---|---|---|---|---|---|---|
| n48 | 3550 ~ 3700 | 28 | 2 | 0.1989 | 1 | 20 |

**CONCLUSION:**

The Compliance Distance is 20cm for AirVelocity2700, 3.55-3.7GHz (n48),FM,PoE/DC installed without any other radio equipment.

The End

# Appendix A - EUT Photograph

Refer to “2106RSU047-UE” file.