



RF Exposure Evaluation Report

Application No.: SZEM2009009876CR
Applicant: Airspan Networks Inc
Address of Applicant: 777 Yamato Rd Suite 310, Boca Raton, Florida 33431, United States
Manufacturer: Airspan Networks Inc
Address of Manufacturer: 777 Yamato Rd Suite 310, Boca Raton, Florida 33431, United States
Equipment Under Test (EUT):
EUT Name: B42H/B43L/B48
Model No.: My-Pro-FC-B42H-43L-48-C12-CB
Trademark: Airspan
FCC ID: PIDASPOT5410
 47 CFR Part 1.1307
Standards: 47 CFR Part 1.1310
 47 CFR Part 2.1091
Date of Receipt: 2020-08-10
Date of Test: 2020-08-10 to 2020-09-29
Date of Issue: 2020-12-16

Test Result :	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu
 EMC Laboratory Manager



2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-12-16		Original

Authorized for issue by:			
			
		<hr/> Calvin Weng /Project Engineer	
			
		<hr/> Eric Fu /Reviewer	



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4 General Information

4.1 General Description of EUT

Power supply:	Adapter Model NO.: G0720-480-050 Input: 100-240V~50/60Hz, 0.75A Output: 48.0V, 0.5A
Test voltage:	AC 120V, 60Hz
Cable:	AC cable: 0.6m unshielded
Sample Type:	Mobile production
LTE Operation Frequency Band:	48
Frequency range:	3550-3700 MHz
Modulation Type:	UL: QPSK, 16QAM, 64QAM DL: QPSK, 16QAM, 64QAM, 256QAM
LTE Release Version:	R11
LTE Power Class:	Level 3
CA Capability MIMO:	DL 4CC 2X2 MIMO DL 3CC 2X2 MIMO DL 2CC 2X2 MIMO DL 2CC 4X4 MIMO DL 1CC 2X2 MIMO DL 1CC 4X4 MIMO UL 1CC 2X2 MIMO UL 2CC SISO Support Intra-band contiguous/non-contiguous CA and support UL MIMO
Antenna Type:	Panel Antenna Ant 4: RX Ant 3: TX & RX Ant 2: TX & RX Ant 1: RX
Antenna Gain:	18dBi
SIM Card:	This device has only one SIM Card sockets.



4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

4.4 Deviation from Standards

None.

4.5 Abnormalities from Standard Conditions

None.

4.6 Other Information Requested by the Customer

None.



5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout * G) / (4 * \pi * R^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

For Uncontrolled Environment, the MPE limit of 1500MHz to 100000MHz is 1.0 mW/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.

5.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.



5.1.3 EUT RF Exposure Evaluation

1) Test Results

For LTE Band 48:

The max tune-up tolerance power Into Antenna & RF Exposure Evaluation Distance:

SISO

Antenna	Max Antenna Gain (dBi)	Max Antenna Gain (Numeric)	Max tune-up tolerance power (dBm)	Max tune-up Tolerance power to Antenna (mW)	Power Density at R = 100 cm (mW/cm ²)	Limit (mW/cm ²)	MPE Ratios	Result
Ant3	18	63.10	24.0	251.19	0.1261	1.0	0.1261	PASS

MIMO

Antenna	Max Antenna Gain (dBi)	Max Antenna Gain (Numeric)	Max tune-up tolerance power (dBm)	Max tune-up Tolerance power to Antenna (mW)	Power Density at R=100 cm (mW/cm ²)	Limit (mW/cm ²)	MPE Ratios	Result
Ant3+2	21.01	126.18	25.0	316.23	0.3175	1.0	0.3175	PASS

Note: Refer to report No. SZEM200900987602 or EUT test Max Conducted Output Power value.

The distance (6th column) calculated from the Fries transmission formula is far greater than 100 cm separation requirement.

Since the SAR Exclusion Threshold Level is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing.

- End of the Report -

