



FCC TEST REPORT

FCC ID: 2AYHLFRL-W5A

Product	:	FARLINK MESH WiFi AC2100
Model Name	:	FRL-W5A
Additional model	:	N/A
Brand	:	N/A
Report No.	:	PTC19102401802E-FC04
Prepared for		
Shenzhen Jetslink Electronic Technology Co., Ltd.		
Room 103-1,Building 3rd,Chao loft Cultural and Creative Park,No150,Huarui Rd,Langkou Neighborhood,Dalang St,Longhua Dist,Shenzhen City.		
Prepared by		
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2 TEST RESULT CERTIFICATION

Applicant's name : Shenzhen Jetslink Electronic Technology Co., Ltd.
Address : Room 103-1,Building 3rd,Chao loft Cultural and Creative Park,No150,Huarui Rd,Langkou Neighborhood,Dalang St,Longhua Dist,Shenzhen City.
Manufacture's name : Shenzhen Jetslink Electronic Technology Co., Ltd.
Address : Room 103-1,Building 3rd,Chao loft Cultural and Creative Park,No150,Huarui Rd,Langkou Neighborhood,Dalang St,Longhua Dist,Shenzhen City.
Product name : FARLINK MESH WiFi AC2100
Model name : FRL-W5A
Test procedure : KDB 447498 D01 General RF Exposure Guidance v06
Test Date : Sep. 10, 2020 to Dec. 11, 2020
Date of Issue : Dec. 11, 2020
Test Result : Pass

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Test Engineer:

A handwritten signature in black ink that reads "Leo Yang" with a long horizontal stroke extending to the right.

Leo Yang / Engineer

Technical Manager:

A handwritten signature in black ink that appears to read "Chris Du" in a stylized, cursive font.

Chris Du / Manager



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Report No.: PTC19102401802E-FC04

3 Test Summary

Test Items	Test Requirement	Result
Maximum Permissible Exposure (Exposure of Humans to RF Fields)	1.1307(b)(1)	PASS
Remark:		
N/A: Not Applicable		



4 General Information

4.1 General Description of E.U.T.

Product Name	:	FARLINK MESH WiFi AC2100
Model Name	:	FRL-W5A
Additional model	:	N/A
Model Description	:	N/A
Bluetooth Version	:	N/A
Operating frequency	:	WiFi 2.4G:802.11b/g/n HT20/H40: 2412-2462MHz Wifi 5.1G:802.1a20/n20/n40/ac20/ac40/ac80:5180MHz~5240MHz Wifi 5.8G:802.1a20/n20/n40/ac20/ac40/ac80:5745MHz~5825MHz
Type of Modulation	:	WIFI 2.4G:DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; WIFI 5.1G:OFDM with BPSK/QPSK/16QAM/64QAM/256QAM WIFI 5.8G:OFDM with BPSK/QPSK/16QAM/64QAM/256QAM
Antenna installation:	:	PIFA Antenna
Antenna Gain: The directional gain	:	WIFI:2.4g:4.77dbi WIFI:5g:5.43dbi WIFI:2.4g:7.78dbi WIFI:5g:11.45dbi
Power supply	:	Adapter model: Input:AC100-240V,50/60Hz, ;Output : DC12V 1.5A
Adapter	:	Input:AC100-240V,50/60Hz, ;Output : DC12V 1.5A



5 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

5.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

5.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842 / f	4.89 / f	(900 / f)*	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

Frequency Range	Electric Field	Magnetic Field	Power Density (S)	Averaging Time
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density



5.3 MPE Calculation Method

$$E \text{ (V/m)} = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } P_d \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$P_d = \frac{30 \times P \times G}{377 \times d^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

5.4 Test Result

Item	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Peak Output Power (mw)	Power Density (mW/cm ²)	Limit of Power Density (mW/cm ²)	Result
2.4G:WIFI A	3	18.52	71.12	0.0424	1	Pass
2.4G:WIFI B	3	18.50	70.79	0.0422	1	Pass
ANT A+ANT B	6	16.61	45.81	0.0547	1	Pass
5.1G:WIFI A	3.49	15.84	38.37	0.0267	1	Pass
5.1G:WIFI B	3.49	16.12	40.93	0.0284	1	Pass
5.1G:WIFI C	3.49	16.42	43.85	0.0305	1	Pass
5.1G:WIFI D	3.49	14.06	25.47	0.0177	1	Pass
ANT A+B+C+D	13.96	21.18	131.22	0.3645	1	Pass
5.8G:WIFI A	3.49	13.60	22.91	0.0159	1	Pass
5.8G:WIFI B	3.49	13.72	23.55	0.0164	1	Pass
5.8G:WIFI C	3.49	11.56	14.32	0.0099	1	Pass
5.8G:WIFI D	3.49	12.06	16.07	0.0112	1	Pass
ANT A+B+C+D	13.96	18.37	68.71	0.1909	1	Pass

NOTE:2.4G wifi+5.1Gwifi +5.8Gwifi simultaneous (worst case):0.0547 +0.3645+0.1909 =0.6101