

TEST REPORT

Product Name : WIFI module
Brand Mark : Fn-link
Model No. : H132A-S
Report Number : BLA-EMC-202204-A1203
FCC ID : 2AATL-H132AS
Date of Sample Receipt : 2022/4/7
Date of Test : 2022/4/7 to 2022/6/2
Date of Issue : 2022/6/2
Test Standard : 47 CFR Part 1.1307, Part 2.1093, KDB
447498
Test Result : Pass

Prepared for:

FN-LINK TECHNOLOGY LIMITED

**No.8, Litong Road, Liuyang Economic & Technical Development Zone,
Changsha, Hunan, CHINA**

Prepared by:

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2022/6/2



REPORT REVISE RECORD

Version No.	Date	Description
00	2022/6/2	Original

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
RF Exposure	47 CFR Part 1.1307, Part 2.1093, KDB 447498	CFR 47 Part 2.1093	CFR 47 Part 2.1093	PASS

2 GENERAL INFORMATION

Applicant	FN-LINK TECHNOLOGY LIMITED?
Address	No.8, Litong?Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan,?CHINA
Manufacturer	FN-LINK TECHNOLOGY LIMITED?
Address	No.8, Litong?Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan,?CHINA
Factory	FN-LINK TECHNOLOGY LIMITED?
Address	No.8, Litong?Road, Liuyang Economic & Technical Development Zone, Changsha, Hunan,?CHINA
Product Name	WIFI module
Test Model No.	H132A-S

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	V1.0
Software Version	V1.0
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Number of Channels:	802.11b/g/n(HT20):11 802.11n(HT40):7
Antenna Type:	External Antenna
Antenna Gain:	4dBi

4 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province,
China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

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5 RF EXPOSURE COMPLIANCE REQUIREMENT

5.1 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: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

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, 1 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.

5.2 TEST PROCEDURE

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

5.3 EUT RF EXPOSURE EVALUATION

Antenna Gain: 4dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.512 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

2.4G WIFI 802.11b(Worse case)

Channel	Frequency (MHz)	Max Conducted Peak Output Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
Highest	2437	16.121	40.935	0.0205	1.0	PASS

Note: Refer to report No. BLA-EMC-202204-A1202/03 for EUT test Max Conducted Peak Output Power value. The distance r (4th column) calculated from the Fries transmission formula is far greater than 20 cm separation Requirement

----END OF REPORT----

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