

# 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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Date:

2022/6/2



**REPORT REVISE RECORD**

<b>Version No.</b>	<b>Date</b>	<b>Description</b>
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

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## 2 GENERAL INFORMATION

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

## 3 GENERAL DESCRIPTION OF E.U.T.

<b>Hardware Version</b>	V1.0
<b>Software Version</b>	V1.0
<b>Operation Frequency:</b>	802.11b/g/n(HT20): 2412MHz to 2462MHz 802.11n(HT40): 2422MHz to 2452MHz
<b>Modulation Type:</b>	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
<b>Channel Spacing:</b>	5MHz
<b>Number of Channels:</b>	802.11b/g/n(HT20):11 802.11n(HT40):7
<b>Antenna Type:</b>	External Antenna
<b>Antenna Gain:</b>	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,  
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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 <sup>2</sup> )	Averaging time (minutes)
<b>(A) Limits for Occupational/Controlled Exposures</b>				
0.3–3.0 .....	614	1.63	*(100)	6
3.0–30 .....	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300 .....	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
<b>(B) Limits for General Population/Uncontrolled Exposure</b>				
0.3–1.34 .....	614	1.63	*(100)	30
1.34–30 .....	824/f	2.19/f	*(180/f <sup>2</sup> )	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/cm<sup>2</sup>

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1 mW/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.

### 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 <sup>2</sup> )	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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