



RF TEST REPORT

Product Name: WiFi6 Wireless Router Module

Model Name: HLK-RM65, HLK-RM65L, HLK-RM65A, HLK-RM65B,
HLK-RM65C, HLK-RM65D

FCC ID: 2AD56HLK-RM65

Issued For : Shenzhen Hi-Link Electronic CO.,Ltd

1705, 1706, 1709A, Building E, Xinghe WORLD, Minle
Community, Minzhi Street, Longhua District, Shenzhen

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
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Report Number: LGT25C210HA02

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Date of Issue: May 30, 2025

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TEST REPORT CERTIFICATION

Applicant: Shenzhen Hi-Link Electronic CO.,Ltd

Address: 1705, 1706, 1709A, Building E, Xinghe WORLD, Minle Community,
Minzhi Street, Longhua District, Shenzhen

Manufacturer: Shenzhen Hi-Link Electronic CO.,Ltd

Address: 1705, 1706, 1709A, Building E, Xinghe WORLD, Minle Community,
Minzhi Street, Longhua District, Shenzhen

Product Name: WiFi6 Wireless Router Module

Trademark: Hi-Link

Model Name: HLK-RM65, HLK-RM65L, HLK-RM65A, HLK-RM65B,
HLK-RM65C, HLK-RM65D

Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47 CFR §2.1091 KDB 447498 D01 General RF Exposure Guidance v06	PASS

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Revision History

Rev.	Issue Date	Revisions
00	May 30, 2025	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	WiFi6 Wireless Router Module	
Trademark:	Hi-Link	
Model Name:	HLK-RM65	
Series Model:	HLK-RM65L, HLK-RM65A, HLK-RM65B, HLK-RM65C, HLK-RM65D	
Model Difference:	Except for the different sizes of FLASH and memory capacity, everything else is the same.	
Frequency Bands:	2.4G WLAN	802.11b/g/n/ax(20MHz): 2412~2462MHz 802.11n/ax(40MHz):2422~2452MHz
	5G WLAN	IEEE 802.11a/n(HT20)/ ac(VHT20)/ax(HE20): 5.180GHz-5.240GHz IEEE 802.11n(HT40)/ ac(VHT40)/ax(HE40): 5.190GHz-5.230GHz IEEE 802.11 ac(VHT80)/ax(HE80): 5.210GHz IEEE 802.11 ac(VHT160)/ax(HE160): 5.250GHz
		IEEE 802.11a/n(HT20)/ ac(VHT20)/ax(HE20): 5.260GHz-5.320GHz IEEE 802.11 n(HT40)/ ac(VHT40)/ax(HE40): 5.270GHz-5.310GHz IEEE 802.11 ac(VHT80)/ax(HE80): 5.290GHz
		IEEE 802.11a/n(HT20)/ ac(VHT20)/ax(HE20): 5.500GHz-5.700GHz IEEE 802.11 n(HT40)/ ac(VHT40)/ax(HE40): 5.510GHz-5.670GHz IEEE 802.11 ac(VHT80)/ax(HE80): 5.530GHz-5.610GHz IEEE 802.11 ac(VHT160)/ax(HE160): 5.570GHz
		IEEE 802.11a/n(HT20)/ ac(VHT20)/ax(HE20): 5.745GHz-5.825GHz IEEE 802.11a/n(HT40)/ac(VHT40)/ax(HE40): 5.755GHz-5.795GHz IEEE 802.11 ac(VHT80)/ax(HE80): 5.775GHz
Rating:	Input: DC 3.3V 5A	
Hardware Version:	N/A	
Software Version:	N/A	



1.2 TEST LABORATORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate:	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
0.3-3.0	614	1.63	*(100)
3.0-30	1842/f	4.89/f	*(900/f ²)
30-300	61.4	0.163	1.0
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
0.3-1.34	614	1.63	*(100)
1.34-30	824/f	2.19/f	*(180/f ²)
30-300	27.5	0.073	0.2
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

F= Frequency in MHz

* = Plane-wave equivalent power density.

Friss Formula

Friss 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 the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



2.5 TEST RESULT

Turn up Result

Mode	Turn up Power
2.4G WIFI-802.11b	16±1dBm
2.4G WIFI-802.11g	15±1dBm
2.4G WIFI-802.11n(HT20)	15±1dBm
2.4G WIFI-802.11n(HT40)	15±1dBm
2.4G WIFI-802.11ax(HE20)	15.5±1dBm
2.4G WIFI-802.11ax(HE40)	15±1dBm
5G WIFI-802.11a	16.5±1dBm
5G WIFI-802.11n(HT20)	15±1dBm
5G WIFI-802.11n(HT40)	15±1dBm
5G WIFI-802.11ac(VHT20)	15.5±1dBm
5G WIFI-802.11ac(VHT40)	15±1dBm
5G WIFI-802.11ac(VHT80)	14.5±1dBm
5G WIFI-802.11ac(VHT160)	12±1dBm
5G WIFI-802.11ax(HE20)	15.5±1dBm
5G WIFI-802.11ax(HE40)	15.5±1dBm
5G WIFI-802.11ax(HE80)	14.5±1dBm
5G WIFI-802.11ax(HE160)	12±1dBm

The MPE result of worst mode:

RF Function	Frequency (MHz)	Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
2.4G WIFI	2437	17.00	50.12	3.76	2.38	0.024	1	0.024	Pass
5G WIFI	5260	17.50	56.23	4.69	2.94	0.033	1	0.033	Pass

Multiple transmission: $0.024 + 0.033 = 0.057 < 1$

Note:

1. The Maximum Power Density is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※