

Qingdao Richmat Intelligence Technology Inc

MPE ASSESSMENT REPORT

Report Type:

FCC MPE assessment report

Model:

HJC65 Ble

REPORT NUMBER:

2412B0803SHA-002

ISSUE DATE:

Mar 25, 2025

DOCUMENT CONTROL NUMBER:

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Applicant: Qingdao Richmat Intelligence Technology Inc
NO.78 Kongquehe 4th Road, Qingdao Clothing Industry park, Jimo,
Qingdao, Shandong Province, China.

Manufacturer: Qingdao Richmat Intelligence Technology Inc
NO.78 Kongquehe 4th Road, Qingdao Clothing Industry park, Jimo,
Qingdao, Shandong Province, China.

FCC ID: 2AJJGHJESP32

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:

KDB447498 D01 General RF Exposure Guidance v06

FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:

Project Engineer

Teddy Yin

REVIEWED BY:

Reviewer

Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
2412B0803SHA-002	Rev. 01	Initial issue of report	Mar 25, 2025

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Control box
Type/Model:	HJC65 Ble
Description of EUT:	The EUT is Control box that contains BLE function. The worst data is listed in the report.
Rating:	DC 29V, 50mA
EUT type:	☒ Table top ☐ Floor standing
Software Version:	/
Hardware Version:	/
Sample No.:	A250116-55-001
Sample received date:	Jan 17, 2025
Date of test:	Jan 20~Mar 18, 2025

1.2 Technical Specification

Frequency Range:	2402-2480MHz
Support Standards:	Bluetooth LE 4.0
Type of Modulation:	GFSK
Channel Number:	40
Data Rate:	1Mbps
Channel Separation:	2MHz
Antenna Information:	3.42dBi, PCB antenna(Declared by manufacturer)

1.3 Description of Test Facility

Name:	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized,	CNAS Accreditation Lab Registration No. CNAS L21189
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TEST REPORT

certified, or accredited by these organizations:	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 2412B0803SHA-001:

The maximum BLE EIRP = 13.21dBm = 20.94 mW;

Here R is chosen to be 20cm,

$$S = PG / (4\pi R^2) = 20.94 / (4 * 3.14 * 20 * 20) = 0.0042 \text{mW/cm}^2 < 1 \text{ mW/cm}^2$$

Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations at closer than this distance is not recommended.

***** END *****