

TEST REPORT

RF Exposure Evaluation

Report No.:	CISRR25101607402
Project No.:	CISR251016074
FCC ID:	2BST4-DGH1011
Applicant:	Huizhou Xinghe Vision Technology Co., Ltd
Address:	3rd Floor, Building B, Leting Wire Factory, Desai 3rd Industrial Zone, Zhongkai Avenue, Chenjiang Sub-district, Zhongkai High-tech Zone, Huizhou City
Manufacturer:	Huizhou Xinghe Vision Technology Co., Ltd
Address:	3rd Floor, Building B, Leting Wire Factory, Desai 3rd Industrial Zone, Zhongkai Avenue, Chenjiang Sub-district, Zhongkai High-tech Zone, Huizhou City
Product Name:	Low power battery machine
Trade Mark:	-
Model/Type reference:	DGH1011
Listed Model(s):	DGH1012,DGH1019,DGH1020,DGH1009,DGH1010,DGH1021,DGH1022, CD11,CD12
Standard:	47 CFR Part 2.1091
Issue date:	October 28, 2025
Test result:	Complied

Morgan Tan

Reviewed by: Morgan Tan


Approved by: Hans Hu

The test results relate only to the tested samples.

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1. APPLICABLE STANDARD

[47 CFR Part2.1091](#): Radio frequency radiation exposure evaluation: mobile devices

[ANSI C95.1–3999](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

[FCC KDB publication 447498 D01](#) General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

[47 CFR Part1.1307](#): Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

[47 CFR Part1.1310](#): Radio frequency radiation exposure limits.

2. REPORT VERSION

Version No.	Issue date	Description
00	October 28, 2025	Original

3. RADIO SPECIFICATION DESCRIPTION

WIFI-2.4GHz Band			
Supported type:	☒ 802.11b	☒ 802.11g	☒ 802.11n
	☐ 802.11ax		

Note: Please refer to RF report for detailed technical specifications

4. SIMULTANEOUS TRANSMISSION ANALYSIS

These devices use a single transmitter module and antenna for both WLAN .

5. TEST RESULT

5.1. SAR test exclusion Evaluation

Exclusion Limit:

KDB447498 D01 v06, Clause 4.3.1 b)

- **100 MHz to 1500 MHz**
 $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$ mW
- **1500 MHz and $\leq$ 6 GHz**
 $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$ mW

Result:

Passed

Test Data

Radio type	Frequency (GHz)	Maximum output power #1 (dBm)	Antenna gain #2 (dBi)	Maximum EIRP#3 (dBm)	Maximum tune-up EIRP#4 (dBm)	Minimum distance #5 (mm)	Exclusion Limit (dBm)	Result
WIFI 2.4G	2.462	8.31	3	11.31	12	200	32.03	PASS

Note

#1: This value comes from the RF test report.

#2: This value is declared by the applicant.

#3: $EIRP = \text{Maximum output power} + \text{Antenna gain}$.

#4: This value is declared by the applicant.

#5: This value is declared by the applicant.

5.2. Standalone transmission

Limit:

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 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)	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

Evaluation method:

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

Where

P_d = power density in mW/cm², **P_{out}** = output power to antenna in mW,

G = gain of antenna in linear scale, **P_i** = 3.1416,

R = distance between observation point and center of the radiator in cm

Result:

Passed

Test Data

Radio type	Maximum output power (dBm) #1	Maximum tune-up power (dBm)	Antenna gain (dBi) #2	Minimum distance (cm) #3	P _d (mW/cm ²)	Limit (mW/cm ²)	Result
WIFI 2.4G	8.31	9.00	3.00	20.00	0.0032	1.0	PASS

Note

#1: This value comes from the RF test report.

#2: This value is declared by the applicant.

5.3. Simultaneous transmission

Limit:

KDB447498 D01 v06, Clause 4.3.2, 47 CFR Part1.1307

In the case of xed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Where

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P , including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for xed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

P_{th,i} = the exemption threshold power (P) according to paragraph (b)(3)(i)(B) of this section for xed, mobile, or portable RF source i.

ERP_j = the ERP of fixed, mobile, or portable RF source j.

ERP_{th,j} = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least λ/2π according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

Evaluated_k = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limit_k = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each xed, mobile, or portable RF source k, as applicable from § 1.1310 of this chapter.

Result:

Not Applicable

-----End of Report-----