

FCC RF EXPOSURE REPORT

FCC ID: 2AFENWK08K

Project No. : 2502C023
Equipment : Projector
Brand Name : XGIMI
Test Model : WK08K
Series Model : N/A
Applicant : XGIMI Technology Co., Ltd.
Address : Building No.4, Zone A, No.1129, Shijicheng Road, High-tech Zone, Pilot Free Trade, Chengdu Sichua, China
Manufacturer : XGIMI Technology Co., Ltd.
Address : No. 4, Zone A, No. 1129, Shijicheng Road, Chengdu Hi-tech Zone, Sichuan Pilot Free Trade Zone, 610041 China
Factory 1 : Yibin XGIMI Optoelectronic Co., Ltd.
Address : No. 2, West Section 4, Changjiang North Road, Lingang Economic Development Zone, Yibin City, Sichuan P.R. China
Factory 2 : XGIMI VIETNAM TECHNOLOGY COMPANY LIMITED
Address : Lot CN 4-1, My Thuan Industria I Zone, y Thuan Commune, Nam Dinh City, Nam Dinh Province, Vietnam
Date of Receipt : Feb. 17, 2025
Date of Test : Feb. 19, 2025 ~ Mar. 27, 2025
Issued Date : May 30, 2025
Report Version : R01
Test Sample : Engineering Sample No.: SSL20250217382
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091 & KDB 447498 D01 v06

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc. (Dongguan)

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-6-2502C023	R00	Original Report.	Apr. 14, 2025	Invalid
BTL-FCCP-6-2502C023	R01	Only updated the applicant information and removed the series models.	May 30, 2025	Valid

1. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi R^2} = \frac{EIRP}{4\pi R^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

2. ANTENNA SPECIFICATION

For BT&LE:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	1.62

Note: The antenna gain is provided by the manufacturer.

For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	N/A	409-00234-001	FPC	N/A	4.59
2	N/A	409-00235-001	FPC	N/A	0.98

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=4.59.
For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$.
So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 4.59 + 10\log(2/1)\text{dBi} = 7.60$.
Then, the power spectral density limit is $8 - (7.60 - 6) = 6.40$.
- 2) The antenna gain is provided by the manufacturer.

For 5GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	409-00234-001	FPC	N/A	6.07
2	N/A	409-00235-001	FPC	N/A	5.55

- 1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=6.07.
So, the UNII-1, the UNII-2A, UNII-2C output power limit is $23.98 - (6.07 - 6) = 23.91$, UNII-3 output power limit is $30 - (6.07 - 6) = 23.93$.

For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$.
So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 6.07 + 10\log(2/1)\text{dBi} = 9.08$.
Then, the UNII-1, UNII-2A and UNII-2C power spectral density limit is $11 - (9.08 - 6) = 7.92$, the UNII-3 power spectral density limit is $30 - (9.08 - 6) = 26.92$.
- 2) The antenna gain is provided by the manufacturer.

3. CALCULATED RESULT

For BT:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.62	1.4521	8.86	7.6913	0.00222	1	Complies

For LE:

Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Peak Output Power (dBm)	Max. Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
1.62	1.4521	8.98	7.9068	0.00229	1	Complies

For 2.4GHz:

Directional Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
4.59	2.8774	27.08	510.5050	0.29238	1	Complies

For 5GHz:

Directional Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
6.07	4.0458	26.21	417.8304	0.33647	1	Complies

For the max simultaneous transmission MPE:

Ratio			Total	Limit of Ratio	Test Result
LE	2.4GHz	5GHz			
0.00229	0.29238	0.33647	0.63114	1	Complies

Note:

- (1) The calculated distance is 20 cm.
- (2) Output power including tune up tolerance.

End of Test Report