



FCC RF EXPOSURE REPORT

For

GMLINK IoT Gateway

MODEL NUMBER: GBM-NL100

REPORT NUMBER: 4791227002-1-RF-2

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Prepared for

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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	October 24, 2024	Initial Issue	\

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
Address: Jinji West Rd, Qianshan, Zhuhai, Guangdong, 519070, P. R. China 510663 China

Manufacturer Information1

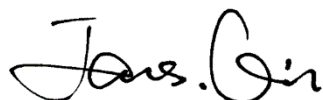
Company Name: GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
Address: Jinji West Rd, Qianshan, Zhuhai, Guangdong, 519070, P. R. China 510663 China

EUT Information

EUT Name: GMLINK IoT Gateway
Model: GBM-NL100
Brand: GREE GMLINK
Sample Received Date: July 3, 2024
Sample Status: Normal
Sample ID: 7311289
Date of Tested: Sep 19, 2024 ~ Oct. 22, 2024

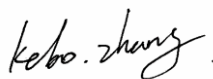
APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR§2.1091	PASS
KDB 447498 D01	PASS

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 and KDB447498 D01 v06.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4102.01) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1187) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules ISED (Company No.: 21320) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320 and the test lab Conformity Assessment Body Identifier (CABID) is CN0046. VCCI (Registration No.: G-20192, C-20153, T-20155 and R-20202) UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20192 and R-20202 Shielding Room B, the VCCI registration No. is C-20153 and T-20155
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Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.

4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (Minutes)
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

CALCULATION METHOD

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

Where:

S=power density

P=power input to 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

CALCULATED RESULTS**For Single RF Source**

Operation Band	Frequency (MHz)	Antenna Gain (dBi)	Tune-up Limit (dBm)	Power Density at R = 20 cm (W/m ²)	FCC Limit (W/m ²)	FCC Conclusion
LTE B5	824	2.84	24.50	1.0783	5.4933	Pass
LTE B40	2300	2.18	22.00	0.5209	10.0000	Pass
LTE 41	2496	4.94	23.00	1.2380	10.0000	Pass

Simultaneous Analysis:

Co-location of this module with other transmitters that operate simultaneously are required to be evaluated using the FCC multi-transmitter procedures.

Note:

1. The calculated distance is 20 cm.
2. The power comes from operation description.

END OF REPORT