



EMF TEST REPORT

Product Name: One Raven Home Server

Model Number: OR-HS100

FCC ID: 2BXG8-OR-HS100

Issued For : One Raven, Inc.
16641 N 91st Street, Suite 101, Scottsdale, Arizona 85260,
United States

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
District, Shenzhen, Guangdong, China

Report Number: LGT26H170HA02

Sample Received Date: Aug. 24, 2026

Date of Test: Aug. 24, 2026 ~ Sep. 09, 2026

Date of Issue: Sep. 09, 2026

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TEST REPORT CERTIFICATION

Applicant: One Raven, Inc.

Address: 16641 N 91st Street, Suite 101, Scottsdale, Arizona 85260, United States

Manufacturer: Shenzhen Pretech Industrial Co., Ltd

Address: Room 808, Qiancheng Commercial Center, No. 5 Haicheng Road, Mabu Community, Xixiang Street, Bao'an District, Shenzhen, China

Product Name: One Raven Home Server

Trademark: One Raven

Model Number: OR-HS100

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	Sep. 09, 2026	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	One Raven Home Server	
Test Model Number:	OR-HS100	
Series Number:	N/A	
Model Difference:	N/A	
Frequency Bands:	Bluetooth	2402-2480MHz
	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 802.11a/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 802.11 ac(VHT160)/ax(HE160): 5.250GHz
		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
	LTE	LTE Band 2:1850~1910MHz LTE Band 4:1710~1755MHz LTE Band 5: 824~849MHz LTE Band 12: 699-716MHz LTE Band 13: 777-787MHz LTE Band 66: 1710-1780MHz
	24G	24.008GHz~24.238GHz
	802.15.4	2405~2480 MHz
Adapter:	Input: AC 100-240V 50/60Hz 0.6A Max Output: DC 5.0V 3.0A 15.0W, 9.0V 2.22A 19.98W, 12.0V 1.67A 20.0W Max	
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:	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
LTE B2	23.5±1dBm
LTE B4	23±1dBm
LTE B5	23.5±1dBm
LTE B12	23.5±1dBm
LTE B13	23.5±1dBm
LTE B66	23.5±1dBm
BT-GFSK	-1.5±1dBm
BT-π/4-DQPSK	3.5±1dBm
BT-8DPSK	4±1dBm
BLE1	-0.5±1dBm
2.4G WIFI-802.11b	14±1dBm
2.4G WIFI-802.11g	14±1dBm
2.4G WIFI-802.11n(HT20)	14±1dBm
2.4G WIFI-802.11n(HT40)	14±1dBm
2.4G WIFI-802.11ax(HE20)	13±1dBm
2.4G WIFI-802.11ax(HE40)	13±1dBm
5G WIFI-802.11a	15±1dBm
5G WIFI-802.11n(HT20)	13±1dBm
5G WIFI-802.11n(HT40)	13±1dBm
5G WIFI-802.11ac(VHT20)	13±1dBm
5G WIFI-802.11ac(VHT40)	13.5±1dBm
5G WIFI-802.11ac(VHT80)	13±1dBm
5G WIFI-802.11ax(HE20)	13±1dBm
5G WIFI-802.11ax(HE40)	13.5±1dBm
5G WIFI-802.11ax(HE80)	14±1dBm
24G	0±1dBm
BLE2	7.7±1dBm
802.15.4	19.8±1.5dBm



The MPE result of worst mode:

RF Function	Max Turn up Power (dBm)	Duty cycle factor	Max Power (dBm)	Max Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
LTE Band 2	24.5	0	24.5	281.84	2.97	1.98	0.111	1.000	0.111	Pass
LTE Band 4	24	0	24	251.19	2.47	1.77	0.088	1.000	0.088	Pass
LTE Band 5	24.5	0	24.5	281.84	2.24	1.67	0.094	0.549	0.171	Pass
LTE Band 12	24.5	0	24.5	281.84	-1.12	0.77	0.043	0.466	0.093	Pass
LTE Band 13	24.5	0	24.5	281.84	-0.79	0.83	0.047	0.518	0.090	Pass
LTE Band 66	24.5	0	24.5	281.84	2.47	1.77	0.099	1.000	0.099	Pass

RF Function	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
BLE1	0.50	1.12	3.34	2.16	0.0005	1	0.0005	Pass
BT	5.00	3.16	3.34	2.16	0.001	1	0.001	Pass
2.4G WIFI	15.00	31.62	0.69	1.17	0.007	1	0.007	Pass
5G WIFI	16.00	39.81	0.91	1.23	0.010	1	0.010	Pass
24G	1.00	1.26	5	3.16	0.001	1	0.001	Pass
BLE2	8.70	7.41	1.1	1.29	0.002	1	0.002	Pass
802.15.4	20.80	120.23	1.1	1.29	0.031	1	0.031	Pass

Multiple transmission: LTE Band 5 + 5G WIFI + 24G + 802.15.4 =
 $0.171+0.010+0.001+0.031=0.213 < 1$

Note:

1. BLE 2+ 802.15.4 module has been certified, the module FCC ID: XMR2026KGM133SP. The power is refers to the module report
2. The RF Exposure is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※