

FCC RF EXPOSURE REPORT

FCC ID: 2AOHHTURBOXC4290

Project No. : 2205C022
Equipment : TurboX C4290 SOM
Brand Name : N/A
Test Model : TurboX C4290
Series Model : N/A
Applicant : Thundercomm Technology Co., Ltd
Address : No. 107, Middle Datagu Road, Xiantao Street, Yubei District, Chongqing, China, 401122
Manufacturer : Thundercomm Technology Co., Ltd
Address : No. 107, Middle Datagu Road, Xiantao Street, Yubei District, Chongqing, China, 401122
Date of Receipt : May 07, 2022
Date of Test : May 19, 2022 ~ Jun. 16, 2022
Issued Date : Jun. 27, 2022
Report Version : R00
Test Sample : Engineering Sample No.: DG2022051887
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091
FCC Title 47 Part 2.1091

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

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TESTING CERT #5123.02

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-6-2205C022	R00	Original Report	Jun. 27, 2022	Valid

1. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.

BTL's Registration Number for FCC: 357015

BTL's Designation Number for FCC: CN1240

2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

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

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

Table for Filed Antenna:

For BT, LE, 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	molex	1461531100	FPC	N/A	3.0

For 5GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	molex	1461531100	FPC	N/A	4.0

3. TEST RESULTS

Tune up tolerance(dBm)						
BT	LE	2.4GHz	5GHz			
≤ 8.50	≤ 8.50	≤ 18.50	UNII-1	UNII-2A	UNII-2C	UNII-3
			≤ 16.00	≤ 16.00	≤ 16.50	≤ 16.50

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
3.0	1.9953	8.5	7.0795	0.00281	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
3.0	1.9953	8.5	7.0795	0.00281	1	Complies

For 2.4GHz:

Antenna 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
3.0	1.9953	18.5	70.7946	0.02812	1	Complies

For 5GHz UNII-1:

Antenna 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
4.0	2.5119	16.00	39.8107	0.01990	1	Complies

For 5GHz UNII-2A:

Antenna 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
4.0	2.5119	16.00	39.8107	0.01990	1	Complies

For 5GHz UNII-2C:

Antenna 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
4.0	2.5119	16.50	44.6684	0.02233	1	Complies

For 5GHz UNII-3:

Antenna 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
4.0	2.5119	16.50	44.6684	0.02233	1	Complies

For the max simultaneous transmission MPE:

Ratio	Ratio	Total	Limit of Ratio	Test Result
BT	2.4GHz			
0.00281	0.02812	0.03093	1	Complies

Note: The calculated distance is 20 cm.
Output power including tune up tolerance.

End of Test Report