FCC RF EXPOSURE REPORT

FCC ID: 2APRGLT03

Project No.	:	2403G076
Equipment	:	4G LTE CAT 6 Wi-Fi Router
Brand Name	:	Cudy
Test Model	:	LT700
Series Model	:	N/A
Applicant	:	Shenzhen Cudy Technology Co., Ltd.
Address	:	Room A606, Gaoxinqi Industrial Park, Liuxianyi Road, Baoan District, Shenzhen, China
Manufacturer	:	Shenzhen Cudy Technology Co., Ltd.
Address	:	Room A606, Gaoxinqi Industrial Park, Liuxianyi Road, Baoan District, Shenzhen, China
Factory	:	Shenzhen Cudy Technology Co., Ltd.
Address	:	Room A606, Gaoxinqi Industrial Park, Liuxianyi Road, Baoan District, Shenzhen, China
Date of Receipt	:	May 16, 2024
Date of Test	:	May 21, 2024 ~ Jul. 01, 2024
Issued Date	:	Jul. 04, 2024
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SSL20240516200
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.

Prepared by : Antony Liang

Approved by : Chay Cai

Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China

Tel: +86-769-8318-3000 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-3-2403G076	R00	Original Report.	Jul. 04, 2024	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 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	RFlink	U00T01S004N03482	Dipole	IPEX	3.18
2	RFlink	U00T01S004N03483	Dipole	IPEX	2.84

Note:
1) This EUT supports CDD, and all antenna gains are not equal, so Directional gain=10log[$(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2$/N]dBi, that is Directional gain=10log[$(10^{3.18/20}+10^{2.84/20})^2$/2]dBi =6.02.
2) Beamforming Gain is 3 dBi, that is Directional gain=3+3.18=6.18.
3) The antenna gain and beamforming gain are provided by the manufacturer.

For 5GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	RFlink	U00T01S004N03482	Dipole	IPEX	5.18
2	RFlink	U00T01S004N03483	Dipole	IPEX	4.49

Note:
1) This EUT supports CDD, and all antenna gains are not equal, so Directional gain=10log[$(10^{G1/20}+10^{G2/20}+...10^{GN/20})^2$/N]dBi, that is Directional gain=10log[$(10^{5.18/20}+10^{4.49/20})^2$/2]dBi =7.85.
2) Beamforming Gain is 3 dBi, that is Directional gain=3+5.18=8.18.
3) The antenna gain and beamforming gain are provided by the manufacturer.

For LTE:

LTE Band 2:1.59dBi(SAA30968A)	LTE Band 4:1.94dBi(SAA30968A)
LTE Band 5:2.53dBi(SAA30968A)	LTE Band 7:3.00dBi(SAA30968A)
LTE Band 12:3.95dBi(SAA30968A)	LTE Band 13:4.45dBi(SAA30968A)
LTE Band 14:4.45dBi(SAA30968A)	LTE Band 25:1.59dBi(SAA30968A)
LTE Band 26:3.19dBi(SAA30968A)	LTE Band 30:-5.70dBi(YE0045AA)
LTE Band 41:3.60dBi(SAA30968A)	LTE Band 48:-1.36dBi (YE0038AA)
LTE Band 66:2.00dBi(SAA30968A)	LTE Band 71:1.66dBi(SAA30968A)
Note: The antenna gain are derived from the gain information report provided by the manufacturer.	

3. TABLE FOR ANTENNA CONFIGURATION

For 2.4GHz Non Beamforming:

Operating Mode / TX Mode	2TX
IEEE 802.11b	V(Ant. 1 + Ant. 2)
IEEE 802.11g	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2)

For 2.4GHz Beamforming:

Operating Mode / TX Mode	2TX
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2)

For 5GHz Non Beamforming:

Operating Mode / TX Mode	2TX
IEEE 802.11a	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)	V(Ant. 1 + Ant. 2)

For 5GHz Beamforming:

Operating Mode / TX Mode	2TX
IEEE 802.11n(HT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)	V(Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)	V(Ant. 1 + Ant. 2)

4. CALCULATED RESULT

For LTE:

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
4.45	2.7861	25	316.2278	0.07794	1	Complies

For 2.4GHz Non Beamforming:

Directional Gain (dBi)	Directional 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
6.02	3.9994	23.74	236.5920	0.08371	1	Complies

For 2.4GHz Beamforming:

Directional Gain (dBi)	Directional 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
6.18	4.1495	22.62	182.8100	0.06711	1	Complies

For 5GHz Non Beamforming:

Directional Gain (dBi)	Directional 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
7.85	6.0954	24.75	298.5383	0.16098	1	Complies

For 5GHz Beamforming:

Directional Gain (dBi)	Directional 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
8.18	6.5677	24.40	275.4229	0.16024	1	Complies

For the max simultaneous transmission MPE:

Ratio			Total	Limit of Ratio	Test Result
2.4GHz	5GHz	LTE			
0.08371	0.16098	0.07794	0.32263	1	Complies

Note:
1. The calculated distance is 30 cm.
2. The output power of LTE are reference from report No.: SEWA2208000035RG03.

End of Test Report