

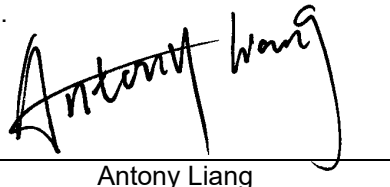
FCC RF EXPOSURE REPORT

FCC ID: G95-UIW4060MCS3

Project No. : 2204C001B
Equipment : Set Top Box
Brand Name : DIRECTV
Model Name : AEPS-100
Applicant : Vantiva USA LLC
Address : 4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA
Manufacturer : Vantiva USA LLC
Address : 4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA
Factory : PT Pegaunihan Technology Indonesia
Address : Jalan Markisa Lot 127 sampai dengan Lot 138, Kawasan Industri Batamindo, Kelurahan Muka Kuning, Kecamatan Sei Beduk, Kota Batam, Provinsi Kepulauan Riau, 29433, Indonesia
Date of Receipt : Apr. 05, 2025
Date of Test : Apr. 07, 2025 ~ Aug. 13, 2025
Issued Date : Aug. 28, 2025
Test Sample : Engineering Sample No.: DG202504052
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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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-6-2204C001B	R00	Original Report.	Aug. 21, 2025	Invalid
BTL-FCCP-6-2204C001B	R01	This report modified the comments of Micom as follows: - Revised the description of Note 2 on Table for Filed Antenna for 2.4GHz and 5GHz. - Revised the calculated distance from 20cm to 36cm. So, recalculated the result. It is a revision of the report BTL-FCCP-6-2204C001B R00. This is a newly released report, replacing the BTL-FCCP-6-2204C001B R00 report.	Aug. 28, 2025	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 Road, Dalang, Dongguan, Guangdong People's Republic of China.

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:

Ant.	Brand	Platform Name	Antenna Type	Connector	Gain (dBi)
1	Vantiva	UZW4060TCH	Internal	N/A	3.00

Note: The antenna gain is provided by the manufacturer.

For 2.4GHz:

Ant.	Brand	Platform Name	Antenna Type	Connector	Gain (dBi)
1	Vantiva	UZW4060TCH	Internal	N/A	3.00
2	Vantiva	UZW4060TCH	Internal	N/A	4.06

Note:

1) For CDD: Directional Gain=2.46 dBi

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

2) For TXBF: Directional Gain=4.89dBi.

3) The antenna gain is provided by the manufacturer.

For 5GHz:

Ant.	Brand	Platform Name	Antenna Type	Connector	Gain (dBi)	Note
1	Vantiva	UZW4060TCH	Internal	N/A	3.05	UNII-1
2	Vantiva	UZW4060TCH	Internal	N/A	4.97	
1	Vantiva	UZW4060TCH	Internal	N/A	3.05	UNII-2A
2	Vantiva	UZW4060TCH	Internal	N/A	4.97	
1	Vantiva	UZW4060TCH	Internal	N/A	3.87	UNII-2C
2	Vantiva	UZW4060TCH	Internal	N/A	5.04	
1	Vantiva	UZW4060TCH	Internal	N/A	4.14	UNII-3
2	Vantiva	UZW4060TCH	Internal	N/A	4.94	

Note:

- For CDD: UNII-1 Directional Gain=2.83 dBi, UNII-2A Directional Gain=2.83 dBi
UNII-2C Directional Gain=2.19 dBi, UNII-3 Directional Gain=2.05 dBi

$$DirectionalGain = 10 \cdot \log \left[\frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

$g_{j,k} = 10^{G_k/20}$ if the k th antenna is being fed by spatial stream j , or zero if it is not;
 G_k is the gain in dBi of the k th antenna.

- For TXBF: UNII-1 Directional Gain=5.26 dBi, UNII-2A Directional Gain=5.26 dBi
UNII-2C Directional Gain=4.63 dBi, UNII-3 Directional Gain=4.77 dBi
- The antenna gain is provided by the manufacturer.

Table for Antenna Configuration:

For 2.4GHz:

For 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 802.11ax(HE20)		V(Ant. 1 + Ant. 2)

For Beamforming:

Operating Mode	TX Mode	2TX
IEEE 802.11n(HT20)		V(Ant. 1 + Ant. 2)
IEEE 802.11ax(HE20)		V(Ant. 1 + Ant. 2)

For 5GHz:

For 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)
IEEE 802.11ax(HE20)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)		V (Ant. 1 + Ant. 2)

For 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)
IEEE 802.11ax(HE20)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)		V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)		V (Ant. 1 + Ant. 2)

3. TEST RESULTS

For BT:

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	1.9953	12.89	19.4536	0.00238	1	Complies

For LE:

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	1.9953	13.41	21.9280	0.00269	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
2.46	1.7620	21.67	146.8926	0.01590	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
4.89	3.0832	21.28	134.2765	0.02543	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
2.83	1.9187	25.14	326.5878	0.03850	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
5.26	3.3572	24.88	307.6097	0.06345	1	Complies

For the max simultaneous transmission MPE:

Ratio		Total	Limit of Ratio	Test Result
LE	5GHz			
0.00269	0.06345	0.06614	1	Complies

Note:

- (1) The calculated distance is 36 cm.
- (2) Ratio=Power Density (S) (mW/cm²)/Limit of Power Density (S) (mW/cm²)
- (3) WLAN 2.4GHz and WLAN 5GHz can not simultaneous transmission.

End of Test Report