FCC RF EXPOSURE REPORT

FCC ID: 2ABVH-OONA222W

Project No.	:	2504G031
Equipment	:	Kiosk
Brand Name	:	AAVA
Test Model	:	OONA22-2W
Series Model	:	N/A
Applicant	:	Aava Mobile Oy
Address	:	Nahkatehtaankatu 2, FI-90130 Oulu, Finland
Manufacturer	:	Aava Mobile Oy
Address	:	Nahkatehtaankatu 2, FI-90130 Oulu, Finland
Factory	:	Ennoconn (Suzhou) Technology Co.,Ltd
Address	:	BUILDING 1, 299 NANSONG RD, YU SHAN TOWN KUNSHAN 215300 JIANGSU CHINA
Date of Receipt	:	Apr. 29, 2025
Date of Test	:	Apr. 29, 2025 ~ Jun. 10, 2025
Issued Date	:	Jun. 18, 2025
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2025042934 for BT & BLE & 2.4GHz & 5GHz, DG2025042936 for 6GHz.
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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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-7-2504G031	R00	Original Report.	Jun. 18, 2025	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 BT & BLE:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		W3006	Chip	N/A	1.2

Note: The antenna gain is provided by the manufacturer.

For 2.4GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		W3006	Chip	N/A	1
2		W3006	Chip	N/A	1.2

Note:
(1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=1.2.
For power spectral density measurements, N_{ANT}=2, N_{SS} = 1.
So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=1.2+10log(2/1)dBi=4.21.
(2) The antenna gain is provided by the manufacturer.

For 5GHz:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		W3006	Chip	N/A	3.0
2		W3006	Chip	N/A	2.3

Note:
(1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=3.0.
For power spectral density measurements, N_{ANT}=2, N_{SS} = 1.
So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=3.0+10log(2/1)dBi=6.01.
(2) The antenna gain is provided by the manufacturer.

For 6GHz:

Ant.	Brand	P/N	Antenna Type	Connect r	Frequency Range (MHz)	Gain (dBi)
1		W3006	Chip	N/A	5925-6425	3.2
					5925-6425	3.2
					6525-6875	3.2
					6875-7125	3.2
2		W3006	Chip	N/A	5925-6425	3
					5925-6425	3
					6525-6875	3
					6875-7125	3

Note:

(1) This EUT supports CDD, and all antenna gains are not equal, Directional gain = G_{ANT}+Array Gain
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=3.2.
For power spectral density measurements, N_{ANT}=2, N_{SS} = 1.
So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=3.0+10log(2/1)dBi=6.03.

(2) The antenna gain is provided by the manufacturer.

3. CALCULATED RESULT

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
1.2	1.3183	9.16	8.2414	0.0022	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
1.2	1.3183	7.87	6.1235	0.0016	1	Complies

For 2.4GHz:

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
1.2	1.3183	21.37	137.0882	0.0360	1	Complies

For 5GHz:

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
3.0	1.9953	21.57	143.5489	0.0570	1	Complies

For 6GHz:

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
3.2	2.0893	17.59	57.4116	0.0239	1	Complies

For the max simultaneous transmission MPE:

Ratio		Total	Limit of Ratio	Test Result
BT	5GHz			
0.0022	0.0570	0.05917	1	Complies

Note:
(1) The calculated distance is 20 cm.
(2) Ratio=Power Density (S) (mW/cm^2)/Limit of Power Density (S) (mW/cm^2)

End of Test Report