

FCC RF EXPOSURE REPORT

FCC ID: ARA-BAXE6X

Project No. : 2403H049
Equipment : BreezeAir AXE 6X
Brand Name : Telrad Networks
Test Model : BreezeAir AXE 6X
Series Model : PN BX6YYYYYYY(YYYYYYY stands for different variants sub products.)
Applicant : Telrad Networks Ltd
Address : 1 Bat Sheva streetLod711600Israel
Manufacturer : Telrad Networks Ltd
Address : 1 Bat Sheva streetLod711600Israel
Factory : Telrad Networks Ltd
Address : 1 Bat Sheva streetLod711600Israel
Date of Receipt : Aug. 14, 2024
Date of Test : Aug. 30, 2024 ~ Oct. 21, 2024
Issued Date : Nov. 28, 2024
Report Version : R00
Test Sample : Engineering Sample No.: SH20240814268-11
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.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2403H049	R00	Original Report.	Nov. 28, 2024	Valid

1. 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

2. ANTENNA SPECIFICATION

For Antenna Configuration 1:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		RDAN9040	Dual Polarized Subscriber Antenna	2 x Pigtail 12 cm with MMCX Male	24
2		RDAN9040	Dual Polarized Subscriber Antenna	2 x Pigtail 12 cm with MMCX Male	24

Note:

- This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=24.
For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$.
So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 24 + 10\log(2/1)\text{dBi} = 27.01$.
- The antenna gain is provided by the manufacturer.

For Antenna Configuration 2:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		B-6X32S003P	Dish Antenna	N Female (2x)	32
2		B-6X32S003P	Dish Antenna	N Female (2x)	32

Note:

- This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$.
For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=32.
For power spectral density measurements, $N_{ANT}=2$, $N_{SS} = 1$.
So the Directional gain= $G_{ANT} + \text{Array Gain} = G_{ANT} + 10\log(N_{ANT}/N_{SS})\text{dBi} = 32 + 10\log(2/1)\text{dBi} = 35.01$.
- The antenna gain is provided by the manufacturer.

When elevation angle above 30 degrees of antenna specification:

For Antenna Configuration 1:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		RDAN9040	Dual Polarized Subscriber Antenna	2 x Pigtail 12 cm with MMCX Male	9
2		RDAN9040	Dual Polarized Subscriber Antenna	2 x Pigtail 12 cm with MMCX Male	9

Note:

- 1) This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$. For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=9.
- 2) The antenna gain is provided by the manufacturer.

For Antenna Configuration 2:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1		B-6X32S003P	Dish Antenna	N Female (2x)	7
2		B-6X32S003P	Dish Antenna	N Female (2x)	7

Note:

- 1) This EUT supports CDD, and all antennas have the same gain, Directional gain = $G_{ANT} + \text{Array Gain}$. For power measurements, Array Gain=0dB ($N_{ANT} \leq 4$), so the Directional gain=7.
- 2) The antenna gain is provided by the manufacturer.

3. TABLE FOR ANTENNA CONFIGURATION

Operating Mode	TX Mode	2TX
IEEE 802.11ax(HE20)		V (Antenna Configuration 1 or Antenna Configuration 2)
IEEE 802.11ax(HE40)		V (Antenna Configuration 1 or Antenna Configuration 2)
IEEE 802.11ax(HE80)		V (Antenna Configuration 1 or Antenna Configuration 2)
IEEE 802.11ax(HE160)		V (Antenna Configuration 1 or Antenna Configuration 2)

4. CALCULATED RESULT

For Antenna Configuration 1:

MAX E.I.R.P (dBm)	MAX E.I.R.P (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
35.99	3971.9155	0.79059	1	Complies

For Antenna Configuration 2:

MAX E.I.R.P (dBm)	MAX E.I.R.P (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
35.97	3953.6662	0.78696	1	Complies

Note:

- (1) The calculated distance is 20 cm.

End of Test Report