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 BX6XYYYYYYY(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:

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

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 Antenna Configuration 1:

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

Note:
1) This EUT supports CDD, and all antennas have the same gain, Directional gain = G_{ANT}+Array Gain.
For power measurements, Array Gain=0dB (NANT≤4), so the Directional gain=24.
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=24+10log(2/1)dBi=27.01.
2) The antenna gain is provided by the manufacturer.

For Antenna Configuration 2:

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

Note:
1) This EUT supports CDD, and all antennas have the same gain, Directional gain = G_{ANT}+Array Gain.
For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=32.
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=32+10log(2/1)dBi=35.01.
2) 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	MARS ANTENNAS & RF SYSTEMS LTD.	RDAN9040	Dual Polarized Subscriber Antenna	2 x Pigtail 12 cm with MMCX Male	9
2	MARS ANTENNAS & RF SYSTEMS LTD.	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}+Array Gain. For power measurements, Array Gain=0dB ($N_{ANT} \leqslant 4$), 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	Telrad Get more from wireless.	B-6X32S003P	Dish Antenna	N Female (2x)	7
2	Telrad Get more from wireless.	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}+Array Gain. For power measurements, Array Gain=0dB ($N_{ANT} \leqslant 4$), 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