RF EXPOSURE EVALUATION

1. PRODUCTINFORMATION

Product Description	IO 5 GHz 1000 Mbps UBR with Integrated Antenna (17 dBi) with dying gasp
Model Name	ion4xl1_BTS_d
FCC ID	2AZOI4XL1BTSD

2. EVALUATION METHODANDLIMIT

Human exposure to RF emissions from mobile devices(47CFR§2.1091) may be evaluated based on the MPE limits adopted by the FCC for electric and magnetic field strength and/or power density, as appropriate, since exposures are assumed to occur at distances of 20 cm or more from persons.

The device under test (IO 5 GHz 1000 Mbps UBR with Integrated Antenna (17 dBi) with dying gasp) is r a mobile device nor a RF exposure product and it is not closed to 20cm distance from persons

LIMITS FOR GENERAL POPULATION*/*UNCONTROLLED EXPOSURE

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density(S) (mW/cm^2)	Averaging Time IEl^2 IHl^2or S(Minutes)
0.3--1.34	614	1.63	(100)*	30
1.34--30	824/f	2.19/f	$(180/f^2)$*	30
30--300	27.5	0.073	0.2	30
300--1500	--	--	f/1500	30
1500--100,000	--	--	1.0	30

*Note:

1. f= Frequency in MHz*Plane-wave Equivalent Power Density
2. The averaging time for General Population/Uncontrolled exposure to fixed transmitters is not applicable for mobile and portable transmitters. (operated in BT/ WIFI) See47CFR§§2.1091 and 2.1093 on source-based time-averaging requirement for mobile and portable transmitters.

$S=PG/4rrR^2$

Where:

S=power density

P=power input toantenna

G=power gain of the antenna in the direction of interest relative to anisotropic radiator

R=distance to the center of radiation of the antenna

3. CALCULATION

A minimum test separation distance 20cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits. The distance must be at least 20cm and fully supported by the operating and installation configurations of the transmitter and its antenna(s), according to the source-based time-averaged maximum power requirements of §2.1091(d)(2). In cases where cable losses or other attenuations are applied to determine compliance, the most conservative operating configurations and exposure conditions must be evaluated.

The device under test (IO 5 GHz 1000 Mbps UBR with Integrated Antenna (17 dBi) with dying gasp) is neither a mobile device nor a RF exposure product and it is not closed to 20cm distance from persons

Antenna Gain (5GHz) = 17dBi (Numeric = 50.12), rr = 3.14

Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Power Density ($mW/cm^{2)}$	PowerDensity Limit ($mW/cm^{2)}$
5240 (Band 1)	17.39	54.8276964921	0.546	1
5785 (Band 4)	18.29	67.4528027698	0.672	1

Note: Only the worst case recorded.