

## RF Exposure

**FCC ID:** 2AG32BS6430E

**Applicant:** Baicells Technologies Co., Ltd.

Exposure category: General population/uncontrolled environment

Product Name: Nova 430 Turbo

Model No.: BS6430E

Refer Standard: FCC Part 2.1091: Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

### FCC MPE Limited:

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Test Data

Predication of MPE limit at a given distance

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

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, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

WIFI Antenna Gain information

5G WLAN: 13.0dBi

LTE Antenna Gain information:

Max gain: 17.0dBi

The WIFI & WWAN Antenna all belongs to the uncorrelated with each other antenna

Worst-case U-NII-1 AVGSA Output Power - 4×4 MIMO

Mode	Frequency (MHz)	Max Power (dBm)				Total Power (dBm)	Tune up tolerance (dBm)
		Ant0	Ant1	Ant2	Ant3		
802.11n (20MHz)	5180	22.35	22.06	22.21	22.24	28.24	28.5±1
802.11n (20MHz)	5220	22.44	22.18	22.07	22.23	28.25	28.5±1
802.11n (20MHz)	5240	22.26	22.18	22.15	22.26	28.23	28.5±1
802.11n (40MHz)	5190	22.42	22.29	22.52	22.31	28.41	28.5±1
802.11n (40MHz)	5230	22.38	22.45	22.43	22.30	28.41	28.5±1
802.11ac (20MHz)	5180	22.25	22.11	22.11	22.39	28.24	28.5±1
802.11ac (20MHz)	5220	22.23	22.13	22.23	22.36	28.26	28.5±1
802.11ac (20MHz)	5240	22.36	22.03	22.06	22.35	28.22	28.5±1
802.11ac (40MHz)	5190	22.40	22.40	22.42	22.23	28.38	28.5±1
802.11ac (40MHz)	5230	22.49	22.30	22.39	22.27	28.38	28.5±1
802.11ac (80MHz)	5210	22.02	21.96	22.07	22.13	28.07	28.5±1
802.11ax (20MHz)	5180	22.06	22.17	22.27	22.27	28.21	28.5±1
802.11ax (20MHz)	5220	22.10	22.15	22.20	22.23	28.19	28.5±1
802.11ax (20MHz)	5240	22.07	22.25	22.27	22.21	28.22	28.5±1
802.11ax (40MHz)	5190	22.58	22.26	22.51	22.44	28.47	28.5±1
802.11ax (40MHz)	5230	22.57	22.27	22.73	22.51	28.54	28.5±1
802.11ax (80MHz)	5210	22.25	21.93	21.77	22.01	28.01	28.5±1

U-NII-3 AVGSA Output Power - 4×4 MIMO

Mode	Frequency (MHz)	Max Power (dBm)				Total Power (dBm)	Tune up tolerance
		Ant0	Ant1	Ant2	Ant3		
802.11n (20MHz)	5745	22.97	23.07	22.81	22.93	28.97	28.5±1
802.11n (20MHz)	5785	22.59	22.32	22.56	22.70	28.57	28.5±1
802.11n (20MHz)	5825	22.31	22.24	22.49	22.13	28.32	28.5±1
802.11n (40MHz)	5755	23.18	23.14	22.84	22.92	29.04	28.5±1
802.11n (40MHz)	5795	22.59	22.63	21.62	22.78	28.45	28.5±1
802.11ac (20MHz)	5745	23.04	22.89	23.62	22.85	29.13	28.5±1
802.11ac (20MHz)	5785	22.84	22.75	22.59	22.96	28.81	28.5±1
802.11ac (20MHz)	5825	22.30	22.29	22.16	22.32	28.29	28.5±1
802.11ac (40MHz)	5755	22.60	22.51	22.51	22.94	28.66	28.5±1
802.11ac (40MHz)	5795	22.84	23.03	22.57	22.83	28.84	28.5±1
802.11ac (80MHz)	5775	22.63	22.85	22.40	22.63	28.65	28.5±1
802.11ax (20MHz)	5745	23.07	22.96	23.02	22.97	29.03	28.5±1
802.11ax (20MHz)	5785	23.32	22.75	22.80	22.89	28.97	28.5±1
802.11ax (20MHz)	5825	22.42	22.46	22.46	22.45	28.47	28.5±1
802.11ax (40MHz)	5755	23.07	23.46	23.38	23.16	29.29	28.5±1
802.11ax (40MHz)	5795	22.87	22.90	22.89	22.84	28.90	28.5±1
802.11ax (80MHz)	5775	22.85	22.82	22.81	22.70	28.82	28.5±1

LTE Band 48 output power(Worst-case)

Mode	Frequency (MHz)	Max Power (dBm)		Total Power (dBm)	Tune up tolerance
		Ant0	Ant1		
10MHz	3555	23.69	24.28	27.01	27±1
20MHz	3560	21.14	21.37	24.27	24±1

Mode	Frequency (MHz)	Max Power (dBm)		Total Power (dBm)	Tune up tolerance
		Ant2	Ant3		
10MHz	3555	23.95	23.80	27.01	27±1
20MHz	3560	21.22	20.81	24.03	24±1

**MPE Calculation results (for 5G WIFI): Worst-Case mode**

Frequency (MHz)	Maximum tune up power(dBm)	RF distance(cm)	ANT Gain	Result (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
NII Bands	29.5	80	13	0.221	1.0
LTE Band 48	28	80	17	0.393	

**Max Simultaneous Transmission Calculation (Worst-case mode)**

No.	Worst Mode	MPE Ratio	Results
1	LTE Band48 +5G WIFI	0.221+0.393=0.614	<1.0(pass)