

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

FCC ID: 2ARDU-DINGER-PRO2

EUT Specification

EUT	TG MAXX
Frequency band (Operating)	☒ WIFI: 2.412GHz ~ 2.462GHz ☒ WIFI: 5.180GHz ~ 5.240GHz ☒ WIFI: 5.260GHz ~ 5.320GHz ☒ WIFI: 5.500GHz ~ 5.700GHz ☒ WIFI: 5.745GHz ~ 5.825GHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	☐ Single antenna ☒ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Max. output power	2.4G WIFI IEEE 802.11b: 16.49 dBm IEEE 802.11g: 15.44 dBm IEEE 802.11n HT20: 17.59 dBm IEEE 802.11n HT40: 16.27 dBm 5G WIFI U-NII-1 IEEE 802.11a: 15.18 dBm IEEE 802.11n HT20: 16.80 dBm IEEE 802.11n HT40: 16.32 dBm IEEE 802.11ac VHT20: 16.88 dBm IEEE 802.11ac VHT40: 16.72 dBm IEEE 802.11ac VHT80: 16.76 dBm U-NII-2A IEEE 802.11a: 15.16 dBm IEEE 802.11n HT20: 16.89 dBm IEEE 802.11n HT40: 16.00 dBm

	IEEE 802.11ac VHT20: 16.51 dBm IEEE 802.11ac VHT40: 16.54 dBm IEEE 802.11ac VHT80: 15.76 dBm U-NII-2C IEEE 802.11a: 16.85 dBm IEEE 802.11n HT20: 16.29 dBm IEEE 802.11n HT40: 16.29 dBm IEEE 802.11ac VHT20: 16.93 dBm IEEE 802.11ac VHT40: 17.23 dBm IEEE 802.11ac VHT80: 15.66 dBm U-NII-3 IEEE 802.11a: 15.24 dBm IEEE 802.11n HT20: 17.00 dBm IEEE 802.11n HT40: 16.20 dBm IEEE 802.11ac VHT20: 17.04 dBm IEEE 802.11ac VHT40: 16.62 dBm IEEE 802.11ac VHT80: 12.30 dBm
Antenna gain (Max)	2.4G WIFI 1.68 dBi for antenna 1 3.3 dBi for antenna 2 5G WIFI 2.99 dBi for antenna 1 2.83 dBi for antenna 2
Evaluation applied	☒ MPE Evaluation ☐ SAR Evaluation

Limits for Maximum Permissible Exposure(MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm², P_{out} =output power to antenna in mW.

G= gain of antenna in linear scale, π =3.1416

R= distance between observation point and center of the radiator in cm=20cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna

and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

For multiple RF sources: Multiple RF sources are exempt if:
in the case of fixed RF sources operating in the same time-averaging period,
or of multiple mobile or portable RF sources within a device operating in the
same time averaging period, if the sum of the fractional contributions to the
applicable thresholds is less than or equal to 1 as indicated in the following
equation

$$\sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

Evaluated_k: the maximum reported SAR or MPE of fixed, mobile, or portable
RF source k either in the device or at the transmitter site from an existing
evaluation at the location of exposure.

Exposure Limit_k: either the general population/uncontrolled maximum
permissible exposure (MPE) or specific Absorption rate (SAR) limit for each
fixed, mobile, or portable RF source k.

Measurement Result

2.4G WIFI:

Mode	Max Measured Power (dBm)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/ cm ²)	Power density Limits (mW/ cm ²)	Results
802.11b	16.49	16±1	17	50.119	3.3	2.138	0.021318	1	PASS
802.11g	15.44	15±1	16	39.811	3.3	2.138	0.016933	1	PASS
802.11n HT20	17.59	17±1	18	63.096	3.3	2.138	0.026837	1	PASS
802.11n HT40	16.27	16±1	17	50.119	3.3	2.138	0.021318	1	PASS

5G WIFI:

U-NII-1

Mode	Max Measured Power (dBm)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/cm ²)	Power density Limits (mW/cm ²)	Results
802.11a	15.18	15±1	16	39.811	2.99	1.991	0.015769	1	PASS
802.11n HT20	16.80	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11n HT40	16.32	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT20	16.88	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT40	16.72	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT80	16.76	16±1	17	50.119	2.99	1.991	0.019852	1	PASS

U-NII-2A

Mode	Max Measured Power (dBm)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/cm ²)	Power density Limits (mW/cm ²)	Results
802.11a	15.16	15±1	16	39.811	2.99	1.991	0.015769	1	PASS
802.11n HT20	16.89	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11n HT40	16.00	16±1	17	50.119	2.99	1.991	0.015769	1	PASS
802.11ac VHT20	16.51	16±1	17	50.119	2.99	1.991	0.015769	1	PASS
802.11ac VHT40	16.54	16±1	17	50.119	2.99	1.991	0.015769	1	PASS
802.11ac VHT80	15.76	15±1	16	39.811	2.99	1.991	0.015769	1	PASS

U-NII-2C

Mode	Max Measured Power (dBm)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/cm ²)	Power density Limits (mW/cm ²)	Results
802.11a	16.85	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11n HT20	16.29	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11n HT40	16.29	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT20	16.93	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT40	17.23	17±1	18	63.096	2.99	1.991	0.024992	1	PASS
802.11ac VHT80	15.66	15±1	16	39.811	2.99	1.991	0.015769	1	PASS

U-NII-3

Mode	Max Measured Power (dBm)	Tune up tolerance (dBm)	Max tune up conducted power(dBm)	Output Peak power (mW)	Ant. Gain (dBi)	Ant. Gain (numeric)	Power density at 20cm (mW/cm ²)	Power density Limits (mW/cm ²)	Results
802.11a	15.24	15±1	16	39.811	2.99	1.991	0.015769	1	PASS
802.11n HT20	17.00	17±1	18	63.096	2.99	1.991	0.024992	1	PASS
802.11n HT40	16.20	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT20	17.04	17±1	18	63.096	2.99	1.991	0.024992	1	PASS
802.11ac VHT40	16.62	16±1	17	50.119	2.99	1.991	0.019852	1	PASS
802.11ac VHT80	12.30	12±1	13	19.953	2.99	1.991	0.007903	1	PASS

Maximum Simultaneous transmission MPE Ratio for 2.4G WIFI & 5G WIFI

Maximum MPE ratio (2.4G WIFI)	Maximum MPE ratio (5G WIFI)	Σ MPE ratios	Limit	Results
0.024992	0.024992	0.049984	1.000	Pass

Signature:



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Date: 2025-12-10