



MPE ESTIMATION

**Test report
On Behalf of
SHENZHEN UTEPO Tech Co.Ltd
For
2.4G Outdoor CPE
Model No.: CP2-300, CP2-300-A**

FCC ID: 2AR8QCP2-300

Prepared for : SHENZHEN UTEPO Tech Co.Ltd
Room No. 4C08, 4th Floor, Sub-Building of Mindray Mansion, Keji 12th Road South,
High-tech Industrial Park, Nanshan, Shenzhen 518057, China.

Prepared By : Shenzhen HUAK Testing Technology Co., Ltd.
1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai Street,
Bao'an District, Shenzhen City, China

Date of Test: Dec. 19, 2018 ~ Dec. 26, 2018

Date of Report: Dec. 26, 2018

Report Number: HK1812202010-2E



1, Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz

2, Estimation Result

For antenna 1:

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	14.69	14±1(15)	31.62	1	1.2589	0.00792
11g	13.61	13±1(14)	25.12	1	1.2589	0.00629
11n/HT20	10.97	10±1(11)	12.59	1	1.2589	0.00315
11n/HT40	10.02	10±1(11)	12.59	1	1.2589	0.00315

$$Pd = \frac{P_{out} * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi



Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	CH1	13.89	24.49	1	1.2589	0.00614
	CH6	14.69	29.44	1	1.2589	0.00738
	CH11	14.33	27.10	1	1.2589	0.00679
11g	CH1	11.68	14.72	1	1.2589	0.00369
	CH6	12.33	17.10	1	1.2589	0.00428
	CH11	13.61	22.96	1	1.2589	0.00575
11n/HT20	CH1	10.92	12.36	1	1.2589	0.00310
	CH6	10.97	12.50	1	1.2589	0.00313
	CH11	9.99	9.98	1	1.2589	0.00250
11n/HT40	CH1	9.69	9.31	1	1.2589	0.00233
	CH4	10.02	10.05	1	1.2589	0.00252
	CH7	9.65	9.23	1	1.2589	0.00231

$$Pd = \frac{Pout * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi

**For antenna 2:**

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	14.74	14±1(15)	31.62	1	1.2589	0.00792
11g	13.18	13±1(14)	25.12	1	1.2589	0.00629
11n/HT20	11.77	11±1(12)	15.85	1	1.2589	0.00397
11n/HT40	11.16	11±1(12)	15.85	1	1.2589	0.00397

$$Pd = \frac{Pout * G}{4\pi r^2} ;$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi



Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	CH1	14.74	29.79	1	1.2589	0.00746
	CH6	14.30	26.92	1	1.2589	0.00674
	CH11	14.62	28.97	1	1.2589	0.00726
11g	CH1	13.18	20.80	1	1.2589	0.00521
	CH6	12.40	17.38	1	1.2589	0.00435
	CH11	12.81	19.10	1	1.2589	0.00479
11n/HT20	CH1	11.21	13.21	1	1.2589	0.00331
	CH6	11.77	15.03	1	1.2589	0.00377
	CH11	10.08	10.19	1	1.2589	0.00255
11n/HT40	CH1	10.00	10.00	1	1.2589	0.00251
	CH4	9.94	9.86	1	1.2589	0.00247
	CH7	11.16	13.06	1	1.2589	0.00327

$$Pd = \frac{Pout * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi,MIMO gain=4.01dBi

**For MIMO:**

Mode	Max PK Output power(dBm)	Tune Up Power(dBm)	Max Tune Up power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	--	--	--	--	--	--
11g	--	--	--	--	--	--
11n/HT20	14.40	13±1(15)	31.62	4.01	2.518	0.01585
11n/HT40	13.48	13±1(14)	25.12	4.01	2.518	0.01259

$$Pd = \frac{Pout * G}{4\pi r^2} ;$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi



Mode	CH	PK Output power(dBm)	Output power(mW)	Antenna Gain(dBi)	Antenna Gain (linear)	MPE (mW/cm ²)
11b	CH1	--	--	--	--	--
	CH6	--	--	--	--	--
	CH11	--	--	--	--	--
11g	CH1	--	--	--	--	--
	CH6	--	--	--	--	--
	CH11	--	--	--	--	--
11n/HT20	CH1	14.08	25.59	4.01	2.518	0.01282
	CH6	14.40	27.54	4.01	2.518	0.01380
	CH11	13.05	20.18	4.01	2.518	0.01012
11n/HT40	CH1	12.86	19.32	4.01	2.518	0.00968
	CH4	12.99	19.91	4.01	2.518	0.00998
	CH7	13.48	22.28	4.01	2.518	0.01117

$$Pd = \frac{Pout * G}{4\pi r^2};$$

Note:

Note: The estimation distance is 20cm

Note:

PK Output power= conducted power.

Conducted power see the test report HK1812202010-E, antenna port 1 gain=1dBi, antenna port 2 gain=1dBi, MIMO gain=4.01dBi

-----The End-----