

## 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: A8I-PIXOO16

### EUT Specification

EUT	Pixoo16
<b>Frequency band (Operating)</b>	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5825GHz <input type="checkbox"/> Others: BLE: 2402-2480MHz
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna diversity</b>	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	25.52 dBm (0.3565W)
<b>Antenna gain (Max)</b>	3.55 dBi
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> 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 <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
<b>300-1500</b>	--	--	<b>F/300</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>5</b>	<b>6</b>
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
<b>300-1500</b>	--	--	<b>F/1500</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>1</b>	<b>30</b>

## Friis transmission formula: $P_d = \frac{P_{out} * G}{4 * \pi * R^2}$

Where

$P_d$  = Power density in  $mW/cm^2$

$P_{out}$  = output power to antenna in Mw

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

$P_d$  the limit of MPE,  $1mW/cm^2$ . 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.

## Measurement Result

Operating Mode	Channel Frequency (MHz)	Maximum output power (dBm)	Tune up tolerance (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Power density at 20cm (mW/ cm2 )	Power density Limits (mW/cm2 )
802.11b	2412	25.52	25.52 ± 1	26.52	3.55	0.2023	1
	2437	25.27	25.27 ± 1	26.27	3.55	0.1910	1
	2462	25.30	25.30 ± 1	26.30	3.55	0.1923	1
802.11g	2412	25.35	25.35 ± 1	26.35	3.55	0.1945	1
	2437	25.15	25.15 ± 1	26.15	3.55	0.1858	1
	2462	25.46	25.46 ± 1	26.46	3.55	0.1995	1
802.11n (HT20)	2412	24.58	24.58 ± 1	25.58	3.55	0.1629	1
	2437	24.36	24.36 ± 1	25.36	3.55	0.1549	1
	2462	24.49	24.49 ± 1	25.49	3.55	0.1596	1
802.11n (HT40)	2422	21.75	21.75 ± 1	22.75	3.55	0.0849	1
	2437	21.53	21.53 ± 1	22.53	3.55	0.0807	1
	2452	21.54	21.54 ± 1	22.54	3.55	0.0809	1

Result: No Standalone SAR test is required.