

Loopcomm Technology, Ltd.
6F., No. 236, Bo'ai St., Shulin Dist., New Taipei City 23845 Taiwan

Federal Communications Commission
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Applicant's declaration concerning RF Radiation Exposure

We hereby indicate that the product
Product description: 802.11 a/b/g/n/ac 2T2R WiFi USB 3.0 Dongle
Model No: LP-8097

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the
Product : 802.11 a/b/g/n/ac 2T2R WiFi USB 3.0 Dongle
will be integrated in the user's manual to provide end-users with transmitter operating
conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6M21402-13807-C-1
and the accompanying calculations.

Company: Loopcomm Technology, Ltd.
Address: 6F., No. 236, Bo'ai St., Shulin Dist., New Taipei City 23845 Taiwan

Date: 2014/03/04

Signature





Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6M21402-13807-C-1

FCC ID: VYTL8097

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

5.8GHz:802.11a

$$\begin{aligned} \text{EIRP} &= 7.75 \text{ dBm} + 4.01 \text{ dBi} \\ &= 11.76 \text{ dBm} \end{aligned}$$

5.8GHz:802.11n(20MHz), 802.11n(40MHz)

$$\begin{aligned} \text{EIRP} &= 9.61 \text{ dBm} + 4.01 \text{ dBi} \\ &= 13.62 \text{ dBm} \end{aligned}$$

5.8GHz:802.11ac

$$\begin{aligned} \text{EIRP} &= 9.60 \text{ dBm} + 4.01 \text{ dBi} \\ &= 13.61 \text{ dBm} \end{aligned}$$

2.4GHz:802.11b/g

$$\begin{aligned} \text{EIRP} &= 9.83 \text{ dBm} + 4.01 \text{ dBi} \\ &= 13.84 \text{ dBm} \end{aligned}$$

2.4GHz: 802.11n(20MHz), 802.11n(40MHz)

$$\begin{aligned} \text{EIRP} &= 9.56 \text{ dBm} + 4.01 \text{ dBi} \\ &= 13.57 \text{ dBm} \end{aligned}$$

Limit: EIRP = +36 dBm for Antenna gain <6dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

FCC OET Bulletin 65 Edition 97.01 determines the equations for predicting RF fields and applicable limits.

The prediction for power density in the far-field but will over-predict power density in the near field, where it could be used for walking a “worst case” or conservative prediction.

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

S – Power Density

P – Output power ERP

R – Distance

D – Cable Loss

AG – Antenna Gain

5.8GHz:802.11a

Item	Unit	Value	Remarks
P	mW	5.9566	Peak value
D	dB		
AG	dBi	4.01	
G		2.5177	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.0030	Calculated value



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5.8GHz:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	9.1411	Peak value
D	dB		
AG	dBi	4.01	
G		2.5177	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.0046	Calculated value

5.8GHz:802.11ac

Item	Unit	Value	Remarks
P	mW	9.1201	Peak value
D	dB		
AG	dBi	4.01	
G		2.5177	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.0046	Calculated value

802.11b/g

Item	Unit	Value	Remarks
P	mW	9.6161	Peak value
D	dB		
AG	dBi	4.01	
G		2.5177	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.0048	Calculated value

2.4G:802.11n(20MHz), 802.11n(40MHz)

Item	Unit	Value	Remarks
P	mW	9.0365	Peak value
D	dB		
AG	dBi	4.01	
G		2.5177	Calculated Value
R	cm	20	Assumed value
S	mW/cm ²	0.0045	Calculated value

Limits:

Limit for General Population / Uncontrolled Exposure	
Frequency (MHz)	Power Density (mW/cm ²)
1500 – 100.000	1.0