RF Exposure Evaluation Declaration

FCC ID:	TK4WPJ342
APPLICANT:	Compex Systems Pte Ltd
Application Type:	Certification
Product:	WIRELESS ACCESS POINT
Model No.:	WPJ342LV, WPJ342HV, MML342LV, MML342HV, MMJ342LV, MMJ342HV, MMS342LV, MMS342HV
Brand Name:	COMPEX
FCC Classification:	Unlicensed National Information Infrastructure (UNII)

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlinchen
(Marlin Chen)

Revision History

Report No.	Version	Description	Issue Date
1407RSU04208	Rev. 01	Initial report	08-28-2014
1407RSU04208	Rev. 02	Modify some channel output power	09-12-2014

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	WIRELESS ACCESS POINT
Model No.	WPJ342LV, WPJ342HV, MML342LV, MML342HV, MMJ342LV, MMJ342HV, MMS342LV, MMS342HV
Power Type	POE input
Frequency Range	802.11a/n: 5150 ~ 5250MHz 5725 ~ 5850MHz
Type of Modulation	802.11a/n: OFDM
Maximum Output Power	802.11a: 23.79dBm 802.11n-HT20: 25.68dBm 802.11n-HT40: 25.38dBm
Adapter	Power Over Ethernet (Gigabit) Model: HS36-2401250US Input: 100-240V ~ 50/60Hz 1.0A Output: +24V ~ 1.25A

2. RF Exposure Evaluation

2.1. Limits

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)

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 (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: Pd = (Pout*G)/(4*pi*r2)

Where
Pd = power density in mW/cm2
Pout = 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

Pd is the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	WIRELESS ACCESS POINT
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 15dBi for 5.2GHz and 25dBi for 5.8GHz in logarithm scale.

For 5G UNII Band:

Test Mode	Frequency Band (MHz)	Maximum Average Output Power (dBm)	Limit of Power Density S(mW/cm^2)	Safety Distance (cm)
802.11a	5180 ~ 5240	23.29	1	23.17
	5745 ~ 5825	23.79	1	77.61
802.11n-HT20	5180 ~ 5240	25.45	1	29.71
	5745 ~ 5825	25.68	1	96.47
802.11n-HT40	5190 ~ 5230	25.38	1	29.47
	5755 ~ 5795	22.61	1	67.75

CONCULISON:

The Safety Distance of this equipment was 96.47 cm.

The End