RF Exposure Evaluation Declaration

FCC ID:	TK4WLE600VX
APPLICANT:	Compex Systems Pte Ltd
Application Type:	Certification
Product:	802.11ac Dual Band Module
Model No.:	WLE600VX
Brand Name:	COMPEX
FCC Classification:	Digital Transmission System (DTS)
	Unlicensed National Information Infrastructure (UNII)

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlin Chen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.
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Revision History

Report No.	Version	Description	Issue Date
1503RSU02903	Rev. 01	Initial report	06-17-2015

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	802.11ac Dual Band Module
Model No.	WLE600VX
Power Type	POE input
Frequency Range	**For 2.4GHz Band:** 802.11b/g/n: 2412 ~ 2462 MHz **For 5.0GHz Band:** 802.11a/n/ac: 5150 ~ 5350MHz 5470 ~ 5725MHz 5725 ~ 5850MHz
Type of Modulation	802.11b: DSSS 802.11g/a/n/ac: OFDM

1.2. Antenna Description

Antenna Type	Manufacturer	Tx Paths	Max Directional Gain (dBi)
Panel Antenna 1#	Compex Systems Pte Ltd	2	2.4GHz: 11.0
Panel Antenna 2#	Kenbotong Communication LTD	2	2.4GHz: 10.0 5GHz: 10.0
Panel Antenna 3#	Smart Ant Inc	2	2.4GHz: 7.0 5GHz: 7.0
Panel Antenna 4#	TAOGLAS Inc	2	2.4GHz: 4.5 5GHz: 6.7
Panel Antenna 5#	Compex Systems Pte Ltd	2	2.4GHz: 5.0 5GHz: 5.0
Panel Antenna 6#	Compex Systems Pte Ltd	2	2.4GHz: 5.0 5GHz: 5.0
Dipole Antenna 1#	Kunshan Wavelink Electronic Co., Ltd.	2	2.4GHz: 2.0 5GHz: 2.0

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: $Pd = (Pout*G)/(4*pi*r^2)$

Where
Pd = power density in mW/cm^2
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	802.11ac Dual Band Module
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to Clause 1.2 of antenna description.

Test Mode	Frequency Band (MHz)	Maximum Average Output Power (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)
802.11b/g/n	2412 ~ 2462	24.22	0.6618	1
802.11a/n/ac	5180 ~ 5240	21.85	0.1527	1
802.11a/n/ac	5260 ~ 5320	22.89	0.1940	1
802.11a/n/ac	5500 ~ 5720	22.91	0.1949	1
802.11a/n/ac	5745 ~ 5825	24.63	0.5777	1

CONCULISON:

The Max Power Density at R (20 cm) = 0.6618mW/cm2 < 1mW/cm2.

So the EUT complies with the requirement.

The End