

MRT Technology (Suzhou) Co., Ltd Phone: +86-512-66308358

Web: www.mrt-cert.com

Report No.: 1703RSU03004 Report Version: Issue Date: 05-24-2017

RF Exposure Evaluation Declaration

FCC ID: TK4WLE600VX

APPLICANT: Compex Systems Pte Ltd

Application Type: Certification

Product: 802.11ac Dual Band Module

WLE600VX, WLE600VX-I Model No.:

COMPEX Trademark:

FCC Classification: Digital Transmission System (DTS)

Unlicensed National Information Infrastructure (UNII)

Reviewed By : Robin Wu)

Approved By : Marlinchen

(Marlin Chen)



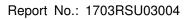


The test results relate only to the samples tested.

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.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

FCC ID: TK4WLE600VX Page Number: 1 of 6





Revision History

Report No.	Version	Description	Issue Date	Note
1703RSU03004	Rev. 01	Initial report	05-24-2017	Valid

FCC ID: TK4WLE600VX Page Number: 2 of 6



1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	802.11ac Dual Band Module			
Model No.	WLE600VX, WLE600VX-I			
Brand Name	COMPEX			
Wi-Fi Specification	802.11a/b/g/n/ac			
Frequency Range	2.4GHz:			
	For 802.11b/g/n-HT20: 2412 ~ 2462 MHz			
	For 802.11n-HT40: 2422 ~ 2452 MHz			
	5GHz:			
	For 802.11a/n-HT20:			
	5180~5320MHz, 5500~5700MHz, 5745~5825MHz			
	For 802.11ac-VHT20:			
	5180~5320MHz, 5500~5720MHz, 5745~5825MHz			
	For 802.11n-HT40:			
	5190~5310MHz, 5510~5670MHz, 5755~5795MHz			
	For 802.11ac-VHT40:			
	5190~5310MHz, 5510~5710MHz, 5755~5795MHz			
	For 802.11ac-VHT80:			
	5210MHz, 5290MHz, 5530MHz, 5610MHz, 5690MHz, 5775MHz			
Type of Modulation	802.11b: DSSS			
	802.11g/a/n/ac: OFDM			

FCC ID: TK4WLE600VX Page Number: 3 of 6



1.2. Description of Available Antennas

Antenna Type	Frequency Band (MHz)	Model	Model	Max Peak Antenna Gain (dBi)
	5150 ~ 5875	MTI Wireless E dge Ltd.	MT-485001	18.0
	4900 ~ 5875	PENSON Wireless, Inc., Taiwan	OM24580703	7.0
	2412 ~ 2462	PENSON Wireless, Inc., Taiwan	OM24580703	5

Note: The device didn't support beam-forming technology and Cyclic Delay Diversity (CDD) technology, and the transmit signals are uncorrected, so no add array gain to the band power and band PSD.

FCC ID: TK4WLE600VX Page Number: 4 of 6

Report No.: 1703RSU03004



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	Electric Field	Magnetic Field	Power Density	Average Time	
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm ²)	(Minutes)	
(A) Limits for Occupational/ Control Exposures					
300-1500		-1	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/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/cm². 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.

FCC ID: TK4WLE600VX Page Number: 5 of 6



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.

Test Mode	Frequency Band	Maximum Average	Limit of Power	Safety
	(MHz)	Output Power	Density	Distance
		(dBm)	S(mW/cm ²)	(cm)
802.11b/g/n	2412 ~ 2462	23.86	1	7.82
	5180 ~ 5320,			
802.11a/n/ac	5500 ~ 5720,	22.80	1	30.93
	5745 ~ 5825			

CONCULISON:

The Safety Distance of the 802.11ac Dual Band Module was 30.93 cm.

The End