

## RF Exposure Report

**Report No.:** SA190618D07A

**FCC ID:** TK4WLE900VX

**Test Model:** WLE900VX

**Received Date:** Aug. 7, 2019

**Test Date:** Aug. 19 to Sep. 2, 2019

**Issued Date:** Oct. 2, 2019

**Applicant:** Compex Systems Pte Ltd

**Address:** No 9 Harrison Road, Harrison Industrial Building, #05-01, 369651, Singapore

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Lin Kou Laboratories

**Lab Address:** No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

**FCC Registration /**  
**Designation Number:** 198487 / TW2021



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## Table of Contents

<b>Release Control Record</b> .....	<b>3</b>
<b>1 Certificate of Conformity</b> .....	<b>4</b>
<b>2 General Information</b> .....	<b>5</b>
2.1 General Description of EUT .....	5
<b>3 RF Exposure</b> .....	<b>6</b>
2.1 Limits for Maximum Permissible Exposure (MPE).....	6
2.2 MPE Calculation Formula .....	6
2.3 Classification .....	6
2.4 Calculation Result of Maximum Conducted Power .....	7

### Release Control Record

Issue No.	Description	Date Issued
SA190618D07A	Original release.	Oct. 2, 2019

## 1 Certificate of Conformity

**Product:** 802.11ac Dual Band Module

**Brand:** COMPEX

**Test Model:** WLE900VX

**Sample Status:** Engineering sample

**Applicant:** Compex Systems Pte Ltd

**Test Date:** Aug. 19 to Sep. 2, 2019

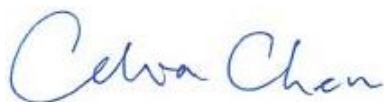
**Standards:** FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

**Prepared by :**



**, Date:**

Oct. 2, 2019

Celia Chen / Supervisor

**Approved by :**



**, Date:**

Oct. 2, 2019

Rex Lai / Associate Technical Manager

## 2 General Information

### 2.1 General Description of EUT

Product	802.11ac Dual Band Module
Brand	COMPEX
Test Model	WLE900VX
Status of EUT	Engineering sample
Operating Frequency	2412 ~ 2462MHz, 5180 ~ 5240MHz, 5745 ~ 5825MHz
Output Power	2412 ~ 2462MHz: 209.152mW 5180 ~ 5240MHz: 139.657mW 5745 ~ 5825MHz: 254.153mW
Antenna Type	Refer to note as below
Antenna Connector	Reverse SMA
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. The difference compared with original test report is adding antenna source.

2. The antenna information is listed as below:

Antenna Type	Dipole Antenna	Dipole Antenna
Maximum Gain (dBi)	2412-2462MHz: 2.0 5180-5825MHz: 2.0	2412-2462MHz: 2.22 5180-5825MHz: 4.29
Remark	Original Approved	Additional

For new antenna source, the EUT is authorized for use frequency bands: 2412-2462MHz, 5180-5240MHz and 5745-5825MHz only.

3. The EUT provides 3 completed transmitters and 3 receivers.

Modulation Mode	TX FUNCTION
802.11a	1TX
802.11b	1TX
802.11g	1TX
802.11n (20MHz)	3TX
802.11n (40MHz)	3TX
802.11ac (20MHz)	3TX
802.11ac (40MHz)	3TX
802.11ac (80MHz)	3TX

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

### 3 RF Exposure

#### 2.1 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 (minutes)
Limits For General Population / Uncontrolled Exposure				
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

f = Frequency in MHz ; \*Plane-wave equivalent power density

#### 2.2 MPE Calculation Formula

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

#### 2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

## 2.4 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2412-2462	23.20	6.99	20	0.2078	1
5180-5240	21.45	9.06	20	0.2237	1
5745~5825	24.05	9.06	20	0.4071	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. 2.4GHz: Directional gain = 2.22dBi + 10log(3) = 6.99dBi  
5.0GHz: Directional gain = 4.29dBi + 10log(3) = 9.06dBi

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