

# RF Exposure Report

Product Name : WiFi 6 (802.11ax) 3x3 MU-MIMO Dual Band Module

Model No. : WLE3003HX

FCC ID : TK4WLE3003HX

Applicant : Compex Systems Pte Ltd

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

Date of Receipt : Nov. 09, 2022

Date of Declaration : Jul. 03, 2023

Report No. : 22B0364R-RFUSV17S-A

Report Version : V2.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

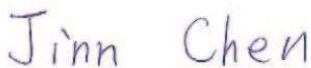
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.



Product Name	WiFi 6 (802.11ax) 3x3 MU-MIMO Dual Band Module	
Applicant	Compex Systems Pte Ltd	
Address	No 9 Harrison Road, Harrison Industrial Building, #05-01, Singapore 369651	
Manufacturer	Compex Systems Pte Ltd	
Model No.	WLE3003HX	
FCC ID	TK4WLE3003HX	
Trade Name	Compex	
Applicable Standard	KDB 447498 D01 v06	<input checked="" type="checkbox"/> Minimum test separation distance $\geq 20$ cm <input type="checkbox"/> For low power devices
Test Result	Complied	

Documented By

:



( Supervisor / Jinn Chen )

Tested By

:



( Senior Engineer / Alan Chen )

Approved By

:



( Manager / Tim Sung )

**Revision History**

Report No.	Version	Description	Issued Date
22B0364R-RFUSV17S-A	V1.0	Initial issue of report.	Mar. 14, 2023
22B0364R-RFUSV17S-A	V2.0	Change module supplier information.	Jul. 03, 2023

**1. General Information**

1.1. EUT Description

Product Name	WiFi 6 (802.11ax) 3x3 MU-MIMO Dual Band Module
Trade Name	Compex
Model No.	WLE3003HX
FCC ID	TK4WLE3003HX

Note: For more detailed information please refer to report No.: 22B0364R-RFNAV03S-3.

## 1.2. Test Facility

USA : FCC Registration Number: TW0033  
Canada : CAB Identifier Number: TW3023 / Company Number: 26930

Site Description : Accredited by TAF  
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd  
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan  
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C.  
Phone Number : +886-3-275-7255  
Fax Number : +886-3-327-8031  
Email Address : [info.tw@dekra.com](mailto:info.tw@dekra.com)  
Website : <http://www.dekra.com.tw>

## 2. RF Exposure Evaluation

### 2.1. Standard Applicable

According to KDB 447498 D01 (7.1), A minimum test separation distance  $\geq 20$  cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits.

### 2.2. 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 <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/ Uncontrolled Exposures				
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
300-1,500			f/1500	30
1,500-100,000			1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

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

Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is  $\leq 1.0$

RF exposure evaluation are performed in accordance with the latest version of IEEE C95.3

### 2.3. Test Result of RF Exposure Evaluation

Product : WiFi 6 (802.11ax) 3x3 MU-MIMO Dual Band Module  
Test Item : RF Exposure Evaluation

Band	Frequency (MHz)	E.I.R.P (dBm)	E.I.R.P (mW)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
2.4GHz	2462	26.50	446.69	0.088	1
5GHz	5190	19.19	82.99	0.017	1

Note:

1. The evaluation method is based on IEEE C95.3-202
2. The conducted output power is refer to report No.: 22B0364R-RFNAV03S-3 from the DEKRA.

Results	PASS
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