



RF Exposure Evaluation Declaration

FCC ID: TK4-WLM54AG

APPLICANT: Compex Systems Pte Ltd

Application Type: Certification

Product: Wireless Network Mini PCI Adapter

Model No.: IWAVEPORT WLM54AG

Brand Name: COMPEX

FCC Classification: Digital Transmission System (DTS)

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(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.

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Revision History

Report No.	Version	Description	Issue Date
1606RSU00402	Rev. 01	Initial report	06-14-2016

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	Wireless Network Mini PCI Adapter
Model No.	IWAVEPORT WLM54AG
Frequency Range	802.11b/g 2412 ~ 2462MHz
Type of Modulation	802.11b: DSSS 802.11g: OFDM

1.2. Antenna Description

Antenna Type	Manufacturer	Paths	Max Gain (dBi)
Dipole Antenna	Compex Systems Pte Ltd	1T1R	2.4GHz: 2

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

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.

2.2. Test Result of RF Exposure Evaluation

Product	Wireless Network Mini PCI Adapter
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	2412 ~ 2462	15.64	0.0116	1

CONCLUSION:

Therefore, the Max Power Density at R (20 cm) = 0.0116mW/cm² < 1mW/cm².
So the EUT complies with the requirement.

_____ The End _____