

RF Exposure Evaluation Report

Product Name : 2.4GHz Dongle

Model No. : GM31WD

FCC ID : I4L-GM31WD

Applicant : MICRO-STAR INT'L Co., LTD.

Address : No.69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)

Date of Receipt : Feb. 06, 2022

Date of Declaration : Apr. 13, 2022

Report No. : 2220009R-RFUSMPEV02-B

Report Version : V1.0



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.

Issued Date: Apr. 13, 2022

Report No.: 2220009R-RFUSMPEV02-B



Product Name	2.4GHz Dongle	
Applicant	MICRO-STAR INT'L Co., LTD.	
Address	No.69, Lide St., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.)	
Manufacturer	CHUAND ELECTRONIC & TECHNOLOGY, LTD	
Model No.	GM31WD	
FCC ID.	I4L-GM31WD	
Trade Name	msi	
Applicable Standard	KDB 447498 D01 v06	<input type="checkbox"/> Minimum test separation distance ≥ 20 cm
	KDB 447498 D04 v01	<input checked="" type="checkbox"/> For low power devices
Test Result	Complied	

Documented By : Genie Chang

(Senior Project Specialist / Genie Chang)

Tested By : Alan Chen

(Senior Engineer / Alan Chen)

Approved By : Tim Sung

(Manager / Tim Sung)

Revision History

Report No.	Version	Description	Issued Date
2220009R-RFUSMPEV02-B	V1.0	Initial issue of report.	2022-04-13

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	2.4GHz Dongle
Trade Name	msi
Model No.	GM31WD
FCC ID.	I4L-GM31WD
Frequency Range	2422 – 2478MHz
Channel Number	8CH
Type of Modulation	GFSK
Channel Control	Auto
Antenna Type	PCB Printed Antenna
Antenna Gain	Refer to the table “Antenna List”
Channel Control	Auto

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	CHUAND ELECTRONIC & TECHNOLOGY,LTD	GM31WD	PCB Printed Antenna	0.76dBi for 2.4GHz

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 : +866-3-327-8031
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

2. RF Exposure Evaluation

2.1. Standard Applicable

According to 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

2.2. Measurement Result:

According to KDB Publication 447498 D01, section 4.3.1, per the calculations of item 1 $(\text{Power(mW)}/\text{separation (mm)} \cdot \sqrt{f(\text{GHz})} \leq 3.0)$, SAR is required as shown in the table below where calculated values are greater than 3.0:

- 1.) Operation frequency = 2449MHz and antenna separation distance = 5mm,
SAR Test Exclusion Threshold = 4.46mW

Frequency Band	Average EIRP power		SAR Test Exclusion Threshold	Calculated Threshold Value (≤ 3.0 SAR is not required)
	(dBuV/3m)	(mW)	(mW)	
2449MHz	61.617	0.0004	4.46	0.00014

Note1: The SAR/MPE measurement is not necessary.

Note2: The Maximum Peak EIRP power is refer to report No.: 2220009R-RFUSOTHV06-B from the DEKRA.