



MPE Report

Report No.: STS2512335H01

Issued for

REOLINK TECHNOLOGY PTE. LTD.

31 KAKI BUKIT ROAD 3, #06-02, TECHLINK, SINGAPORE
417818

Product Name: WiFi module

Brand Name: **Reolink**

Model Name: CDI-WX27931A-00

Series Model(s): N/A

FCC ID: 2BN5S-2509B

Test Standard: FCC 47CFR §2.1091

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

**TEST REPORT**

Applicant's Name: REOLINK TECHNOLOGY PTE. LTD.
Address: 31 KAKI BUKIT ROAD 3, #06-02, TECHLINK, SINGAPORE 417818
Manufacturer's Name: REOLINK TECHNOLOGY PTE. LTD.
Address: 31 KAKI BUKIT ROAD 3, #06-02, TECHLINK, SINGAPORE 417818

Product Description

Product Name: WiFi module

Brand Name: **Reolink**

Model Name: CDI-WX27931A-00

Series Model(s): N/A

Test Standards: FCC 47CFR §2.1091
447498 D01 Interim General RF Exposure Guidance v06

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Date of Test

Date of receipt of test item: 17 Nov. 2025

Date (s) of performance of tests: 17 Nov. 2025 to 20 Dec. 2025

Date of Issue: 20 Dec. 2025

Test Result: **Pass**

Testing Engineer :

Aaron Bu

(Aaron Bu)

Technical Manager :

Skylar Li

(Skylar Li)

Authorized Signatory :

Bovey Yang

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	20 Dec. 2025	STS2512335H01	ALL	Initial Issue



1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	WiFi module	
Brand Name	Reolink	
Model Name	CDI-WX27931A-00	
Series Model(s)	N/A	
Model Difference	N/A	
Product Description	The EUT is Wifi Module	
	Operation Frequency:	2402~2480 MHz 802.11b/g/n/ax 20: 2412~2462 MHz IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20) 5.180GHz-5.240GHz IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20) 5.260GHz-5.320GHz IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20) 5.500GHz-5.700GHz IEEE 802.11a/ n(HT20)/ac(VHT20)/ax(HE20) 5.745GHz-5.825GHz
	Modulation Type:	GFSK 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ax(OFDM, OFDMA): BPSK,QPSK,16-QAM,64-QAM,256-QAM,1024QAM 802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM): BPSK,QPSK,16-QAM,64-QAM,256-QAM 802.11ax(OFDM, OFDMA): BPSK,QPSK,16-QAM,64-QAM,256-QAM,1024QAM
		2.4G WIFI: 802.11b/g Support SISO 802.11n/ax Support SISO 5G WIFI: 802.11a Support SISO 802.11n/ac/ax Support SISO
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): 65/58.5/52/39/26/19.5/13/6.5Mbps 802.11ax(HE20): 135/65/58.5/52/39/26/19.5/13/6.5Mbps
	Number of Channel:	BLE: 40 802.11b/g/n/ax20: 11CH



	Antenna Type:	External antenna	
	Antenna Gain (dBi):	BLE/2.4G WIFI: 4.4 5G WIFI: 3.42	
Power Rating	DC 3.3V		
Adapter	N/A		
Battery	N/A		
Hardware Version	N/A		
Software Version	N/A		

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f ²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f ²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.



2.3 TEST RESULT

Tune up

Mode	Detector	Tune up Power
BLE	AV	9±1dBm
2.4G WIFI	AV	17±1dBm
5G WIFI	AV	16±1dBm

Protocol	Fre. (GHz)	Separation distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Ratio	Result
BLE	2.480	20	10	4.4	14.4	27.54	0.0055	1	0.0055	Pass
2.4G WIFI	2.462	20	18	4.4	22.4	173.8	0.0346	1	0.0346	Pass
5G WIFI	5.580	20	17	3.42	20.42	110.2	0.00219	1	0.0219	Pass

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. The Bluetooth and WLAN can't simultaneous transmission at the same time.

3. ERP = EIRP - 2.15

※※※※※END OF THE REPORT※※※※※