



# FCC RF EXPOSURE REPORT

Applicant : SHENZHEN Hitevision Technology Co., Ltd.  
Address : Honghe Mansion No. 1 Building A, 1 Danzi North Road, Shatian, Kengzi Street, Pingshan District, Shenzhen  
Equipment : Wireless Module  
Model No. : AZ932-HN  
Trade Name : N/A  
FCC ID. : 2ACYT-AZ932

## I HEREBY CERTIFY THAT :

The sample was received on Oct. 28, 2022 and the testing was completed on Nov. 30, 2022 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Leevin Li /Supervisor



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### History of this test report

Original.

Additional attachment as following record:

Attachment No.	Issue Date	Description
DEFJ2210072	Nov. 30, 2022	Original



# 1. Test Configuration of Equipment under Test

## 1.1 Feature of Equipment

Equipment	Wireless Module
Model Name	AZ932-HN
Model Discrepancy	N/A
Chipset	RTL8852BU& RTL8811CU
Frequency Range	RTL8852BU BT/BLE/ WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5725MHz -5850MHz
	RTL8811CU WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5725MHz -5850MHz
Modulation Type	RTL8852BU BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
	RTL8811CU 2.4GHz 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 5GHz 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Data Rate	RTL8852BU BT: GFSK:1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps, 2Mbps, 125kbps, 500kbps WIFI 2.4GHz: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ax: MCS0-MCS11, HE20/HE40 WIFI 5GHz: 802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: MCS0-MCS15, HT20/HT40 802.11ac: MCS0-MCS9, VHT20/40/80 802.11ax: MCS0-MCS11, HE20/HE40/HE80
	RTL8811CU WIFI 2.4GHz: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 72.2Mbps, HT40 reach up to150Mbps WIFI 5GHz:



	802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 72.2Mbps, HT40 reach up to 150Mbps 802.11ac: VHT20 reach up to 86.7Mbps, VHT40 reach up to 200Mbps, VHT80 reach up to 433.3Mbps
Antenna Type	Dipole Antenna
Working Temperature	0°C to +45°C
Storage Temperature	-40°C to +70°C
Operating Voltage	DC 12V from adapter

Note: For more details, please refer to the User’s manual of the EUT.

### 1.2 General Information of Test

Test Site	<b>Cerpass Technology Corporation(Cerpass Laboratory)</b> Address: Room 102, No. 5, Xing'an Road, Chang'an Town, Dongguan City, Guangdong Province Tel: +86-769-8547-1212 Fax: +86-769-8547-1912
FCC Designation No.:	CN1288



## 2. Radio Frequency Exposure

<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation)
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna diversity</b>	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input checked="" type="checkbox"/> Tx/Rx diversity
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

### TEST RESULTS

No non-compliance noted.

### Calculation

Given  $E = \frac{\sqrt{30 \times P \times G}}{d}$  &  $S = \frac{E^2}{3770}$

Where  $E =$  Field strength in Volts / meter  
 $P =$  Power in Watts  
 $G =$  Numeric antenna gain  
 $d =$  Distance in meters  
 $S =$  Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where  $d =$  Distance in cm  
 $P =$  Power in mW  
 $G =$  Numeric antenna gain  
 $S =$  Power density in mW / cm<sup>2</sup>



**Maximum Permissible Exposure**

**RTL8852BU**

**Bluetooth**

Mode	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
Bluetooth EDR	2402-2480	7.57	9.57	3.56	20	0.004
Bluetooth LE	2402-2480	6.36	7.36	3.56	20	0.002

**Wlan**

**MIMO**

**ANT A**

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
2412-2462	21.77	23.77	3.77	20	0.113
5150-5250	10.65	12.65	3.62	20	0.008
5725-5850	12.44	14.44	3.79	20	0.013

**ANT B**

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
2412-2462	19.42	21.42	3.78	20	0.066
5150-5250	10.74	12.74	3.68	20	0.009
5725-5850	12.65	14.65	3.79	20	0.014

The sum of the ratios of the spatially averaged results to the applicable frequency dependent MPE limits :

Simultaneous transmission mode	The sum of the ratios	Result
ANT A+ANT B	0.113/1+0.066/1	0.179 < 1

**RTL8811CU**

**SISO**

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm <sup>2</sup> )
2412-2462	19.95	21.95	3.73	20	0.074
5150-5250	9.70	11.70	3.73	20	0.007
5725-5850	12.98	14.98	3.73	20	0.015

**Maximum Permissible Exposure (Co-location)**

the sum of the ratios of the spatially averaged results to the applicable frequency dependent MPE limits :

Simultaneous transmission mode	The sum of the ratios	Result
Bluetooth +WLAN	0.004/1+0.179/1	0.183 < 1
RTL8852BU + RTL8811CU	0.179/1+0.074/1	0.253 < 1

**Conclusion**

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

-----End of the report -----