



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. : AZ820-HN
Trade Name : N/A
FCC ID. : 2ACYT-AZ820

I HEREBY CERTIFY THAT :

The sample was received on Jan. 20, 2022 and the testing was completed on Feb. 24, 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
DEFJ2201003	Feb. 24, 2022	Original



1. Test Configuration of Equipment under Test

1.1 Feature of Equipment

Equipment	Wireless module
Model Name	AZ820-HN
Model Discrepancy	N/A
Frequency Range	BT/BLE/ WIFI 2.4G: 2400MHz-2483.5MHz WIFI 5G: 5150MHz-5250MHz, 5725MHz -5850MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK 802.11b: CCK, DQPSK, DBPSK 802.11a/g: 64-QAM,16-QAM, QPSK, BPSK 802.11n: 64-QAM,16-QAM, QPSK, BPSK 802.11ac: 256-QAM,64-QAM,16-QAM, QPSK, BPSK
Data Rate	BT: GFSK:1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK:3Mbps BLE: GFSK: 1Mbps&2Mbps WIFI 2.4G: 802.11b: 1, 2 ,5.5,11Mbps 802.11g: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to 300Mbps WIFI 5G: 802.11a: 6,9,12,18,24,36,48,54Mbps 802.11n: HT20 reach up to 144.4Mbps, HT40 reach up to300Mbps 802.11ac: VHT20 reach up to 173.3Mbps, VHT40 reach up to 400Mbps, VHT80 reach up to 866.7Mbps
Antenna Type	BT/BLE:Dipole Antenna WIFI 2.4G/5G: Dipole Antenna
Operating Voltage	DC 12V

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



1.2 General Information of Test

Test Site	Cerpass Technology Corporation(Cerpass Laboratory) 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

Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation)
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	<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
Evaluation applied	<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 / cm²



Maximum Permissible Exposure

Bluetooth

Mode	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
Bluetooth EDR	2402-2480	7.59	8.59	5.13	20	0.005
Bluetooth LE	2402-2480	6.80	7.8	5.13	20	0.004

Wlan

SISO

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
2412-2462	23.00	24.00	4.67	20	0.146
5150-5250	15.95	16.95	5.36	20	0.034
5725-5850	14.02	15.02	5.67	20	0.023

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 ²)
2412-2462	21.56	22.56	4.67	20	0.105
5150-5250	15.95	16.95	5.36	20	0.034
5725-5850	13.39	14.39	5.67	20	0.020

ANT B

Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)
2412-2462	23.00	24.00	4.67	20	0.146
5150-5250	15.35	16.35	5.36	20	0.029
5725-5850	14.02	15.02	5.67	20	0.023

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	0.146/1+0.034/1	0.180 < 1

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	0.005/1+0.146/1+0.034/1	0.185 < 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 -----