

# RF Exposure Evaluation Report

**Applicant:** Zhuhai Jinhong Technology Co., LTD

**Address of Applicant:** room R07-06, 2nd floor, 4th building, number 2007 Mingzhunan road, Zhuhai City, Guangdong Province, China

**Equipment Under Test (EUT)**

Product Name: Wirerless Signal Wall-through Ethernet Connector-ETHERNET AIR

Model No.: AH 9066, ZG302M, ZR08PR, TD-AH9066, HW9066, TX23-9066, COD- AH06, 87306, MT141

**FCC ID:** 2AZIK-AH9066

**Applicable standards:** FCC CFR Title 47 Part 2 Subpart J Section 2.1091

**Date of sample receipt:** 01 Apr., 2021

**Date of Test:** 02 Apr., to 23 Apr., 2021

**Date of report issue:** 25 Apr., 2021

**Test Result:** PASS\*

Authorized Signature:



Bruce Zhang  
Laboratory Manager



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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## 2 Version

Version No.	Date	Description
00	25 Apr., 2021	Original

Tested by: Mike Ou  
Test Engineer

Date: 25 Apr., 2021

Reviewed by: Winner Zhang  
Project Engineer

Date: 25 Apr., 2021

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## 4 General Information

### 4.1 Client Information

Applicant:	Zhuhai Jinhong Technology Co., LTD
Address:	room R07-06, 2nd floor, 4th building, number 2007 Mingzhunan road, Zhuhai City, Guangdong Province, China
Manufacturer/Factory:	Zhuhai Jinhong Technology Co., LTD
Address:	room R07-06, 2nd floor, 4th building, number 2007 Mingzhunan road, Zhuhai City, Guangdong Province, China

### 4.2 General Description of E.U.T.

Product Name:	Wireless Signal Wall-through Ethernet Connector-ETHERNET AIR
Model No.:	AH9066, ZG302M, ZR08PR, TD-AH9066, HW9066, TX23-9066, COD- AH06, 87306, MT141
Operation Frequency:	903.5-926.5MHz for 802.11ah(1MHz channel bandwidth); 905-925MHz for 802.11ah(2MHz channel bandwidth); 906-926MHz for 802.11ah(4MHz channel bandwidth); 908-924MHz for 802.11ah(8MHz channel bandwidth);
Modulation technology:	Orthogonal Frequency Division Multiplexing(OFDM)
Antenna Type:	External Antenna
Antenna gain:	5.0dBi
Remark:	Model No.: AH9066, ZG302M, ZR08PR, TD-AH9066, HW9066, TX23-9066, COD- AH06, 87306, MT141 were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model.
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

### 4.3 Operating Modes

Operating mode	Detail description
802.11ah mode	Keep the EUT in continuously transmitting in 802.11ah mode

### 4.4 Additions to, deviations, or exclusions from the method

No
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### 4.5 Laboratory Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> <li>● <b>FCC - Designation No.: CN1211</b> JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.</li> <li>● <b>ISED – CAB identifier.: CN0021</b> The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.</li> <li>● <b>A2LA - Registration No.: 4346.01</b> This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <a href="https://portal.a2la.org/scopepdf/4346-01.pdf">https://portal.a2la.org/scopepdf/4346-01.pdf</a></li> </ul>
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### 4.6 Laboratory Location

<p>JianYan Testing Group Shenzhen Co., Ltd. Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info@ccis-cb.com, Website: <a href="http://www.ccis-cb.com">http://www.ccis-cb.com</a></p>
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## 5 Technical Requirements Specification in FCC CFR Title 47 Part 2.1091

### 5.1 Limits

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)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

### 5.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

### 5.3 Result

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm <sup>2</sup> )	Limits for General Population/ Uncontrolled Exposure (mW/cm <sup>2</sup> )
802.11ah(1MHz channel bandwidth)							
926.5	20.32	107.65	5.0	3.16	20.00	0.07	0.62
802.11ah(2MHz channel bandwidth)							
925.0	20.71	117.76	5.0	3.16	20.00	0.07	0.62
802.11ah(4MHz channel bandwidth)							
914.0	20.97	125.03	5.0	3.16	20.00	0.08	0.61
802.11ah(8MHz channel bandwidth)							
908.0	20.72	118.03	5.0	3.16	20.00	0.07	0.61

Note: Just the worst case mode was shown in report.

### 5.4 Conclusion

The device is exempt from the RF exposure evaluation.

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