TEST REPORT

Product Name	:	Mini PC
Brand Name	:	Pipo
Model	:	X1
Series Model	:	X1S，X2，X2S，M8，M9，M10，M11，M12，M13，M14，M15
FCC ID	:	PT7-X1
Applicant	:	**PIPO TECHNOLOGY CO.,LIMITED**
Address	:	Area C,3F,Bao Yun Da Logistics Centre,Warehouse Xi Xiang Avenue, Bao An District, China
Manufacturer	:	**PIPO TECHNOLOGY CO.,LIMITED**
Address	:	Area C,3F,Bao Yun Da Logistics Centre,Warehouse Xi Xiang Avenue, Bao An District, China
Standard(s)	:	FCC CFR Title 47 Part 15 Subpart B
Date of Receipt	:	Apr. 04, 2025
Date of Test	:	Apr. 05, 2025~ Apr. 21, 2025
Issued Date	:	Apr. 22, 2025

Issued By: **Guangdong Asia Hongke Test Technology Limited**

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

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GUANGDONG ASIA TEST TECHNOLOGY LIMITED AiT TEST REPORT

Report Revise Record

Report Version	Issued Date	Notes
M1	Apr. 22, 2025	Initial Release

Contents

1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:
47 CFR FCC Part 15 Subpart B - Unintentional Radiators

ANSI C63.4: 2014 – American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40GHz

1.2 Test Summary

Test Item	Section in 47 CFR	Test Result
AC Power Line Conducted Emission	FCC Part 15 B (Section15.107)	PASS
Electric Field Radiated Emissions	FCC Part 15 B (Section15.109)	PASS

1.3 Test Facility

Test Laboratory:
Guangdong Asia Hongke Test Technology Limited
B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:
FCC-Registration No.: 251906 Designation Number: CN1376
Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01
Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the Guangdong Asia Hongke Test Technology Limited’s quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Asia Hongke laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	9KHz~30MHz ±1.20 dB	(1)
Radiated Emission	9KHz~30MHz ±3.10dB	(1)
Radiated Emission	30MHz~1GHz ±3.75dB	(1)
Radiated Emission	1GHz~18GHz ±3.88 dB	(1)
Radiated Emission	18GHz-40GHz ±3.88dB	(1)
RF power, conducted	30MHz~6GHz ±0.16dB	(1)
RF power density, conducted	±0.24dB	(1)
Spurious emissions, conducted	±0.21dB	(1)
Temperature	±1℃	(1)
Humidity	±3%	(1)
DC and low frequency voltages	±1.5%	(1)
Time	±2%	(1)
Duty cycle	±2%	(1)

The report uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of k=2 , providing a level of confidence of approximately 95%

2 GENERAL INFORMATION

2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2 General Description of EUT

Product Name:	Mini PC
Model/Type reference:	X1
Serial Model:	X1S，X2，X2S，M8，M9，M10，M11，M12，M13，M14，M15
Different models：	Only model No differencei
Power Supply:	Input: 100-240V-50/60Hz 0.8A Output: DC12V3A (36.0W)
Adapter：	Mode: FX36U-120300C Input: 100-240V-50/60Hz 0.8A Output: DC12V3A (36.0W)
Hardware Version:	N/A
Software Version:	N/A

2.3 Description of Test Modes

The device, according to the function of the EUT, select the following operating modes for testing.

Test Modes:	
Mode 1	Data transmission

Note:

1. Pre-testing on all test modes, only the worst case mode was recorded in this report.
2. After the pre-testing, the following test modes were found to be the worst mode for the corresponding test items and recorded in the report

Test item	Test mode (Worse case operation mode)
EMI	Test mode 1

2.4 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Serial No.	Provided by	Other
Display	/	/	/	Lab	/

2.5 Equipment List for the Test

☒ **Radiation Emission Test Equipment (AiT 966 chamber)**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Measuring Receiver	R&S	ESR	101160	2024.09.08	2025.09.07
2	Low Noise Pre Amplifier	Tsj	MLA-10K01-B01-27	1205323	2024.09.08	2025.09.07
3	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3207	2024.09.08	2025.09.07
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2024.09.08	2025.09.07
5	Spectrum Analyzer	R&S	FSV40	101470	2024.09.08	2025.09.07
6	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2024.09.08	2025.09.07
7	Broadband Horn Antenna	Schwarzbeck	BBHA 9120D	452	2024.09.08	2025.09.07
8	Filter	MICRO-TRONICS	BRM50702-02	16	2024.09.08	2025.09.07
9	Filter	MICRO-TRONICS	BRC50703-02	17	2024.09.08	2025.09.07
10	Filter	MICRO-TRONICS	BRC50705-02	18	2024.09.08	2025.09.07

☒ **Conducted Emission Test Equipment (AiT shiled room)**

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
1	EMI Test Receiver	R&S	ESCI	100124	2024.09.08	2025.09.07
2	LISN	Kyoritsu	KNW-242	8-837-4	2024.09.08	2025.09.07
3	LISN	R&S	ESH3-Z2	0357.8810.54-101161-S2	2024.09.08	2025.09.07
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2024.09.08	2025.09.07
5	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2024.09.08	2025.09.07
6	Broadband Horn Antenna	SCHWARZBECK	BBHA 9120D	452	2024.09.08	2025-08-28

3 TEST CONDITIONS AND RESULTS

3.1 Conducted Emission

LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

FREQUENCY (MHz)	☐Class A (dBuV)		☒Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

TEST PROCEDURE

a) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2014.

b) Support equipment, if needed, was placed as per ANSI C63.4-2014.

c) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2014.

d) The EUT received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.

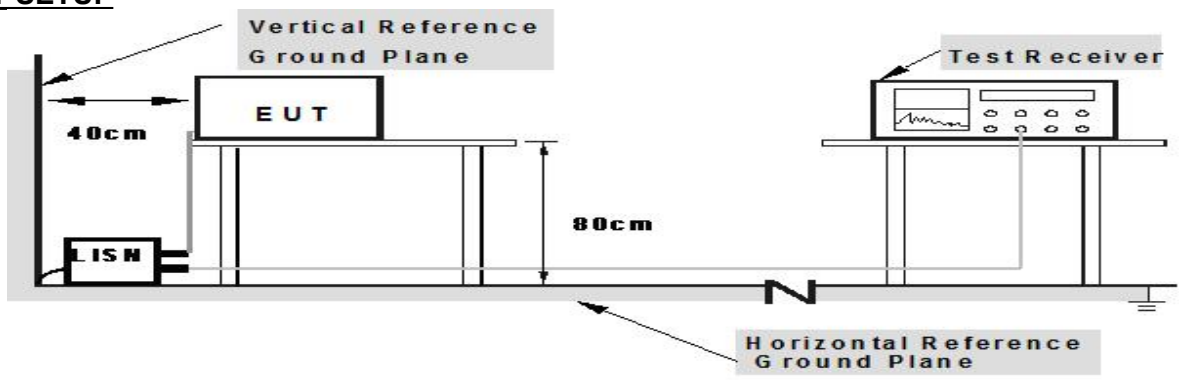
e) All support equipments received AC power from a second LISN, if any.

f) The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.

g) Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.

h) During the above scans, the emissions were maximized by cable manipulation.

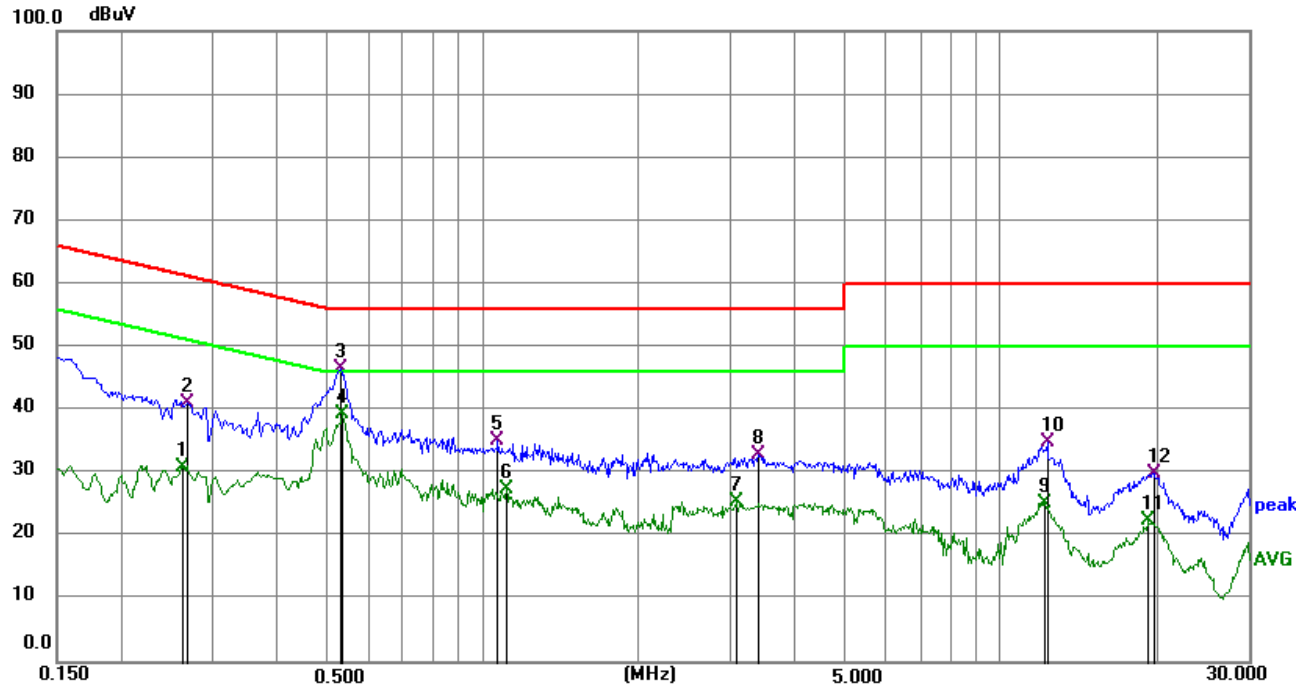
TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

TEST RESULTS

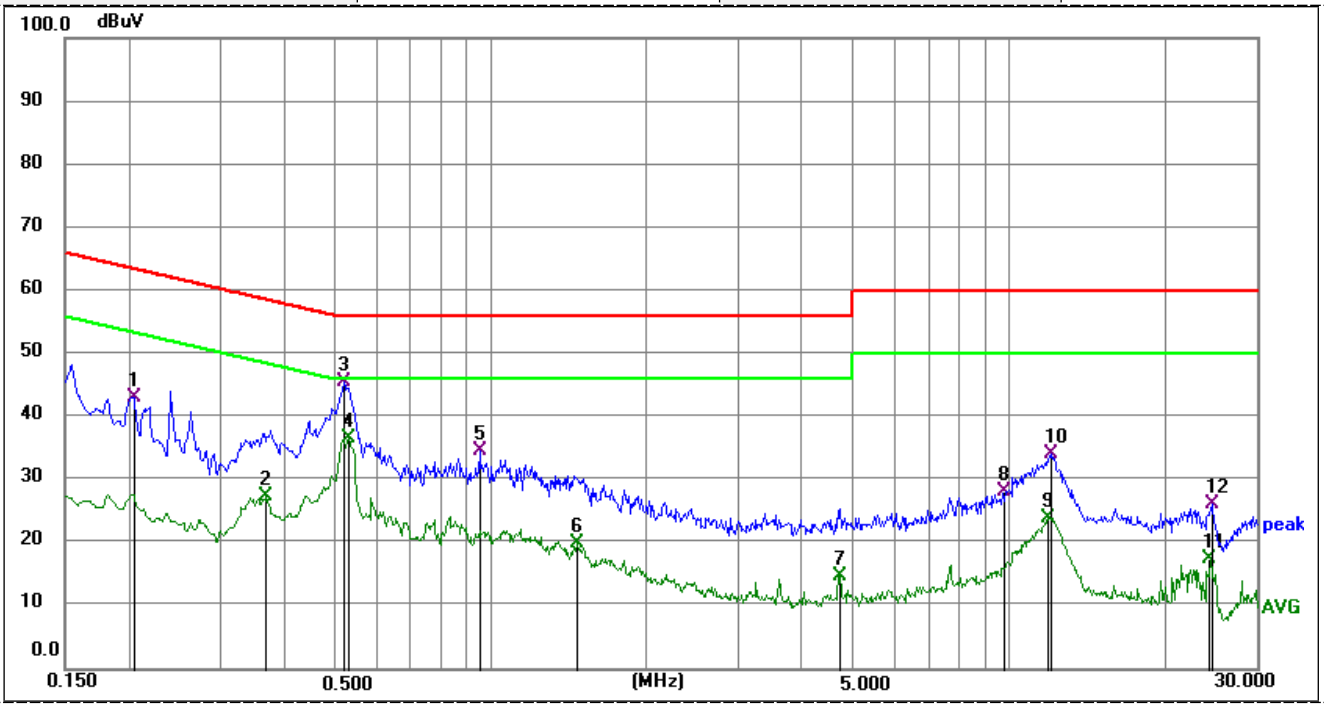
Test Mode	Mode 1	Line:	L



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;
Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2615	20.18	10.70	30.88	51.38	-20.50	AVG
2	0.2670	30.46	10.70	41.16	61.21	-20.05	QP
3	0.5280	35.86	10.69	46.55	56.00	-9.45	QP
4	0.5322	28.60	10.69	39.29	46.00	-6.71	AVG
5	1.0680	24.50	10.66	35.16	56.00	-20.84	QP
6	1.1085	16.87	10.66	27.53	46.00	-18.47	AVG
7	3.0884	14.70	10.79	25.49	46.00	-20.51	AVG
8	3.4080	21.84	10.97	32.81	56.00	-23.19	QP
9	12.1515	13.92	11.28	25.20	50.00	-24.80	AVG
10	12.2550	23.56	11.29	34.85	60.00	-25.15	QP
11	19.2345	10.66	11.68	22.34	50.00	-27.66	AVG
12	19.7340	18.32	11.70	30.02	60.00	-29.98	QP

Test Mode	Mode 1	Line:	N



Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;
Measurement Result = Reading Level +Correct Factor;

Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.2040	32.44	10.69	43.13	63.45	-20.32	QP
2	0.3660	16.82	10.68	27.50	48.59	-21.09	AVG
3	0.5190	34.92	10.69	45.61	56.00	-10.39	QP
4	0.5280	25.93	10.69	36.62	46.00	-9.38	AVG
5	0.9510	24.00	10.65	34.65	56.00	-21.35	QP
6	1.4640	9.21	10.71	19.92	46.00	-26.08	AVG
7	4.6993	3.84	11.01	14.85	46.00	-31.15	AVG
8	9.8159	17.15	10.98	28.13	60.00	-31.87	QP
9	11.9130	12.78	11.24	24.02	50.00	-25.98	AVG
10	12.1065	22.90	11.25	34.15	60.00	-25.85	QP
11	24.4814	5.84	11.70	17.54	50.00	-32.46	AVG
12	24.6210	14.37	11.69	26.06	60.00	-33.94	QP