C-Tick REPORT

Prepared For :	Polyhex Technology Company Limited 5-6/F., East Zone, Shunheda A2 Building, Liuxiandong Industrial Park, Xili, Nanshan Dist., Shenzhen, China
Product Name:	Industrial grade single board computer
Trade Name:	N/A
Model :	DEBIX Model B
Prepared By :	Shenzhen HTT Technology Co., Ltd. 1F, B Building, Huafeng International Robotics Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen
Test Date:	Dec.01,2022~Dec.06,2022
Date of Report :	Dec.06,2022
Report No.:	HTT202212026CR

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TEST REPORT DECLARATION

Applicant	:	Polyhex Technology Company Limited
Address	:	5-6/F., East Zone, Shunheda A2 Building, Liuxiandong Industrial Park, Xili, Nanshan Dist., Shenzhen, China
EUT Description	:	Industrial grade single board computer
Model Number	:	DEBIX Model B
Power Rating		DC5V, 3A,15W

Test Standards:

AS/NZS CISPR 2015+A1: 2020

The EUT described above is tested by US to determine the maximum emissions from the EUT, the maximum emission levels are compared to the AS/NZS CISPR 2015+A1: 2020 Class B limits. The measurement results are contained in this test report and Shenzhen HTT Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT is to be technically compliant with the C-Tick requirements

This report applies to above tested sample only and shall not be reproduced in part without written approval of Shenzhen HTT Technology Co., Ltd.

Prepared by: Ervin Xu

Reviewer: Bruce Zhu

Approved & Authorized Signer: Kevin Yang

1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that HTT approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that HTT in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, HTT therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

1.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through HTT, unless the applicant has authorized HTT in writing to do so.

1.2. Measurement Uncertainty

Available upon request.

1.3. Test Facility

Site Description

Name of Film : Shenzhen HTT Technology Co.,Ltd

Site Location : 1F, B Building, Huafeng International Robotics Industrial Park, Gushu, Xixiang Street, Bao'an District, Shenzhen

1.4. Test Uncertainty

Conducted Emission Uncertainty = ±2.66dB

Radiated Emission Uncertainty = ±4.26dB

2. PRODUCT DESCRIPTION

2.1. EUT Description

Description	:	Industrial grade single board computer
Applicant	:	Polyhex Technology Company Limited
Manufacturer	:	5-6/F., East Zone, Shunheda A2 Building, Liuxiandong Industrial Park, Xili, Nanshan Dist., Shenzhen, China
Model Number	:	DEBIX Model B

2.2. Test Conditions

Temperature: 23-26℃
Relative Humidity: 55-68 %

3. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	Test Results
Conducted disturbance	N/A
Radiated disturbance	Pass

Remark: “N/A” means “Not applicable.

4. TEST EQUIPMENT USED

4.1. For Conducted Emission Test

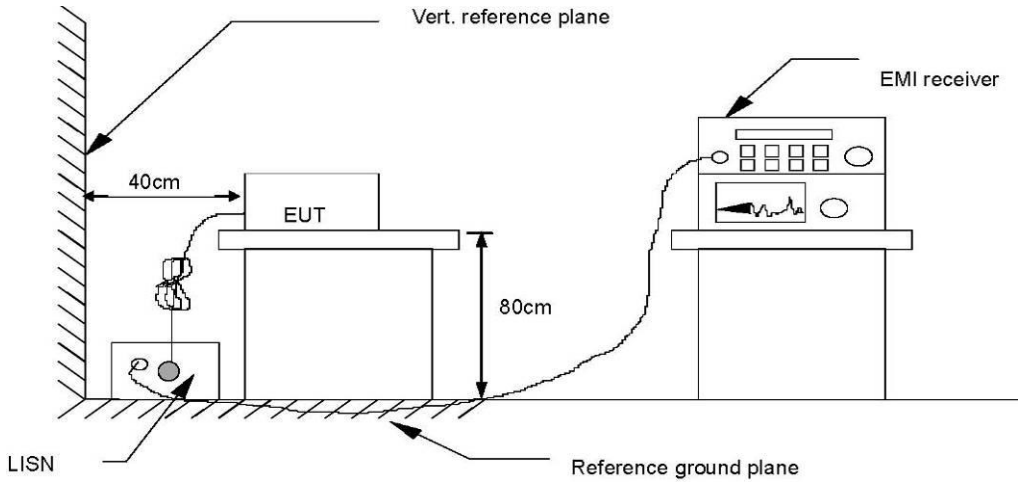
Item	Equipment	Manufacturer	ModelNo.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde &Schwarz	ESHS30	828985/018	Jun. 09, 2022	1 Year
2.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100006	Jun. 09, 2022	1 Year
3.	L.I.S.N.	Rohde & Schwarz	ESH2-Z5	834549/005	Jun. 09, 2022	1 Year
4.	Conical	Emtek	N/A	N/A	N/A	N/A
5.	Voltage Probe	Schwarzbeck	TK9416	N/A	Jun. 09, 2022	1 Year
6.	Coaxial Switch	Anritsu	MP59B	6100214550	Jun. 09, 2022	1 Year

4.2. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	ANRITSU	MS2661C	6200140915	Jun. 09, 2022	1 Year
2.	Test Receiver	Rohde&Schwarz	ESC830	828982/018	Jun. 09, 2022	1 Year
3.	Bilog Antenna	Schwarzbeck	VULB9163	142	Jun. 09, 2022	1 Year
4.	50 Coaxial Switch	Anritsu Corp	MP59B	6100237248	Jun. 09, 2022	1 Year
5.	Cable	Schwarzbeck	AK9513	ACRX1	Jun. 09, 2022	1 Year
6.	Cable	Rosenberger	N/A	FR2RX2	Jun. 09, 2022	1 Year
7.	Cable	Schwarzbeck	AK9513	CRRX2	Jun. 09, 2022	1 Year
8.	Cable	Schwarzbeck	AK9513	CRRX2	Jun. 09, 2022	1 Year
9.	Signal Generator	HP	864A	3625U00573	Jun. 09, 2022	1 Year

5. POWER LINE CONDUCTED EMISSION TEST

5.1. Block Diagram of Test Setup



5.2. Test Standard

AS/NZS CISPR 2015+A1: 2020

5.3. Conducted Emission Limit

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

5.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet CISPR 32 requirement and operating in a manner, which tends to maximize its emission characteristics in a normal application.

5.5. Operating Condition of EUT

5.5.1. Setup the EUT and simulators as shown in Section 5.1
5.5.2. Turn on the power of all equipments.
5.5.3. Let the EUT work in test modes (EUT Working) and test it

5.6. Test Procedure

The EUT is put on the table which is 0.8 meter high above the ground. The vertical conducting
Wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N).A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions from both sides of AC line. The bandwidth of EMI test receiver is set at 9kHz.

The bandwidth of the test receiver (R&S Test Receiver ESHS30) is set at 10KHz. waveform are attached within **Appendix I**

5.7. Test Result

6dB Bandwidth	10 KHz	**Environmental Conditions**	26°C, 55% RH
Test Mode	Working	**Detector Function**	Peak / Quasi-peak/AV
Test By	Jack Chen	**Test Results**	N/A

6. MAGNETIC FIELD EISSION TEST

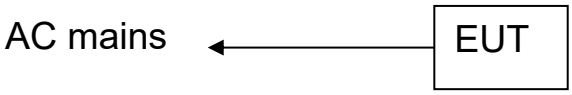
6.1. Test Equipment

The following test equipments are used during the radiated emission test:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Loop Antenna	Chase	HLA6120	1062	Jun. 09, 2022	1 Year
2	Test Receiver	Rohde&Schwarz	ESHS20	836600/006	Jun. 09, 2022	1 Year

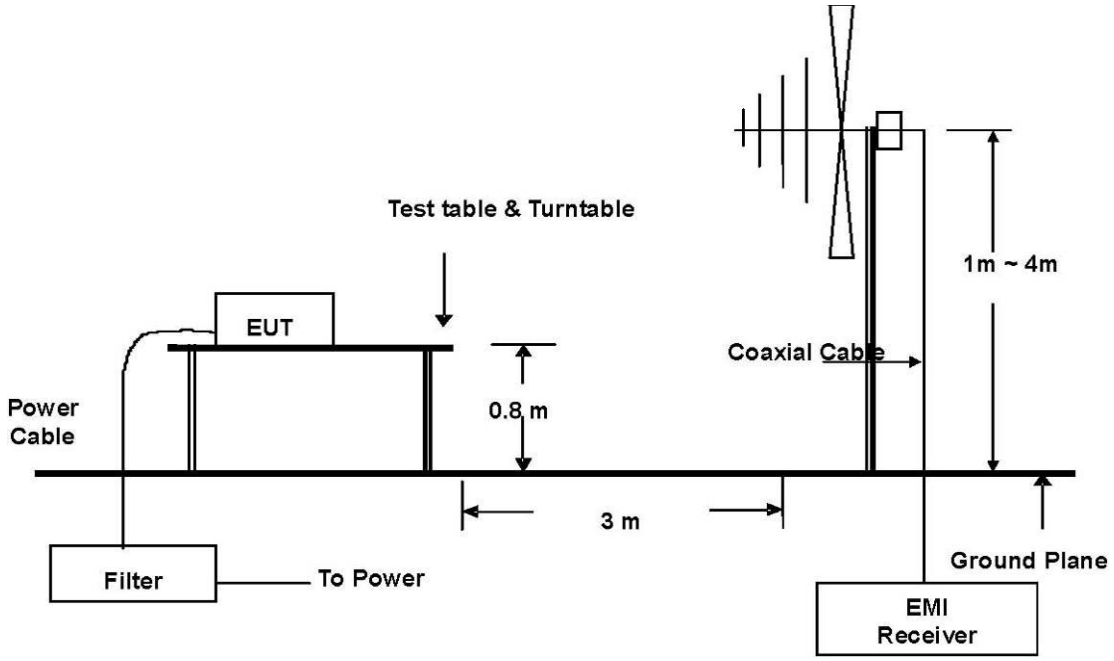
6.1.1. Block Diagram of Test Setup

6.1.2. Block Diagram of connection between the EUT and simulators



(EUT:)

6.1.3. In Anechoic Chamber Test Setup Diagram



6.2. Test Standard

AS/NZS CISPR 2015+A1: 2020
Magnetic Field Emission Limit

All emanations from Non-ISM devices or system，including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Frequency band MHz	Quasi-peak Electric Field Test Distance 3m dB(u V/m)
30-230	40
230-1000	47

(1) The limit shall decreasing linearly with logarithm of frequency
(2) Distance refers to the distance in meters between the test
Instrument antenna and the closed point of any part of the E.U.T

6.3. EUT Configuration on Test

The following equipment are installed on Radiated Emission Measurement to meet the Commission requirement and operating regulations in a manner which tends to maximize Its emission characteristics in normal application

6.4. Operating Condition of EUT

6.4.1. Setup the EUT as shown in Section 6.1.3

6.4.2. Turn on the power of all equipments.

6.4.3. Let the EUT work in test mode (ON) and test it.

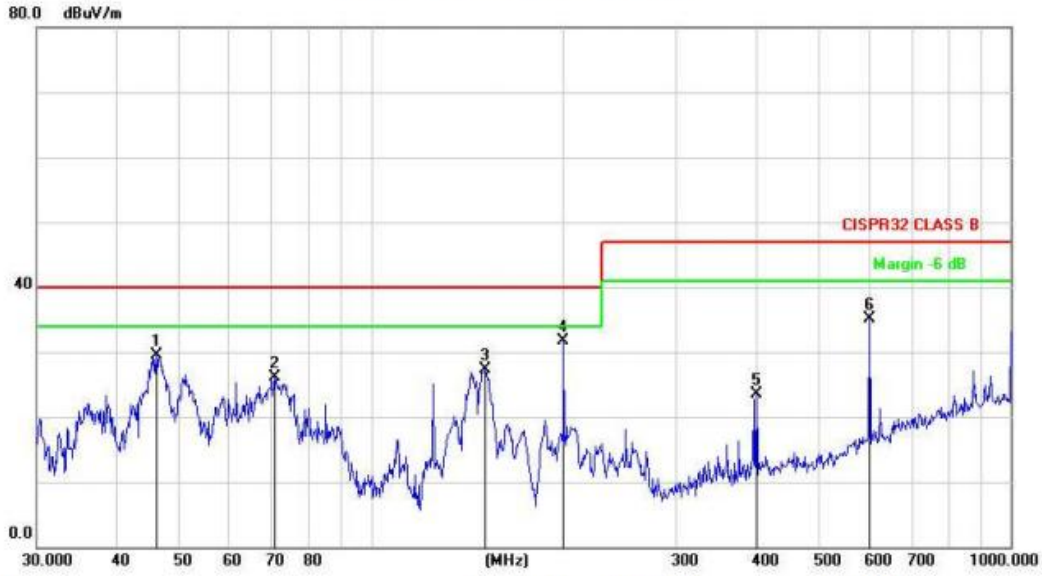
6.5. Test Procedure

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna (calibrated by dipole antenna) are used as a receiving antenna. Both horizontal and vertical polarization of the antenna are set on measurement
The bandwidth setting on the test receiver(R&S Test Receiver ESCS20) is 120KHz.
The EUT is tested in Anechoic Chamber. The frequency range from 14MHz to 1000MHz is checked. All the test results are listed in Section 6.6.and all the scanning waveform are attached within **Appendix I**

6.6.Test Results

Test Mode	Working	**Environmental Conditions**	26°C, 55% RH
6dB Bandwidth	120 KHz	**Antenna Pole**	Vertical / Horizontal
Antenna Distance	3m	**Detector Function**	Peak / Quasi-peak
Tested by	Jack Chen	**Test Results**	Pass

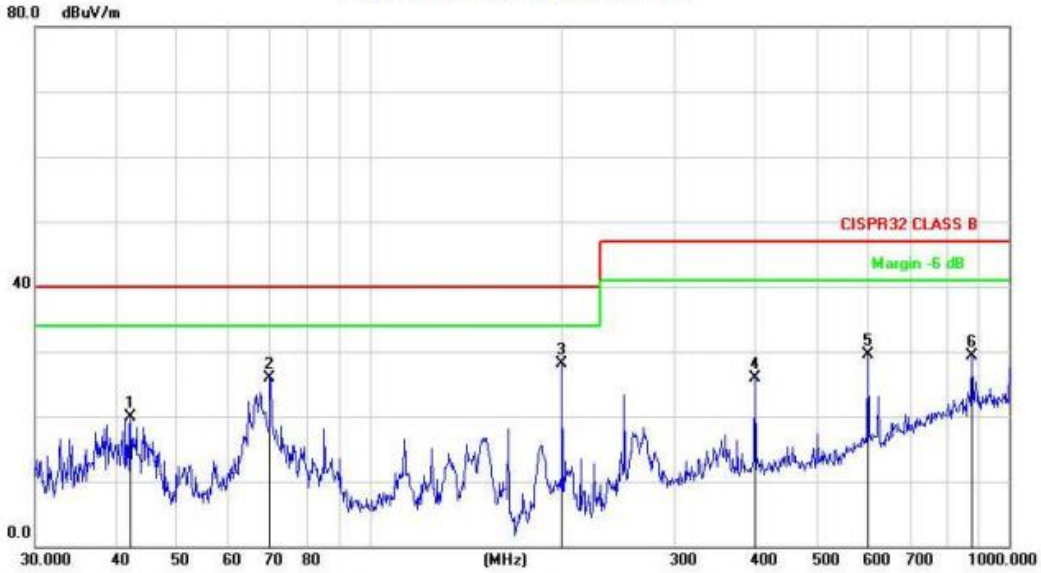
Radiated Emission Measurement



Site LAB
Limit: CISPR32 CLASS B
Polarization: *Vertical*
Power:
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		46.1779	46.80	-17.36	29.44	40.00	-10.56	peak			
2		70.5836	46.16	-20.09	26.07	40.00	-13.93	peak			
3		151.0666	45.09	-17.88	27.21	40.00	-12.79	peak			
4	*	199.9856	52.66	-20.99	31.67	40.00	-8.33	peak			
5		400.4319	37.56	-14.06	23.50	47.00	-23.50	peak			
6		601.4265	45.31	-10.16	35.15	47.00	-11.85	peak			

Radiated Emission Measurement



Site LAB
Limit: CISPR32 CLASS B
Polarization: *Horizontal*
Power:
Temperature:
Humidity: %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1		42.3022	37.36	-17.43	19.93	40.00	-20.07	peak			
2		69.8450	45.85	-19.94	25.91	40.00	-14.09	peak			
3	*	199.9856	49.17	-20.99	28.18	40.00	-11.82	peak			
4		400.4319	39.97	-14.06	25.91	47.00	-21.09	peak			
5		601.4265	39.65	-10.16	29.49	47.00	-17.51	peak			
6		875.2470	34.75	-5.36	29.39	47.00	-17.61	peak			

7. Photos of the Product