

Page 1 of 26



EMC TEST REPORT

For

Ituner Networks Corporation

M2-ATX

Test Model: M2-ATX

Prepared for

: Ituner Networks Corporation

Address

: 44244 Fremont Blvd. Fremont, CA. 94538

Prepared by

: Shenzhen LCS Compliance Testing Laboratory Ltd.

Address

: Room 101, 201, Building A and Room 301, Building C, Juji

Industrial Park, Yabianxueziwei, Shajing Street, Bao' an

District, Shenzhen, Guangdong, China

Tel

: (+86)755-82591330

Fax

: (+86)755-82591332 : www.LCS-cert.com

Web Mail

: webmaster@LCS-cert.com

Date of receipt of test sample : March 30, 2023

Number of tested samples

Sample No.

: A030823080

Date of Test

: March 30, 2023 ~ April 10, 2023

Date of Report

: April 14, 2023





Page 2 of 26 Report No.: LCSA030823080E

EMC TEST REPORT

EN 55032:2015/A11:2020

Electromagnetic compatibility of multimedia equipment - Emission Requirements

EN 55035:2017/A11: 2020

Electromagnetic compatibility of multimedia equipment – Immunity requirements

Report Reference No.:: LCSA030823080E

Date of Issue : April 14, 2023

Testing Laboratory Name.....: Shenzhen LCS Compliance Testing Laboratory Ltd.

Address : Room 101, 201, Building A and Room 301, Building C, Juji

Industrial Park, Yabianxueziwei, Shajing Street, Bao' an District,

Shenzhen, Guangdong, China

Testing Location/ Procedure : Full application of Harmonised standards

Partial application of Harmonised standards

Other standard testing method \square

Applicant's Name.....: : Ituner Networks Corporation

Address : 44244 Fremont Blvd. Fremont, CA. 94538

Test Specification

Standard : EN 55032:2015/A11:2020

EN 55035:2017/A11: 2020

Test Report Form No. : LCSEMC-1.0

TRF Originator.....: : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2011-03

Shenzhen LCS Compliance Testing Laboratory Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen LCS Compliance Testing Laboratory Ltd. is acknowledged as copyright owner and source of the material. Shenzhen LCS Compliance Testing Laboratory Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test Item Description.: : M2-ATX

Trade MarkPicoPSU

Test Model: M2-ATX

Ratings : Please Refer to Page 9

Result: : Positive

Compiled by: Supervised by: Approved by:

Cindy Nie

Cindy Nie/ File administrators

Baron Wen/Technique principal

Baron Wen

Gavin Liang/ Manager

Jains Piang





EMC -- TEST REPORT

April 14, 2023 LCSA030823080E Test Report No.: Date of issue

Test Model.....: : M2-ATX

EUT.....: : M2-ATX

Applicant.....:: Ituner Networks Corporation

Address...... : 44244 Fremont Blvd. Fremont, CA. 94538

Telephone.....::/ Fax.....::/

Manufacturer.....: : Eastern Electronics Co., LTD

Address...... : No.4, Shin-Long Road, Taoyuan Dist., Taoyuan City

33068. Taiwan R.O.C.

Telephone.....:: : / Fax.....: : /

Factory..... : Eastern Electronics Co., LTD

Address...... : No.4, Shin-Long Road, Taoyuan Dist., Taoyuan City

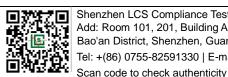
33068, Taiwan R.O.C.

Telephone.....::/ Fax.....:: : /

Test Result Positive

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.







	Revi	sion History	
Revision	Issue Date	Revisions Content	Revised By
000	April 14, 2023	Initial Issue	
	i .		

Report No.: LCSA030823080E













Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China





TABLE OF CONTENTS

Report No.: LCSA030823080E

TABLI	E OF CONTENTS	
Test Report Description		Page
1. TEST STANDARDS		6
2.SUMMARY OF STANDARDS AND RESULTS		
2.1. DESCRIPTION OF STANDARDS AND RESULTS 2.2. DESCRIPTION OF PERFORMANCE CRITERIA		
3. GENERAL INFORMATION		9
3.1. DESCRIPTION OF DEVICE (EUT)		9
3.3. DESCRIPTION OF TEST FACILITY3.4. STATEMENT OF THE MEASUREMENT UNCERTAINTY	NTY	10
4. MEASURING DEVICES AND TEST EQUIPMEN	NT	11
5.TEST RESULTS		
5.1. RADIATED EMISSION MEASUREMENT		12
5.2. ELECTROSTATIC DISCHARGE IMMUNITY 5.3. RF FIELD STRENGTH SUSCEPTIBILITY T	/ TEST EST	14
ANNEX A		
ANNEX B		
ANNEX C		26













Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China





1. TEST STANDARDS

The tests were performed according to following standards:

EN 55032:2015/A11:2020 Electromagnetic compatibility of multimedia equipment - Emission Requirements

<u>EN 55035:2017/A11: 2020</u> Electromagnetic compatibility of multimedia equipment – Immunity requirements

工资规模测度分

上CS Testing Lab

上CS Testing La







Report No.: LCSA030823080E











Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street,

Bao'an District, Shenzhen, Guangdong, China





2.SUMMARY OF STANDARDS AND RESULTS

2.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

Standard	Limits	Results
EN 55032:2015/A11:2020	Class B	N/A
EN 55032:2015/A11:2020	Class B	N/A
EN 55032:2015/A11:2020	Class B	PASS
EN IEC 61000-3-2: 2019/A1:2021	Class A	N/A
EN 61000-3-3: 2013/A2:2021		N/A
munity (EN 55035:2017/A11: 2	2020)	
Basic Standard	Performance Criteria	Results
EN 61000-4-2: 2009	В	PASS
EN IEC 61000-4-3:2020	А	PASS
EN 61000-4-4: 2012	В	N/A
EN 64000 4 5: 2044/44: 2047	Testing B	N/A
EN 61000-4-5: 2014/A1: 2017	В	N/A
EN61000-4-6:2014/AC:2015	А	N/A
EN 61000-4-8: 2010	А	PASS
	В	N/A
EN 61000-4-11:2020	С	N/A
MSG CS Testing	C	N/A
	EN 55032:2015/A11:2020 EN 55032:2015/A11:2020 EN IEC 61000-3-2: 2019/A1:2021 EN 61000-3-3: 2013/A2:2021 munity (EN 55035:2017/A11: Basic Standard EN 61000-4-2: 2009 EN IEC 61000-4-3:2020 EN 61000-4-4: 2012 EN 61000-4-5: 2014/A1: 2017 EN61000-4-6:2014/AC:2015 EN 61000-4-8: 2010	EN 55032:2015/A11:2020 Class B EN 55032:2015/A11:2020 Class B EN IEC 61000-3-2: 2019/A1:2021 Class A EN 61000-3-3: 2013/A2:2021 munity (EN 55035:2017/A11: 2020) Basic Standard Performance Criteria EN 61000-4-2: 2009 B EN IEC 61000-4-3:2020 A EN 61000-4-4: 2012 B EN 61000-4-5: 2014/A1: 2017 B EN 61000-4-6:2014/AC:2015 A EN 61000-4-8: 2010 A EN 61000-4-11:2020 C C C

Test mode:			
Mode	Working	Record	
***Note: All test modes were tested, but we only recorded the worst case in this report.			



Report No.: LCSA030823080E





2.2. Description of Performance Criteria

General Performance Criteria

Examples of functions defined by the manufacturer to be evaluated during testing include, but are not limited to, the following:

Report No.: LCSA030823080E

essential operational modes and states;

2.2.1. Performance criterion A

The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacture when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be deriver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

2.2.2. Performance criterion B

After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacture, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance.

During the test, degradation of performance is allowed. However, no change of operation state or stored data is allowed to persist after the test.

If the minimum performance level (or the permissible performance loss) is not specified by the manufacturer, then either of these may be deriver from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.

2.2.3. Performance criterion C

Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacture's instructions.

Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be loss.





3. GENERAL INFORMATION

3.1. Description of Device (EUT)

EUT : M2-ATX

Trade Mark : Mini-Box.com/PicoPSU

Test Model : M2-ATX

Power Supply : Input: 6-24V=15A

EUT Clock Frequency : ≤108MHz

Highest internal frequency (Fx)	Highest measured frequency
Fx ≤ 108 MHz	1 GHz
108 MHz < Fx ≤ 500 MHz	2 GHz
500 MHz < Fx ≤ 1 GHz	5 GHz
Fx > 1 GHz	5 × Fx up to a maximum of 6 GHz

NOTE 1 For FM and TV broadcast receivers, Fx is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. Where Fx is unknown, the radiated emission measurements shall be performed up to 6 GHz

3.2. Description of Support Device

Name	Manufacturers	M/N	S/N

3.3. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.



下上



3.4. Statement of The 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 acc. 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 LCS quality system acc. 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.

3.5. Measurement Uncertainty

Test	Parameters	Expanded Uncertainty (U _{lab})	Expanded Uncertainty (U _{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Power Disturbance	Level accuracy (30MHz to 300MHz)	± 2.90dB	± 4.5 dB
Electromagnetic Radiated Emission (3-loop)	Level accuracy (9kHz to 30MHz)	± 3.60 dB	± 3.3 dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB

¹⁾ Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.



R检测股份 STesting Lab LCS Testing La

Report No.: LCSA030823080E

²⁾ The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.



4. MEASURING DEVICES AND TEST EQUIPMENT

RADIATED DISTURBANCE

4. MEASURING DEVICES AND TEST EQUIPMENT						
RA	ADIATED DISTURBANCE	工语检测 Lab	1	语的 Lab		立洲检测的
Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	EMI Test Software	AUDIX	E3	/	N/A	N/A
2	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-09-12	2024-09-11
3	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-09-05	2024-09-04
4	EMI Test Receiver	R&S	ESR3	102311	2022-08-17	2023-08-16
5	Broadband Preamplifier	/	BP-01M18G	P190501	2022-06-16	2023-06-15

RF ELECTROMAGNETIC FIELD

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	MXG Vector Signal Generator	Agilent	E4438C	MY42081396(6 G)	2022-06-16	2023-06-15
2	RF POWER AMPLIFIER	SKET	HAP_0306G	/	2022-06-16	2023-06-15
3	RF POWER AMPLIFIER	OPHIR	5225R	1052	2022-06-16	2023-06-15
4	RF POWER AMPLIFIER	OPHIR	5273F	1019	2022-06-16	2023-06-15
5	Stacked Broadband Log Periodic Antenna	SCHWARZBE CK	STLP 9128	9128ES-145	NCR	NCR
6	Stacked Mikrowellen LogPer Antenna	SCHWARZBE CK	STLP 9149	9149-484	NCR	NCR
7	RS Electric field probe	narda	EP601	611WX80208	2022-06-16	2023-06-15

ELECTROSTATIC DISCHARGE

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	ESD Simulator	SCHLODER	SESD 230	604035	2022-07-18	2023-07-17

MAGNETIC FIELD SUSCEPTIBILITY TEST

Item	Equipment	Manufacturer	Model No.	Serial No.	Cal Date	Due Date
1	Power frequency mag-field generator System	EVERFINE	EMS61000-8K	906003	2022-06-16	2023-06-15

NCR --- No calibration requirement.



Report No.: LCSA030823080E





Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street,
Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

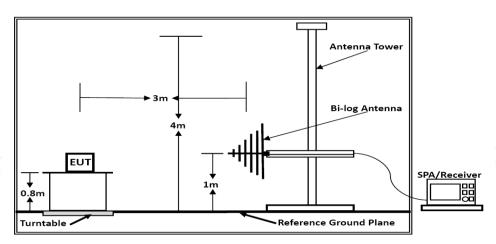
Scan code to check authenticity



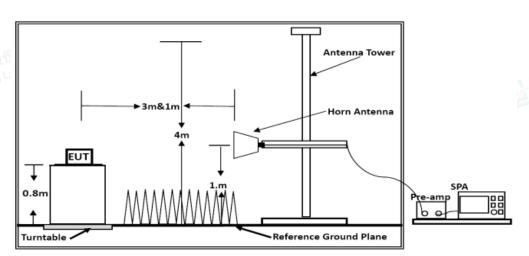
5.TEST RESULTS

5.1. RADIATED EMISSION MEASUREMENT

5.1.1. Block Diagram of Test Setup



Below 1GHz



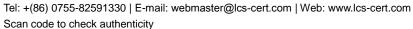
Above 1GHz



Report No.: LCSA030823080E

Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China







5.1.2. Test Standard

EN 55032:2015/A11:2020 Class B

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Report No.: LCSA030823080E

Limits for Radiated Emission Below 1GHz					
Frequency	Frequency Distance Field Strengths Limit				
(MHz)	(Meters)	(dBµV/m)			
30 ~ 230	3	40			
230 ~ 1000	3	47			

^{***}Note:

⁽²⁾ Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

Limits for Radiated Emission Above 1GHz						
Frequency Distance Peak Limit Average Limit						
(MHz) (Meters) (dBμV/m) (dBμV/						
1000 ~	3000	3	70	50		
3000 ~ 6000 3 74 54						
***Note: The lower limit applies at the transition frequency.						

5.1.3. EUT Configuration on Test

The EN 55032 regulations test method must be used to find the maximum emission during emission measurement.

5.1.4. Operating Condition of EUT

5.1.4.1. Turn on the power.

5.1.4.2. Let the EUT work in the test USB and measure it.

5.1.5. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter high above the ground. The turntable 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 be moved up and down from 1 to 4 meters to find out the maximum emission level. By-log antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test.

The bandwidth of the EMI test receiver is set at RBW/VBW=120kHz/300kHz.

The frequency range from 30MHz to 1000MHz is checked.

The bandwidth of the Spectrum analyzer is set at RBW/VBW=1MHz/3MHz.

The frequency range from 1GHz to the frequency which about 5th carrier harmonic or 6GHz is checked.

5.1.6. Test Results

PASS.

Refer to attached Annex B.1



Shenzhen LCS Compliance Testing Laboratory Ltd.

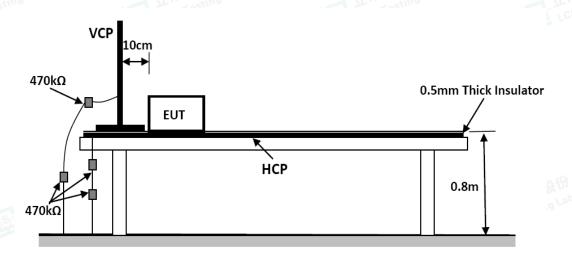
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

⁽¹⁾ The smaller limit shall apply at the combination point between two frequency bands.



5.2. ELECTROSTATIC DISCHARGE IMMUNITY TEST

5.2.1. Block Diagram of Test Setup



5.2.2. Test Standard

EN 55035:2017/A11: 2020 (EN 61000-4-2: 2009, Severity Level: 3 / Air Discharge: ±8KV, Level: 2 / Contact Discharge: ±4KV)

5.2.3. Severity Levels and Performance Criterion

5.2.3.1. Severity level		
	Test Voltage	Test Voltage
Level	Contact Discharge (KV)	Air Discharge (KV)
1	±2	±2
2	±4	±4
3	±6	±8
4	±8	±15
X	Special	Special

5.2.3.2. Performance Criterion Performance Criterion: B

5.2.4. EUT Configuration on Test

The configuration of EUT is listed in Section 5.2.1.

5.2.5. Operating Condition of EUT

Same as radiated emission measurement, which is listed in Section 5.1.4. Except the test set up replaced by Section 5.2.1.



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

5.2.6. Test Procedure

5.2.6.1. Air Discharge

This test is done on a non-conductive surfaces. The round discharge tip of the Electrostatic Discharge simulator shall be approached as fast as possible then to touch the EUT. After each discharge, the simulator shall be removed from the EUT. The simulator is then re-triggered for a new single discharge and repeated 25 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed

5.2.6.2. Contact Discharge

All the procedure shall be same as air discharge, except using the acute discharge tip. The top end of the Electrostatic Discharge simulator is touch the EUT all the time when the simulator is re-triggered for a new single discharge and repeated 25 times for each pre-selected test point.

5.2.6.3. Indirect Discharge For Horizontal Coupling Plane

The vertical coupling plane(VCP) is placed 0.1m away from EUT. The top end of Electrostatic Discharge simulator should aim at the center of one border of the VCP for at least 25 times discharge.

5.2.6.4. Indirect Discharge For Vertical Coupling Plane

The top end of Electrostatic Discharge simulator should place at the point 0.1m away from EUT on the horizontal coupling plane(HCP). At least 25 times discharge should be done for every pre-selected point around EUT.

Record any performance degradation of the EUT during the test and judge the test result according to ce criterion.

5.2.7. Test Results

PASS.

Refer to attached Annex B.2

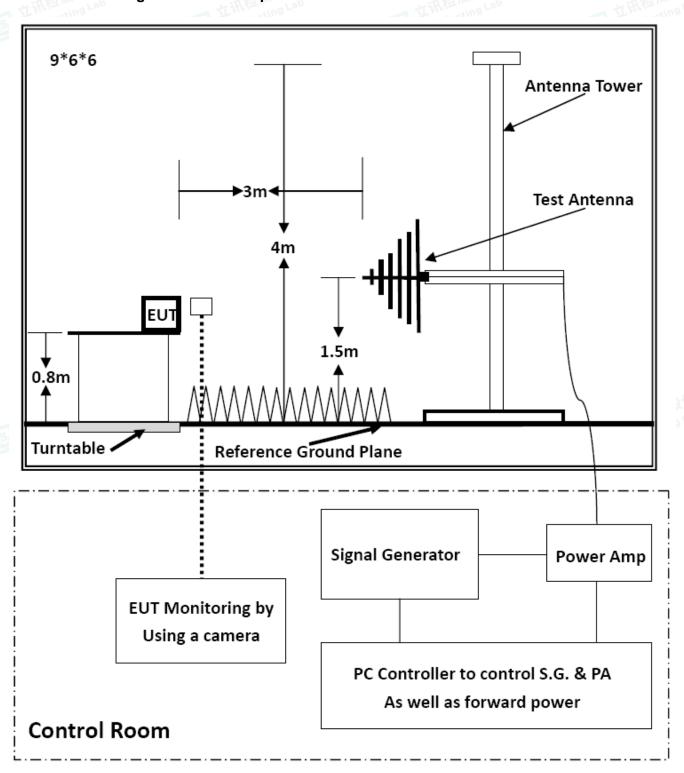






5.3. RF FIELD STRENGTH SUSCEPTIBILITY TEST

5.3.1. Block Diagram of Test Setup











5.3.2. Test Standard

EN 55035:2017/A11: 2020 (EN IEC 61000-4-3:2020 Severity Level: 2, 3V/m)

5.3.3. Severity Levels and Performance Criterion

5.3.3.1. Severity level

Level	Field Strength (V/m)
1	1
2	3
3	10
X	Special

5.3.3.2. Performance Criterion

Performance Criterion: A

5.3.4. EUT Configuration on Test

The configuration of EUT is listed in Section 5.3.1.

5.3.5. Operating Condition of EUT

Same as radiated emission measurement, which is listed in Section 5.1.4, except the test setup replaced as Section 5.3.1.

5.3.6. Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD Recording is used to monitor its screen. All the scanning conditions are as following:

Condition of Test	Remark			
Fielded Strength	3 V/m (Severity Level 2)			
Radiated Signal	Unmodulated			
Test Frequency Range (Swept Test)	80-1000MHz			
Test Frequency (spot test)	1800MHz, 2600MHz, 3500MHz, 5000MHz			
Dwell Time of Radiated	0.0015 decade/s			
Waiting Time	3 Sec.			

5.3.7. Test Results

PASS.

Refer to attached Annex B.3



心测度份

Report No.: LCSA030823080E

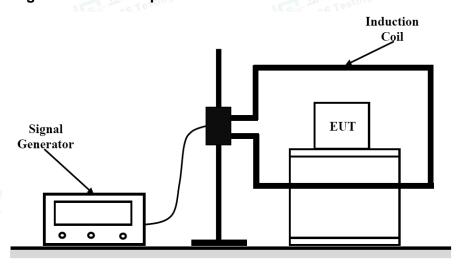
Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



5.4. MAGNETIC FIELD SUSCEPTIBILITY TEST

5.4.1. Block Diagram of Test Setup



5.4.2. Test Standard

EN 55035:2017/A11: 2020 (EN 61000-4-8: 2010, Severity Level: Level 1, 1A/m)

5.4.3. Severity Levels and Performance Criterion

5.4.3.1. Severity level

5.4.3.1.	Severit	y level			
	evel		20.017	Field Strength (A	√m)
CS 1	1	1/20 1	55	Mag Los 1	Val rea
	2			3	
	3			10	
	4			30	
	5			100	
	Χ			Special	

5.4.3.2. Performance Criterion

Performance Criterion: A

5.4.4. EUT Configuration on Test

The configuration of EUT is listed in Section 5.4.1.

5.4.5. Test Procedure

EUT is placed on an insulating support of 0.1m high above a table of 0.8m high. There is a minimum 1m*1m ground metallic plane put on this table. EUT is put in the center of the magnetic coil then two orientations of the magnetic coil, horizontal and vertical, shall be rotated in order to expose the EUT to the difference polarization magnetic field.

Record any performance degradation of the EUT during the test and judge the test result according to performance criterion.

5.4.6. Test Results

PASS.

Refer to attached Annex B.4



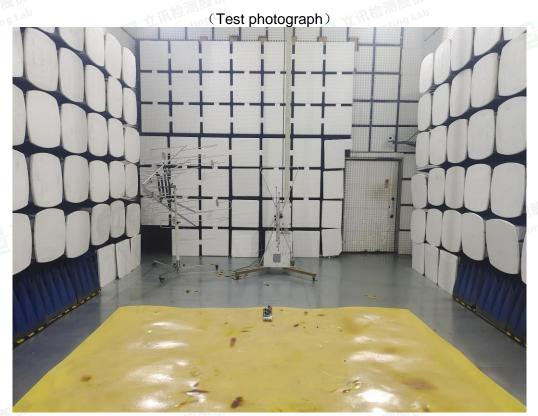
Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building Bao'an District, Shenzhen, Guangdong, China Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street,

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

Scan code to check authenticity



ANNEX A



Test Setup Photo of Radiated Measurement (30MHz~1GHz)



Test Setup Photo of Electrostatic Discharge Test



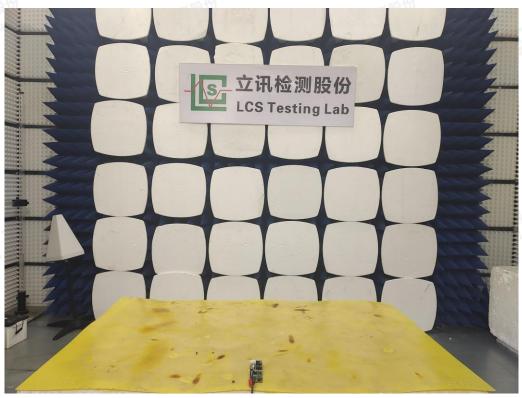
Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com Scan code to check authenticity



Report No.: LCSA030823080E



Rf Field Strength Susceptibility Test



Test Setup Photo of Magnetic Field Immunity Test



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



ANNEX B

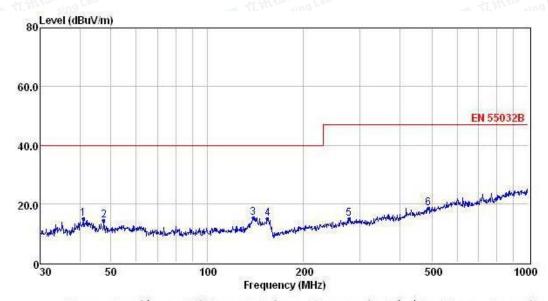
Report No.: LCSA030823080E

(Emission and Immunity test results)

B.1 Radiated Disturbance Test Results (30MHz to 1000MHz)

Environmental Conditions:	22.3°C, 53%RH
Test Voltage:	DC
Test Model:	M2-ATX
Test Mode:	Working
Test Engineer:	Xing Mo
Pol:	Vertical

Detailed results are shown below



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	40.99	2.98	0.52	11.48	14.98	40.00	-25.02	QP
2	47.49	1.74	0.58	12.01	14.33	40.00	-25.67	QP
3	139.36	5.62	0.99	8.56	15.17	40.00	-24.83	QP
4	154.28	4.80	1.05	8.92	14.77	40.00	-25.23	QP
5	278.07	0.16	1.30	13.26	14.72	47.00	-32.28	QP
6	489.03	0.36	1.49	16.57	18.42	47.00	-28.58	QP

Note: 1. All readings are Quasi-peak values.

- 2. Measured= Reading + Antenna Factor + Cable Loss
- 3. The emission that are 20db below the official limit are not reported



Shenzhen LCS Compliance Testing Laboratory Ltd.

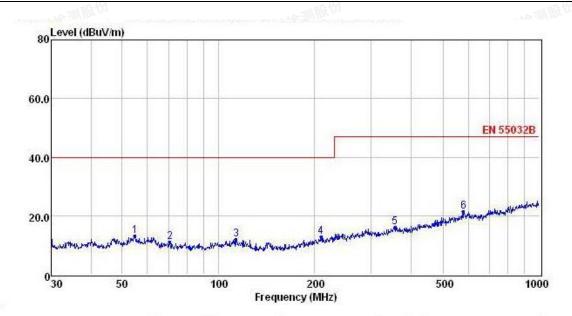
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



Environmental Conditions: 22.3°C, 53%RH

Environmental Conditions:	22.3℃, 53%RH
Test Voltage:	DC
Test Model:	M2-ATX
Test Mode:	Working
Test Engineer:	Xing Mo
Pol:	Horizontal

Detailed results are shown below



	Freq	Reading	Caphos	Antiac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	54.83	-0.17	0.63	12.55	13.01	40.00	-26.99	QP
2	70.58	0.26	0.70	10.18	11.14	40.00	-28.86	QP
3	113.71	0.06	0.87	11.09	12.02	40.00	-27.98	QP
4	209.31	0.38	1.21	11.23	12.82	40.00	-27.18	QP
5	356.68	-0.17	1.37	14.79	15.99	47.00	-31.01	QP
6	580.70	1.29	1.50	18.70	21.49	47.00	-25.51	QP

Note: 1. All readings are Quasi-peak values.

- 2. Measured= Reading + Antenna Factor + Cable Loss
- 3. The emission that are 20db below the official limit are not reported



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



B.2 ELECTROSTATIC DISCHARGE IMMUNITY TEST

BIL ELEGINOGIANIO BIOGRAMOE IMMIGRATITI TEGI					
Electrostatic Discharge Test Results					
Standard	☐ IEC 61000-4-2 ☐ EN 61000-4-2	Ce ,	TC2		
Applicant	Ituner Networks Corporation				
EUT	M2-ATX	Temperature	23.1℃		
M/N	M2-ATX	Humidity	54.2%		
Criterion	В	Pressure	1021mbar		
Test Mode	Working	Test Engineer	Hy Luo		

Report No.: LCSA030823080E

Test Mode	Working		Test Engineer Hy Luo				
			r Discharge	ı			
	Test Levels					Res	
Test Points	± 2kV	4kV	± 8kV	Pas	ssed	Fail	Performance Criterion
Front		\boxtimes			\leq		□A ⊠B
Back		\boxtimes					□A ⊠B
Left		\boxtimes					□A ⊠B
Right		\boxtimes					□A ⊠B
Тор	\boxtimes	\boxtimes					□A ⊠B
Bottom	\boxtimes	\boxtimes			\leq		□A ⊠B
		Con	tact Dischar	ge			
	Tes	t Levels				Res	
Test Points	± 2 kV		±4 kV		sed	Fail	Performance Criterion
Front				\geq	3		□A ⊠B
Back	\boxtimes						□A ⊠B
Left	\boxtimes		\boxtimes	\triangleright			□A ⊠B
Right			\boxtimes	\geq			□A ⊠B
Тор	\boxtimes		\boxtimes	\geq]		□A ⊠B
Bottom			\boxtimes	\geq			□A ⊠B
	Dischar	ge To H	lorizontal Co	upling	Plane)	
	Test Levels			Results			
Side of EUT	± 2 kV		± 4 kV		sed	Fail	Performance Criterion
Front]		□ □ A □ B
Back	\boxtimes	-154		\boxtimes]	100	□A ⊠B
Left			\boxtimes	\boxtimes]		□A ⊠B
Right	\boxtimes		\boxtimes	\boxtimes]		□A ⊠B
	Disch	arge To	Vertical Cou	pling I	Plane		
	Tes	t Levels		Results			
Side of EUT	± 2 kV		± 4 kV	Pass	sed	Fail	Performance Criterion
Front			\boxtimes	\boxtimes			□A ⊠B
Back			\boxtimes	\boxtimes			□A ⊠B
Left		测验证	\boxtimes	\boxtimes		, \square	□A ⊠B
Right		stingLan		\boxtimes	sting		□A ⊠B



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street,
Bao'an District, Shenzhen, Guangdong, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

Scan code to check authenticity



Page 24 of 26

Report No.: LCSA030823080E

B.3 RF FIELD STRENGTH SUSCEPTIBILITY TEST

RF Field Strength Susceptibility Test Results							
Standard	□ IEC 61000-4-3 ☑ EN 61000-4-3						
Applicant	Ituner Networks Corporation						
EUT	M2-ATX	Temperature	23.5℃				
M/N	M2-ATX	Humidity	53.7%				
Field Strength	3 V/m	Criterion	Α				
Test Mode	Working	Test Engineer	Hy Luo				
Test Frequency	80MHz to 1000MHz (Swept Test) 1800MHz, 2600MHz, 3500MHz, 5000MHz (spot test)		立讯检测股份 LCS Testing Lab				
Modulation	□None □ Pulse	☑AM 1KHz 80%					
Steps	1%						

	Horizontal	Vertical	
Front	PASS	PASS	
Right	PASS	PASS	
Rear	PASS	PASS PASS	
Left	PASS	PASS	

Note:





Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



Page 25 of 26

Report No.: LCSA030823080E

B.4 MAGNETIC FIELD SUSCEPTIBILITY TEST

100	a\subsection = \text{initial}	100				
Magnetic Field Immunity Test Result						
Standard	□ IEC 61000-4-8 ☑ EN 61000-4-8					
Applicant	Ituner Networks Corporation					
EUT	M2-ATX	Temperature	24.3℃			
M/N	M2-ATX	Humidity	54.1%			
Test Mode	Working	Criterion	A ASTREET			
Test Engineer	Hy Luo		Till In I I I I I I I I I I I I I I I I I			

Test Level (A/M)	Testing Duration	Coil Orientation	Criterion	Result
1	5 mins	X	А	PASS
1	5 mins	Y	А	PASS
立语检测程的	5 mins	ig Lab Z	THE A Lab	PASS

Note:



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China



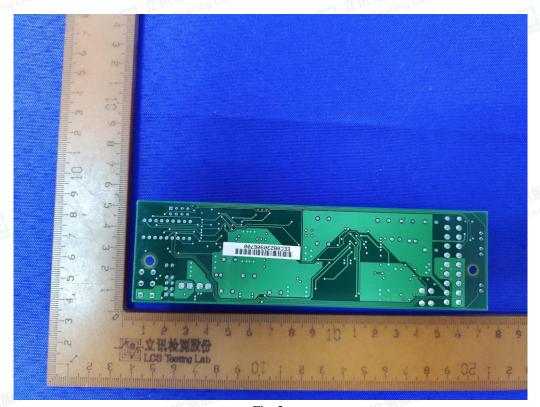
ANNEX C

Report No.: LCSA030823080E

(External and internal photos of the EUT)



Fig. 1









Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China