



FC TEST REPORT

Product: GAME DECODER

Trade Mark: N/A

Model: X8 X8PRO M8 M15 M16 K8 K8PRO M8MINI X5
X6

Report No.: LTT20240909F003

Issued Date: Sep.09,2024

Issued for:

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Note:

The results detailed in this test report relate only to the specific sample(s) tested. It is the application's responsibility to ensure that all production units are manufactured with equivalent EMC characteristics. This report is not to be reproduced except in full, without written LTT approval from LTT Testing Technology.



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1 TEST RESULT CERTIFICATION

Product: GAME DECODER**Model:** X8,**Applicant:** Shenzhen Xinyifa Electronic Technology Co., Ltd.
202, Building F, Digital Warehouse, Bay Area, Taoyuan Community, Dalang Street,
Longhua District, Shenzhen, Guangdong, China**Factory:** Shenzhen Xinyifa Electronic Technology Co., Ltd.
202, Building F, Digital Warehouse, Bay Area, Taoyuan Community, Dalang Street,
Longhua District, Shenzhen, Guangdong, China**Tested Date:** Sep.02,2024 ~ Sep.09,2024

EMISSION

Standard	Item	Result	Remarks
47 CFR FCC Part 15 Subpart B :2016, ANSI C63.4-2014	Conducted (Main Port)	PASS	Meet Class A limit
	Radiated	PASS	Meet Class A limit

Note: 1. The test result judgment is decided by the limit of measurement standard
2. The information of measurement uncertainty is available upon the customer's request.

Deviation from Applicable Standard

None

The above equipment has been tested by Shenzhen LTT Testing Technology Co.,Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:*Jack Li***Date:** Sep.09,2024**Check By:***Anly***Date:** Sep.09,2024**Approved By:***Lance***Date:** Sep.09,2024



2 EUT DESCRIPTION

Product	GAME DECODER
Model	X8
Test Voltage:	Power Input: DC 24V 2.5A
Trade Mark	N/A
Applicant	Shenzhen Xinyifa Electronic Technology Co., Ltd.
EUT Type	<input checked="" type="checkbox"/> Engineering Sample <input type="checkbox"/> Product Sample <input type="checkbox"/> Mass Product Sample
Serial Number	N/A
Power Rating	N/A
Data Line	N/A

I/O PORT

I/O PORT TYPES	Q'TY	TESTED WITH
N/A	N/A	N/A

Model list and Models difference

No.	Model Number	Tested With
1	X8	<input checked="" type="checkbox"/>
Other models	X8PRO M8 M15 M16 K8 K8PRO M8MINI X5 X6	<input type="checkbox"/>

NOTE: X8 is tested model, other models are derivative models, The models are identical in circuit and PCB layout, only different on the model names, and power rating, So the test data of X8 can represent the remaining models.

3 TEST METHODOLOGY

3.1. DECISION OF FINAL TEST MODE

The EUT was tested together with the thereafter additional components, and a configuration, which produced the worst emission levels, was selected and recorded in this report.

The following test mode(s) were scanned during the preliminary test:

**Pre-Test Mode**

Emission	Conducted Emission	Mode: Running
	Radiated Emission	Mode : Running

After the preliminary scan, the following test mode was found to produce the highest emission level.

The Worst Test Mode

Emission	Conducted Emission	Mode: Running
	Radiated Emission	Mode : Running

Then, the EUT configuration and cable configuration of the above highest emission mode was chosen for all final test items.

3.2. EUT SYSTEM OPERATION

1. Set up EUT with the relative support equipments.
2. Make sure the EUT worked normally during the test.

4 SETUP OF EQUIPMENT UNDER TEST

4.1. DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

No.	Equipment	Model No.	Serial No.	FCC ID	Trade Name	Data Cable	Power Cord
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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Note:

- 1) All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2) Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

All measurement facilities used to collect the measurement data are located at LTT Lab.

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio



5.2. ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC	Registration number: 572331
Japan	VCCI	
Canada	INDUSTRY CANADA	Registration number: 10668A-1
Germany	TUV	
	Phoenix	Registration number: 70x121130x

5.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency		Uncertainty
Conducted emissions	9kHz~30MHz		+/- 3.59dB
Radiated emissions	Horizontal	30MHz ~ 200MHz	+/- 4.77dB
		200MHz ~1000MHz	+/- 4.93dB
	Vertical	30MHz ~ 200MHz	+/- 5.04dB
		200MHz ~1000MHz	+/- 4.93dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

6 RADIATED EMISSION MEASUREMENT

6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Maximum permissible level of Radiated Emission measured at 3 meter

FREQUENCY (MHz)	dBuV/m (At 3m)
	Class A



30~88	50.00
88~216	53.50
216~960	56.00
960~1000	64.00

NOTE: (1) The lower limit shall apply at the transition frequencies.

(2) Emission level (dBuV/m) = 20 log Emission level (uV/m).

6.2 TEST INSTRUMENTS

Radiated Emission Test Site 966				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	100005	06/24/2024
Spectrum Analyzer	R&S	FSU	100114	06/29/2024
Pre Amplifier	H.P.	HP8447E	2945A02715	06/24/2024
Bilog Antenna	SUNOL Sciences	JB3	A021907	06/20/2024
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	06/29/2024
System-Controller	CCS	N/A	N/A	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to International system of unit (SI).

2. N.C.R = No Calibration Request.

6.3 TEST PROCEDURES

Procedure of Preliminary Test

The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.



Support equipment, if needed, was placed as per ANSI C63.4.

All I/O cables were positioned to simulate typical usage as per ANSI C63.4.

Mains cables, telephone lines or other connections to auxiliary equipment located outside the test are shall drape to the floor, be fitted with ferrite clamps or ferrite tubes placed on the floor at the point where the cable reaches the floor and then routed to the place where they leave the turntable. No extension cords shall be used to mains receptacle.

The antenna was placed at 3 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.

The Analyzer / Receiver quickly scanned from 30MHz to 1000MHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

The test mode(s) described in Item 3.1 were scanned during the preliminary test:

After the preliminary scan, we found the test mode described in Item 3.1 producing the highest emission level.

The EUT and worse cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

When measuring emissions above 1GHz, the frequencies of maximum emission shall be determined by manually positioning the antenna close to the EUT and by moving the antenna over all sides of the EUT while observing a spectral display. It will be advantageous to have prior knowledge of the frequencies of emissions above 1GHz. If the EUT is a device with dimensions approximately equal to that of the measurement antenna beam width, the measurement antenna shall be aligned with the EUT.

Procedure of Final Test

EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.

The Analyzer / Receiver scanned from 30MHz to 1000MHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.

Recorded at least the six highest emissions. Emission frequency, amplitude, antenna



position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit and only Q.P. reading is presented.

For the measurement above 1GHz, use the cable, EUT arrangement, and mode of operation determined in the exploratory testing to produce the emission that has the highest amplitude relative to the limit.

Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the antenna in the “cone of radiation” from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response.

The antenna may have to be higher or lower than the EUT, depending on the EUT’s size and mounting height, but the antenna should be restricted to a range of height of from 1m to 4m above the ground or reference ground plane.

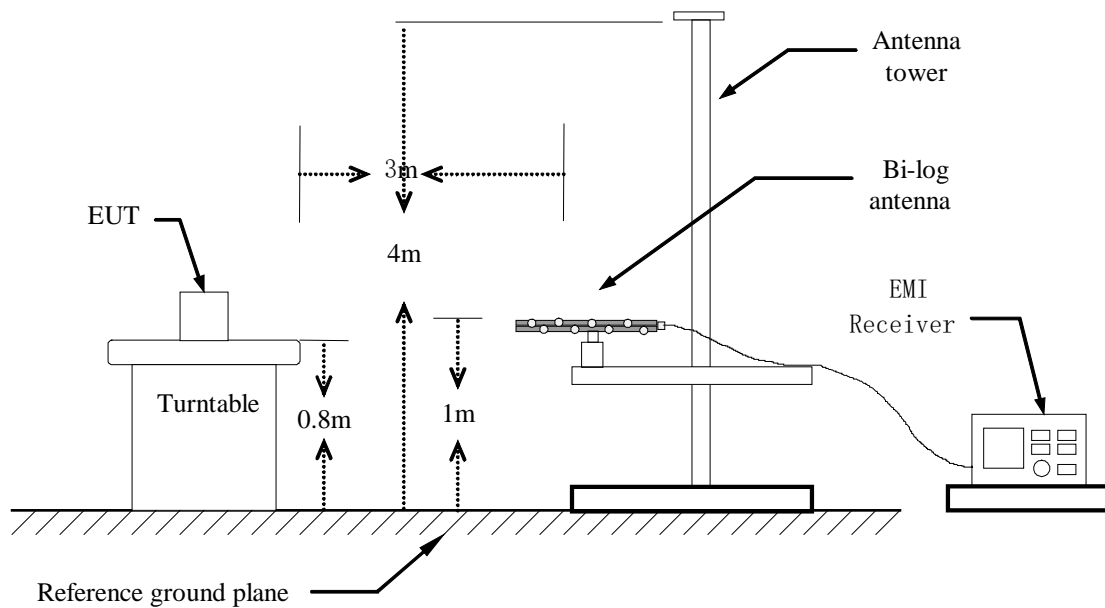
If the transmission line for the measurement antenna restricts its range of height and polarization, the steps needed to ensure the correct measurement of the maximum emissions, shall be described in detail in the report of the measurements.

using the procedures above to measure with peak detector function, if the result comply with the average limit specified by the appropriate regulation, record the EUT arrangement, mode of operation, and cable positions used for final radiated emission measurement , this can be done with either diagrams or photographs.

Set the detector function of the measuring instrument to average mode, using the procedures above and remeasure only those emissions that complied with the peak limits but exceeded the average limits.

Recorded at least the six highest emissions.

6.4 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

6.5 TEST RESULTS

Test Mode	Lighting	Environmental Conditions	26°C, 55% RH
6dB Bandwidth	120 KHz	Antenna Pole	Vertical / Horizontal
Antenna Distance	3m	Detector Function	Peak / Quasi-peak
Test Result	Pass		

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

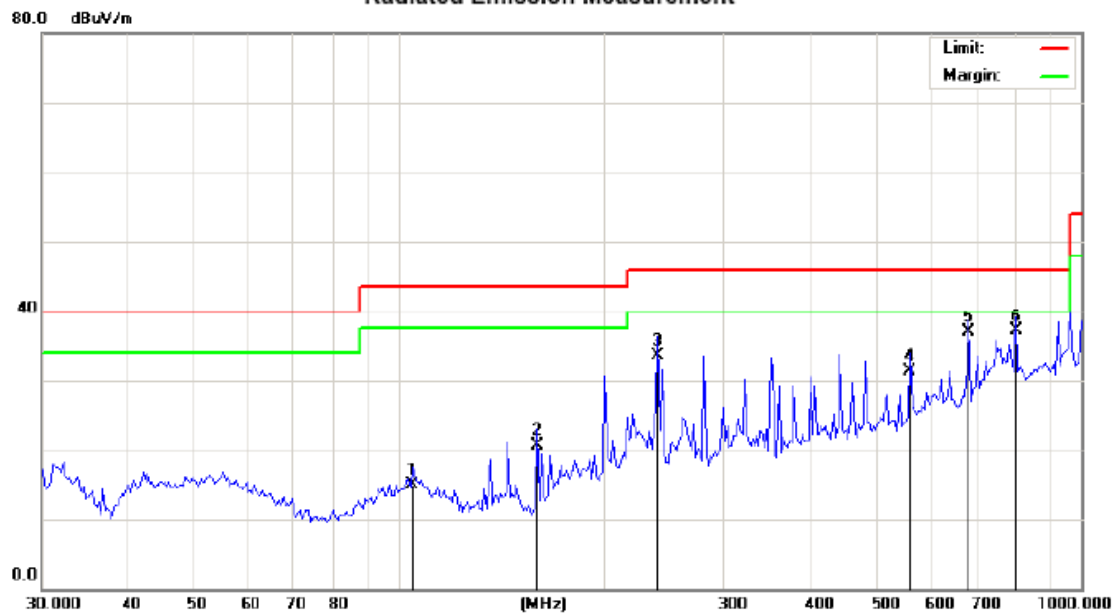
Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) – Limits (dBuV)



Please refer to following diagram for individual
Radiated Emission Measurement

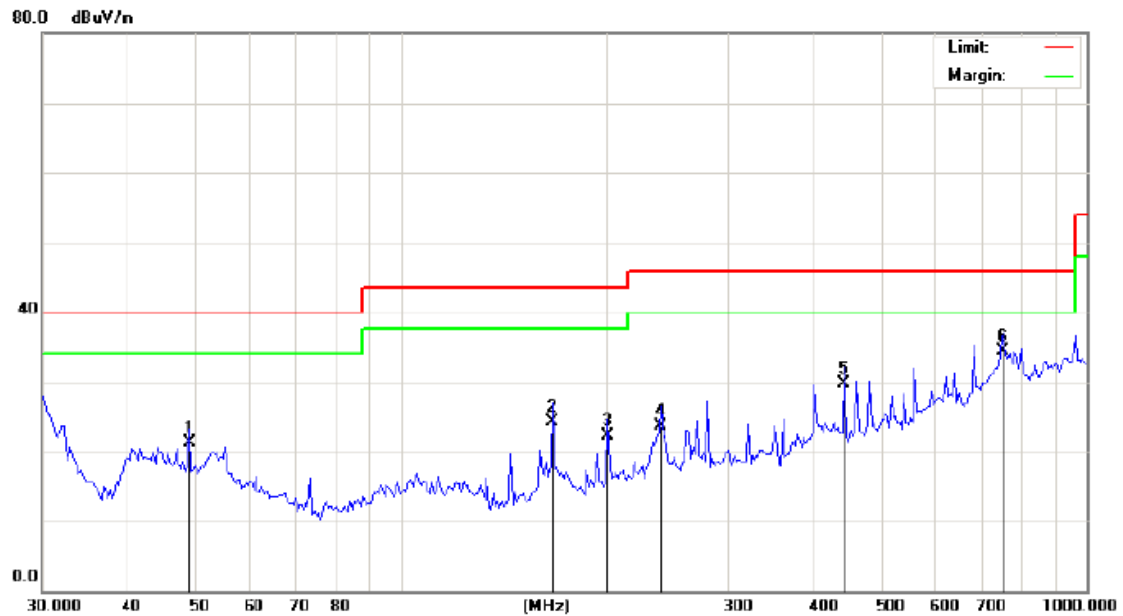


Site

Polarization: *Horizontal*

Temperature: 23

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	
1		104.7978	24.15	-9.18	14.97	43.50	-28.53	QP		0
2		159.7586	35.23	-14.58	20.65	43.50	-22.85	QP		0
3		240.1442	41.88	-8.31	33.57	46.00	-12.43	QP		0
4		562.0143	32.55	-1.32	31.23	46.00	-14.77	QP		0
5		684.2260	35.26	1.65	36.91	46.00	-9.09	QP		0
6	*	804.2522	32.02	5.03	37.05	46.00	-8.95	QP		0



Site

Polarization: **Vertical**

Temperature: 23

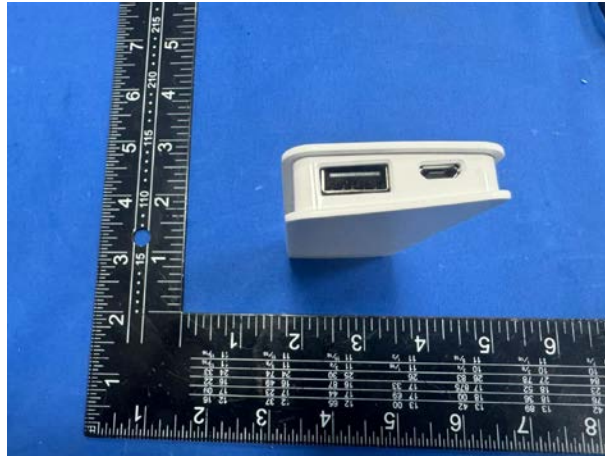
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	Comment
			dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree	
1		49.0626	31.02	-9.71	21.31	40.00	-18.69	QP	0	
2		166.6384	38.02	-13.67	24.35	43.50	-19.15	QP	0	
3		200.0432	32.15	-9.82	22.33	43.50	-21.17	QP	0	
4		240.1442	32.02	-8.31	23.71	46.00	-22.29	QP	0	
5		442.5722	33.14	-3.45	29.69	46.00	-16.31	QP	0	
6	*	754.9628	28.05	6.27	34.32	46.00	-11.68	QP	0	



7 PHOTOGRAPHS OF EUT

Appearance photograph of EUT





*****End of Report*****