



EMC TEST REPORT

For

SHENZHEN GAGO ELECTRONICS CO.,LTD

Smart Surveillance Power Box

Test Model: GG-DD4BWA-360B40

Prepared for : SHENZHEN GAGO ELECTRONICS CO.,LTD
Address : Room 301, 1st Building, Geya Technology Park, Matian Street, Guangming District, Shenzhen 518107

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

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Date of receipt of test sample : October 13, 2025
Number of tested samples : 1
Serial number : Prototype
Date of Test : October 13, 2025-October 13, 2025
Date of Report : October 21, 2025





TEST REPORT

Report No.	: LCSEA09195029E
Date of Issue	: October 21, 2025
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 <input checked="" type="checkbox"/> Partial application of Harmonised standards <input type="checkbox"/> Other standard testing method <input type="checkbox"/>
Applicant's Name	: SHENZHEN GAGO ELECTRONICS CO.,LTD
Address	: Room 301, 1st Building, Geya Technology Park,Matian Street, Guangming District, Shenzhen 518107
Test Specification	
Standard	: FCC Rules and Regulations Part 15 Subpart B ANSI C63.4:2014 ANSI C63.4a-2017
Test Report Form No	: TRF-4-E-010 A/0
TRF Originator	: Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	: Dated 2011-03
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Test Item Description	: Smart Surveillance Power Box
Trade Mark	: /
Test Model	: GG-DD4BWA-360B40
Result	: Pass

Compiled by:

Supervised by:

Approved by:

Rayer peng / File Administrator

Jelly Li / Technique principal

Gavin Liang / Manager





TEST REPORT

Test Report No.: LCSEA09195029E	<u>October 21, 2025</u> Date of issue
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Test Model	: GG-DD4BWA-360B40
EUT.....	: Smart Surveillance Power Box
Applicant	: SHENZHEN GAGO ELECTRONICS CO.,LTD
Address.....	: Room 301, 1st Building, Geya Technology Park,Matian Street, Guangming District, Shenzhen 518107
Telephone.....	: /
Fax.....	: /
Manufacturer	: SHENZHEN GAGO ELECTRONICS CO.,LTD
Address.....	: Room 301, 1st Building, Geya Technology Park,Matian Street, Guangming District, Shenzhen 518107
Telephone.....	: /
Fax.....	: /
Factory	: SHENZHEN GAGO ELECTRONICS CO.,LTD
Address.....	: Room 301, 1st Building, Geya Technology Park,Matian Street, Guangming District, Shenzhen 518107
Telephone.....	: /
Fax.....	: /

Test Result	Pass
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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.





Revision History

Report Version	Issue Date	Revision Content	Revised By
000	October 21, 2025	Initial Issue	/





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1. SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

Description of Test Item	Standard	Result	Memo
AC Power Port Conducted Emission	FCC Rules and Regulations Part 15 Subpart B,ANSI C63.4a-2017	PASS	/
Radiated Emissions Test(30-1000MHz)	FCC Rules and Regulations Part 15 Subpart B,ANSI C63.4a-2017	PASS	/





1.2 Description of Test Modes

No	Title	Description
Mode 1	Working(AC 120V/60Hz)	/





2. GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT	: Smart Surveillance Power Box
Test Model	: GG-DD4BWA-360B40
Power Supply	: AC 110V-277V
Highest Internal Frequency	: ≤108MHz
Classification of Equipment	: Class B

2.2 Support equipment List

Equipment	Manufacturer	Model	Serial Number	Description
/	/	/	/	/

2.3 Description of Test Facility

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.

- NVLAP Accreditation Code is 600167-0.
- FCC Designation Number is CN5024.
- CAB identifier is CN0071.
- CNAS Registration Number is L4595.

2.4 Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Emission (150kHz to 30MHz)	± 2.35 dB
Radiated Emission (30MHz to 1000MHz)	± 3.48 dB
Radiated Emission (above 1000MHz)	± 3.90 dB
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	





3. MEASURING DEVICES AND TEST EQUIPMENT

AC Power Port Conducted Emission				
Equipment	Manufacturer	Model No	Serial No.	Due Date
EMI Test Receiver	R&S	ESR3	102312	2026-03-05
Artificial Mains	R&S	ENV216	101288	2026-05-22
Pulse Limiter	R&S	ESH3-Z2	102750-NB	2026-05-22
EMI Test Software	Farad	EZ	/	/

Radiated Emissions Test(30-1000MHz)				
Equipment	Manufacturer	Model No	Serial No.	Due Date
EMI Test Software	Farad	EZ	/	/
EMI Test Software	AUDIX	E3	/	/
By-log Antenna	SchwarzBECK	VULB9163	01565	2027-07-12
Horn Antenna	ETS	3115	EABF-018	2027-07-19
EMI Test Receiver	R&S	ESR3	102311	2026-05-22
Broadband Preamplifier	/	BBV9745	00317	2025-11-07
EMI Test Receiver	R&S	ESC17	101173	2026-10-10
By-log Antenna	SchwarzBECK	VULB9163	01143	2027-07-19





4. EMISSION TEST RESULTS (EMI)

4.1 AC Power Port Conducted Emission

4.1.1 Limits

Class A		
Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150 kHz~500 kHz	79	66
500 kHz~30 MHz	73	60
Class B		
Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Notes:

- * Decreasing linearly with logarithm of frequency.
- The lower limit shall apply at the transition frequencies.

4.1.2 Test procedure

The EUT and Support equipment placement requires reference to the test block diagram and is placed on a non-metallic table.

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

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

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

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

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

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

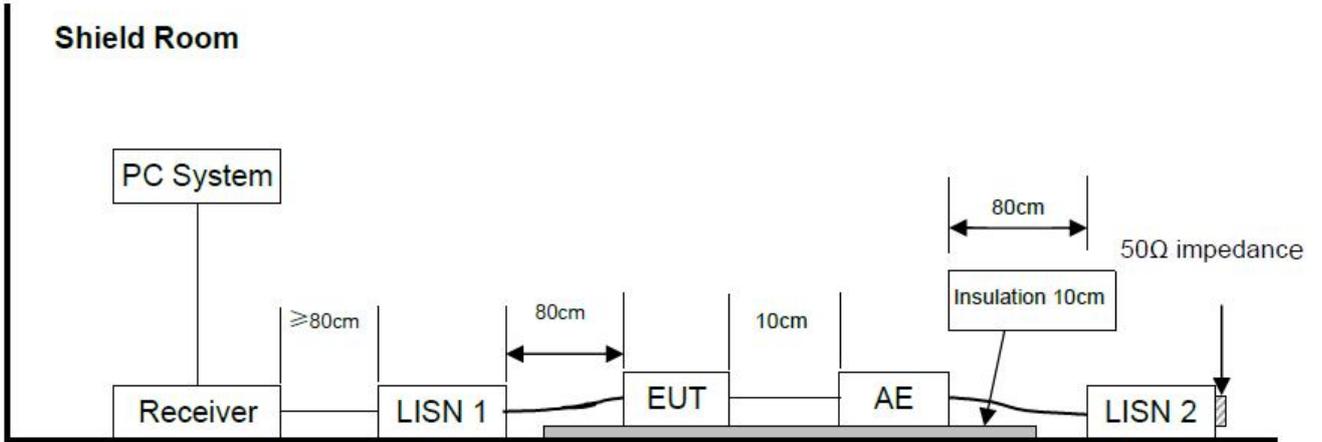
The bandwidth of test receiver is set at 9 kHz.



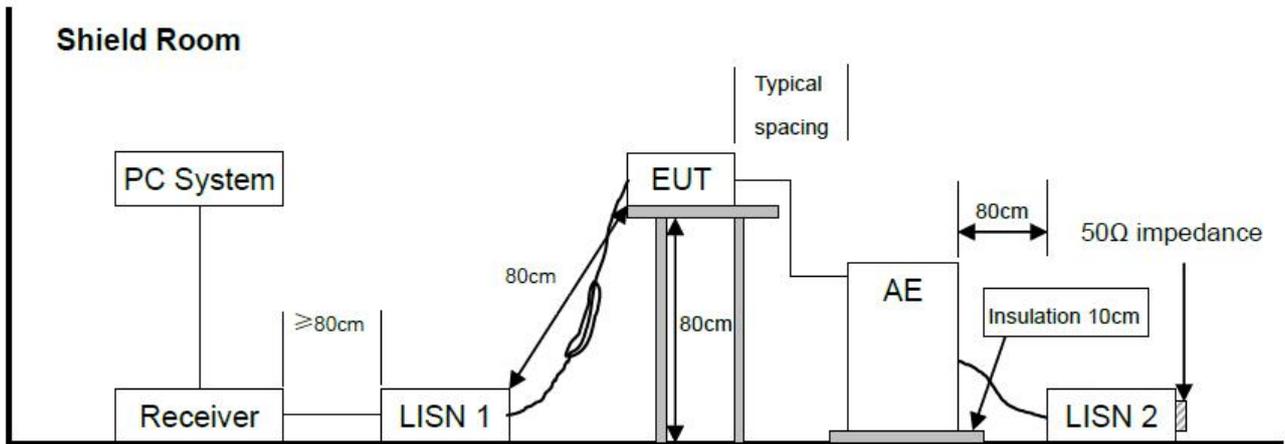


4.1.3 Test Setup Diagram

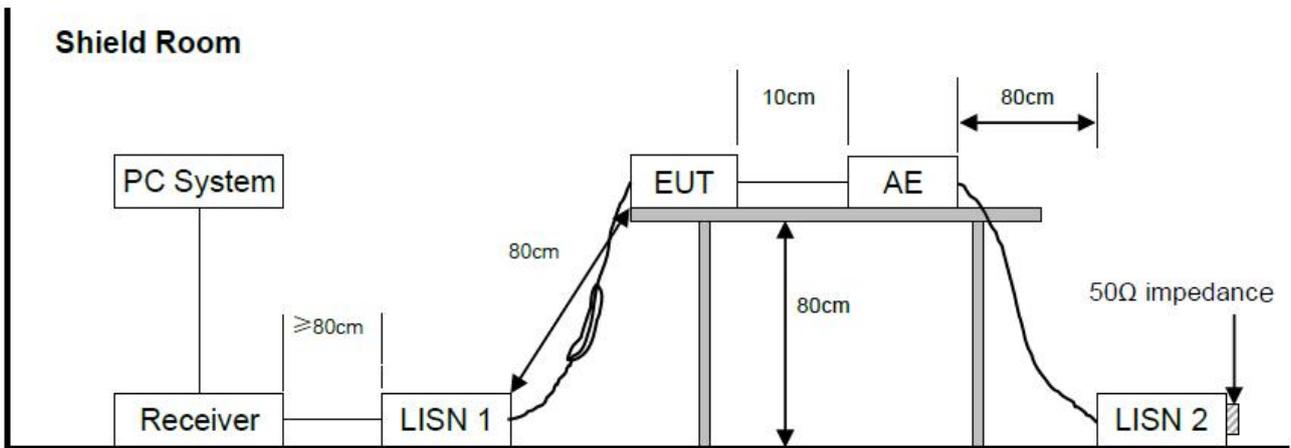
For floor standing equipment



For combinations equipment



For table-top equipment





4.1.4 E.U.T. Operation

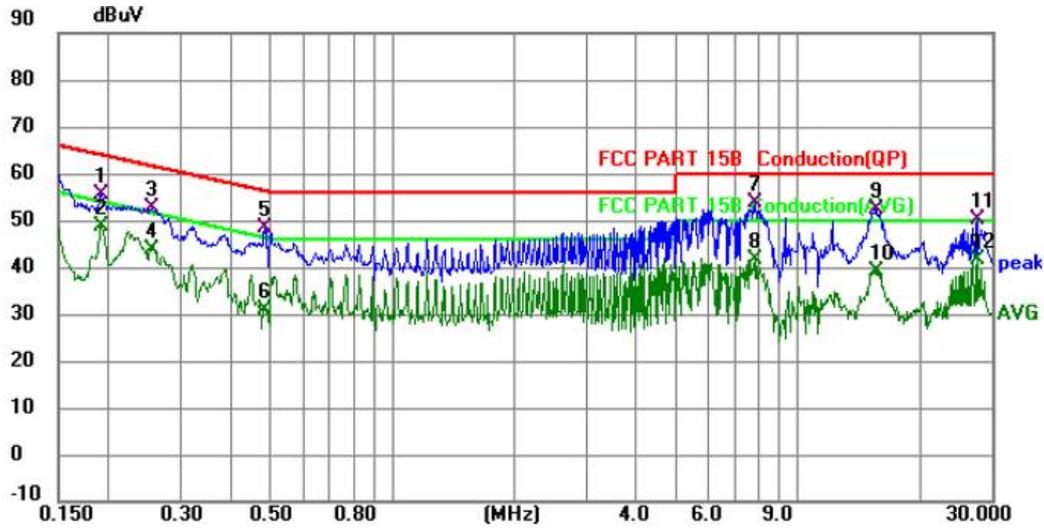
Operating Environment:			
Temperature:	22.7° C	Humidity:	53.7%RH
Test Engineer	Rayer peng		
Mode 1	Working	Voltage	AC 120V/60Hz





4.1.5 Test data

Mode 1 / Line: Line

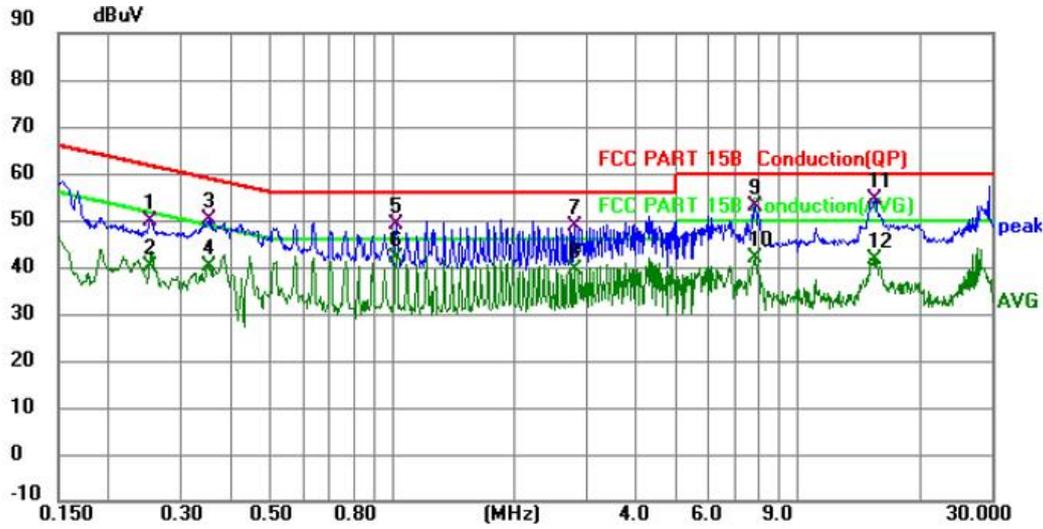


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.1905	35.28	20.33	55.61	64.01	-8.40	QP	
2 *	0.1905	28.32	20.33	48.65	54.01	-5.36	AVG	
3	0.2560	32.16	20.35	52.51	61.56	-9.05	QP	
4	0.2560	23.46	20.35	43.81	51.56	-7.75	AVG	
5	0.4830	28.29	20.13	48.42	56.29	-7.87	QP	
6	0.4830	10.88	20.13	31.01	46.29	-15.28	AVG	
7	7.8673	33.34	20.49	53.83	60.00	-6.17	QP	
8	7.8673	21.04	20.49	41.53	50.00	-8.47	AVG	
9	15.6570	31.83	20.65	52.48	60.00	-7.52	QP	
10	15.6570	18.48	20.65	39.13	50.00	-10.87	AVG	
11	27.8110	29.39	20.86	50.25	60.00	-9.75	QP	
12	27.8110	20.63	20.86	41.49	50.00	-8.51	AVG	





Mode 1 / Line: Neutral



No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV	Limit dBuV	Margin dB	Detector	Comment
1	0.2519	29.53	20.35	49.88	61.69	-11.81	QP	
2	0.2519	19.93	20.35	40.28	51.69	-11.41	AVG	
3	0.3520	29.74	20.29	50.03	58.92	-8.89	QP	
4	0.3520	20.01	20.29	40.30	48.92	-8.62	AVG	
5	1.0230	28.68	20.46	49.14	56.00	-6.86	QP	
6 *	1.0230	21.67	20.46	42.13	46.00	-3.87	AVG	
7	2.8093	28.08	20.53	48.61	56.00	-7.39	QP	
8	2.8093	19.11	20.53	39.64	46.00	-6.36	AVG	
9	7.8494	32.54	20.61	53.15	60.00	-6.85	QP	
10	7.8494	21.33	20.61	41.94	50.00	-8.06	AVG	
11	15.5040	33.90	20.66	54.56	60.00	-5.44	QP	
12	15.5040	21.12	20.66	41.78	50.00	-8.22	AVG	





4.2 Radiated Emissions Test(30-1000MHz)

4.2.1 Limits

For FCC Rules and Regulations Part 15 Subpart B limits:				
Frequency (MHz)	Class A Field Strengths Limits at 10m measuring distance dB(μ V)/m	Class A Field Strengths Limits at 3m measuring distance dB(μ V)/m	Class B Field Strengths Limits at 10m measuring distance dB(μ V)/m	Class B Field Strengths Limits at 3m measuring distance dB(μ V)/m
30--88	39.0	49.5	29.5	40.0
88--216	43.5	54.0	33.0	43.5
216--960	46.4	57.0	35.5	46.0
960--1000	49.5	60.0	43.5	54.0
For ICES-003 Issue 7 limits:				
Frequency (MHz)	Class A Field Strengths Limits at 10m measuring distance dB(μ V)/m	Class A Field Strengths Limits at 3m measuring distance dB(μ V)/m	Class B Field Strengths Limits at 10m measuring distance dB(μ V)/m	Class B Field Strengths Limits at 3m measuring distance dB(μ V)/m
30--88	40.0	50.0	30.0	40.0
88--216	43.5	54.0	33.1	43.5
216--230	46.4	56.9	35.6	46.0
230--960	47.0	57.0	37.0	47.0
960--1000	49.5	60.0	43.5	54.0

4.2.2 Test procedure

Procedure of Preliminary Test

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 0.8m (table-top device)/0.1m (floor stand device) above the ground plane.

Configuration EUT to simulate typical usage as described in as shown above block diagram and equipment list of this report.

All I/O cables were positioned to simulate typical actual 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 30 MHz to 1 GHz. 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.

After the preliminary scan, we found the test mode producing the highest emission level. The EUT and cable configuration, antenna position, polarization and turntable position of the above highest emission level were recorded for the final test.

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 30 MHz to 1 GHz. 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 emissions from 30 MHz to 1 GHz, Quasi-Peak values were measured with EMI Receiver and the bandwidth of Receiver is 120 kHz.

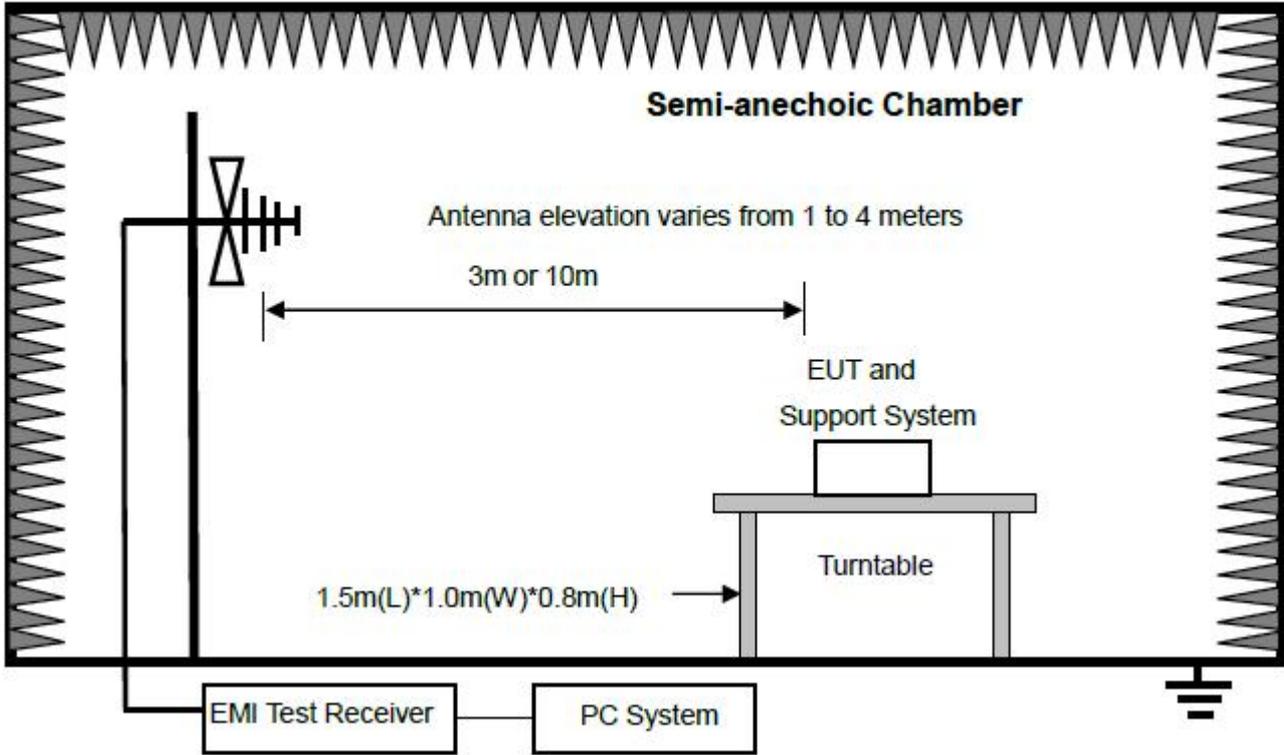




4.2.3 Test Setup Diagram

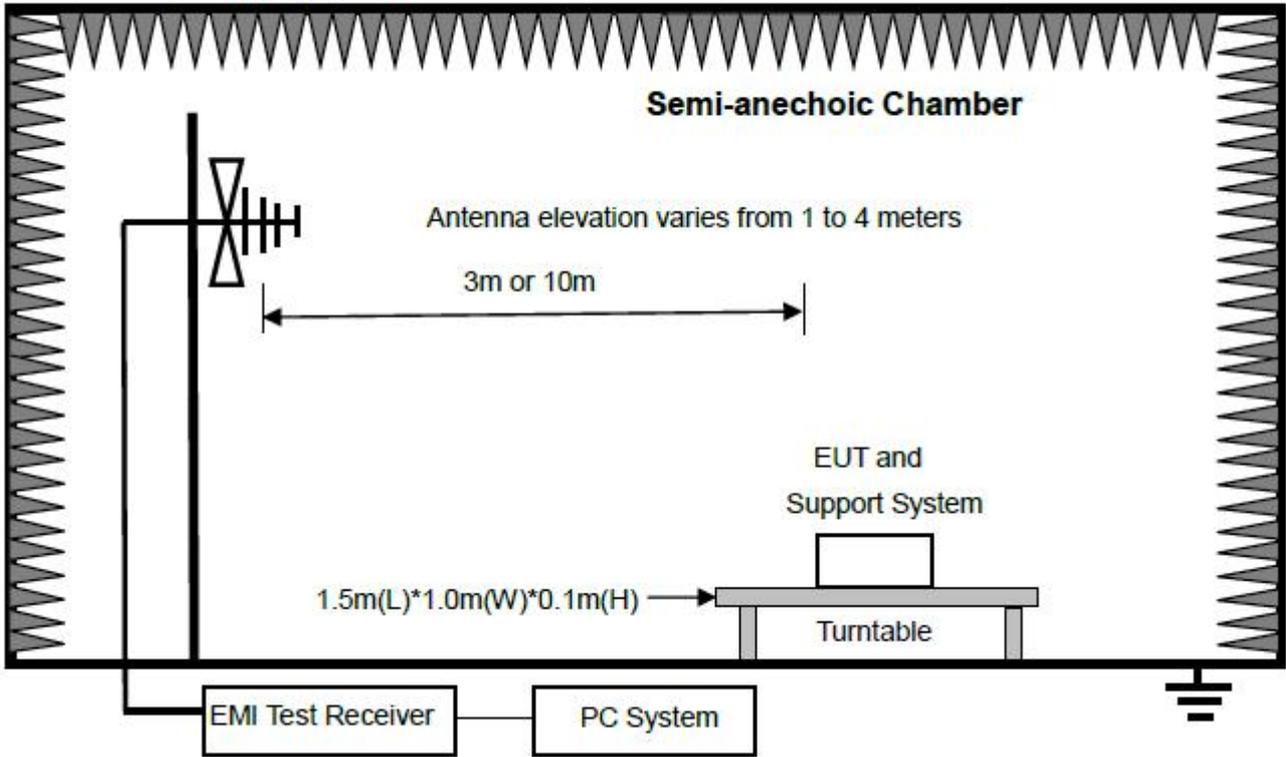
Below 1 GHz

For table-top equipment

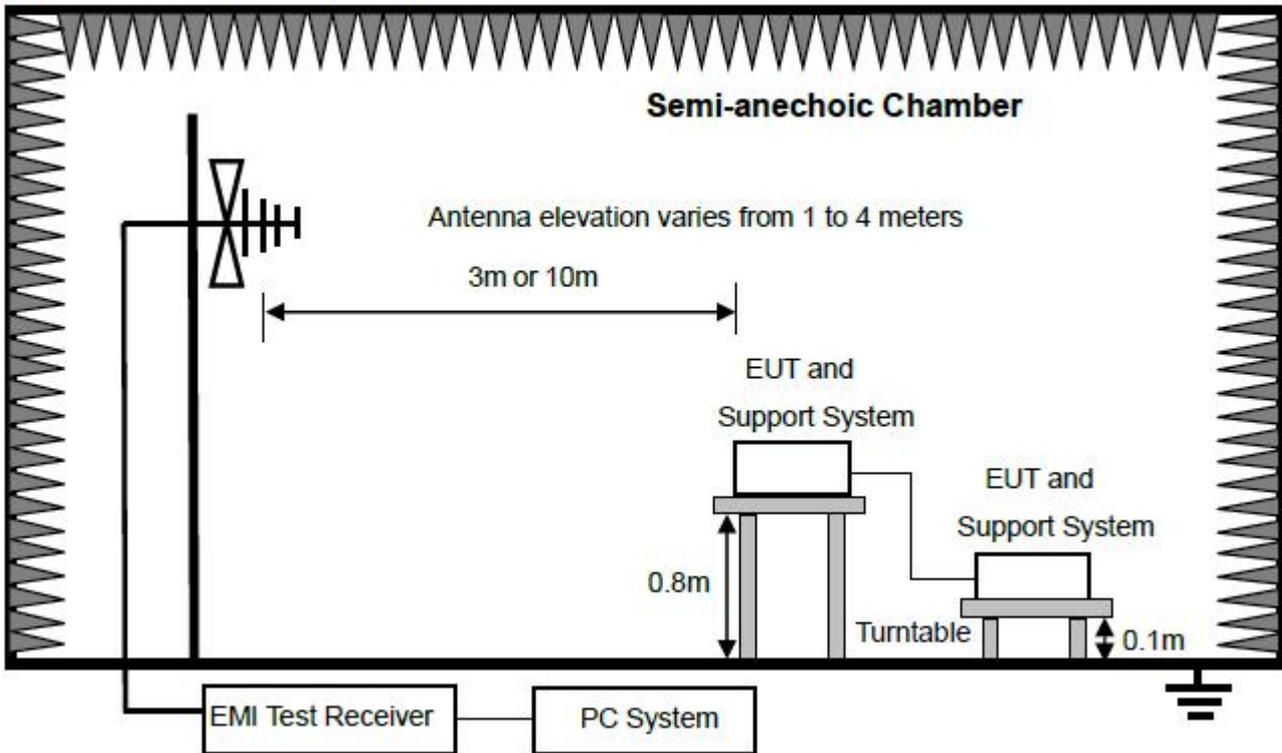




For floor standing equipment



For combinations equipment





4.2.4 E.U.T. Operation

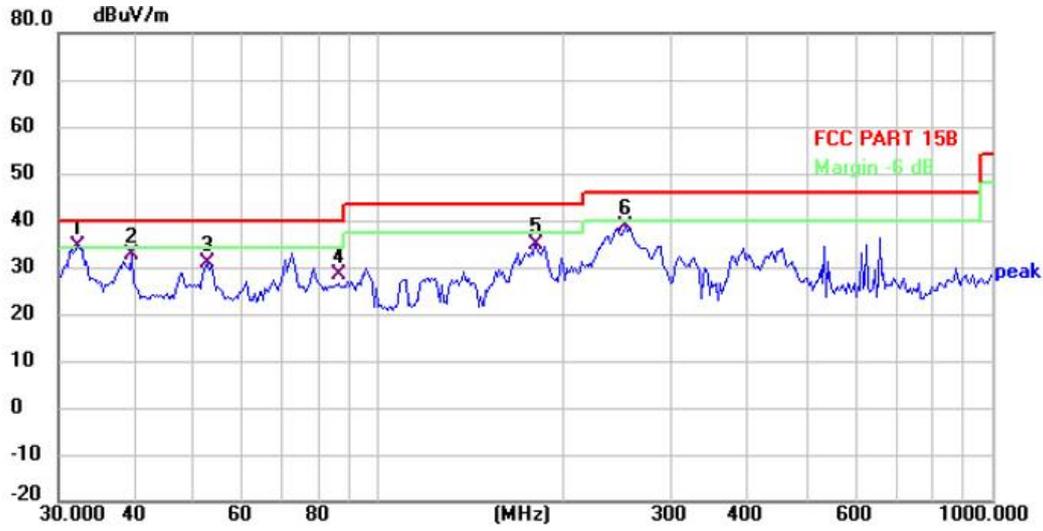
Operating Environment:			
Temperature:	22.3° C	Humidity:	53%RH
Test Engineer	Rayer peng		
Mode 1	Working	Voltage	AC 120V/60Hz





4.2.5 Test data

Mode 1 / Polarization: Vertical

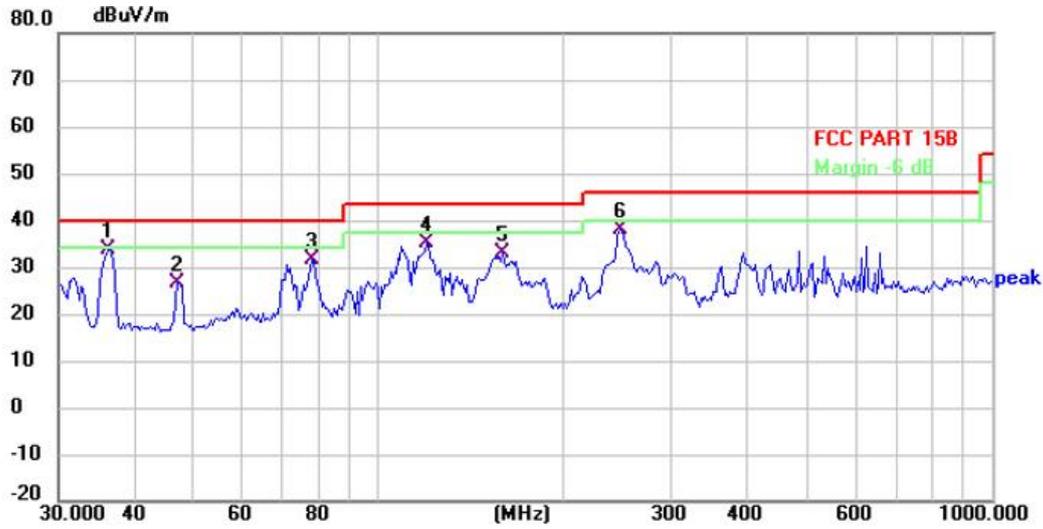


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measurement dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1 *	32.179	46.80	-12.50	34.30	40.00	-5.70	QP	
2	39.437	44.36	-11.54	32.82	40.00	-7.18	QP	
3	52.575	41.28	-10.21	31.07	40.00	-8.93	QP	
4	85.898	42.78	-14.37	28.41	40.00	-11.59	QP	
5	180.649	49.53	-14.58	34.95	43.50	-8.55	QP	
6	252.948	49.93	-11.29	38.64	46.00	-7.36	QP	





Mode 1 / Polarization: Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	36.254	46.02	-12.16	33.86	40.00	-6.14	QP	
2		46.995	37.02	-10.42	26.60	40.00	-13.40	QP	
3		77.865	46.62	-15.07	31.55	40.00	-8.45	QP	
4		119.436	48.56	-13.54	35.02	43.50	-8.48	QP	
5		159.225	47.80	-14.74	33.06	43.50	-10.44	QP	
6		247.682	49.39	-11.32	38.07	46.00	-7.93	QP	



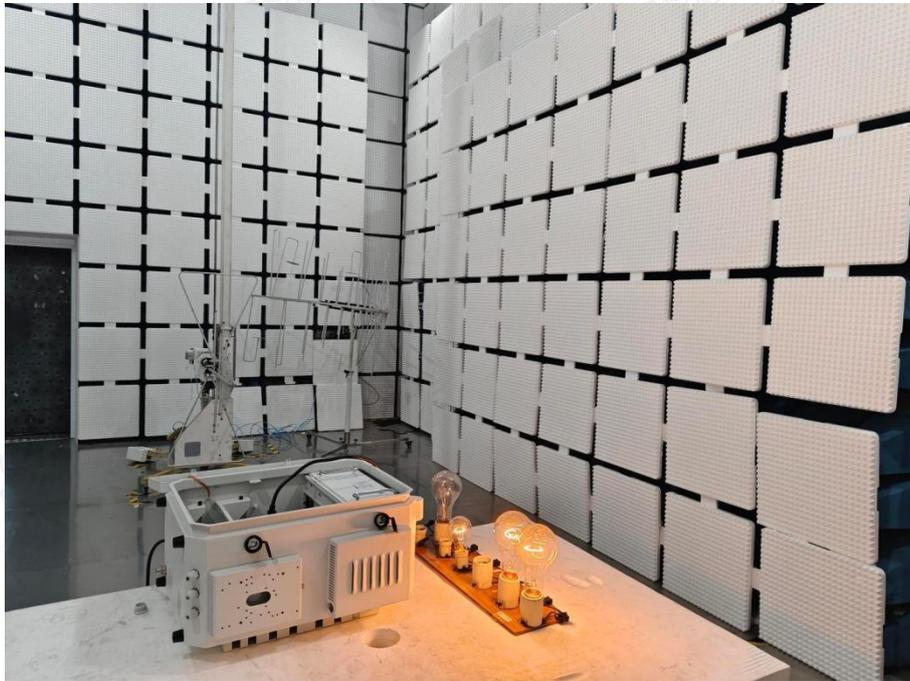


5. TEST SETUP PHOTOS

AC Power Port Conducted Emission



Radiated Emissions Test(30-1000MHz)





6. EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)



Fig. 1

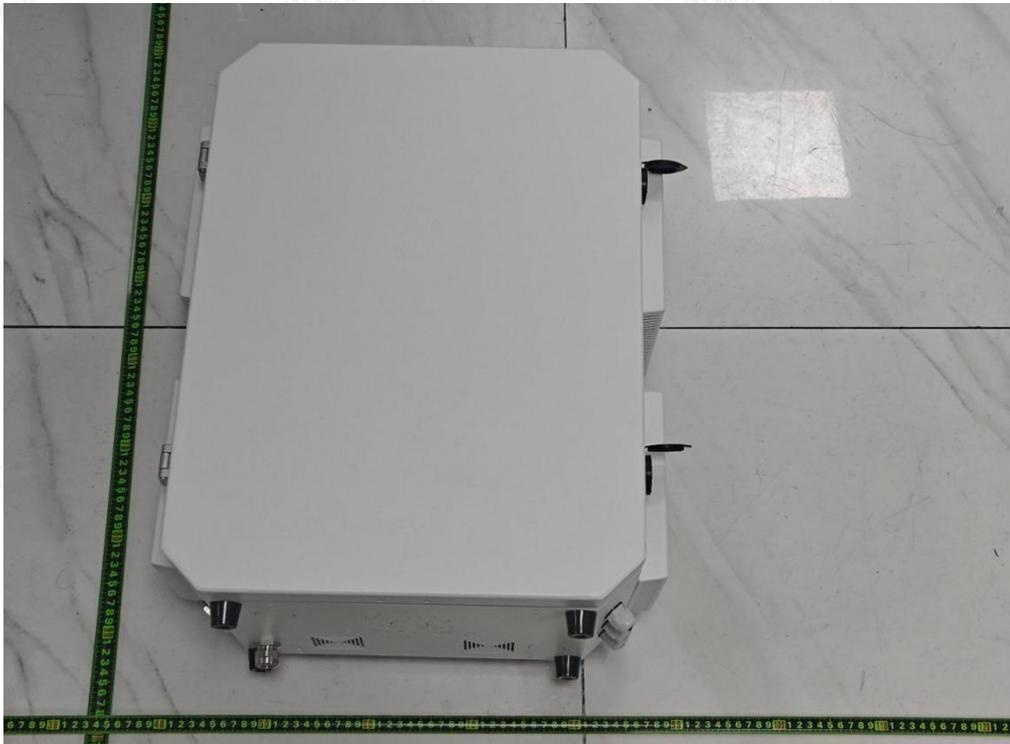


Fig. 2





Fig. 3



Fig. 4



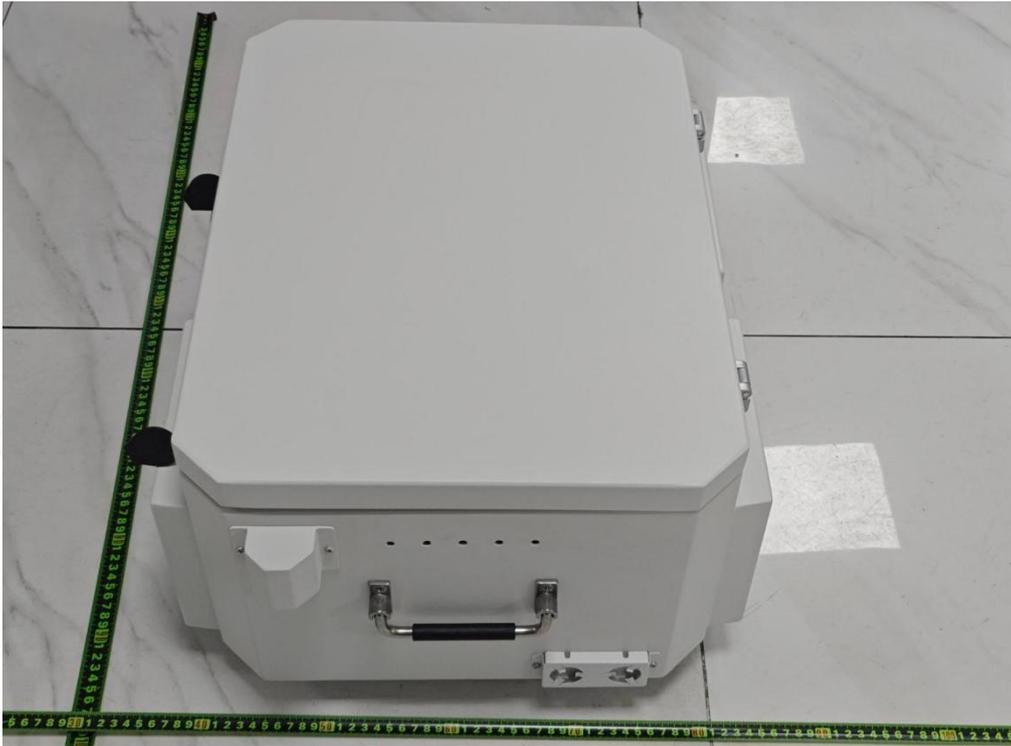


Fig. 5



Fig. 6





Fig. 7

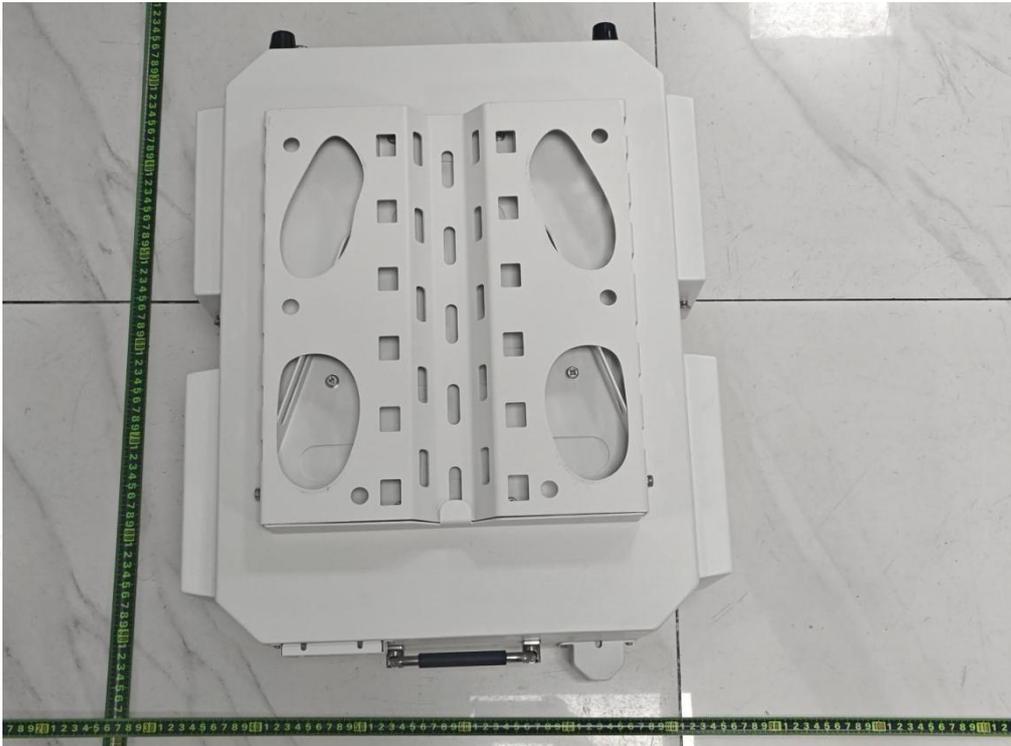


Fig. 8



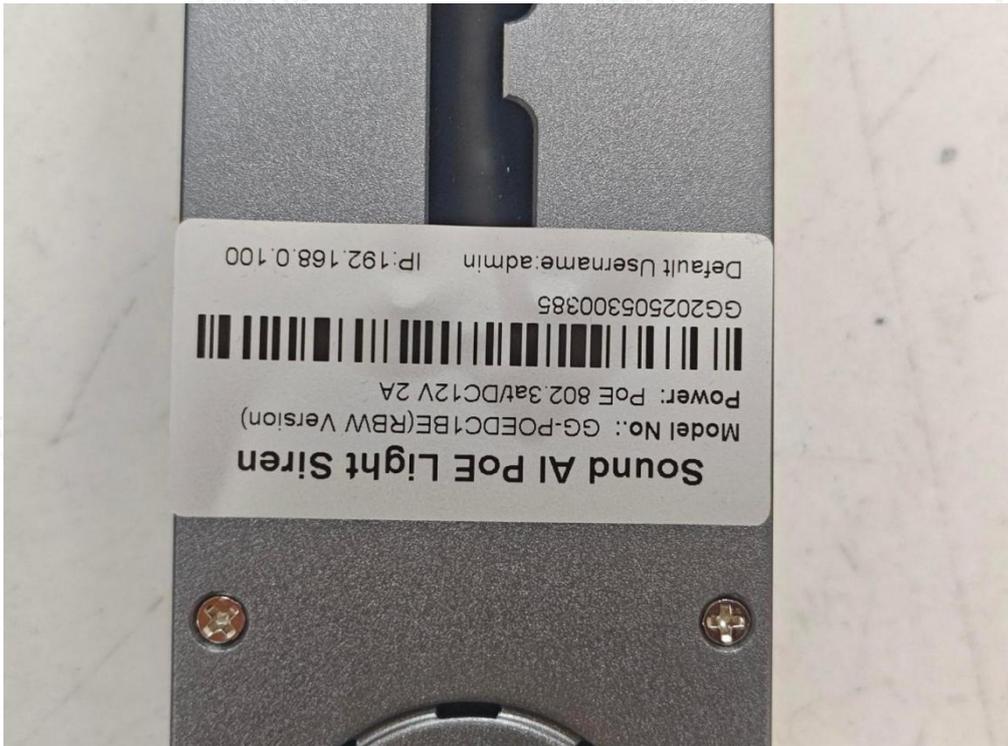


Fig. 9



Fig. 10



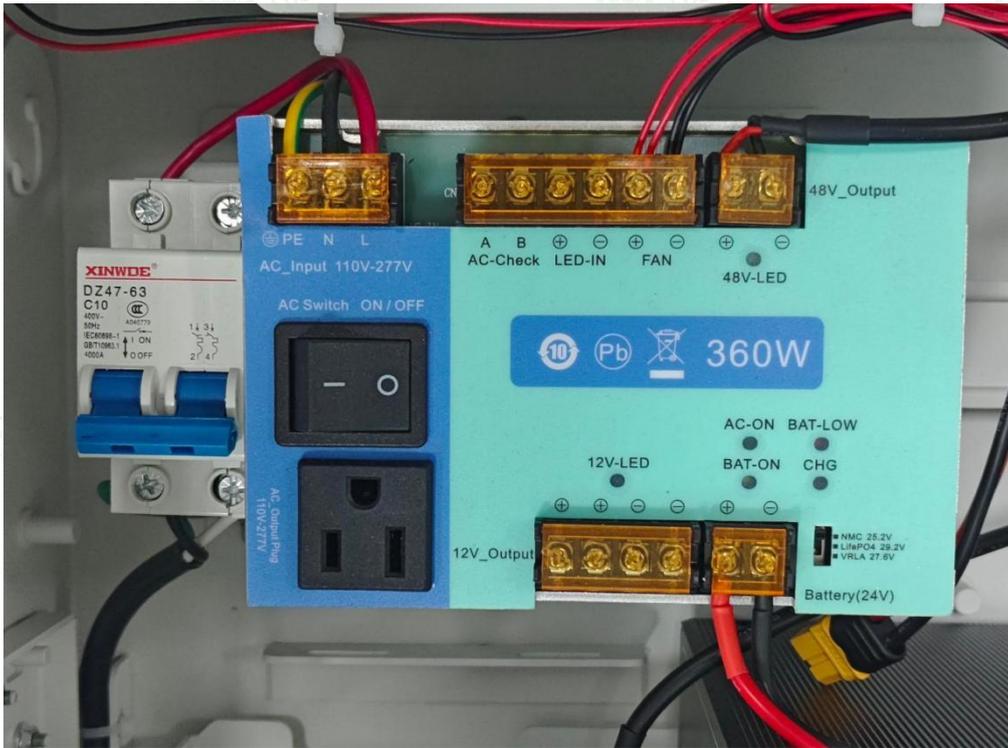


Fig. 11



Fig. 12

-----End Report-----

