EMC TEST REPORT

For

SHENZHEN GAGO ELECTRONICS CO.,LTD

Smart Surveillance Power Box

Test Model: GG-DD3-VBWA-420S

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
Tel	:	+(86) 0755-82591330
Fax	:	+(86) 0755-82591332
Web	:	www.lcs-cert.com
Mail	:	webmaster@lcs-cert.com
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.	:	**LCSA09155154E**
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 ■ Partial application of Harmonised standards □ Other standard testing method □
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

Test Item Description	:	**Smart Surveillance Power Box**
Trade Mark	:	/
Test Model	:	GG-DD3-VBWA-420S
Result	:	**Pass**

Compiled by:	Supervised by:	Approved by:
Rayer peng / File Administrator	Jelly Li / Technique principal	Gavin Liang / Manager

TEST REPORT

Test Report No.: LCSA09155154E	October 21, 2025 Date of issue

Test Model	:	**GG-DD3-VBWA-420S**
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**

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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Test Report Description Page

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	AC Charging+Working(AC 120V/60Hz)	/
Mode 2	Working(DC 24V)	/

2. GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT : Smart Surveillance Power Box
Test Model : GG-DD3-VBWA-420S
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	ESCI7	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(μV)	Average Level dB(μV)
150 kHz~500 kHz	79	66
500 kHz~30 MHz	73	60
Class B		
Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50
Notes: 1. * Decreasing linearly with logarithm of frequency. 2. 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.

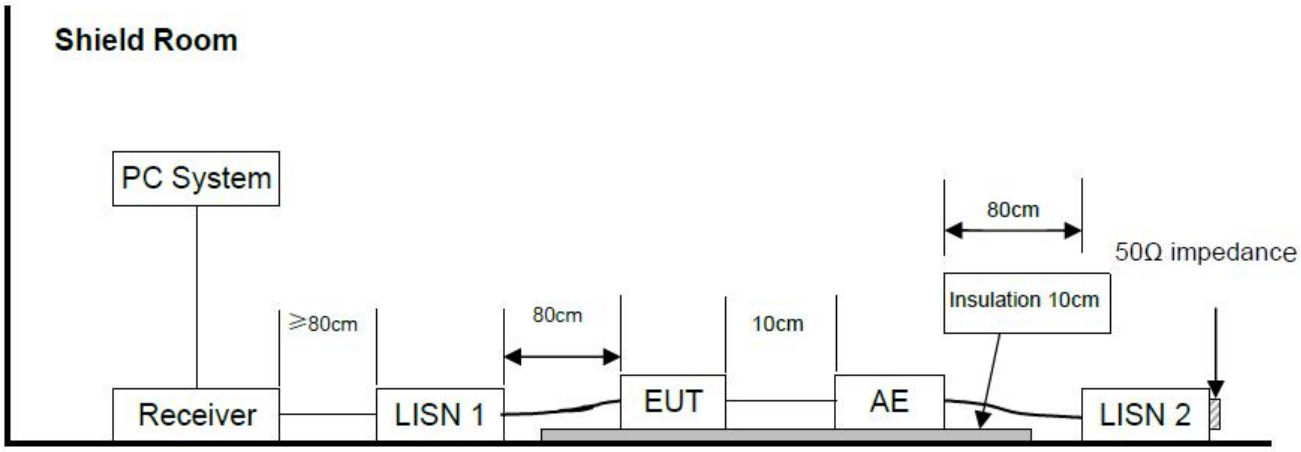
Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

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

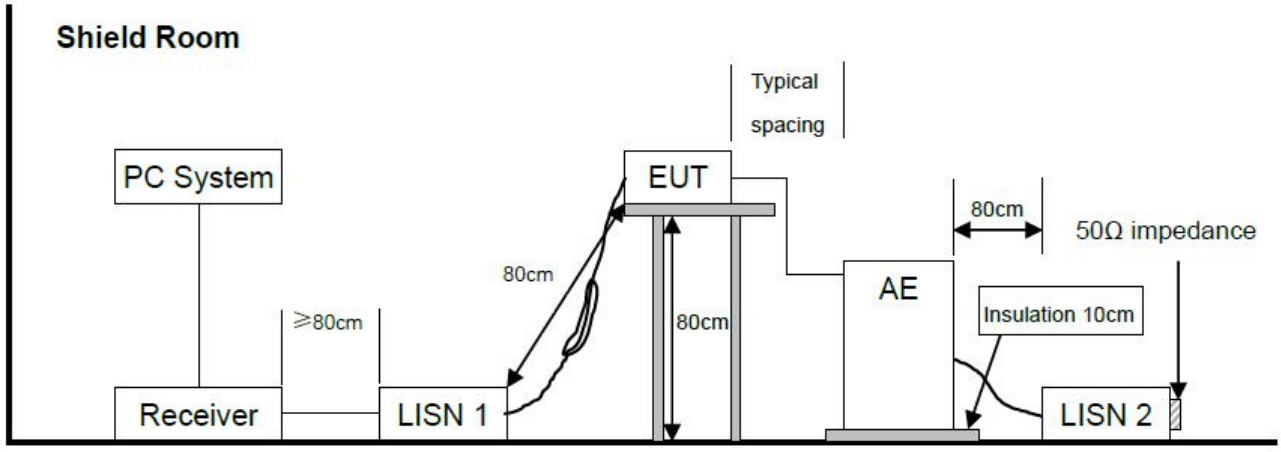
The bandwidth of test receiver is set at 9 kHz.

4.1.3 Test Setup Diagram

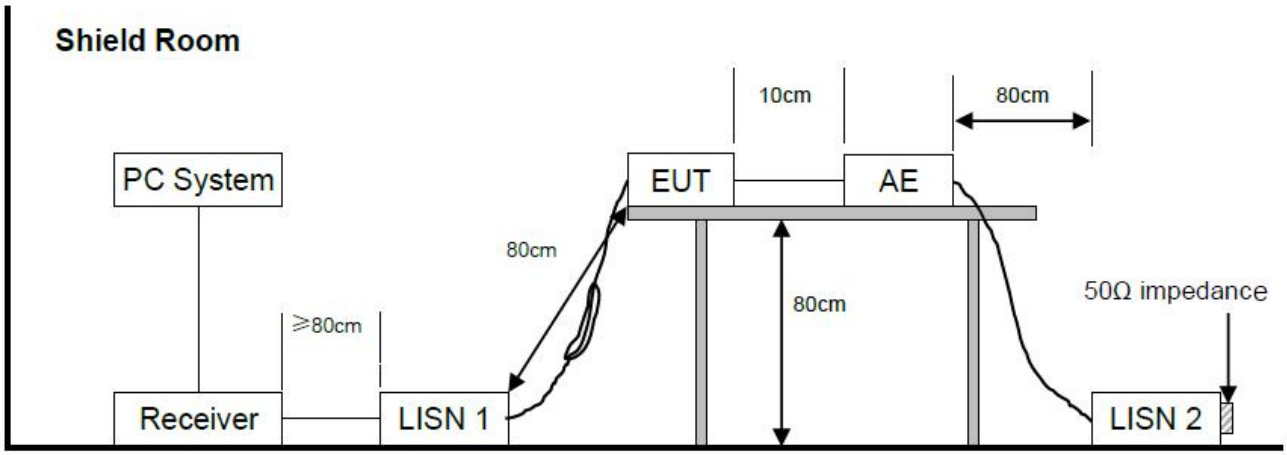
For floor standing equipment



For combinations equipment



For table-top equipment

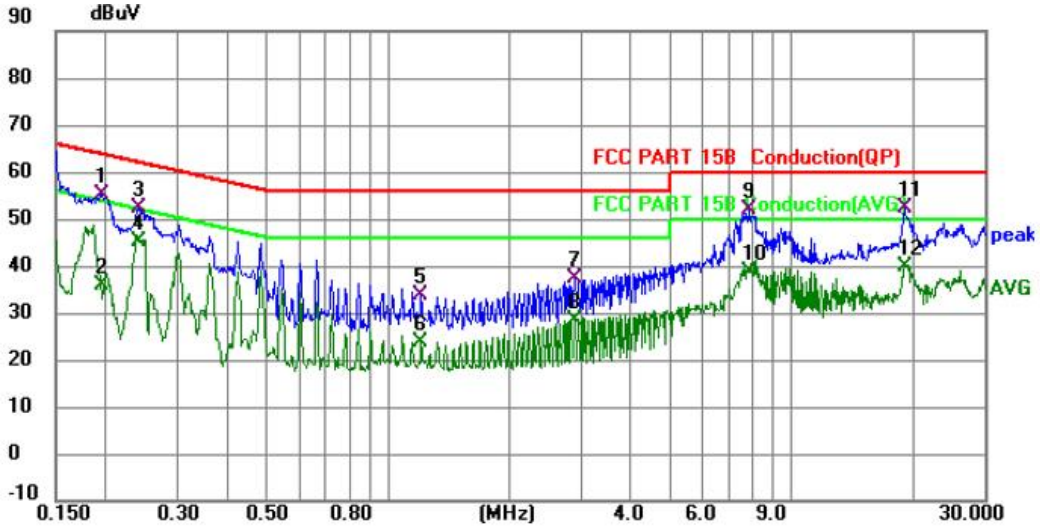


4.1.4 E.U.T. Operation

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

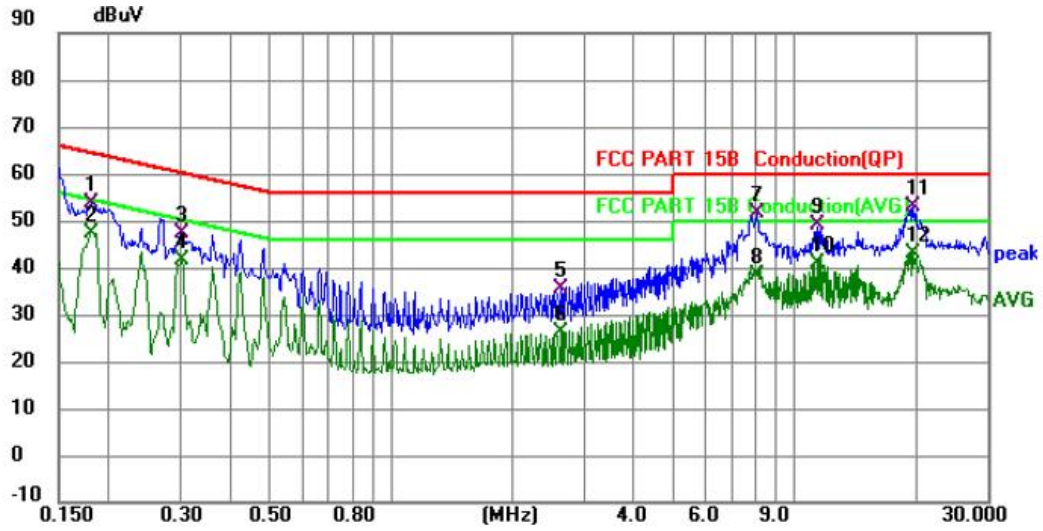
4.1.5 Test data

Mode 1 / Line: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1943	34.93	20.34	55.27	63.85	-8.58	QP	
2		0.1943	15.65	20.34	35.99	53.85	-17.86	AVG	
3		0.2416	31.94	20.35	52.29	62.04	-9.75	QP	
4	*	0.2416	24.78	20.35	45.13	52.04	-6.91	AVG	
5		1.2075	13.39	20.48	33.87	56.00	-22.13	QP	
6		1.2075	3.31	20.48	23.79	46.00	-22.21	AVG	
7		2.9040	16.75	20.53	37.28	56.00	-18.72	QP	
8		2.9040	8.01	20.53	28.54	46.00	-17.46	AVG	
9		7.8360	31.33	20.61	51.94	60.00	-8.06	QP	
10		7.8360	17.98	20.61	38.59	50.00	-11.41	AVG	
11		19.1082	31.42	20.93	52.35	60.00	-7.65	QP	
12		19.1082	18.84	20.93	39.77	50.00	-10.23	AVG	

Mode 1 / Line: Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1814	33.51	20.33	53.84	64.42	-10.58	QP	
2		0.1814	27.09	20.33	47.42	54.42	-7.00	AVG	
3		0.3030	27.02	20.35	47.37	60.16	-12.79	QP	
4		0.3030	21.34	20.35	41.69	50.16	-8.47	AVG	
5		2.6474	14.96	20.48	35.44	56.00	-20.56	QP	
6		2.6474	5.82	20.48	26.30	46.00	-19.70	AVG	
7		8.0250	31.08	20.49	51.57	60.00	-8.43	QP	
8		8.0250	17.83	20.49	38.32	50.00	-11.68	AVG	
9		11.3505	28.43	20.50	48.93	60.00	-11.07	QP	
10		11.3505	20.33	20.50	40.83	50.00	-9.17	AVG	
11		19.6259	31.95	21.00	52.95	60.00	-7.05	QP	
12	*	19.6259	22.05	21.00	43.05	50.00	-6.95	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(μV)/m	Class A Field Strengths Limits at 3m measuring distance dB(μV)/m	Class B Field Strengths Limits at 10m measuring distance dB(μV)/m	Class B Field Strengths Limits at 3m measuring distance dB(μV)/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(μV)/m	Class A Field Strengths Limits at 3m measuring distance dB(μV)/m	Class B Field Strengths Limits at 10m measuring distance dB(μV)/m	Class B Field Strengths Limits at 3m measuring distance dB(μV)/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.

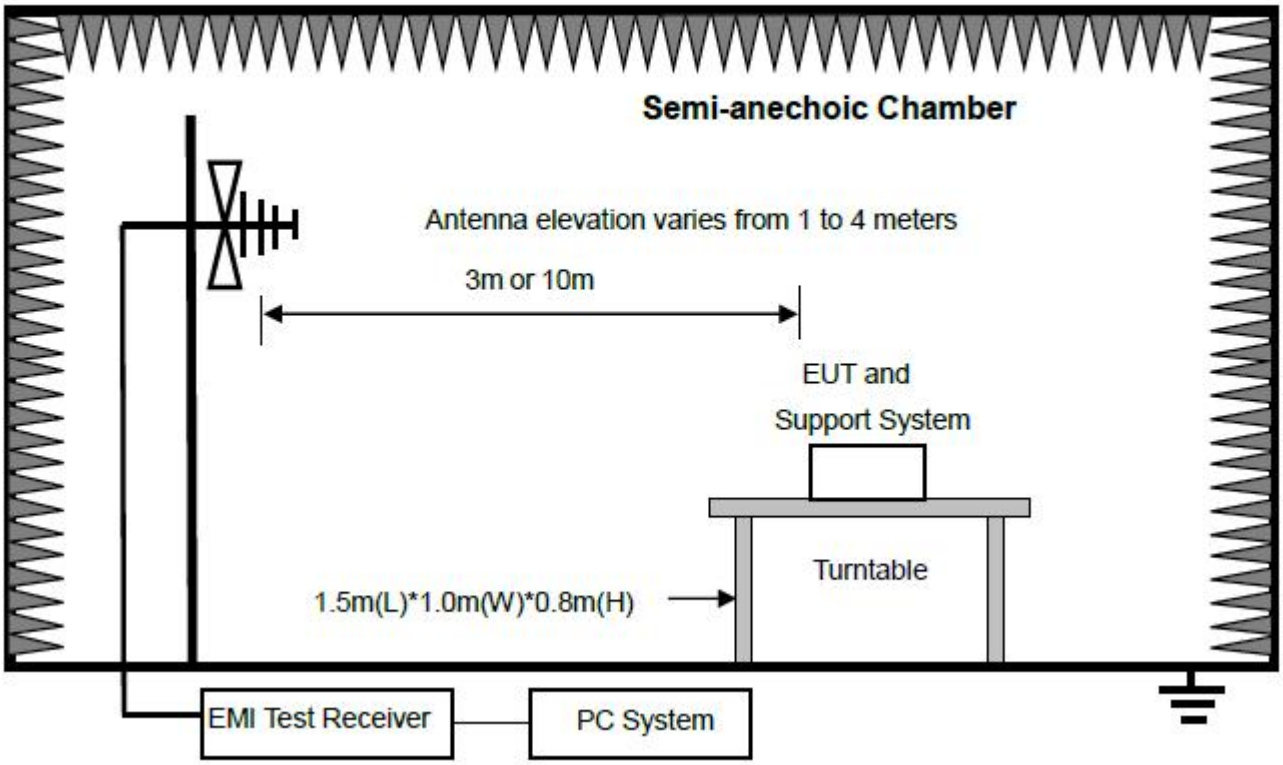
The Analyzer / Receiver scanned from 30 MHz to 1 GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.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

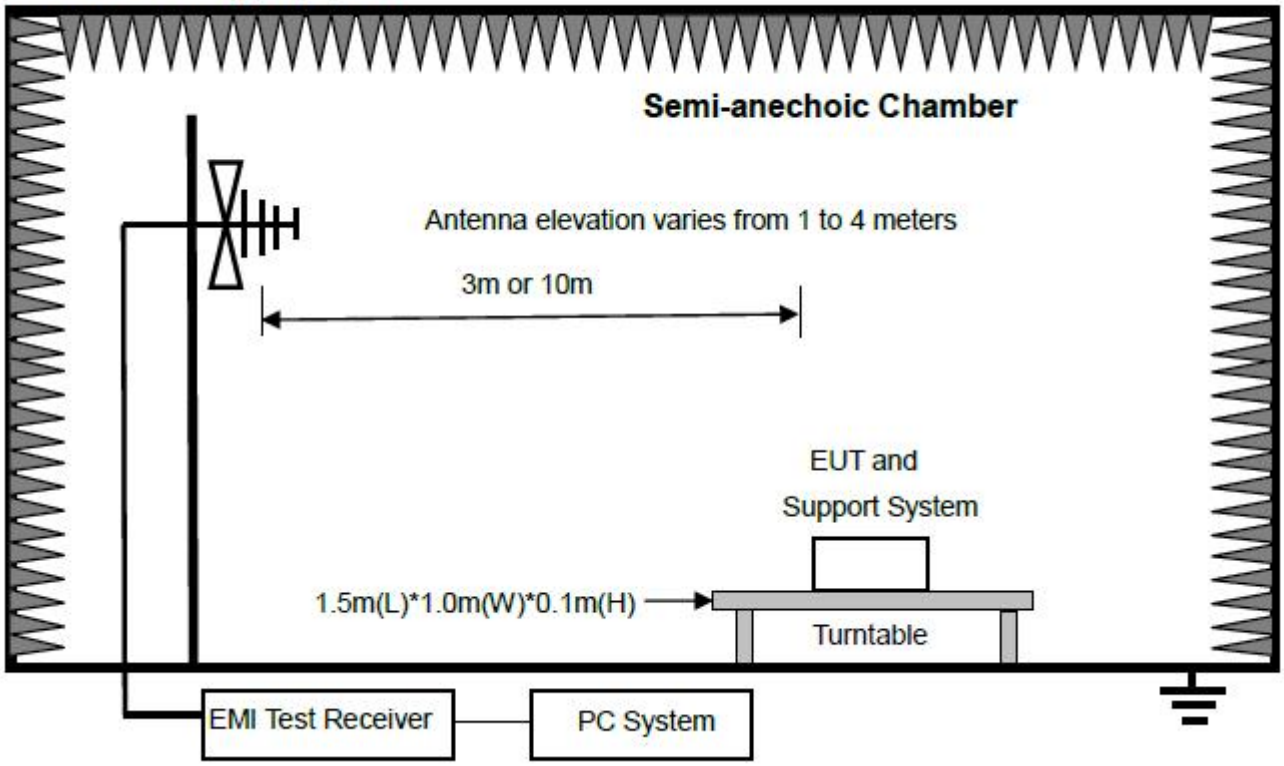
4.2.3 Test Setup Diagram

Below 1 GHz

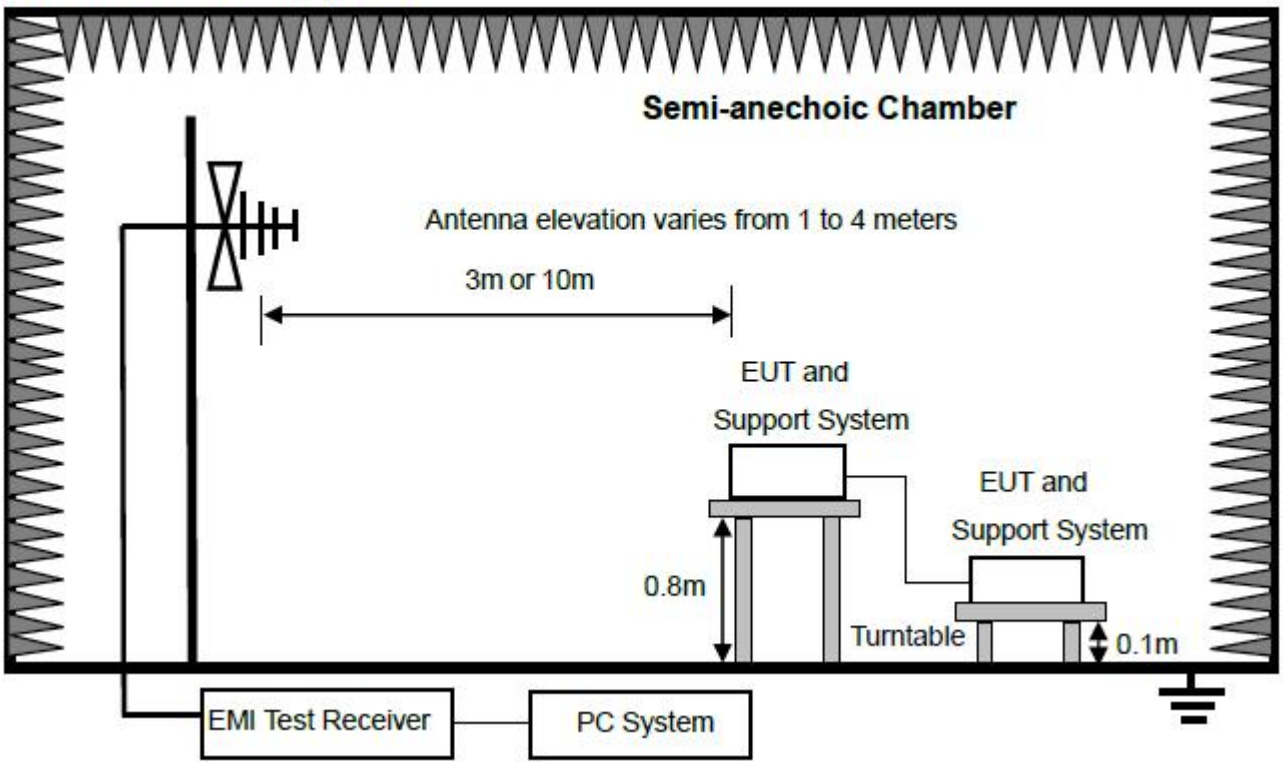
For table-top equipment



For floor standing equipment



For combinations equipment

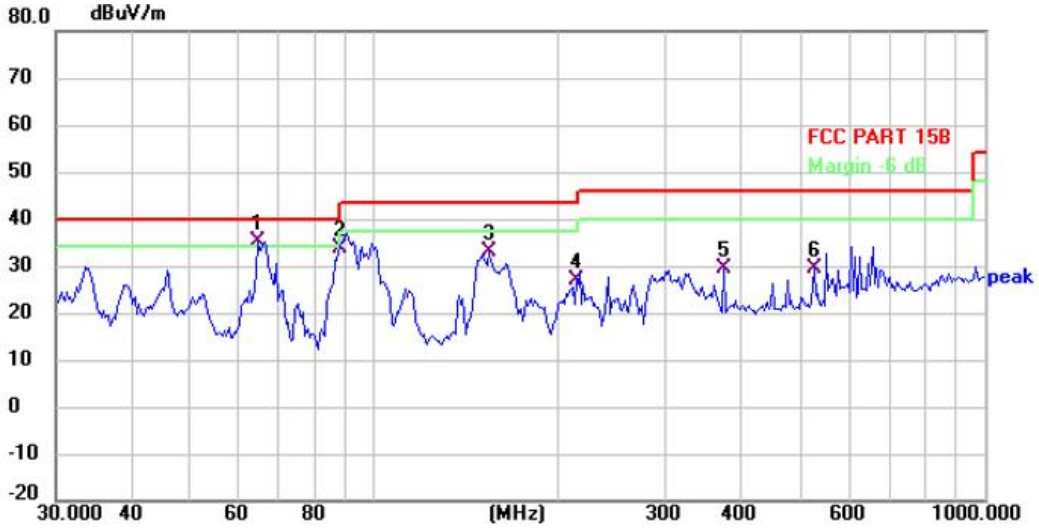


4.2.4 E.U.T. Operation

Operating Environment:			
Temperature:	22.3° C	Humidity:	53%RH
Test Engineer	Rayer peng		
Mode 1	AC Charging+Working	Voltage	AC 120V/60Hz
Mode 2	Working	Voltage	DC 24V

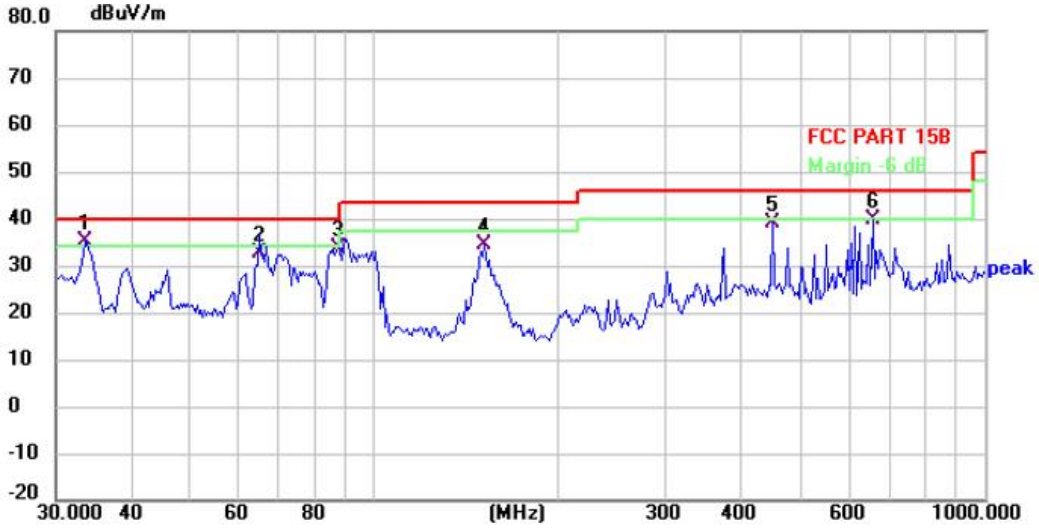
4.2.5 Test data

Mode 1 / Polarization: Vertical



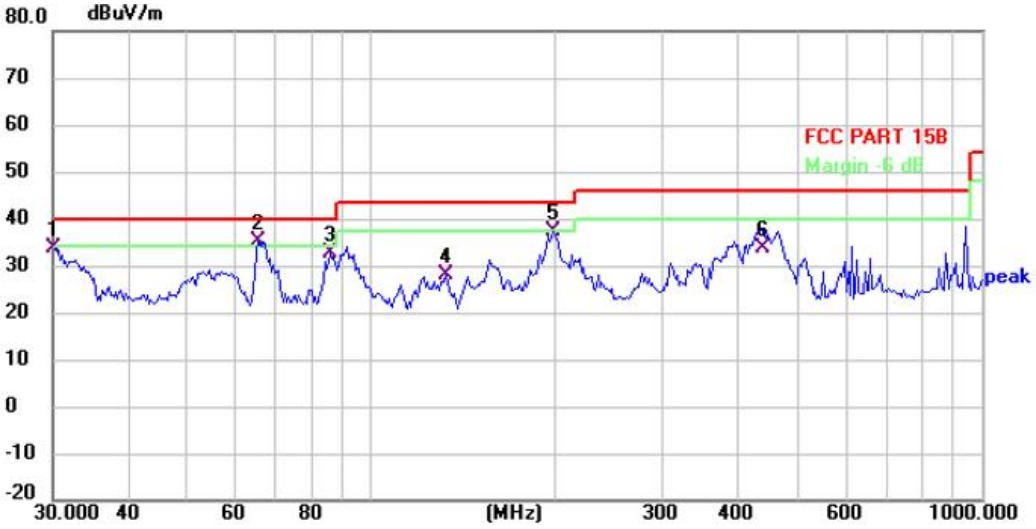
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	64.433	48.10	-13.07	35.03	40.00	-4.97	QP	
2		87.725	48.04	-14.17	33.87	40.00	-6.13	QP	
3		153.738	48.30	-15.30	33.00	43.50	-10.50	QP	
4		213.763	39.27	-12.45	26.82	43.50	-16.68	QP	
5		374.623	37.48	-8.07	29.41	46.00	-16.59	QP	
6		524.554	35.61	-6.03	29.58	46.00	-16.42	QP	

Mode 1 / Polarization: Horizontal



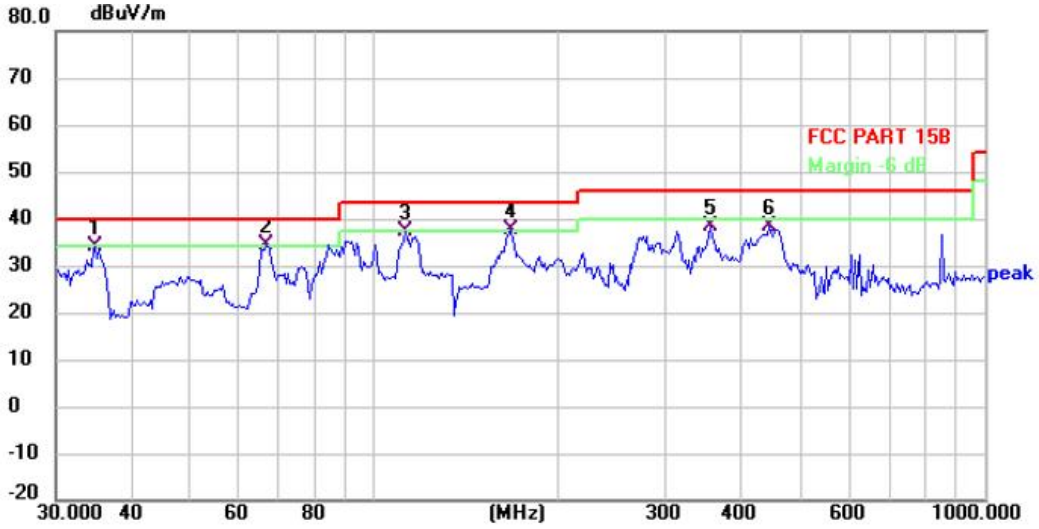
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	33.562	47.96	-12.69	35.27	40.00	-4.73	QP	
2		64.886	45.57	-12.99	32.58	40.00	-7.42	QP	
3		87.112	47.99	-14.17	33.82	40.00	-6.18	QP	
4		151.597	49.65	-15.32	34.33	43.50	-9.17	QP	
5		449.556	46.56	-7.50	39.06	46.00	-6.94	QP	
6		656.530	44.15	-4.24	39.91	46.00	-6.09	QP	

Mode 2 / Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1		30.211	46.06	-12.21	33.85	40.00	-6.15	QP	
2	*	65.343	48.20	-13.04	35.16	40.00	-4.84	QP	
3		85.298	47.22	-14.42	32.80	40.00	-7.20	QP	
4		132.685	43.33	-15.19	28.14	43.50	-15.36	QP	
5		197.893	50.74	-13.45	37.29	43.50	-6.21	QP	
6		437.120	40.99	-7.35	33.64	46.00	-12.36	QP	

Mode 2 / Polarization: Horizontal

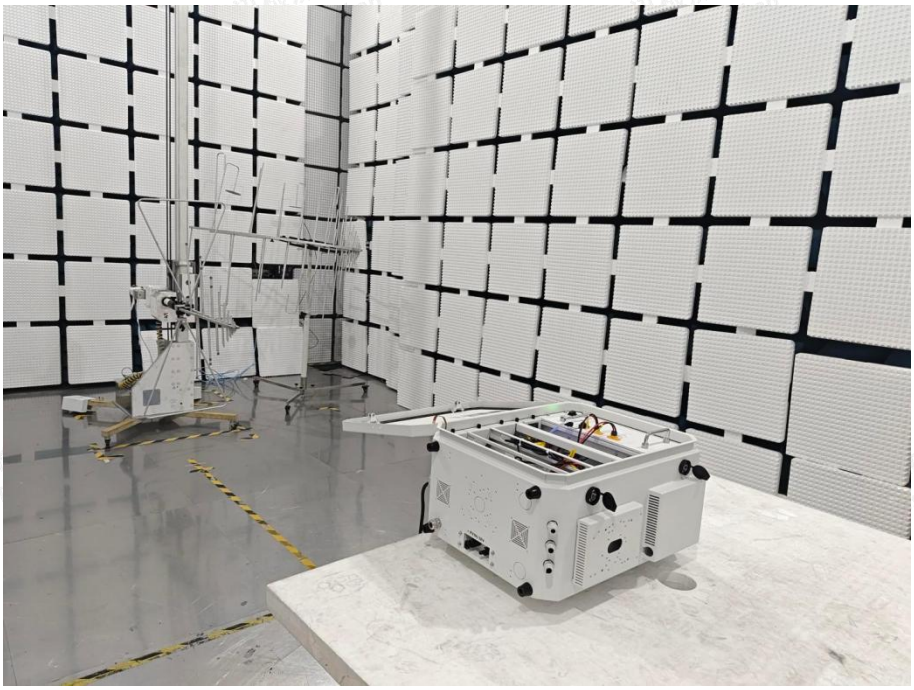


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	Comment
1	!	34.760	46.64	-12.48	34.16	40.00	-5.84	QP	
2	*	66.266	47.79	-13.21	34.58	40.00	-5.42	QP	
3		112.130	49.29	-11.88	37.41	43.50	-6.09	QP	
4	!	167.237	52.00	-14.47	37.53	43.50	-5.97	QP	
5		354.183	46.73	-8.50	38.23	46.00	-7.77	QP	
6		443.294	45.53	-7.28	38.25	46.00	-7.75	QP	

5. TEST SETUP PHOTOS

AC Power Port Conducted Emission

Radiated Emissions Test(30-1000MHz)



6. EUT CONSTRUCTIONAL DETAILS (EUT PHOTOS)

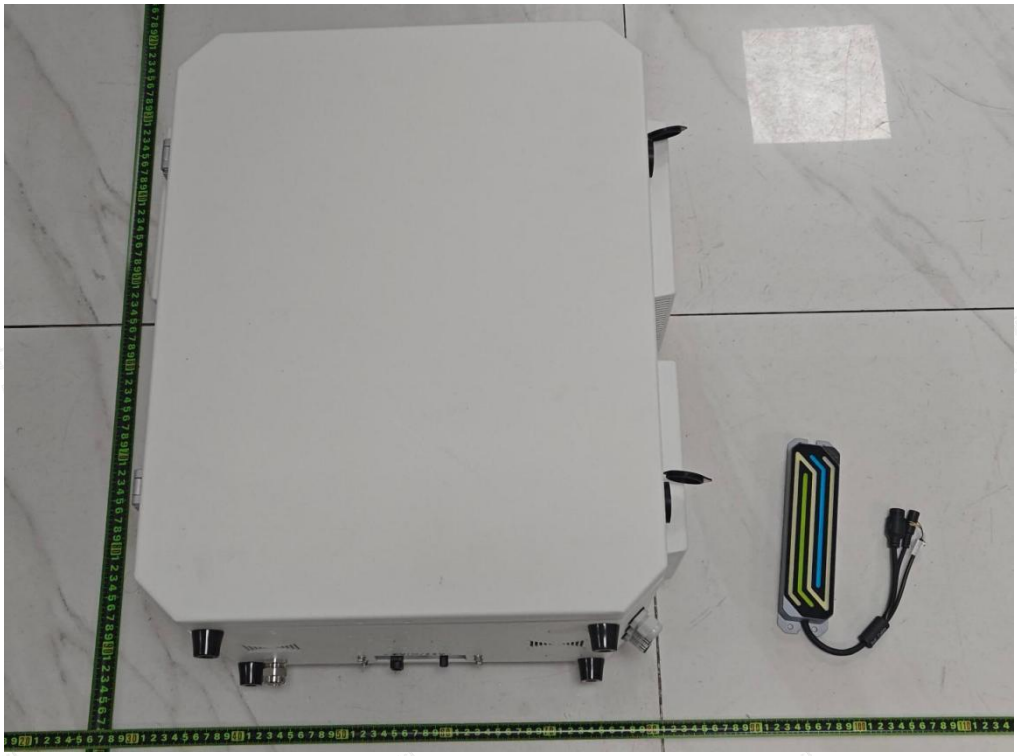


Fig. 1

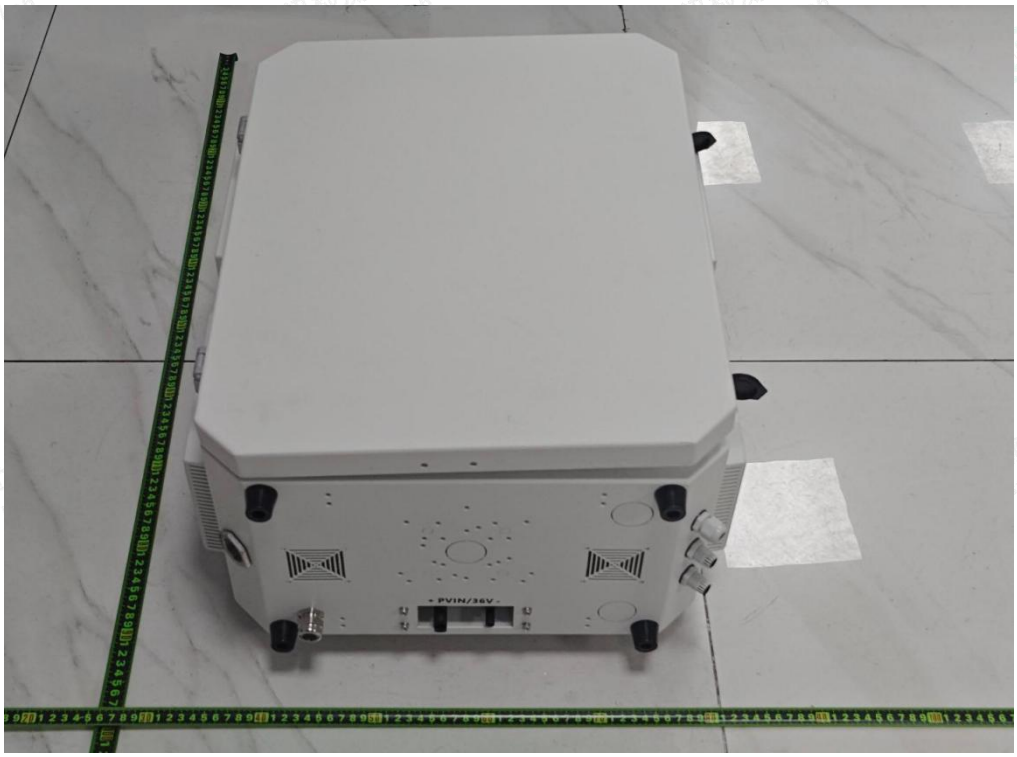


Fig. 2

Fig. 3

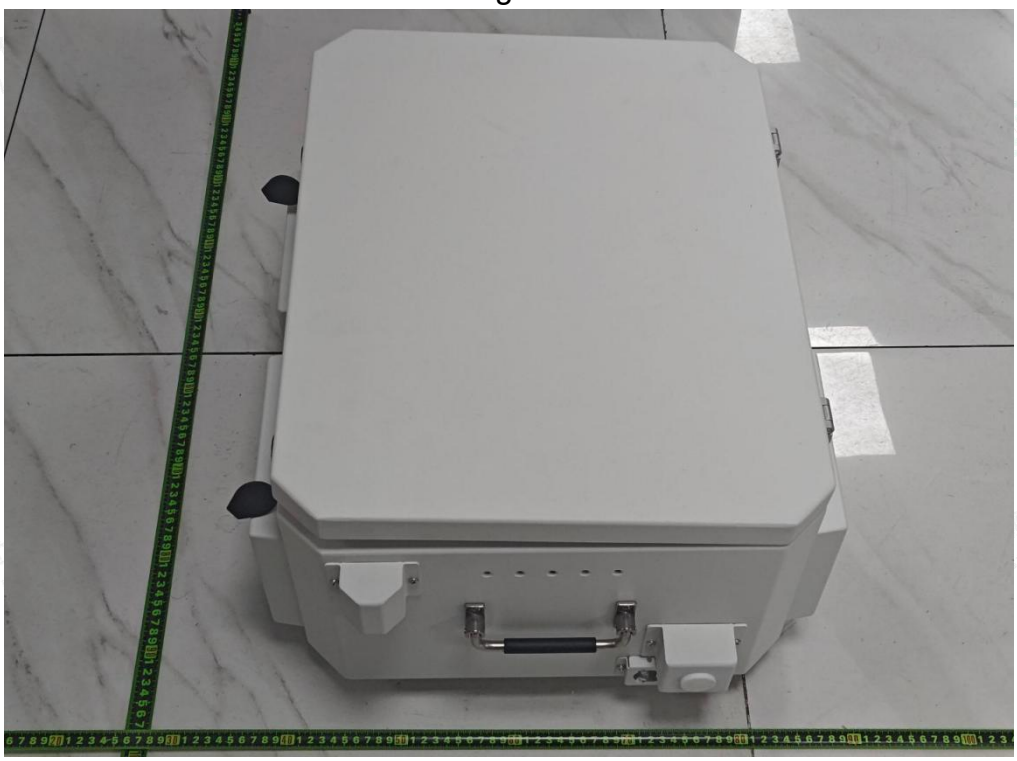


Fig. 4

Fig. 5

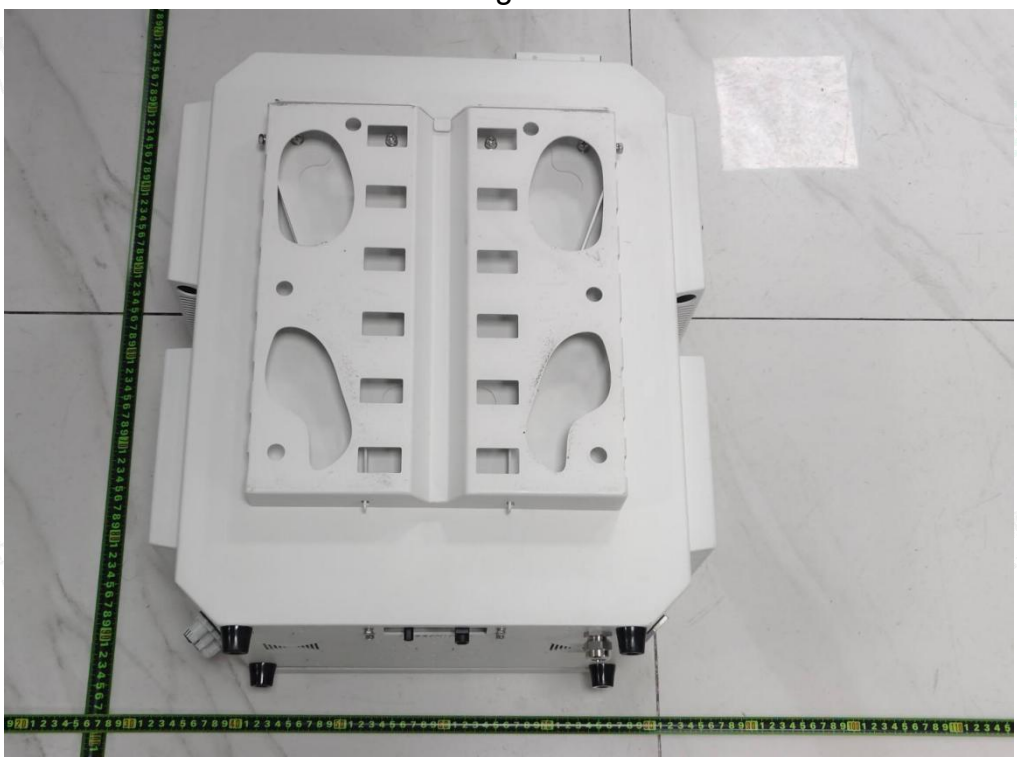


Fig. 6

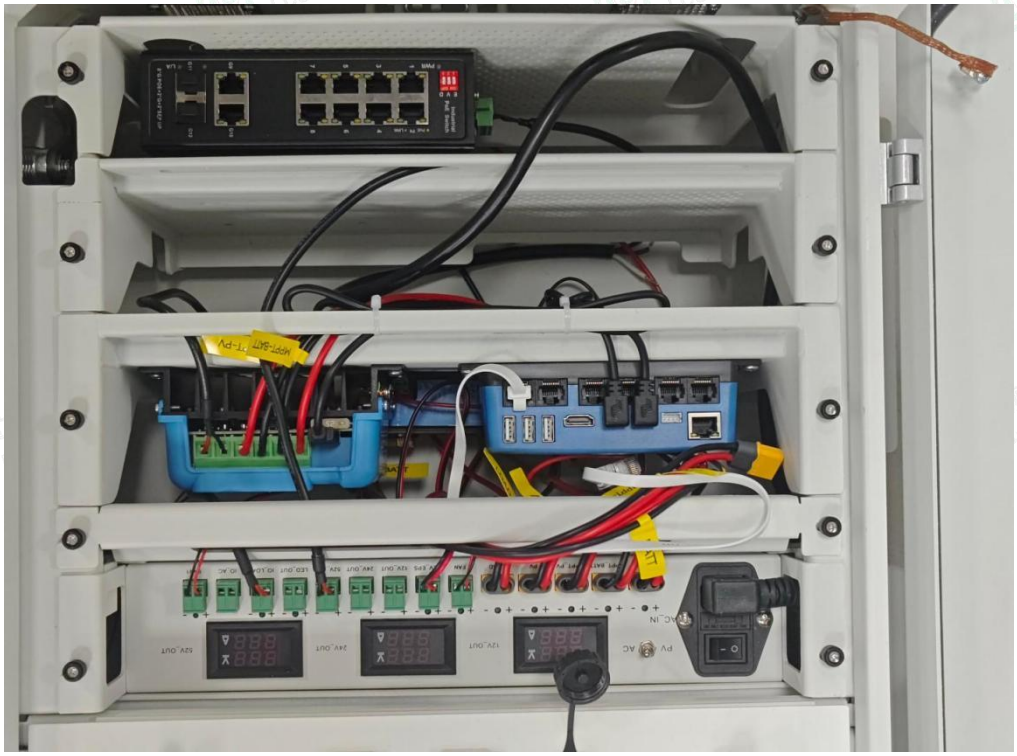


Fig. 7


Model No：
GG-BC0117-24
Rated voltage：
22.2V
Charging voltage/current：
25.2V/20A
Discharge voltage /current：
18V~25.2V/20A
Rated capacity：
2597Wh
Series No：
20250722075
BATT
BATT

Fig. 8

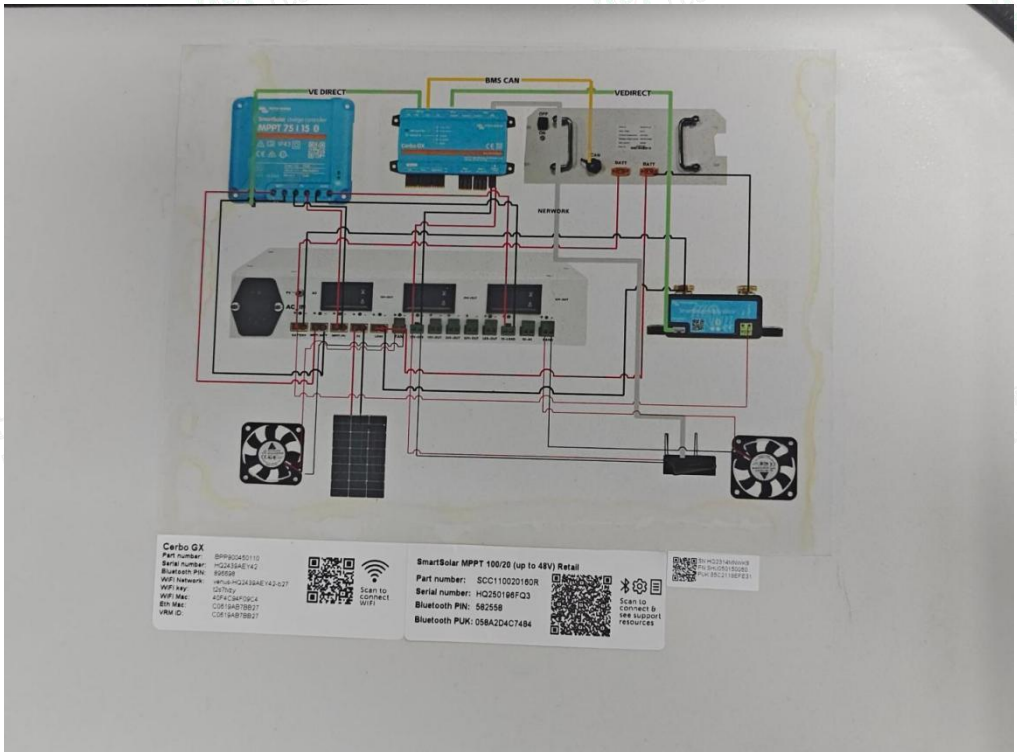


Fig. 9

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