



Report No.: TW2306621-04E
File reference No.: 2023-07-21
Applicant: Autel Robotics Co., Ltd.
601, 701, 801, 901, Block B1, Nanshan iPark, No. 1001 Xueyuan Avenue,
Nanshan District, Shenzhen, Guangdong, 518055, China
Product: Nest
Model No.: Nest
Trademark: Autel Robotics

Test Standards: FCC Part 15 Subpart B & ICES-003 Issue 7:2020

Test Result: It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15&ICES-003 regulations for the evaluation of electromagnetic compatibility

Approved By

A handwritten signature in black ink that reads "Terry Tang".

Terry Tang

Manager

Dated: July 21, 2023

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES.

**Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West,
Tong Le Village, Nanshan District, Shenzhen, China**

Tel (755) 83448688 Fax (755) 83442996 Email: info@timeway-lab.com

TEST REPORT



Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

Industry Canada (IC) —Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.
Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China
Telephone: (755) 83448688
Fax: (755) 83442996

1.2 Applicant Details

Applicant: Autel Robotics Co., Ltd.
Address: 601, 701, 801, 901, Block B1, Nanshan iPark, No. 1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, 518055, China
Telephone: --
Fax: --

1.3 Description of EUT

Product: Nest
Manufacturer: Autel Robotics Co., Ltd.
Address: 601, 701, 801, 901, Block B1, Nanshan iPark, No. 1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, 518055, China
Trademark: Autel Robotics
Basic Model: Nest
Additional Model: N/A
Rating: DC 12V

1.4 Submitted Sample: 1 Samples

1.5 Test Duration

Date of Receipt of Application: 2023.06.21
Date of Test: 2023.06.21~2023.07.01

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB
Radiated Emissions Uncertainty =4.7dB

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Date: 2023-07-21



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1.7 Test Engineer

The sample tested by

Print Name: Leo Lau

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2.0 List of Measurement Equipment

2.1 Conducted Emission Test

Name	Model No.	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESCS 30	834115/006	RS	2022-07-15	2023-07-14
LISN	NNB42	00012	SCHAFFNER	2022-08-18	2023-07-17

2.2 Radiated electromagnetic disturbance test

Name	Model No	Serial No.	Manufacturer	Calibration Date	Calibration Cycle
EMI Test Receiver	ESPI 3	100379	RS	2022-07-15	2023-07-14
Spectrum Analyzer	E4407B	MY50441392	HP/Agilent	2022-07-15	2023-07-14
Amplifier	BBV9743	#218	HP/Agilent	2022-07-15	2023-07-14
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2022-07-18	2025-07-17
Horn Antenna	BBHA 9120D	9120D-631	RS	2022-07-18	2025-07-17
Amplifier	8449B	3008A00160	HP/Agilent	2022-07-15	2023-07-14

2.3 Auxiliary Equipment

Device	Manufacturer	Model	Rating
N/A			

2.4 DESCRIPTION OF TEST MODES

Test mode: GPS receiving

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3.0 Technical Details

3.1 Investigations Requested

Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

FCC Part 15 Subpart B

ICES-003 Issue 7:2020

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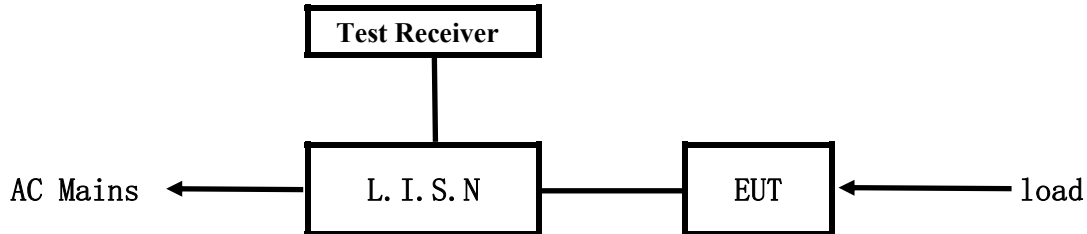
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4.0 Conducted Power line Test

4.1 Schematics of the test



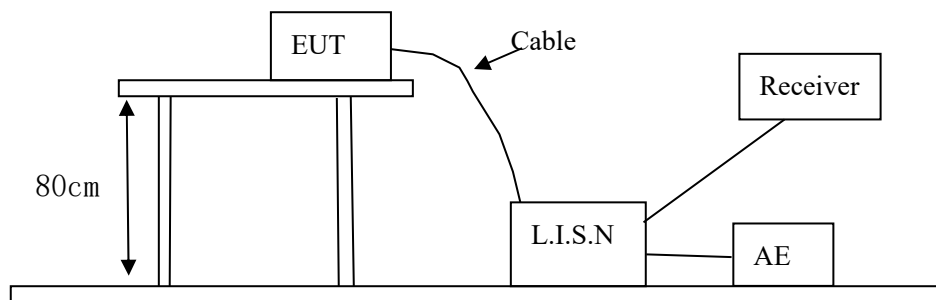
EUT: Equipment Under Test

4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2014. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Test Voltage: DC 12V

Block diagram of Test setup



4.3 Power line conducted Emission Limit

Frequency (MHz)	Class A Limits dB(μV)		Class B Limits dB(μV)	
	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level
0.15 ~ 0.50	79.00	66.00	66.00~56.00*	56.00~46.00*
0.50 ~ 5.00	73.00	60.00	56.00	46.00
5.00 ~ 30.00	73.00	60.00	60.00	50.00

- Notes:
1. *decreasing linearly with logarithm of frequency.
 2. The tighter limit shall apply at the transition frequencies

4.4 Test Results

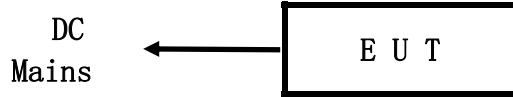
N/A

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5.0 Radiated Disturbance Test

5.1 Schematics of the test

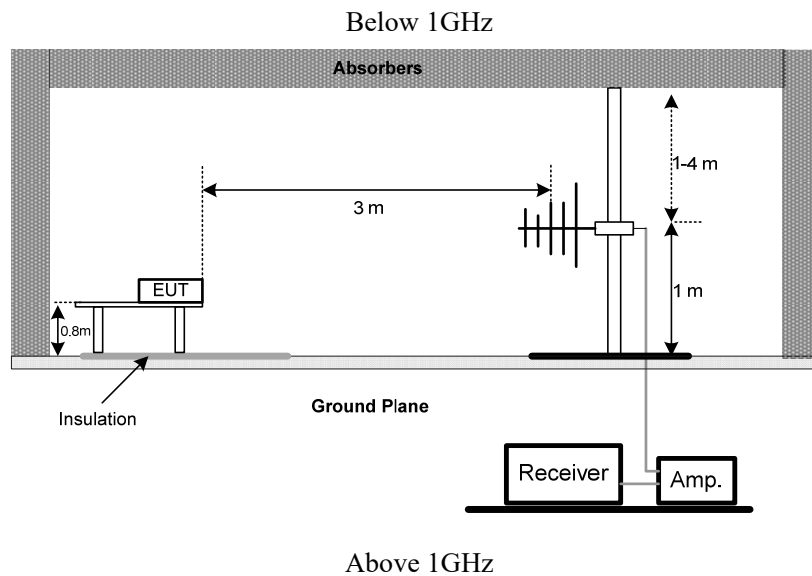


5.2 Test Method and test Procedure

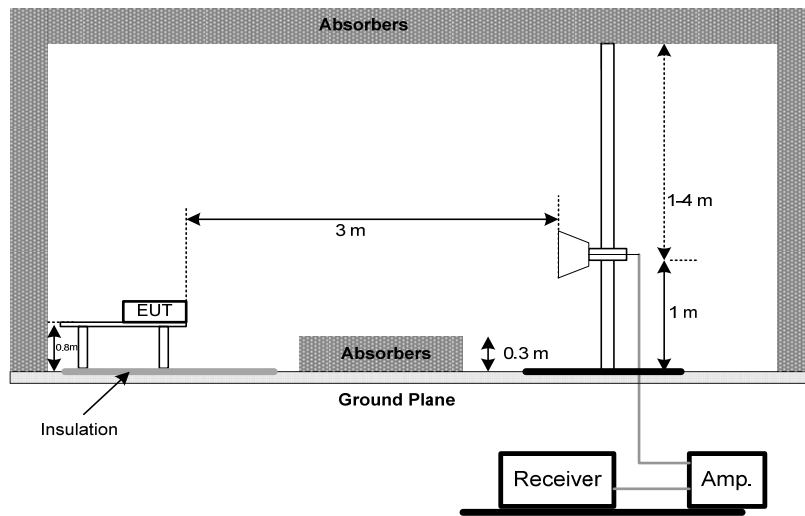
The EUT was tested according to ANSI C63.4 –2014, The frequency spectrum from 30MHz to 25GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak 0values with a resolution bandwidth of 120kHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

Test Voltage: DC 12V

Block diagram of Test setup



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5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)	
		FCC PART 15B	ICES-003
30-88	3	40.00	40.00
88-216	3	43.50	43.50
216-230	3	46.00	46.00
230-960	3	46.00	47.00
Above 960	3	54.00	54.00

Note: The lower limit shall apply at the transition frequencies

5.4 Test result

The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

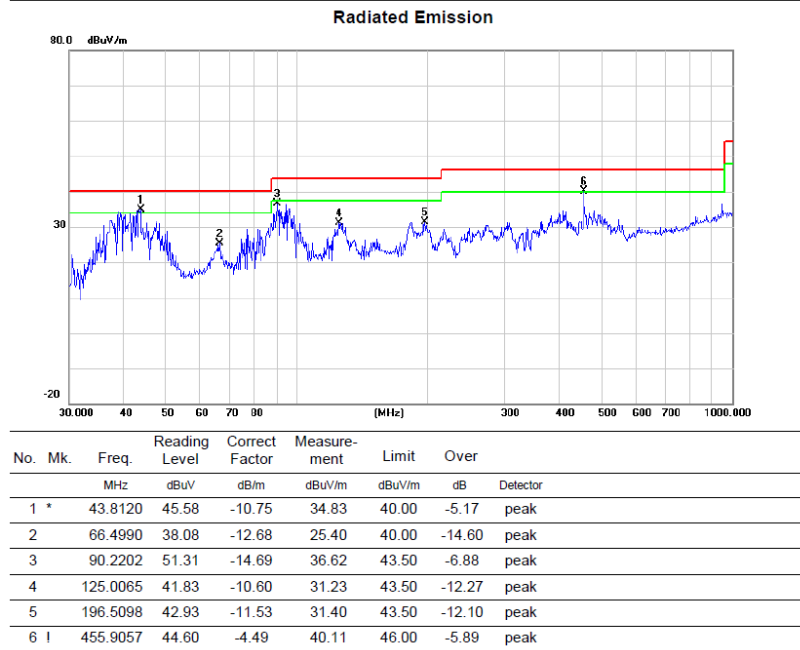
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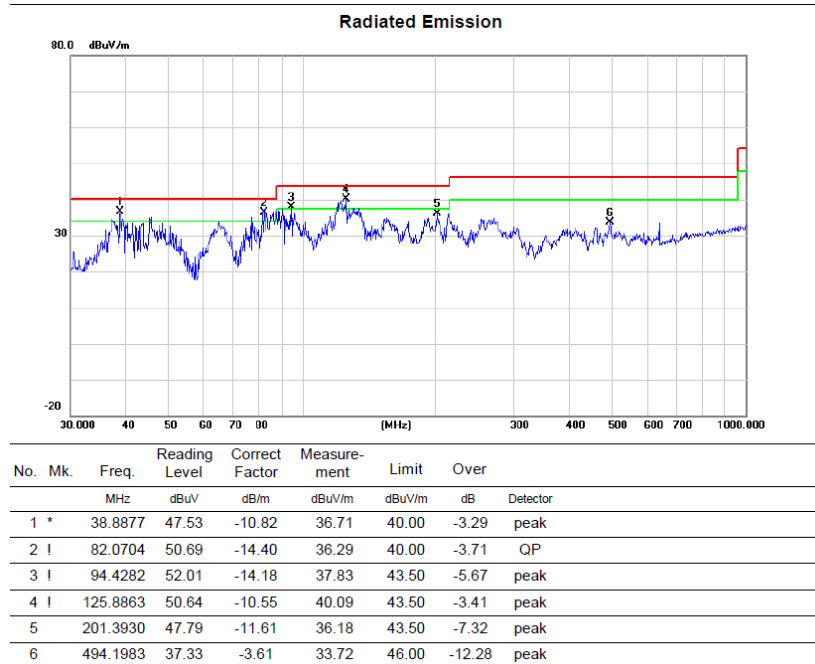
Radiated Disturbance (30MHz----1000MHz)

FCC PART 15B

Horizontal



Vertical

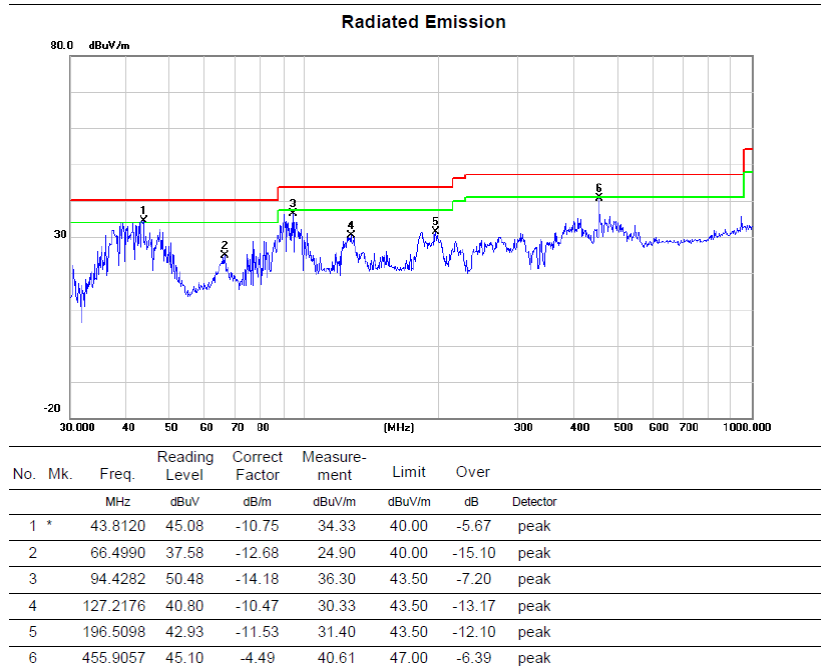


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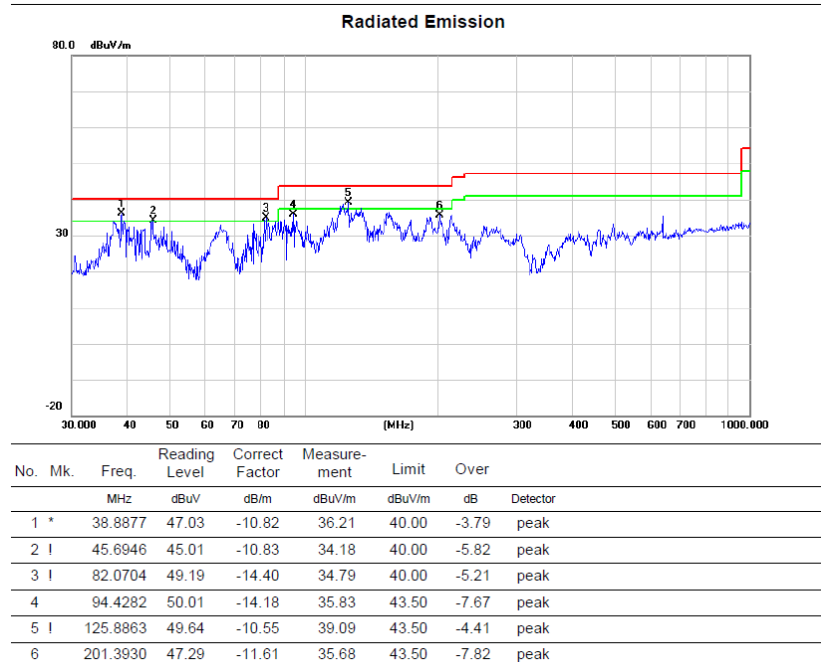


ICES-003

Horizontal



Vertical



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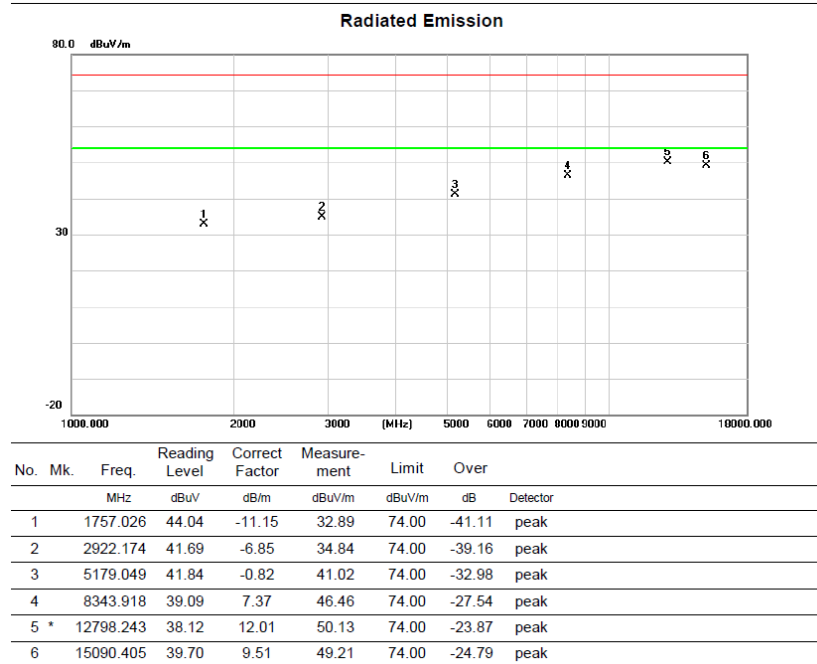


Radiated Disturbance (Above 1GHz)

Horizontal



Vertical



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6.0 Label

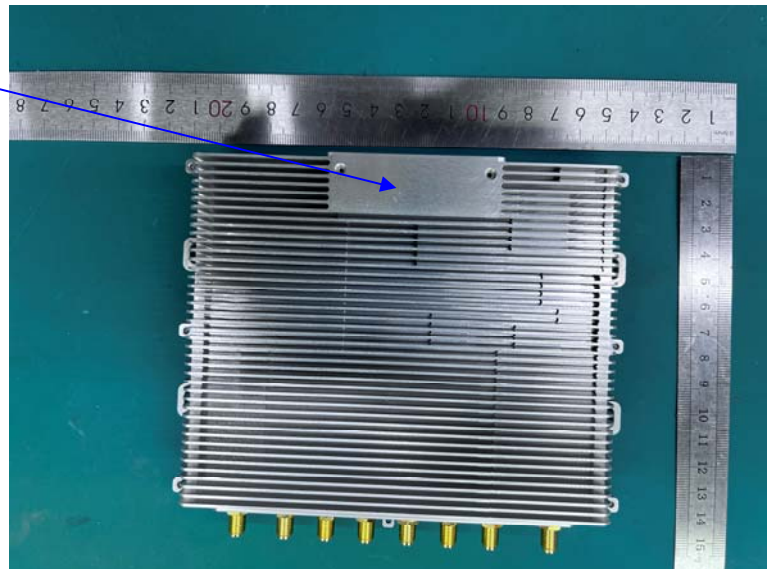
FCC ID: 2AGTNEST

IC: 20910-NEST

This device complies with Part 15 of the FCC Rules and contains licence-exempt transmitter(s) /receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



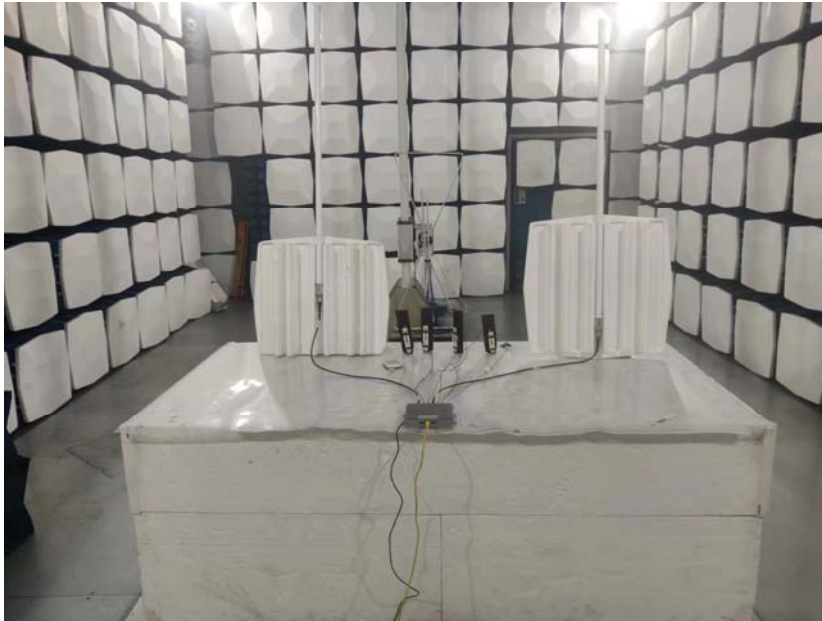
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7.0 Photo of testing

Radiated Emissions

Below 1GHz



Above 1GHz



Photos of EUT

Please see test report TW2306621-01E

--End of the Report--

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