**MITAC EMC Laboratory**
No.200, Wen Hwa 2nd Rd., Guishan Dist., Taoyuan City 33383, Taiwan
Tel. 886-3-3275988 Fax 886-3-3276328

Testing Laboratory
3021

# TEST REPORT

**Regulatory Model No.:**
**MX2-10ADP-XXXXXXXXXXXXXXXX**
**(Where "X" can be 0-9,A-Z,hyphen,or blank for marketing purpose)**

**Prepared For:**
**MITAC DIGITAL TECHNOLOGY CORP.**

**According to**
**FCC Part 15 Subpart B 、**
**ANSI C63.4 & ICES-003 Class A**

| | |
|---|---|
| Test Report No: | 20240012FAR0A |
| Application Date: | 07/23/2024 |
| Tested Date: | 08/01/2024~08/07/2024 |
| Issued Date: | 09/04/2024 |
| Prepared by: | MITAC EMC Laboratory |

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## DISCLAIMER NOTICE

The following information listed in this report, including detailed specification and photo of EUT, measuring equipment and conditions, testing results, and photography of measuring equipment and testing set-up, are all provided solely by our laboratory for testing purpose.

Our laboratory is not liable to those following information listed in this report, including applicant basic information, product model, product specification and application, trademark, interference source, suppression component, printed circuit board diagram, and take-back & storage service of EUT after being tested.

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The method of testing described in this report refers to the new version of the regulations according to customer’s requirements. If there is a risk of misjudgment, it is not the responsibility of the laboratory.

The results shown in this test report refer only to the EUT subjected under test.

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## ADMINISTRATIVE DATA

| | |
|---|---|
| Test Sample | :Box PC |
| Classification of EUT | :Class A |
| Regulatory Model Number | :MX2-10ADP-XXXXXXXXXXXXXXXX(Where "X" can be 0-9, A-Z,hyphen,or blank for marketing purpose) |
| Serial Number of EUT | :427MX20013 |
| Rating of EUT | :DC Input:9-48V DC 14-6.25A |
| Brand Name | :MiTAC |
| Applicant Name | :MITAC DIGITAL TECHNOLOGY CORP. |
| Address | :4F., No.1, R&D Road 2, Hsinchu Science Park, Hsinchu, Taiwan |

## CONSTRUCTION OF EUT

The EUT was evaluated 4 modes and components list required as below table. All of the results can meet the test requirements and will present the test result of mode 1(worst case) in this report.

| MX2-10ADP | DESCRIPTION | MAX. load per system | mode 1 (High Chassis) | mode 2 (High Chassis) | mode 3 (Standard Chassis) | mode 4 (Standard Chassis) |
|---|---|---|---|---|---|---|
| System | | | | | | |
| **Motherboard** | | 1 | | | | |
| MITAC | 316D89200003-R0B | | 1 | 1 | 1 | 1 |
| **PSU** | | 1 | | | | |
| EDAC | EA12501J-2400,AC Input:100-240v,50-60Hz<br>DC Output:24v,9.16A | | 1 | 1 | 1 | 1 |
| **Riser Card** | | 1 | | | | |
| MITAC | 316D80500032 TF-PCB,SBU,MX1-10FEP,MP-01RCN | | 1 | 1 | 1 | 1 |
| **Chassic** | Case | 1 | | | | |
| MX2D | High chassic | | 1 | 1 | | |
| MX2 | Standard chassic | | | | 1 | 1 |
| **CPU** | | 1 | | | | |
| Intel | Intel Core I9-12900K, Intel® Core™ i9 CPU Alder Lake,5.2GHz | | 1 | 1 | 1 | 1 |
| **M.2** | | 1 | | | | |
| innodisk | DEM28-32GM41BW1DC 32GB | | 1 | 1 | 1 | 1 |
| **HDD** | | 1 | | | | |
| SanDisk | SD9SB8W-256G-1016 256GB | | 1 | 1 | 1 | 1 |
| **SSD** | | 1 | | | | |
| innodisk | DES25-32GM41BW1DC,32GB | | 1 | 1 | 1 | 1 |
| **DIMM** | | 2 | | | | |
| SAMSUNG | M425R4GA3BBO-CQK0D,32GB | | 2 | 2 | 2 | 2 |
| **WIRELESS MODULE** | | 1 | | | | |
| QCNFA344A | WNFQ-258ACN(BT)(W) | | 1 | 1 | 1 | 1 |
| **SKU Card** | | 3 | | | | |
| MS-48CDN-DT10 | 316D80500024-R0C MITAC | | 1 | | | 1 |
| MS-04LAN-R10 | 316D80500025-R0C MITAC | | 1 | | | 1 |
| MS-04LAN-M10 | 316D80500026-R0C MITAC | | | 1 | | |
| MS-04POE-R10 | 316D80500033-R0C,316D80500035-R0B MITAC | | | 1 | 1 | |
| MS-04POE-M10 | 316D80500028-R0C,316D80500018-R0B MITAC | | | | 1 | |
| ME-02POE-R10 | 316D80500037-R01 MITAC | | | | 1 | |
| **POE Card power board** | | 2 | | | | |
| 316D80500028 | 316D80500028 MITAC | | | 1 | 2 | |

## FINAL TEST CONSTRUCTION OF EUT

| Regulatory Model No.: MX2-10ADP-XXXXXXXXXXXXXXXX (Where "X" can be 0-9,A-Z,hyphen,or blank for marketing purpose) | |
|---|---|
| **Item** | **Mode 1** |
| **Chassis** | MX2D<br>(MiTAC) |
| **CPU** | Intel® CORE i9 -12900K/5.2GHz<br>(Intel) |
| **M/B** | 316D89200003-R0B<br>(MiTAC) |
| **MS-48CDNDT10 Card** | 316D80500024-R0C<br>(MiTAC) |
| **MS-04LANR10** | 316D80500025-R0C<br>(MiTAC) |
| **M.2** | DEM28-32GM41BW1DC/32GB<br>(innodisk) |
| **HDD** | SD9SB8W-256G-1016/256GB<br>(SanDisk) |
| **SSD** | DES25-32GM41BW1DC/32GB<br>(innodisk) |
| **DIMM** | M425R4GA3BBO-CQK0D/32GB*2<br>(Samsung) |
| **WIFI Card** | WNFQ-258ACN(BT)(W)<br>(SparkLAN) |
| **Adapter** | EA12501J-2400<br>(EDACPOWER ELEC) |

## MEASUREMENT UNCERTAINTY

| Test Item | Measurement Uncertainty |
|---|---|
| Conducted Emission (Power Port) | Conducted Emission Measurement Uncertainty =±2.41dB.Derived from ISO/IEC 17025 and CISPR 16-4-2:ed2.0+ AMD.1:2014. +AMD2:2018 to the determination of uncertainties with a coverage factor K=2.At 95% minimum confidence level. |
| Radiated Emission (10M Chamber) | Radiated Emission from 30MHz to 1GHz measurement uncertainly =±3.99dB. From 1GHz to 6GHz measurement uncertainty =±4.56dB. 6GHz to 18GHz measurement uncertainty =±4.37dB. Derived from ISO/IEC 17025 and CISPR 16-4-2:ed2.0+ AMD.1:2014. +AMD2:2018 to the determination of uncertainties with a coverage factor K=2. At 95% minimum confidence level. |
| | Reference 18GHz to 40GHz measurement uncertainty =±5.09dB. |

Note: 18G-40G MU budget refer as 6G-18G MU budget table E.2 to evaluate 18G-40G MU. CISPR 16-4-2 is not included.

## MEASUREMENT SOFTWARE

| Test Item | Measurement Software |
|---|---|
| Conducted Emission Test | EZ_EMC for Windows Version Mit-A15 |
| Radiated Emission Test | EZ_EMC for Windows Version Mit-A15 |

## TEST SUMMARY

The Electromagnetic Interference requirements on model **MX2-10ADP-XXXXXXXXXXXXXXXX(Where "X" can be 0-9,A-Z,hyphen,or blank for marketing purpose)** for these tests are stated below. This report and test results are deemed satisfactory evidence of compliance with Federal Communications Commission Parts 15 Subpart B.

The test object complies with the FCC regulations and because the FCC limit values are more stringent than ICES-003, the result is equivalent to under limit values of ICES-003 published by the Innovation, Science, and Economic Development Canada (ISED).

All results listed in this report relate exclusively to this above-mentioned model as the Equipment Under Test. This report confers no approval or endorsement upon any other component, host or subsystem used in the test set-up.

The function of Wifi and BT were not operating yet.

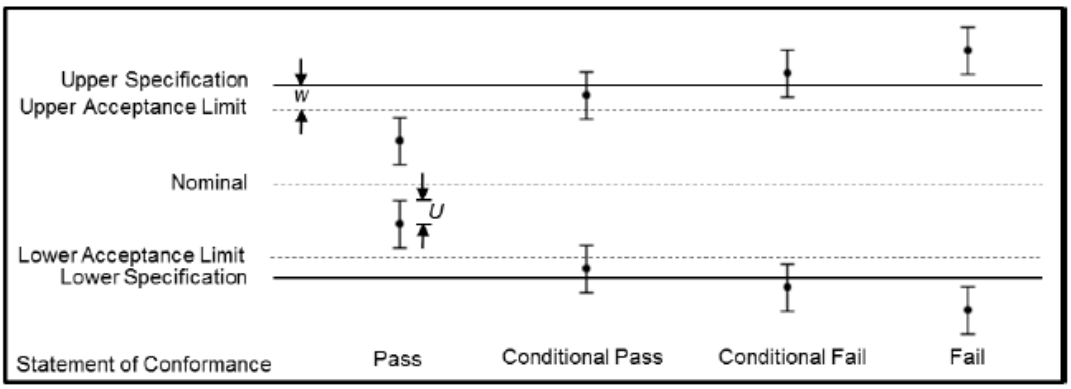
Test results conformance statement decision principle: Decision rules governed by regulations or standards.

Test results Compliant and Not compliant decision principle, in accordance with:
Priority when product (or product family) standards have individual specifications or the CISPR 16-4-2 and ANSI C63.4 decision rules apply. If MU does not need to be counted on FCC Part 15 Subpart B, under limit is Compliant.

In the Radiate and Conducted emission test, the test result is expressed with measurement uncertainty as the below:

1. When providing a declaration of conformity to a specification or standard, the laboratory shall document the decision rules used to determine the decision to be taken.
   Rules are related to their associated risk levels (eg, error acceptance, false rejection, and statistical assumptions) and apply this decision rule.
   Remarks: When the decision rules are regulated by customers, regulations or standard documents, there is no need to further consider the risk level.
2. When the laboratory reports a declaration of conformity, the statement should clearly identify:
   Corresponding product (or product family) standards and CISPR 16-4-2, Chapter 4.2 decision rules:Customer-specified decision rule.

If neither 1 nor 2 apply, the simple acceptance according to ILAC Guide 8 clause 4.2.3 is used.




*U* = 95% expanded measurement uncertainty

Graphical representation of a non-Binary statement statement with a guard band(shown for w=U)

| **Status** | **Description by words** | **Mathematical expression*** (written in 2 ways) | **Specific risk** |
|---|---|---|---|
| Pass | The measured value is within the specification.<br>The probability of a false accept (specific risk) is up to 2.5 %. | ALlower ≤ y ≤ ALupper<br>y within acceptance limit | < 2.5 % PFA |
| | | \|y\| ≤ specification – U | |
| Conditional pass(Pass –) | The measured value is within the specification.<br>The probability of a false accept (specific risk) is below 50 % due to the value near to the specification. | TLlower ≤ y < ALlower or ALupper < y ≤ TLupper<br>y within the guard band | < 50 % PFA |
| | | specification – U < \|y\| ≤ specification | |
| Conditional fail (Fail –) | The measured value is out of specification.<br>The probability of a false reject (specific risk) is below 50 % due to the value near to the specification. | TLlower – w ≤ y < TLlower or TLupper y ≤ TLupper + w<br>y outside specification, but not by more than value of the guard band | < 50 % PFR |
| | | specification < \|y\| ≤ specification +U | |
| Fail | The measured value is out of specification.<br>The probability of a false reject (specific risk) is below 2.5 %. | y ≤ TLlower – w or<br>y ≥ TLupper + w<br>y outside specification by more than value of the guard band | < 2.5 % PFR |
| | | \|y\| > specification + U | |

| Mode 1 | | | | |
|---|---|---|---|---|
| **Emission Tests** | | | | |
| **Standard** | **Test Item** | **Test Result** | **Specification of Result** | **Remark** |
| FCC Part 15 Subpart B<br>ANSI C63.4-2014<br>ANSI C63.4a-2017<br>ICES-003 Issue 7:2020<br>Class A | Conducted Emission | Compliant | Worst margin is<br>Passed by –39.82dB of QP<br>Passed by –34.47dB of AVG<br>At 19.8654MHz Frequency | Attachment 1 |
| FCC Part 15 Subpart B<br>ANSI C63.4-2014<br>ANSI C63.4a-2017<br>ICES-003 Issue 7:2020<br>Class A | Radiated Emission | Compliant | Worst margin is<br>Passed by –5.64dB of QP<br>At 296.9946MHz Frequency | Attachment 2 |

TECHNICAL REVIEWED: Jeff. T. Chan
*Jeff.T.Chan*

QUALITY REVIEWED: Richard Chien
*Richard Chien*

APPROVED: Vincent. Chia
*Vincent Chia/Lab Manager*

## TEST LOCATION

MITAC EMC Laboratory
No.200, Wen Hwa 2nd Rd., Guishan Dist., Taoyuan City 33383, Taiwan

## ACCREDITIATION BODIES

In compliance with the FCC requirement is through BSMI multilateral MRA (Mutual Recognition Arrangement).MITAC EMC Lab has been accredited as a Conformity Assessment Body(CAB).
Designation Number: TW-1080

In compliance with the site registration requirements from BSMI according to ISO/IEC 17025.
Site reference No.SL2-IN-E-0063

Registered in accordance with Japanese VCCI Regulations and member No.1433
Conduction Emission Registration No: C-11173
Radiation Emission Registration No: R-11114 & G-10021
Telecommunication Ports Conducted Emission Interference Measurement Registration No.: T-11551

In compliance with the Council of Chinese National Laboratory Accreditation accredited. Lab accreditation No.3021

## EUT EXERCISE SOFTWARE

The EUT exercise program “BurnIn test Version 9.0” was used to test during compliance testing. The program contained in a hard disk, and was loaded under”Windows 10 64bit”. Once loaded, the test engineer selected each connected support device, then the program exercises each connected support device in turn, data is transmitted to them during testing.

## EQUIPMENT MODIFICATION

Any modifications installed previous to testing by MITAC DIGITAL TECHNOLOGY CORP. will be incorporated in each production model sold or leased in the United States.

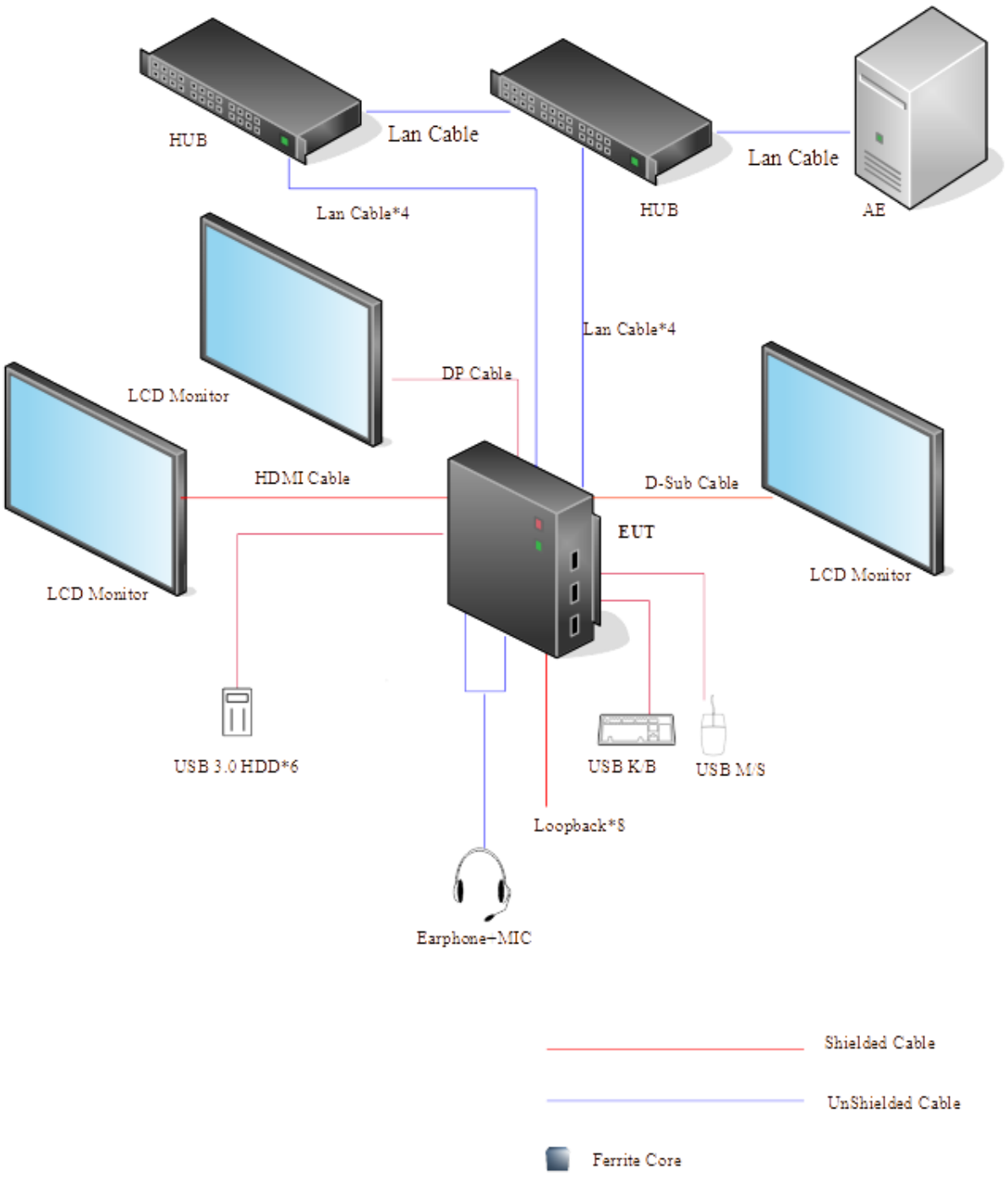
There were no modifications installed by MITAC EMC Laboratory.

## DESCRIPTION OF PERIPHERAL DEVICES AND CABLE CONNECTION

| Peripheral Device | | |
|---|---|---|
| **Description** | **Model Number** | **Manufacture** |
| AE | OptiPlex 3020 | Dell Inc. |
| 27” LCD Monitor*2 | P2715Qt | Dell Inc. |
| 27” LCD Monitor | 2707WFPc | Dell Inc. |
| USB Keyboard | KB216t | Dell Inc. |
| USB Mouse | MS116p | Dell Inc. |
| USB HDD*6 | My Passport Ultra | WD |
| HUB*2 | XS508M | NETGEAR |
| MIC+Earphone | --- | TS-star |

| Cable Connection | | | | | |
|---|---|---|---|---|---|
| **From** | **To** | **Length (Meters)** | **Shielded (Y/N)** | **Ferrite Loaded (Y/N)** | **Type** |
| EUT | LCD Monitor | 1.8 | Y | N | HDMI Cable*1 |
| EUT | LCD Monitor | 1.8 | Y | N | DP Cable*1 |
| EUT | LCD Monitor | 1.8 | Y | N | D-Sub Cable*1 |
| EUT | USB K/B | 1.8 | Y | N | USB Cable*1 |
| EUT | USB M/S | 1.8 | Y | N | USB Cable*1 |
| EUT | USB HDD | 1.2 | Y | N | USB Cable*6 |
| EUT | MIC+Earphone | 1.8 | N | N | Audio Cable*1 |
| EUT | Loopback | 2.5 | Y | N | S IO Cable*8 |
| EUT | HUB | RE: 30<br>CE:3 | N | N | UTP Cable*4 |
| EUT | HUB | RE: 30<br>CE:3 | N | N | UTP Cable*4 |
| HUB | HUB | 3 | N | N | UTP Cable*1 |
| HUB | AE | 3 | N | N | UTP Cable *1 |

## CONNECTION DIAGRAM OF EUT




Remark:
The AE is placed in outside of 10M chamber during the radiated emission test.

## ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS

- **Test Reference:** FCC Part 15 Subpart B、ANSI C63.4、ICES-003 Issue 7

- **Test Procedure:**
  The EUT is set up according to the guideline of FCC Part 15 Subpart B、ANSI C63.4 for conducted emissions. The measurement is using a LISN on each line and an EMI receiver peak scan is made at the frequency measurement range. The six highest significant peaks are then marked, and these signals are then quasi-peaked and averaged. The frequency range investigated is from 150kHz to 30MHz.

  The basic equation with a sample calculation is as follows:
  Corr.Data = Raw Data + LISN/ISN Loss (or AMN/AAN Loss) + Cable Loss

  Corr.Data = Field Strength

  Raw Data = Receiver Amplitude

  LISN/ISN Loss = LISN/ISN Factor

  AMN/AAN Loss = AMN/AAN Factor

  Cable Loss = Cable Loss

- **Test Result:** The EUT meets the Class A device requirement.

- **Change or Modification:** There is no modification installed by MITAC EMC Laboratory test personnel.

- **Test Raw Data:** Following pages are detailed testing contents

- **Test Equipment:**

| Test Equipment | Manufacturer/ Model | Serial No. | Last Calibration Date | Due Date |
|---|---|---|---|---|
| EMI Receiver | ROHDE&SCHWARZ/ ESR | 102549 | 2024/5/29 | 2025/5/28 |
| LISN | ROHDE&SCHWARZ /ENV216 | 101331 | 2024/5/30 | 2025/5/29 |
| CABLE | EMC400-BNCM-BNCM-6000 | 140304 | 2023/8/30 | 2024/8/29 |

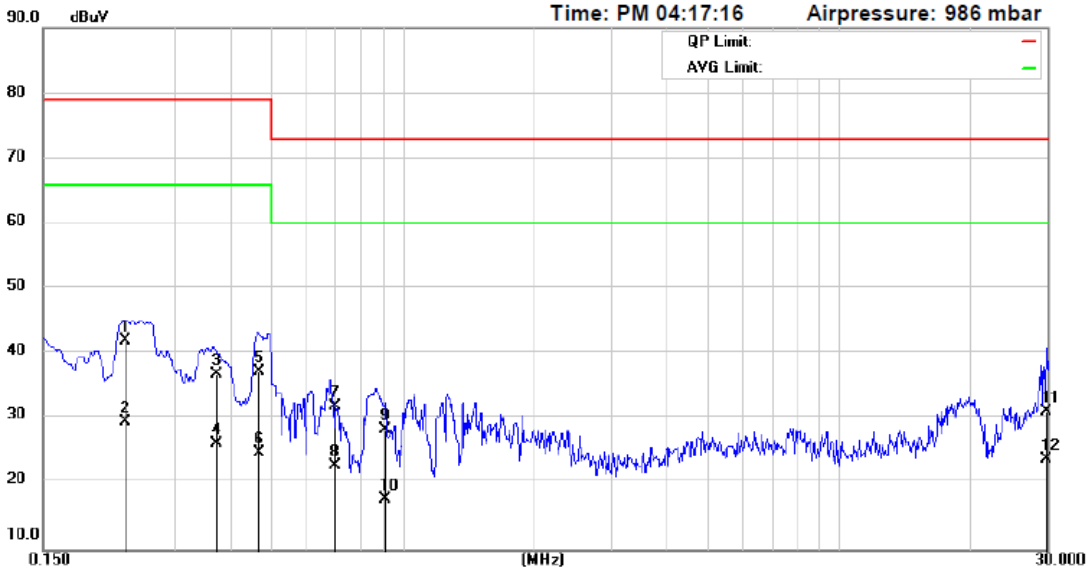
MiTAC EMC LAB Tel:+886-3-3275988 Fax:+886-3-3276328
Address: No.200,Wenhua 2nd Rd.,Guishan Dist.,Taoyuan,Taiwan.

Operator: ABEL KAO

Conducted Emission Measurement Temperature: 23 ℃

File :20240012CE003R0 Data :#1 Date: 8/1/2024 Humidity: 48 %

Time: PM 04:17:16 Airpressure: 986 mbar




Site : Conduction Emission

Limit : (CE)FCC Part 15 class A_QP Phase: *L1*

Company : MiTAC Power : 120VAC/60Hz

EUT : MX2-10ADP

Exercise Program : BurnInTest V9.0

Comments: Full system.Mode1

| Mk. | Frequency MHz | Raw Data dBuV | AMN/AAN Loss | Cable Loss dB | Corr. Data dBuV | Limit dBuV | Margin dB | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 0.2310 | 32.51 | 9.56 | 0.04 | 42.11 | 79.00 | -36.89 | QP | |
| | 0.2310 | 20.04 | 9.56 | 0.04 | 29.64 | 66.00 | -36.36 | AVG | |
| | 0.3730 | 27.42 | 9.56 | 0.06 | 37.04 | 79.00 | -41.96 | QP | |
| | 0.3730 | 16.63 | 9.56 | 0.06 | 26.25 | 66.00 | -39.75 | AVG | |
| | 0.4662 | 27.73 | 9.56 | 0.06 | 37.35 | 79.00 | -41.65 | QP | |
| | 0.4662 | 15.29 | 9.56 | 0.06 | 24.91 | 66.00 | -41.09 | AVG | |
| | 0.6940 | 22.35 | 9.57 | 0.07 | 31.99 | 73.00 | -41.01 | QP | |
| | 0.6940 | 13.38 | 9.57 | 0.07 | 23.02 | 60.00 | -36.98 | AVG | |
| | 0.9104 | 18.76 | 9.58 | 0.08 | 28.42 | 73.00 | -44.58 | QP | |
| | 0.9104 | 8.21 | 9.58 | 0.08 | 17.87 | 60.00 | -42.13 | AVG | |
| | 29.7628 | 20.75 | 10.1 | 0.44 | 31.29 | 73.00 | -41.71 | QP | |
| * | 29.7628 | 13.46 | 10.1 | 0.44 | 24.00 | 60.00 | -36.00 | AVG | |

Spectrum Analyzer: ESR *:Maximum data x:Over limit !:over margin

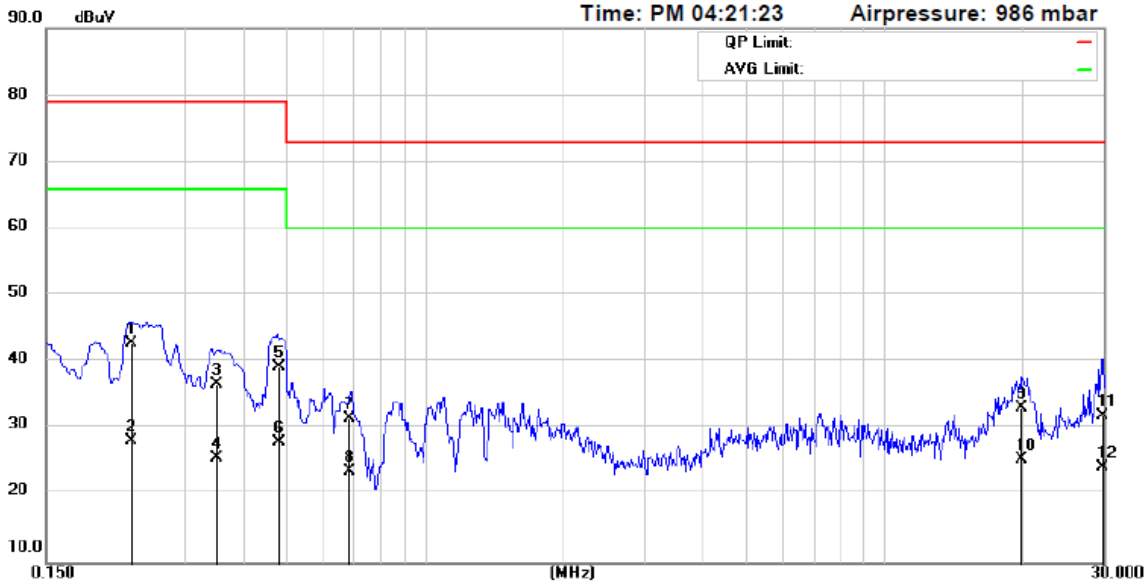
Receiver: ESR_1 RBW: 9 KHz

AMN/AAN ENV216-331 VBW: 30 KHz

Cable: EMC400 B140304

*File :20240012CE003R0\Data :#1* **Page: 1**

Conducted Emission Measurement Temperature: 23 ℃
File :20240012CE003R0 Data :#2 Date: 8/1/2024 Humidity: 48 %
Time: PM 04:21:23 Airpressure: 986 mbar




Site : Conduction Emission
Limit : (CE)FCC Part 15 class A_QP Phase: N
Company : MiTAC Power : 120VAC/60Hz
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

| Mk. | Frequency MHz | Raw Data dBuV | AMN/AAN Loss | Cable Loss dB | Corr. Data dBuV | Limit dBuV | Margin dB | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | 0.2284 | 33.31 | 9.54 | 0.04 | 42.89 | 79.00 | -36.11 | QP | |
| | 0.2284 | 18.63 | 9.54 | 0.04 | 28.21 | 66.00 | -37.79 | AVG | |
| | 0.3512 | 27.23 | 9.53 | 0.06 | 36.82 | 79.00 | -42.18 | QP | |
| | 0.3512 | 16.08 | 9.53 | 0.06 | 25.67 | 66.00 | -40.33 | AVG | |
| | 0.4800 | 29.71 | 9.53 | 0.06 | 39.30 | 79.00 | -39.70 | QP | |
| | 0.4800 | 18.56 | 9.53 | 0.06 | 28.15 | 66.00 | -37.85 | AVG | |
| | 0.6848 | 21.96 | 9.53 | 0.07 | 31.56 | 73.00 | -41.44 | QP | |
| | 0.6848 | 14.21 | 9.53 | 0.07 | 23.81 | 60.00 | -36.19 | AVG | |
| | 19.8654 | 22.99 | 9.83 | 0.36 | 33.18 | 73.00 | -39.82 | QP | |
| * | 19.8654 | 15.34 | 9.83 | 0.36 | 25.53 | 60.00 | -34.47 | AVG | |
| | 29.6944 | 21.38 | 10.22 | 0.44 | 32.04 | 73.00 | -40.96 | QP | |
| | 29.6944 | 13.66 | 10.22 | 0.44 | 24.32 | 60.00 | -35.68 | AVG | |

Spectrum Analyzer: ESR
Receiver: ESR_1
AMN/AAN ENV216-331
Cable: EMC400 B140304

*:Maximum data x:Over limit !:over margin
RBW: 9 KHz
VBW: 30 KHz

File :20240012CE003R0\Data :#2 **Page: 1**

## ATTACHMENT 2 - RADIATED EMISSION TEST RESULTS

- **Test Reference:** FCC Part 15 Subpart B、ANSI C63.4、ICES-003 Issue 7

- **Test Procedure:**
  The EUT is set up according to the guidelines of FCC Part 15 Subpart B、ANSI C63.4 for radiated emissions on table was placed on ground plane. The turn table can rotate 360 degrees to determine the position of the max. emission level. For 30MHz to 1GHz frequency range, EUT was set 10 meters distances and above 1GHz to 40GHz frequency range, EUT was set 3 meters distances.Semi-Anechoic chamber away from the receiving antenna which was mounted on an antenna tower. The antenna moved up and down between 1 to 4 meters for 30MHz to 1GHz frequency, then use Bore-Sight antenna for above 1GHz to 40GHz frequency to find out the max. emission level contains horizontal and vertical polarization.

  The basic equation with a sample calculation is as follows:
  Corr.Data = Raw Data+Ant_F+Cab_L-PreAmp
  Corr.Data = Field Strength
  Raw Data = Receiver Amplitude
  Ant_F = Antenna Factor
  Cab_L = Cable Loss
  PreAmp = Amplifier Factor

  The limit value is calculated by truncate one digit after the decimal point. e.g. truncate 49.54 to the one digit after the decimal point= 49.5

- **Test Result:** The EUT meets the Class A device requirement.

- **Change or Modification:** There is no modification installed by MITAC EMC Laboratory test personnel.

- **Test Raw Data:** Following pages are detailed testing contents

- **Test Equipment:**

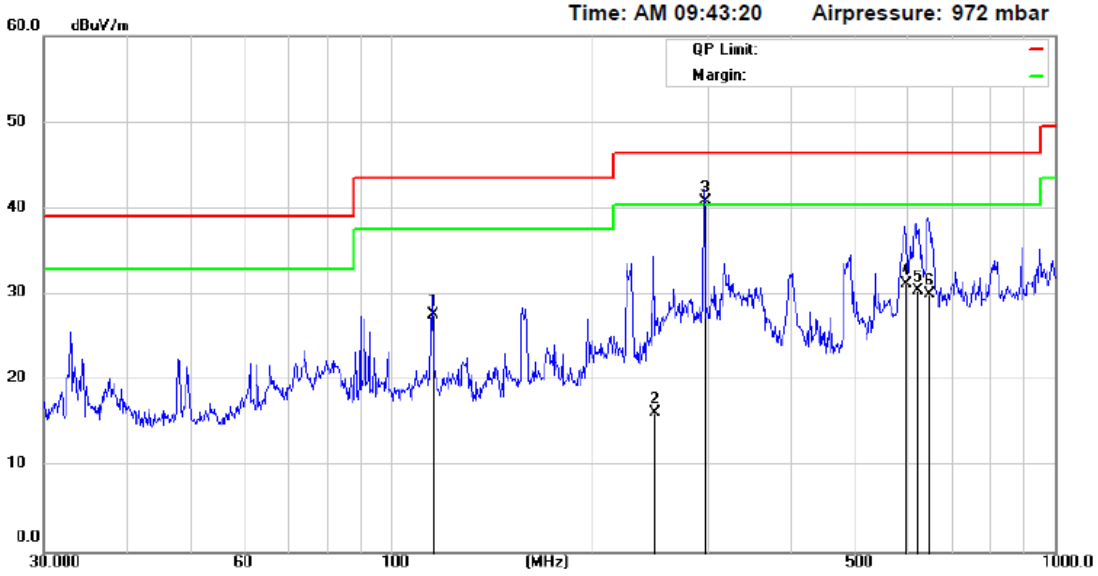
| Test Equipment | Manufacturer/ Model | Serial No. | Last Calibration Date | Due Date |
|---|---|---|---|---|
| EMI Receiver | ROHDE&SCHWARZ / ESU | 100501 | 2024/3/1 | 2025/2/28 |
| EMI Receiver | ROHDE&SCHWARZ / ESCI | 100696 | 2023/9/6 | 2024/9/5 |
| Antenna | Shwazbeck & EMCI / VULB9168 & N-18-06 | 716 & AT-N0536 | 2023/9/22 | 2024/9/21 |
| Antenna | EMCO 3117 | 00251992 | 2023/8/17 | 2024/8/16 |
| Antenna | COM-POWER/AH-840 | 101086 | 2024/4/12 | 2025/4/11 |
| Pre-Amplifier | EMC9135 | 980343 | 2024/6/26 | 2025/6/25 |
| Pre-Amplifier | AGILENT / 8449B | 3008A01734 | 2024/6/15 | 2025/6/14 |
| Pre-Amplifier | EMCI/EMC184045SE | 980967 & 3dB-001 | 2024/3/1 | 2025/2/28 |
| CABLE | 10m Left | --- | 2024/8/3 | 2025/8/2 |
| CABLE | EMCI/EMC105-NM | 210230 210231 | 2023/9/11 | 2024/9/10 |
| CABLE | EMCI/EMC104-SM-SF | 170812&141007 | 2023/9/11 | 2024/9/10 |
| RF Cable (18-40GHz) | EMCI/EMC101G-KM-KM-3300/EMC101G-KM-KM-300 | 240202/240201 | 2024/3/1 | 2025/2/28 |

MiTAC EMC LAB Tel:+886-3-3275988 Fax:+886-3-3276328
Address:No.200,Wenhua 2nd Rd.,Guishan Dist.,Taoyuan,Taiwan.
Operator: Weilin Wang

Radiated Emission Measurement

File :20240012RE004R0 Data :#1 Date: 8/7/2024 Time: AM 09:43:20

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 10m
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Horizontal*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 115.4894 | 46.99 | 15.43 | 1.87 | 36.68 | 27.61 | 43.50 | -15.89 | 400 | 141 | QP | |
| | 249.4101 | 32.85 | 16.98 | 2.74 | 36.32 | 16.25 | 46.40 | -30.15 | 400 | 258 | QP | |
| * | 296.9946 | 55.55 | 18.5 | 3 | 36.29 | 40.76 | 46.40 | -5.64 | 334 | 292 | QP | |
| | 596.4101 | 38.95 | 24.81 | 4.28 | 36.82 | 31.22 | 46.40 | -15.18 | 100 | 218 | QP | |
| | 622.7188 | 37.80 | 25.17 | 4.37 | 36.86 | 30.48 | 46.40 | -15.92 | 100 | 221 | QP | |
| | 646.5705 | 36.96 | 25.46 | 4.46 | 36.91 | 29.97 | 46.40 | -16.43 | 100 | 237 | QP | |

Spectrum Analyzer: ESCI
Receiver: ESCI_1
Antenna: 9168-716+PAD
Amplifier: 9135 980343

*:Maximum data x:Over limit !:over margin
RBW: 120 KHz
VBW: 300 KHz
Cable: 10ML + EMC105

*File :20240012RE004R0\Data :#1* *Page: 1*

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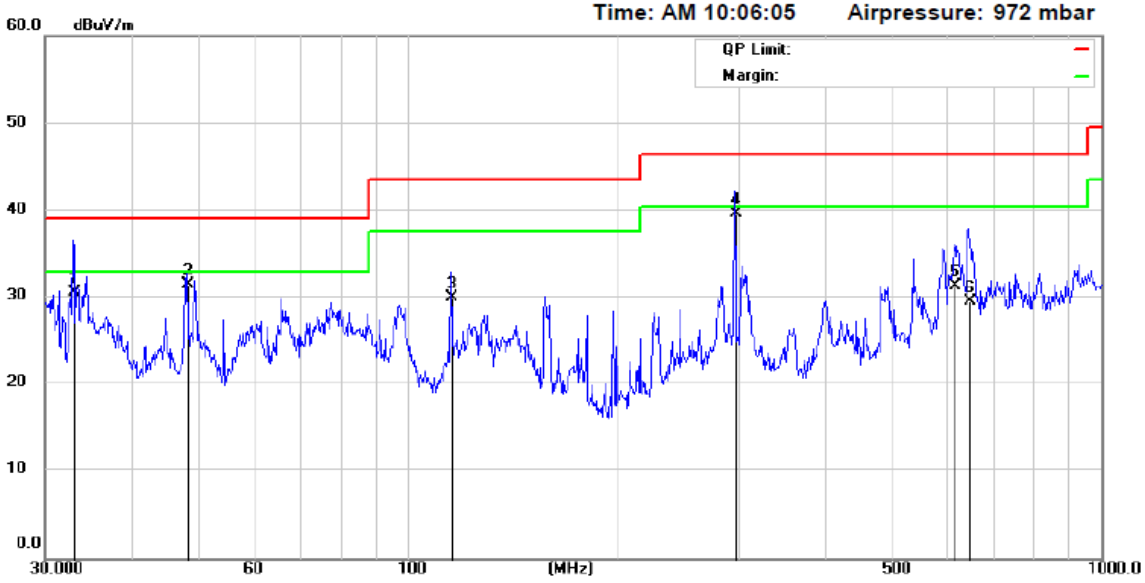
Operator: Weilin Wang

Radiated Emission Measurement

File :20240012RE004R0 Data :#2 Date: 8/7/2024 Time: AM 10:06:05

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 10m
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Vertical*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 32.9844 | 48.92 | 18.03 | 0.98 | 37.32 | 30.61 | 39.00 | -8.39 | 100 | 112 | QP | |
| | 48.0551 | 48.47 | 18.96 | 1.21 | 37.13 | 31.51 | 39.00 | -7.49 | 244 | 122 | QP | |
| | 115.4995 | 49.38 | 15.43 | 1.87 | 36.68 | 30.00 | 43.50 | -13.50 | 100 | 178 | QP | |
| * | 296.9596 | 54.36 | 18.5 | 3 | 36.29 | 39.57 | 46.40 | -6.83 | 100 | 198 | QP | |
| | 615.3242 | 38.71 | 25.08 | 4.35 | 36.85 | 31.29 | 46.40 | -15.11 | 213 | 196 | QP | |
| | 647.2206 | 36.55 | 25.47 | 4.46 | 36.91 | 29.57 | 46.40 | -16.83 | 206 | 188 | QP | |

Spectrum Analyzer: ESCI
Receiver: ESCI_1
Antenna: 9168-716+PAD
Amplifier: 9135 980343

*:Maximum data x:Over limit !:over margin
RBW: 120 KHz
VBW: 300 KHz
Cable: 10ML + EMC105

*File :20240012RE004R0\Data :#2* **Page: 1**

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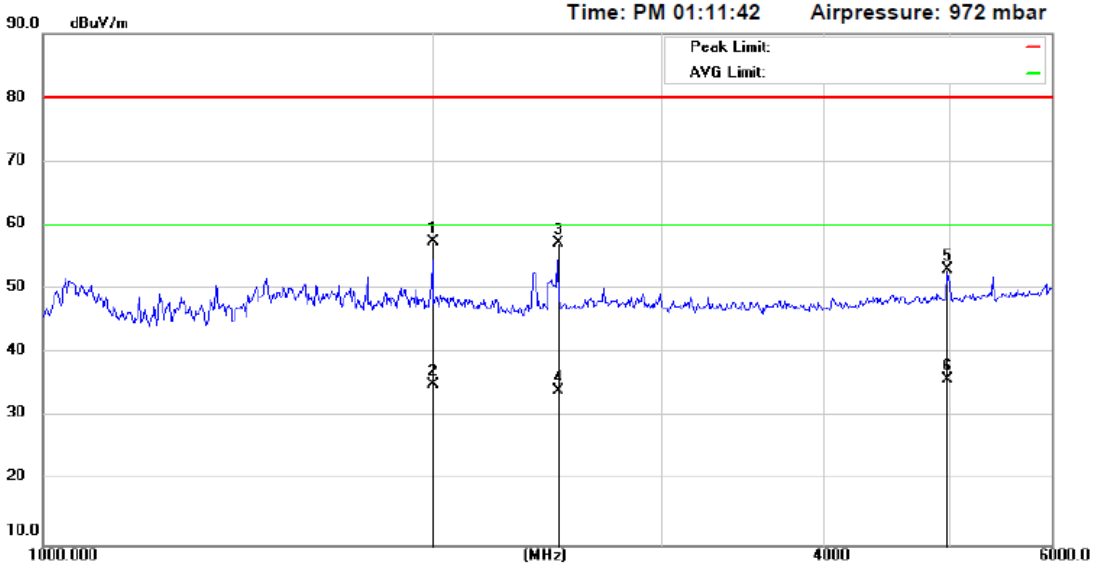
Operator: Weilin Wang

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#3 Date: 08/07/2024 Time: PM 01:11:42

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Horizontal*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| * | 1996.091 | 59.34 | 31.67 | 2.85 | 36.3 | 57.56 | 80.00 | -22.44 | 100 | 192 | peak | |
| | 1996.091 | 37.05 | 31.67 | 2.85 | 36.3 | 35.27 | 60.00 | -24.73 | 100 | 192 | AVG | |
| | 2497.633 | 58.17 | 32.4 | 3.2 | 36.48 | 57.29 | 80.00 | -22.71 | 107 | 201 | peak | |
| | 2497.633 | 35.06 | 32.4 | 3.2 | 36.48 | 34.18 | 60.00 | -25.82 | 107 | 201 | AVG | |
| | 4985.006 | 50.98 | 34.29 | 4.59 | 36.63 | 53.23 | 80.00 | -26.77 | 100 | 203 | peak | |
| | 4985.006 | 33.81 | 34.29 | 4.59 | 36.63 | 36.06 | 60.00 | -23.94 | 100 | 203 | AVG | |

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: 3117-3m-00251992
Amplifier: PA-8449B-1734

*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: 104 170812&14

*File :20240012RE004-1R0\Data :#3* **Page: 1**

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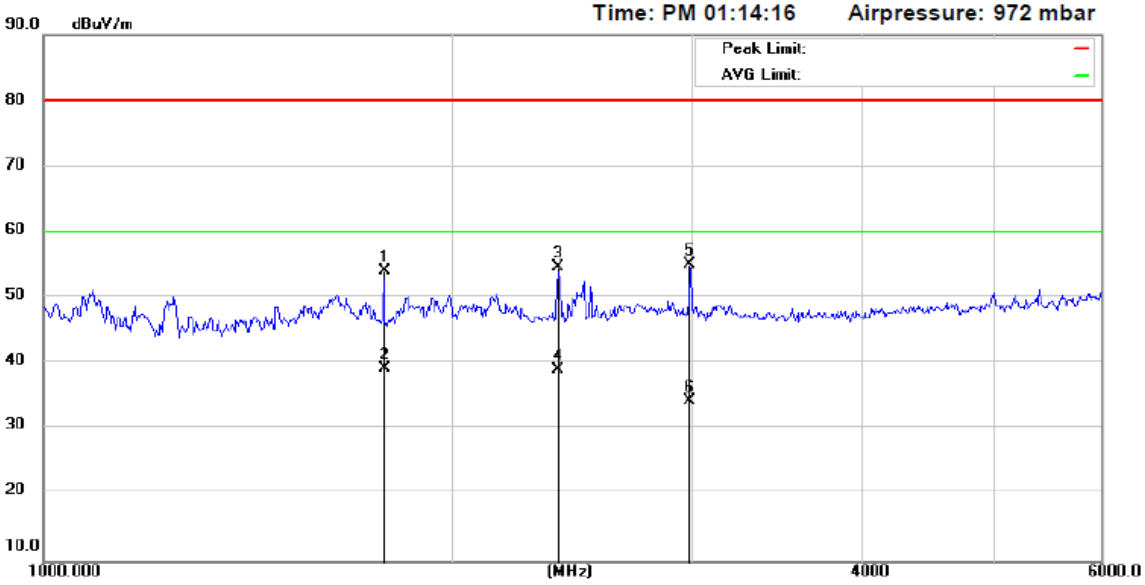
Operator: Weilin Wang

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#4 Date: 08/07/2024 Time: PM 01:14:16

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Polarization: *Vertical*
Company : MiTAC
Power : 120VAC/60Hz
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1782.083 | 57.83 | 30.04 | 2.68 | 36.37 | 54.18 | 80.00 | -25.82 | 100 | 252 | peak | |
| * | 1782.083 | 43.03 | 30.04 | 2.68 | 36.37 | 39.38 | 60.00 | -20.62 | 100 | 252 | AVG | |
| | 2391.523 | 55.72 | 32.25 | 3.12 | 36.44 | 54.65 | 80.00 | -25.35 | 106 | 261 | peak | |
| | 2391.523 | 40.15 | 32.25 | 3.12 | 36.44 | 39.08 | 60.00 | -20.92 | 106 | 261 | AVG | |
| | 2988.393 | 55.18 | 33.28 | 3.51 | 36.74 | 55.23 | 80.00 | -24.77 | 100 | 170 | peak | |
| | 2988.393 | 34.41 | 33.28 | 3.51 | 36.74 | 34.46 | 60.00 | -25.54 | 100 | 170 | AVG | |

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: 3117-3m-00251992
Amplifier: PA-8449B-1734

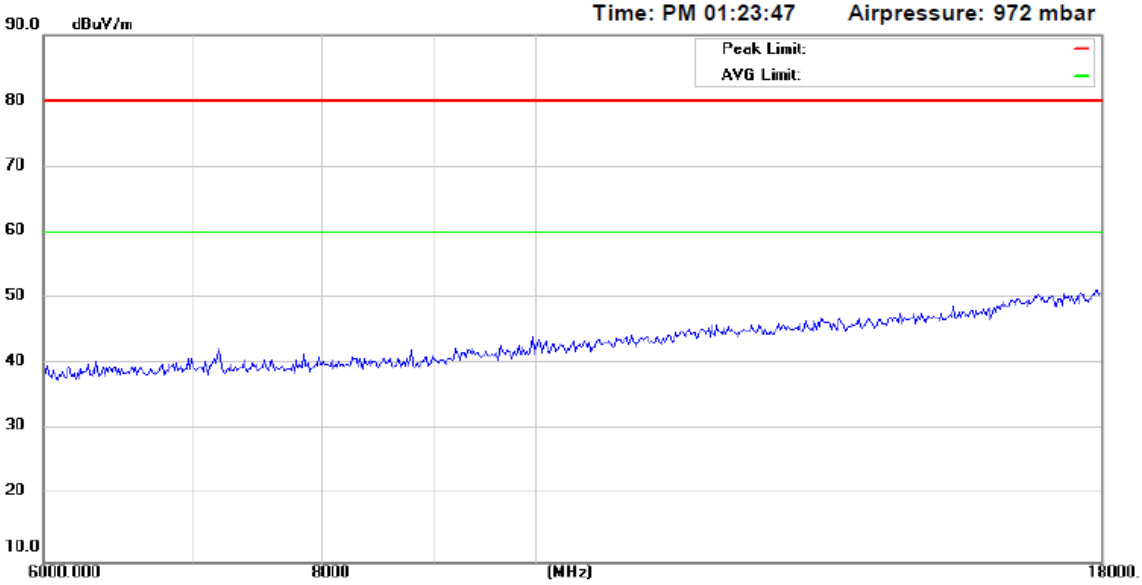
*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: 104 170812&14

*File :20240012RE004-1R0\Data :#4* **Page: 1**

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#5 Date: 08/07/2024 Time: PM 01:23:47

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Horizontal*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: 3117-3m-00251992
Amplifier: PA-8449B-1734

*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: 104 170812&14

*File :20240012RE004-1R0\Data :#5* **Page: 1**

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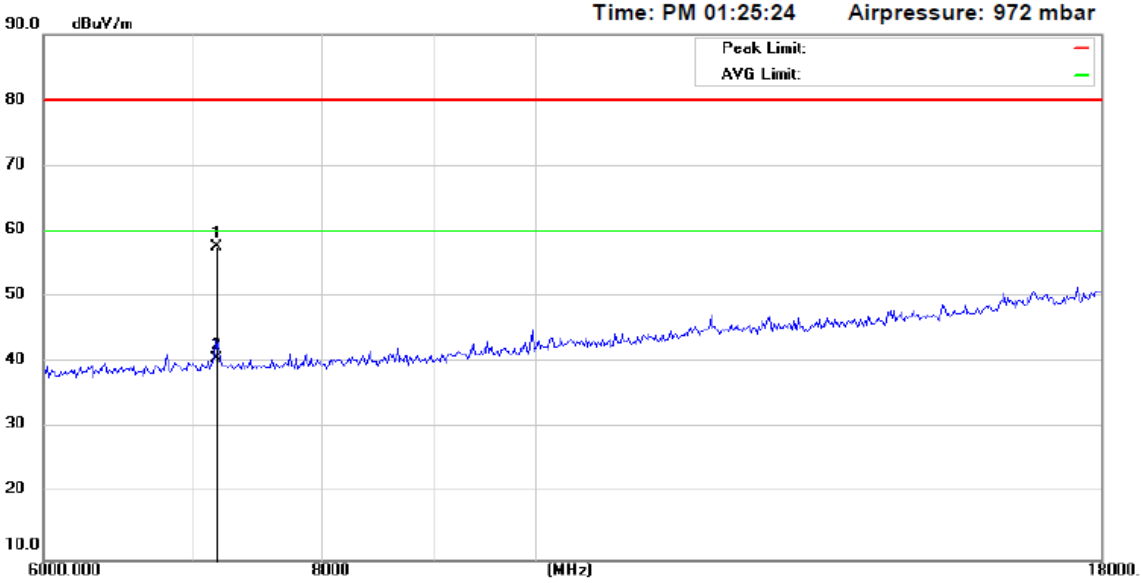
Operator: Weilin Wang

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#6 Date: 08/07/2024 Time: PM 01:25:24

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Vertical*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7170.484 | 53.39 | 35.83 | 5.49 | 37 | 57.71 | 80.00 | -22.29 | 100 | 225 | peak | |
| * | 7170.484 | 36.46 | 35.83 | 5.49 | 37 | 40.78 | 60.00 | -19.22 | 100 | 225 | AVG | |

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: 3117-3m-00251992
Amplifier: PA-8449B-1734

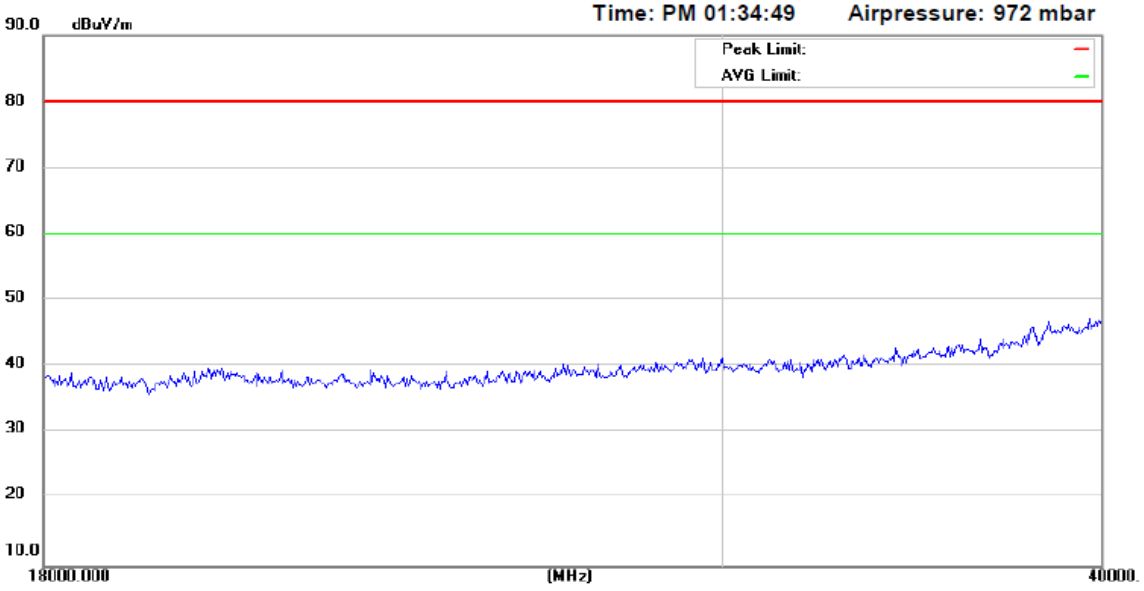
*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: 104 170812&14

*File :20240012RE004-1R0\Data :#6* **Page: 1**

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#7 Date: 08/07/2024 Time: PM 01:34:49

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Horizontal*
Power : 120VAC/60Hz

| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: AH-840 40G 3m
Amplifier: EMC184045SE 40G

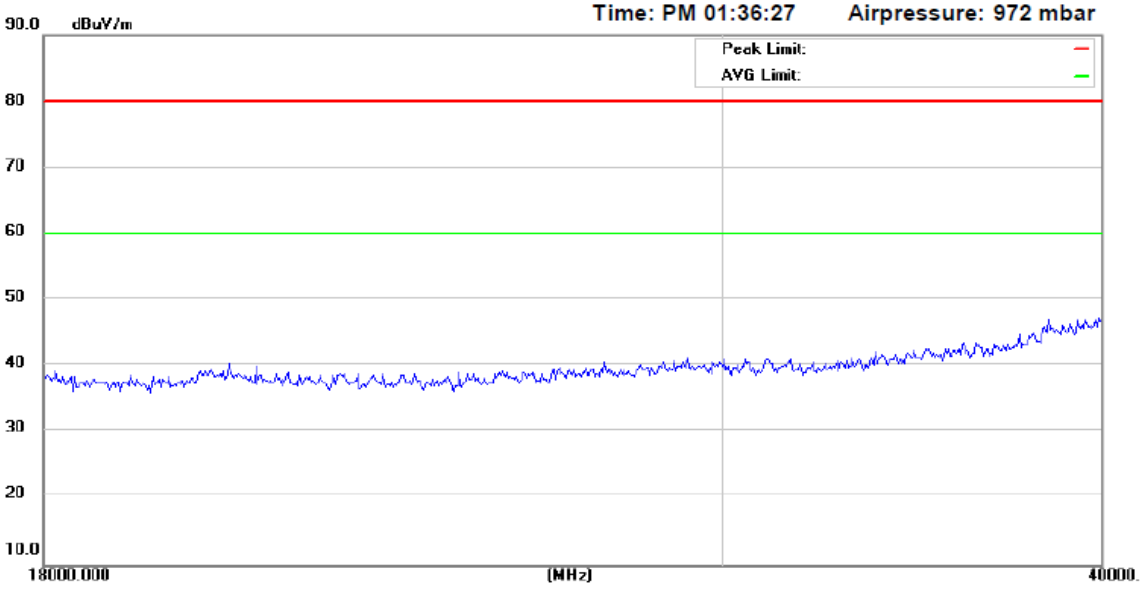
*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: EMC-101 cable

*File :20240012RE004-1R0\Data :#7* ***Page: 1***

Radiated Emission Measurement

File :20240012RE004-1R0 Data :#8 Date: 08/07/2024 Time: PM 01:36:27

Temperature: 19 ℃ Humidity: 62 % Airpressure: 972 mbar




Site : 10m Chamber
Limit : (RE)FCC PART 15 class A 3m_PEAK
Company : MiTAC
EUT : MX2-10ADP
Exercise Program : BurnInTest V9.0
Comments: Full system.Mode1

Polarization: *Vertical*
Power : 120VAC/60Hz

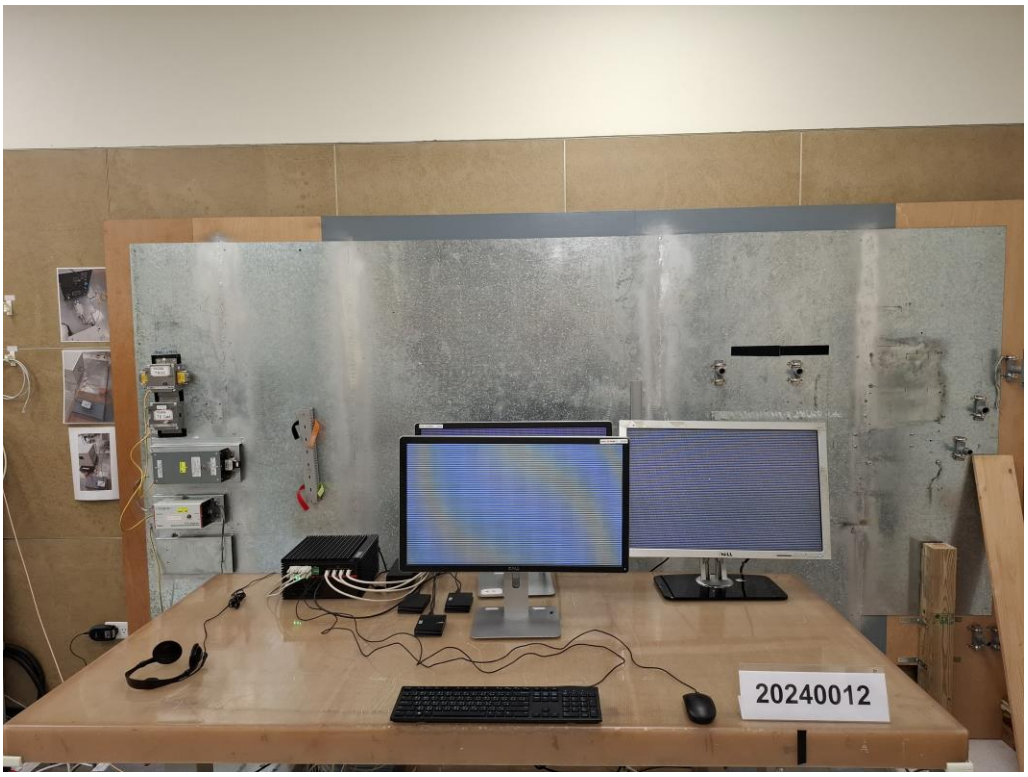
| Mk. | Frequency MHz | Raw Data dBuV | Ant_F dB/m | Cab_L dB | PreAmp dB | Corr. Data dBuV/m | Limit dBuV/m | Margin dB | Ant. cm | Ang. deg. | Detector | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|

Spectrum Analyzer: ESU
Receiver: ESU_1
Antenna: AH-840 40G 3m
Amplifier: EMC184045SE 40G

*:Maximum data x:Over limit !:over margin
RBW: 1000 KHz
VBW: 3000 KHz
Cable: EMC-101 cable

*File :20240012RE004-1R0\Data :#8* ***Page: 1***

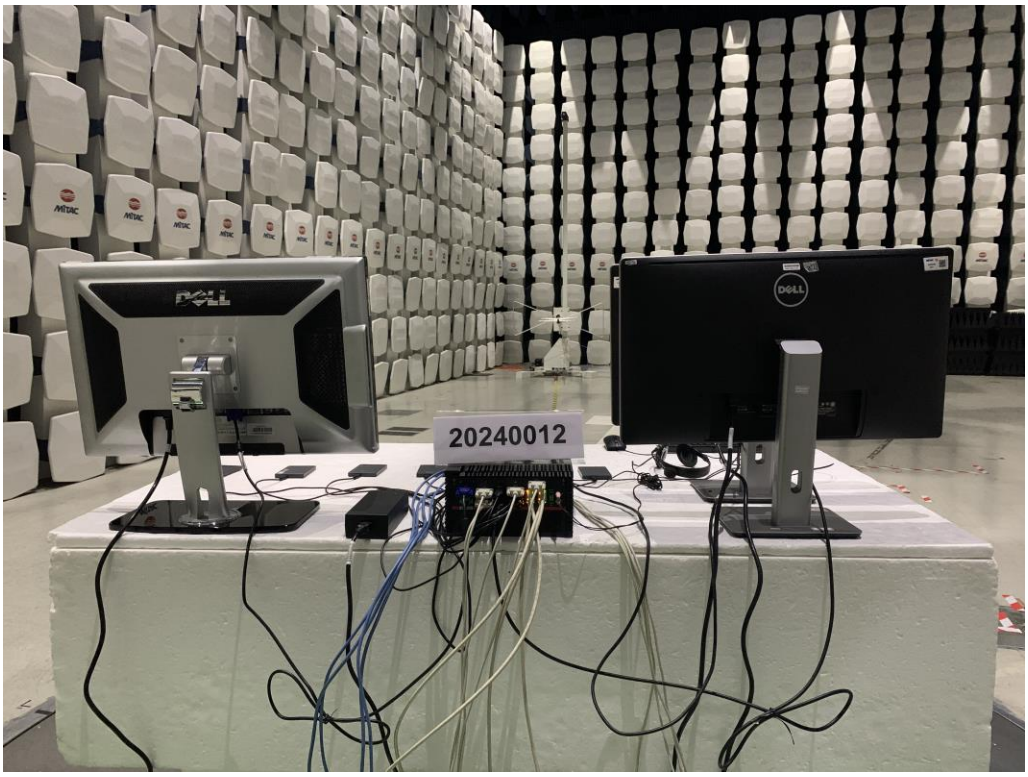
## PHOTOGRAPHS OF TEST



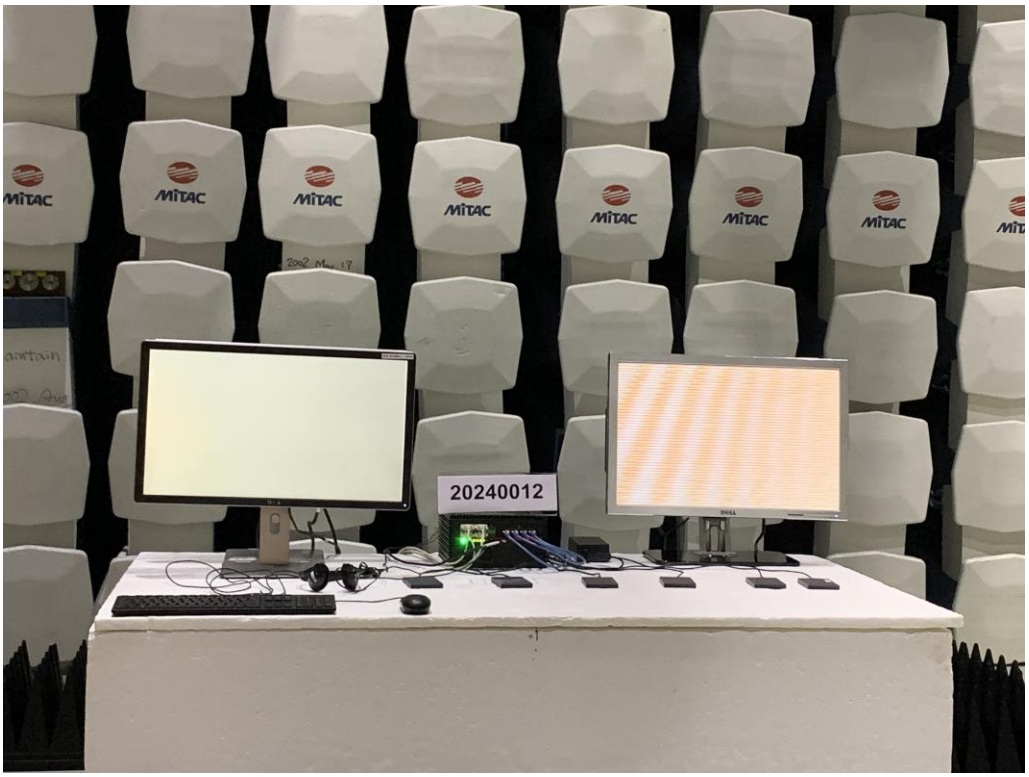

Conducted Emission Test Set up-Front View of Power Port


Conducted Emission Test Set up-Rear View of Power Port

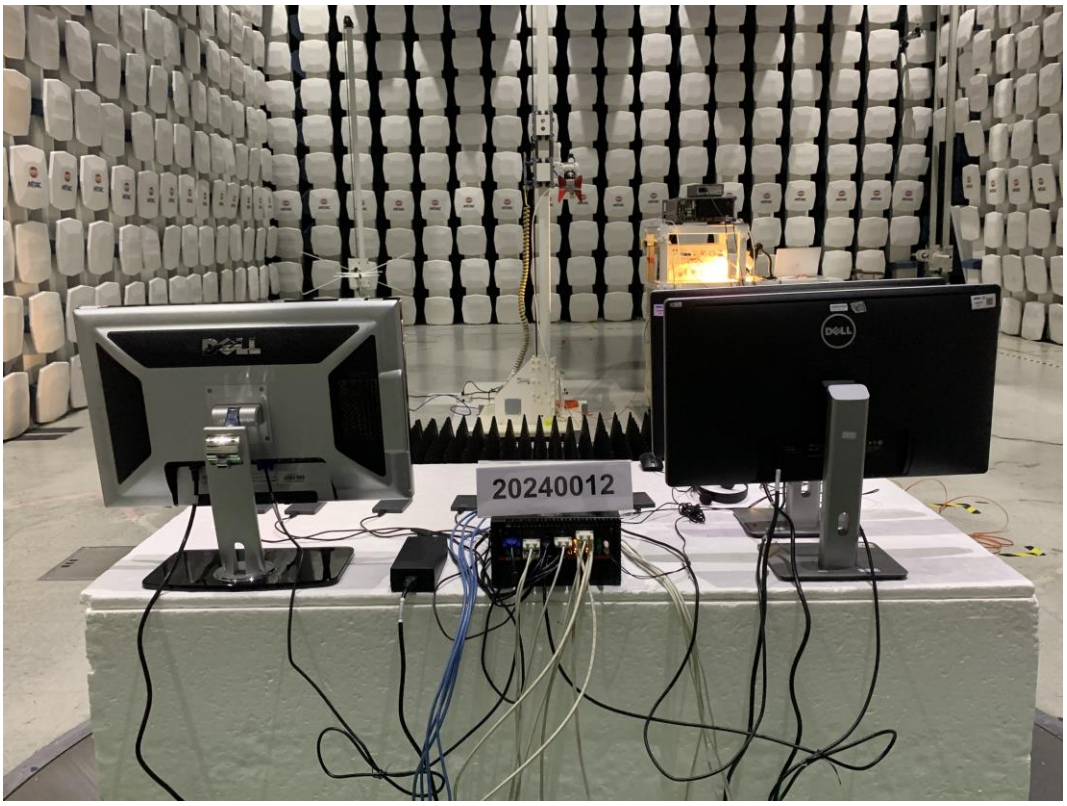

Radiated Emission Test Set up(Below 1GHz)-Front View



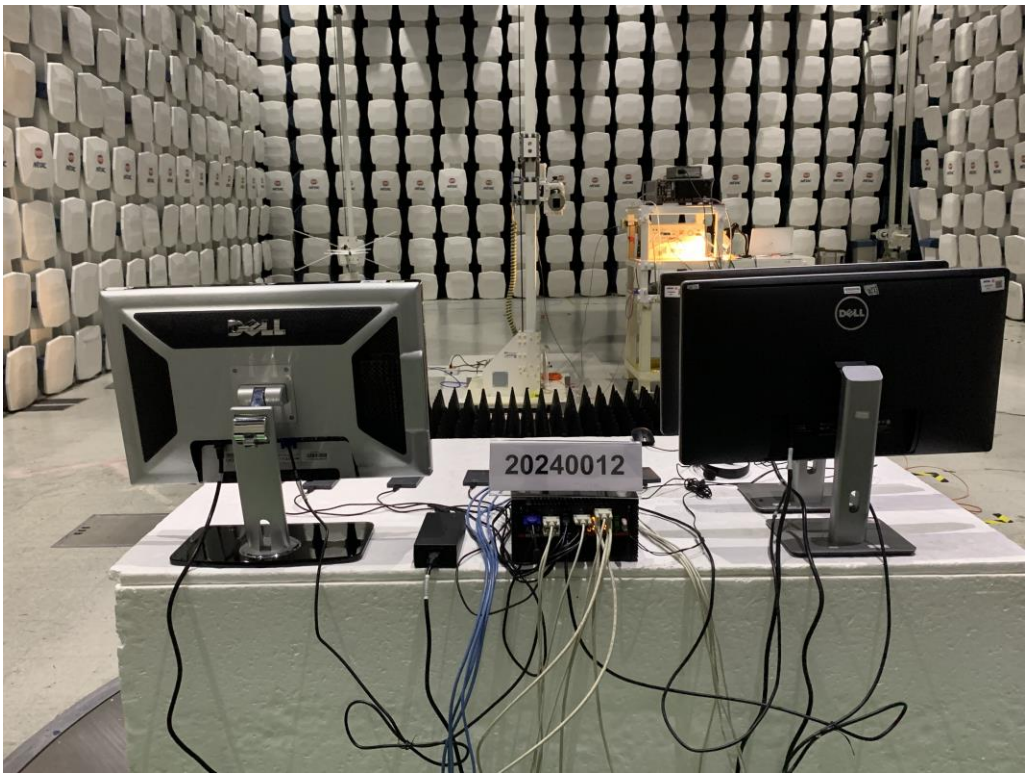

Radiated Emission Test Set up(Below 1GHz)-Rear View



Radiated Emission Test Set up(Above 1GHz)-Front View

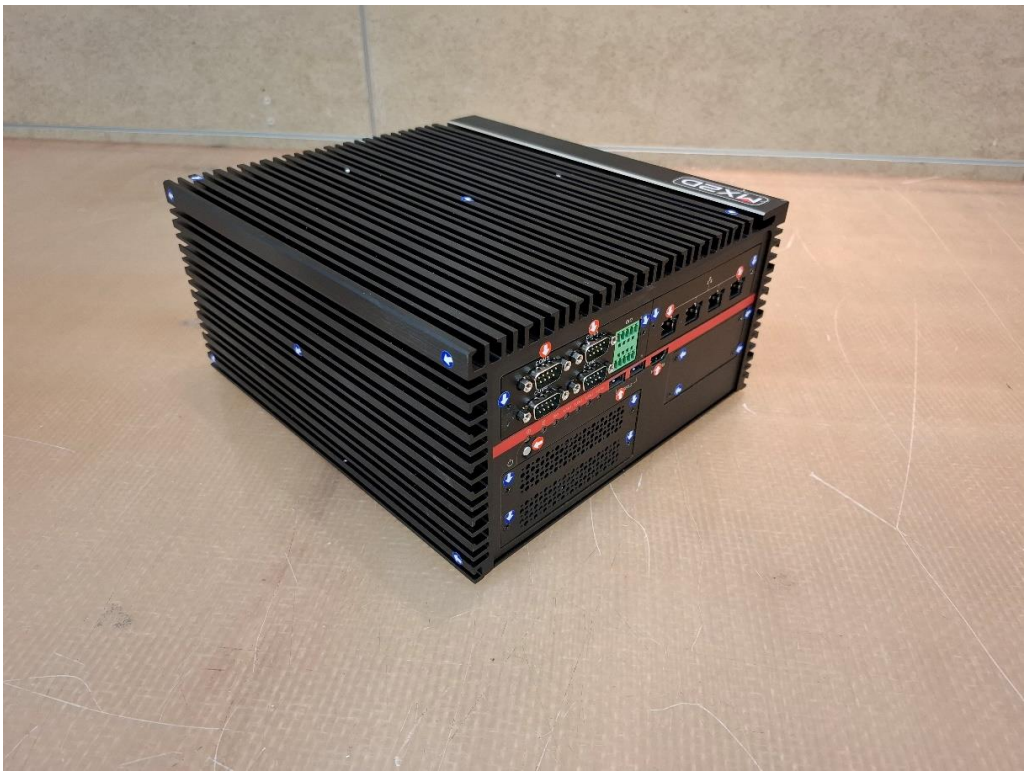


Radiated Emission Test Set up(1~18GHz)-Rear View



Radiated Emission Test Set up(18~40GHz)-Rear View

## PHOTOGRAPHS OF EUT



EUT(Mode 1)-Front View

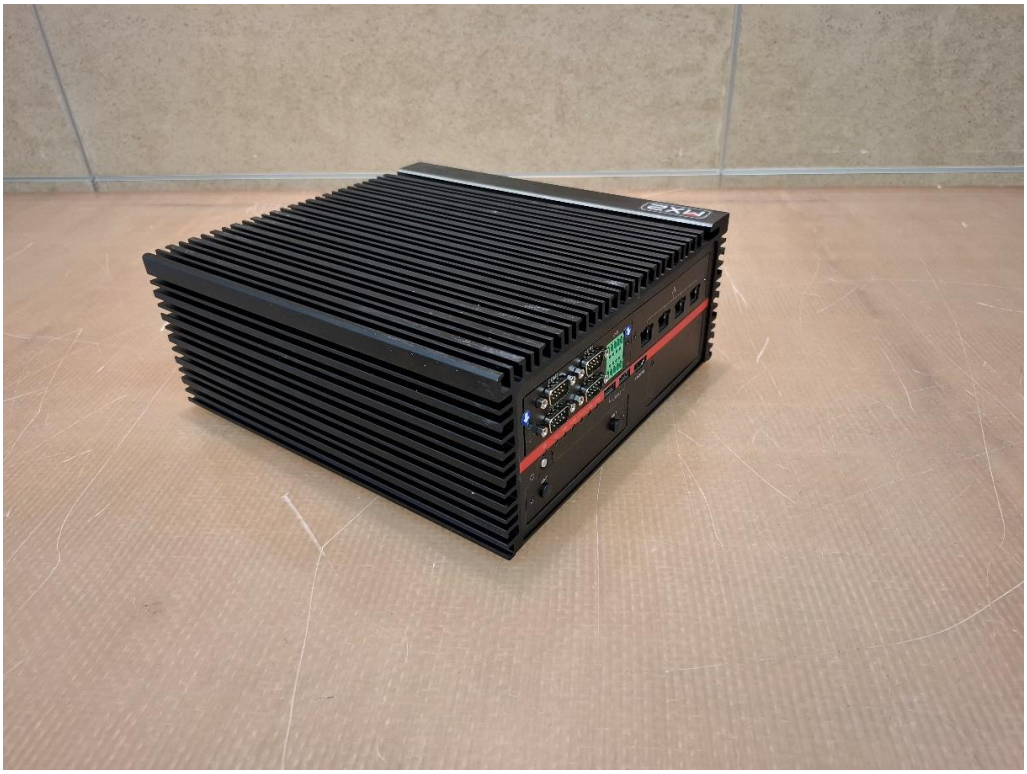
EUT(Mode 1)-Rear View

EUT(Mode 2)-Front View

EUT(Mode 2)-Rear View

EUT(Mode 3)-Front Viw

EUT(Mode 3)-Rear View



EUT(Mode 4)-Front View

EUT(Mode 4)-Rear View


IO Ports(Mode 1)-Front View


IO Ports(Mode 1)-Rear View

Serial Number of EUT View