

## TEST REPORT

### Environmental Testing

**MIL-STD-810H: 2019, Method 514.8, Procedure I – General Vibration**

**MIL-STD-810H: 2019, Method 516.8, Procedure I – Functional Shock**

**IEC 60068 Part 2-1 : Test A : Cold**

**IEC 60068 Part 2-78 : Test Cab : Damp heat, steady state**

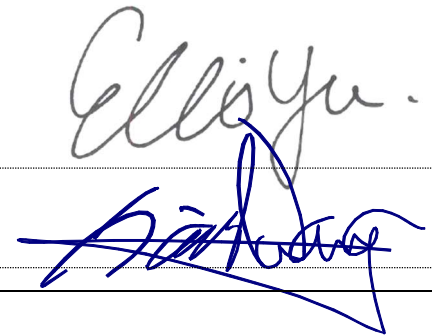
Report Number ..... : **2508008**

Date of issue ..... : 2025/08/15

Total number of pages ..... : 17

Tested by  
(name, function, signature) ..... : Ellis Yu /  
Engineer

Approved by  
(name, function, signature)..... : David Wang /  
Reviewer



### Testing Laboratory

Name ..... : Universal Certification Technology Co. Ltd.

Address ..... : 13F-5, No. 93, Sec. 1, Xintai 5th Rd.,  
Xizhi Dist., New Taipei City 221,  
Taiwan.

Test Location ..... : Same above

### Applicant

Name ..... : Vecow Co., Ltd.

Address ..... : 3F, No. 10, Jiankang Rd., Zhonghe Dist., New Taipei City 23586,  
Taiwan

### Test item description

Product name ..... : Arm-based Edge AI Computing

Trade mark(s) ..... : Vecow

Model /Type reference ..... : EAC-4000, EAC-4XXXXXXXXXXXXXXXXX ("X" can be 0-9, A-Z, - or  
blank for marketing purpose)

Rating ..... : DC Power from Power adaptor

### Test specification

Test Required: ..... : ☒ **MIL-STD-810H: 2019, Method 514.8, Procedure I –  
General Vibration, Table 514.8C-I Category 4 / Common  
carrier and client's request**

☒ **MIL-STD-810H: 2019, Method 516.8, Procedure I –  
Functional Shock and client's request**

☒ **IEC 60068-2-1: Edition 6.0: 2007**

☒ **IEC 60068-2-78: Edition 2.0: 2012**

Test Result ..... : **No visible Damage and Functional check Normal**

**Testing :**

Dates of receipt of test item ..... : 2025-07-28

Date(s) of performance of tests ..... : 2025-07-30 ~ 2025-08-06

**General product information and other remarks :**

1. Test sample :

☒ Complete enclosure.

☐ Individually section of enclosure (see below test method)

2. During test the EUT was operating.

3. The test sample was a pre-production sample

4. Dimension of test object : 112 mm x 103 mm x 45 mm

5. Weight of test object : 0.73 kg

6. Interior Parts:

CPU: NVIDIA Jetson Orin™ NX/Nano, up to 100 TOPS AI performance (Orin Nano Super Mode Supported)

RAM: Up to 16GB LPDDR5

SSD: 128GB NVMe

**Summary of compliance with standard:**

We have tested the submitted sample(s) as requested and the following results were obtained :

**Test Required : (According to client's test specification , please see following sheets in detail.)**

☒ **MIL-STD-810H: 2019, Method 514.8, Procedure I – General Vibration, Table 514.8C-I Category 4 – Common carrier and client's request**

☒ **MIL-STD-810H: 2019, Method 516.8, Procedure I – Functional Shock and client's request**

☒ **IEC 60068-2-1: Edition 6.0: 2007 and client's request**

☒ **IEC 60068-2-78: Edition 2.0: 2012 and client's request**

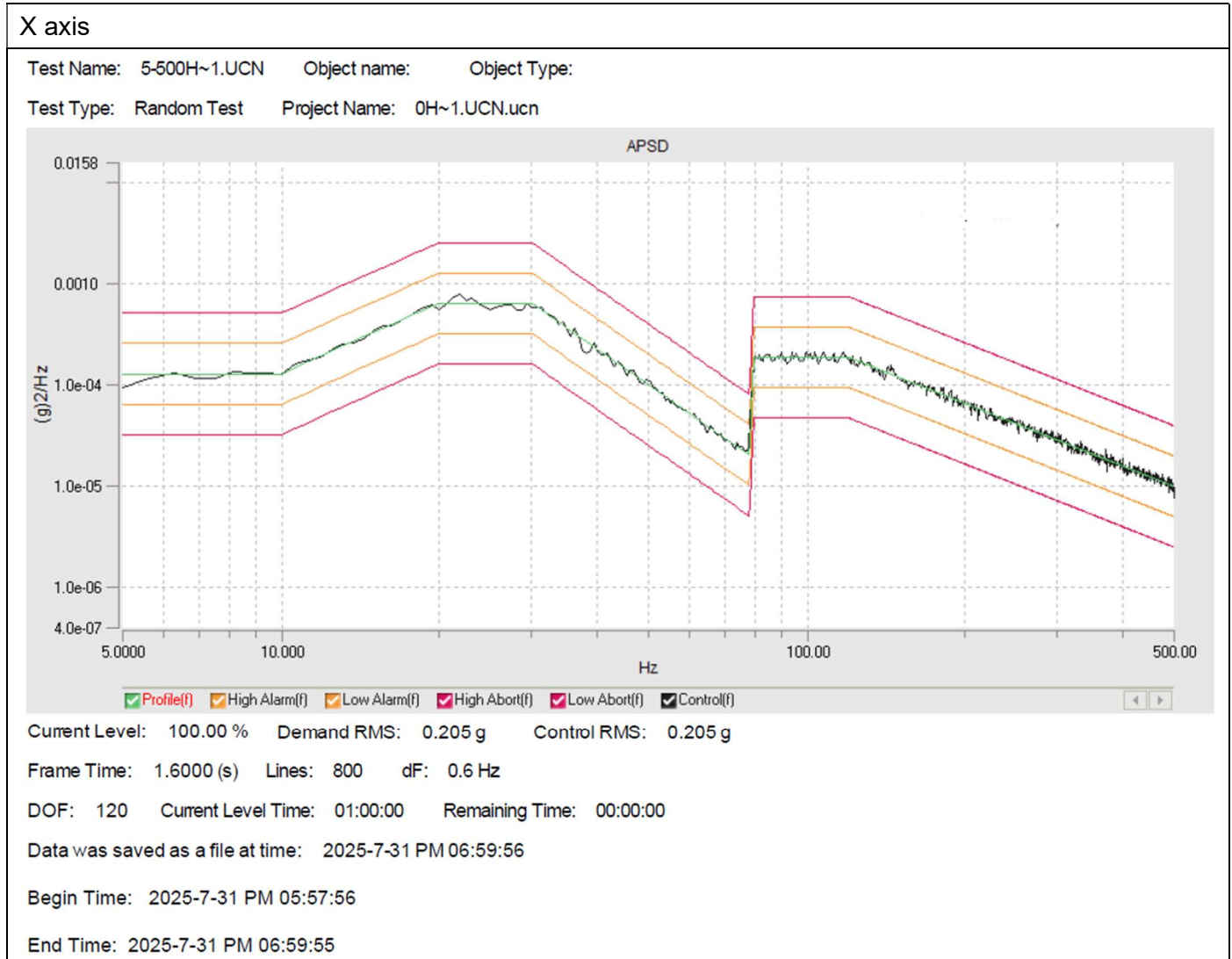
**Test Results :**

☒ - Please see attached Sheets

## 1. Vibration - operation

| Test Equipment :                                                                                                                                                                                                                                                                                                                                             |                         |                          |                         |                          |                         |            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|------------|--|
| Name                                                                                                                                                                                                                                                                                                                                                         |                         | Brand                    |                         | Model                    |                         | Serial No. |  |
| Vibration Tester                                                                                                                                                                                                                                                                                                                                             |                         | Vibration Source         |                         | ZVS-600VH-51             |                         | E113006    |  |
| Controller                                                                                                                                                                                                                                                                                                                                                   |                         | Vibration Source         |                         | VST-9008                 |                         | 395352176  |  |
| Test Laboratory Environment Condition :                                                                                                                                                                                                                                                                                                                      |                         |                          |                         |                          |                         |            |  |
| Temperature (°C)                                                                                                                                                                                                                                                                                                                                             |                         | Relative humidity (%)    |                         |                          | Air pressure (kPa)      |            |  |
| 15 ~ 35                                                                                                                                                                                                                                                                                                                                                      |                         | 25 ~ 75                  |                         |                          | 86 ~ 106                |            |  |
| Test Location :                                                                                                                                                                                                                                                                                                                                              |                         |                          |                         |                          |                         |            |  |
| 13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.                                                                                                                                                                                                                                                                             |                         |                          |                         |                          |                         |            |  |
| Test Method / Specification :                                                                                                                                                                                                                                                                                                                                |                         |                          |                         |                          |                         |            |  |
| MIL-STD-810H: 2019, Method 514.8, Procedure I – General Vibration, Table 514.8C-I Category 4                                                                                                                                                                                                                                                                 |                         |                          |                         |                          |                         |            |  |
| Sample Condition: operation                                                                                                                                                                                                                                                                                                                                  |                         |                          |                         |                          |                         |            |  |
| Wave form: Random                                                                                                                                                                                                                                                                                                                                            |                         |                          |                         |                          |                         |            |  |
| Frequency: 5-500Hz- Continued ( Test Spectrums as shown in the following sheet in detail)                                                                                                                                                                                                                                                                    |                         |                          |                         |                          |                         |            |  |
| Vertical - Z axis                                                                                                                                                                                                                                                                                                                                            |                         | Transverse - X axis      |                         | Longitudinal - Y axis    |                         |            |  |
| Frequency (Hz)                                                                                                                                                                                                                                                                                                                                               | ASD(g <sup>2</sup> /Hz) | Frequency (Hz)           | ASD(g <sup>2</sup> /Hz) | Frequency (Hz)           | ASD(g <sup>2</sup> /Hz) |            |  |
| 5                                                                                                                                                                                                                                                                                                                                                            | 0.015                   | 5                        | 0.00013                 | 5                        | 0.0065                  |            |  |
| 40                                                                                                                                                                                                                                                                                                                                                           | 0.015                   | 10                       | 0.00013                 | 20                       | 0.0065                  |            |  |
| 500                                                                                                                                                                                                                                                                                                                                                          | 0.00015                 | 20                       | 0.00065                 | 120                      | 0.0002                  |            |  |
|                                                                                                                                                                                                                                                                                                                                                              |                         | 30                       | 0.00065                 | 121                      | 0.003                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                              |                         | 78                       | 0.00002                 | 200                      | 0.003                   |            |  |
|                                                                                                                                                                                                                                                                                                                                                              |                         | 79                       | 0.00019                 | 240                      | 0.0015                  |            |  |
|                                                                                                                                                                                                                                                                                                                                                              |                         | 120                      | 0.00019                 | 340                      | 0.00003                 |            |  |
|                                                                                                                                                                                                                                                                                                                                                              |                         | 500                      | 0.00001                 | 500                      | 0.00015                 |            |  |
| →Equivalent to 1.08 Grms                                                                                                                                                                                                                                                                                                                                     |                         | →Equivalent to 0.21 Grms |                         | →Equivalent to 0.76 Grms |                         |            |  |
| Direction : X, Y, Z axis (See photo 1 ~ 3)                                                                                                                                                                                                                                                                                                                   |                         |                          |                         |                          |                         |            |  |
| Duration : 1 hour/ axis                                                                                                                                                                                                                                                                                                                                      |                         |                          |                         |                          |                         |            |  |
| Test Procedure:                                                                                                                                                                                                                                                                                                                                              |                         |                          |                         |                          |                         |            |  |
| <ul style="list-style-type: none"> <li>- Check the samples' appearance before the test.</li> <li>- Install the samples on the testing table and set up testing condition.</li> <li>- After testing, take off samples from table and put them in the storage area.</li> <li>- Observe the samples and record for any visible change after testing.</li> </ul> |                         |                          |                         |                          |                         |            |  |
| Summary:                                                                                                                                                                                                                                                                                                                                                     |                         |                          |                         |                          |                         |            |  |
| <ul style="list-style-type: none"> <li>- No visible damage was found on sample appearance after the test.</li> <li>- Sample photo after the test:</li> </ul>                                                                                                                                                                                                 |                         |                          |                         |                          |                         |            |  |

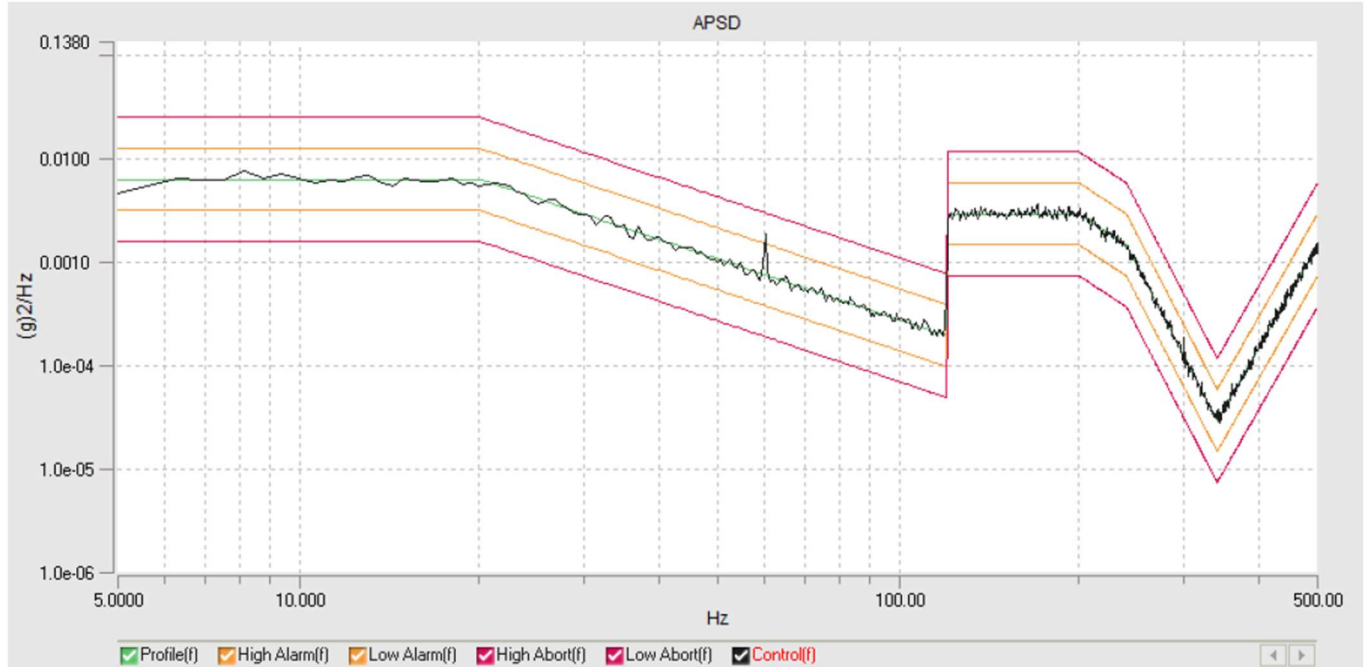
## Test profile:



## Y axis

Test Name: 5-500Hz 0.76 Gms-Longitudinal-Y axis-MIL-STD-810H Object name: Object Type:

Test Type: Random Test Project Name: 5-500Hz 0.76 Gms-Longitudinal-Y axis-MIL-STD-810H.ucn



Current Level: 100.00 % Demand RMS: 0.796 g Control RMS: 0.797 g

Frame Time: 1.6000 (s) Lines: 800 dF: 0.6 Hz

DOF: 300 Current Level Time: 01:00:00 Remaining Time: 00:00:00

Data was saved as a file at time: 2025-7-31 PM 04:24:45

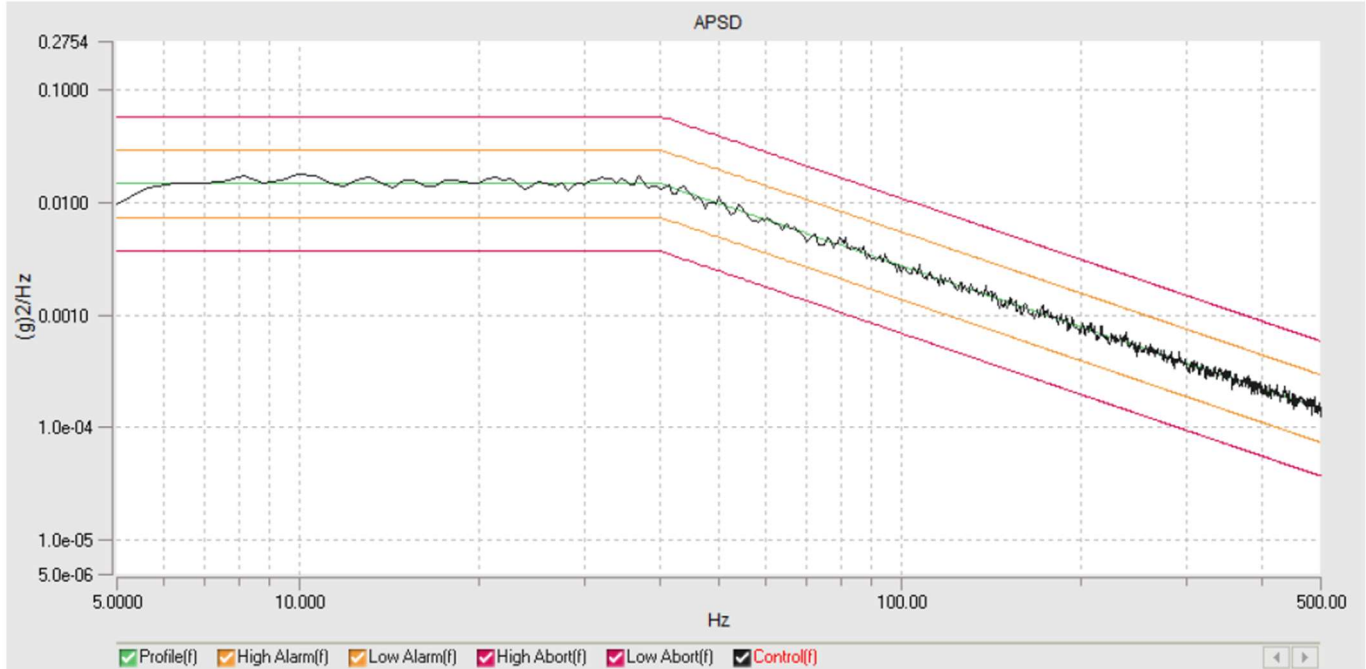
Begin Time: 2025-7-31 PM 03:23:32

End Time: 2025-7-31 PM 04:24:45

## Z axis

Test Name: 5-500 Hz 1.08 Gms -Vertical -MIL STD 810H Object name: Object Type:

Test Type: Random Test Project Name: 5-500 Hz 1.08 Gms -Vertical -MIL STD 810H.uch



Current Level: 100.00 % Demand RMS: 1.080 g Control RMS: 1.085 g

Frame Time: 1.6000 (s) Lines: 800 dF: 0.6 Hz

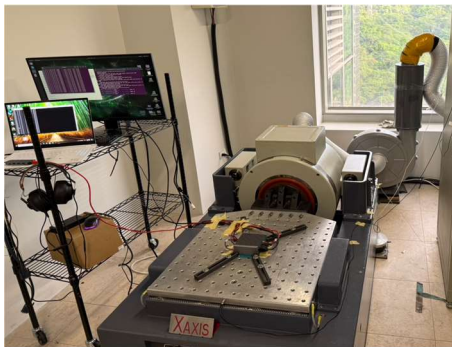
DOF: 300 Current Level Time: 01:00:00 Remaining Time: 00:00:00

Data was saved as a file at time: 2025-7-30 PM 06:22:48

Begin Time: 2025-7-30 PM 05:29:38

End Time: 2025-7-30 PM 06:22:47

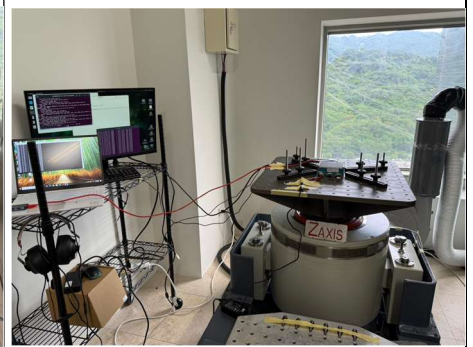
### Test photos:



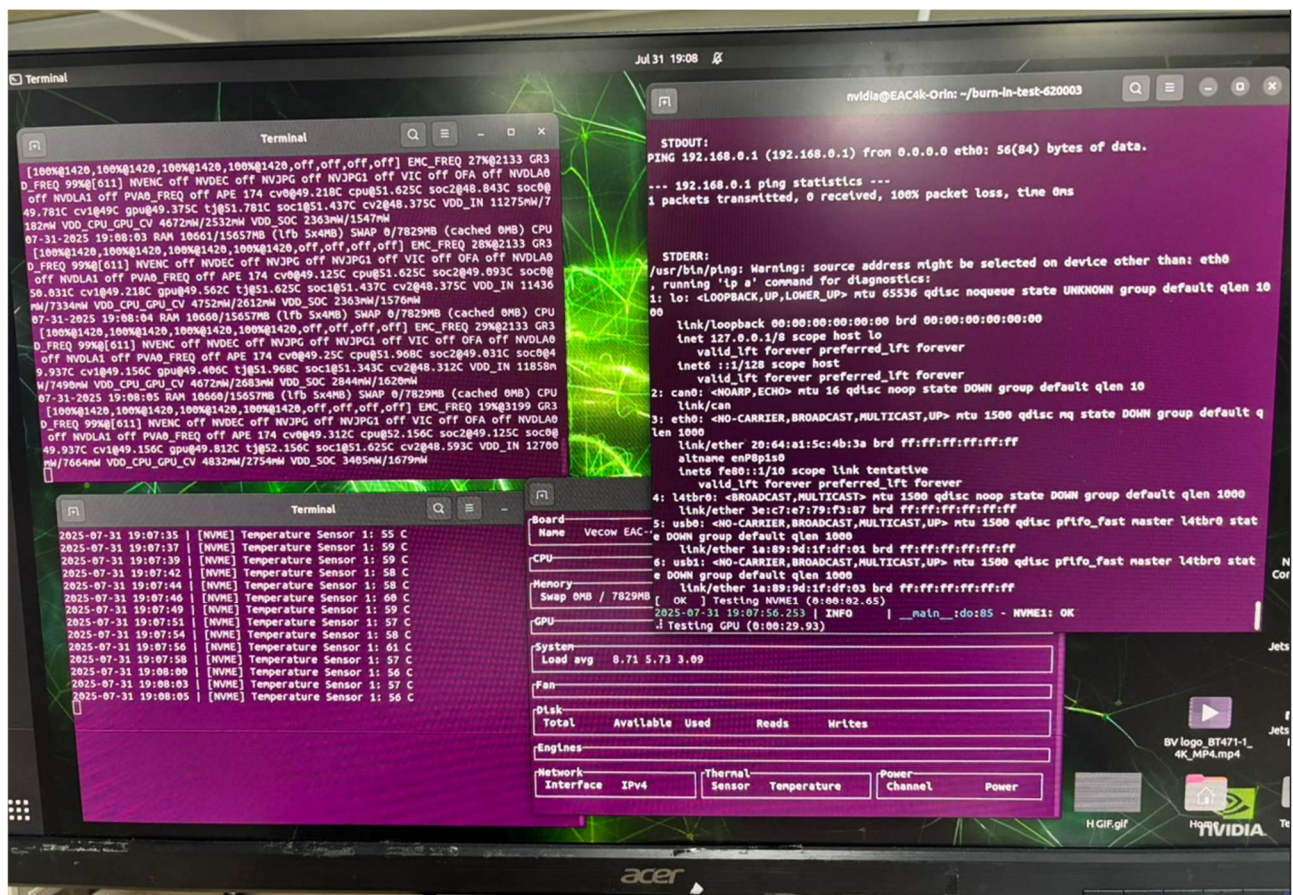
1. X axis



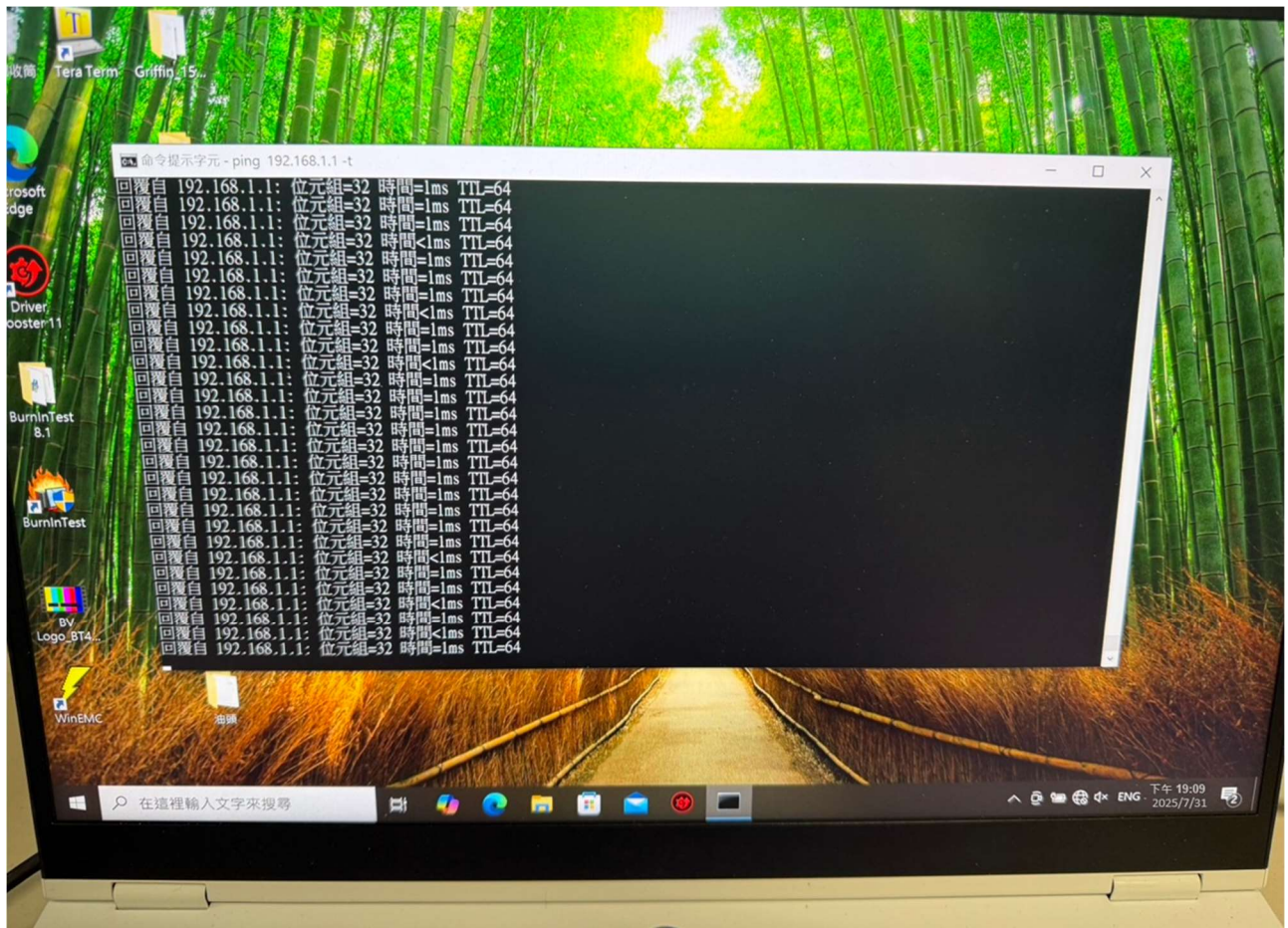
2. Y axis



3. Z axis



### Functional Check

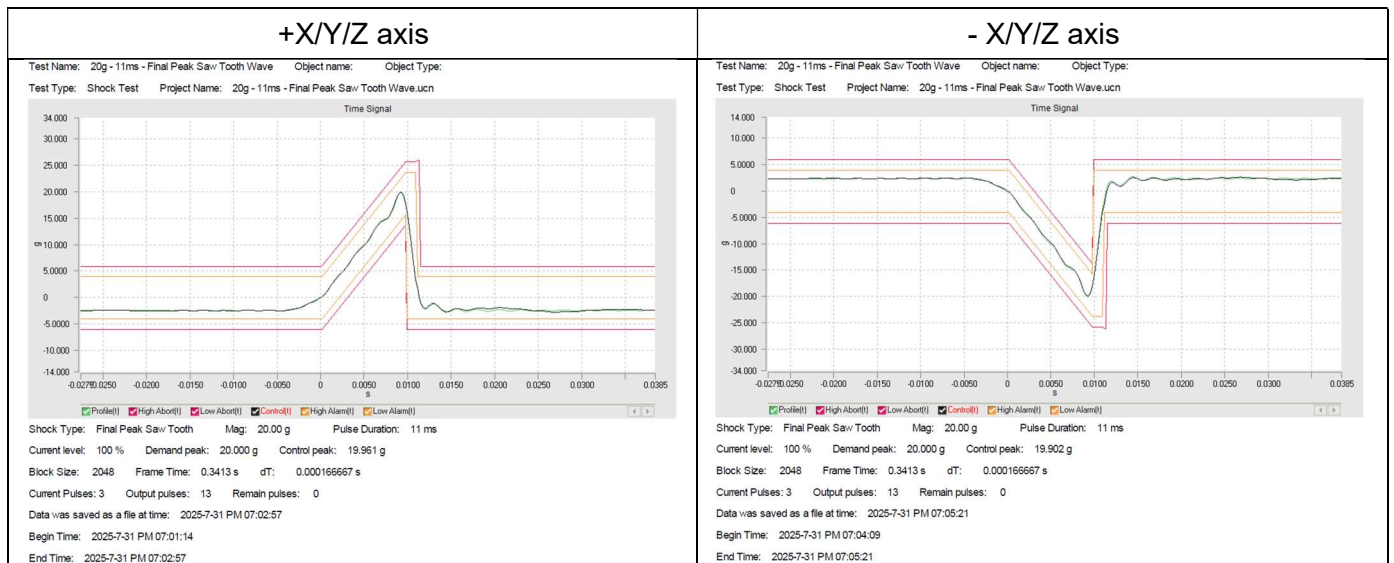


Functional Check

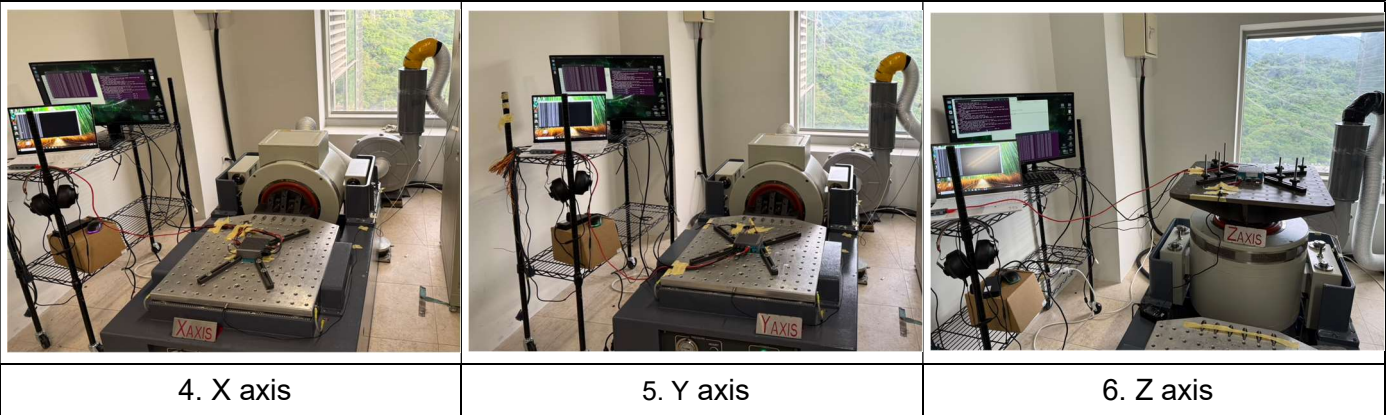
## 2. Operating Mechanical Shock Test

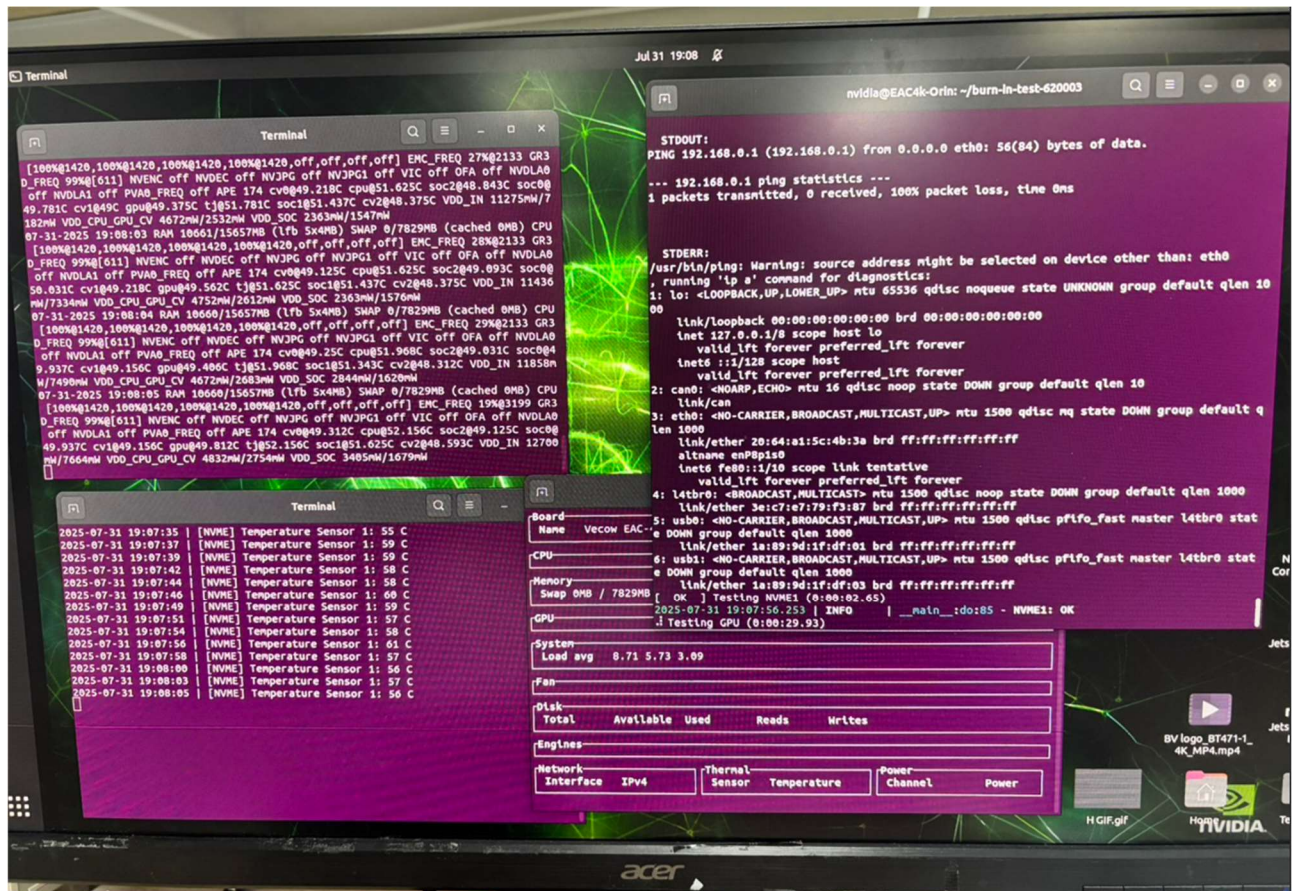
| Test Equipment :                                                                                                                                                                                                                                                                                                                                                     |                       |              |                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|--------------------|
| Name                                                                                                                                                                                                                                                                                                                                                                 | Brand                 | Model        | Serial No.         |
| Vibration Tester                                                                                                                                                                                                                                                                                                                                                     | Vibration Source      | ZVS-600VH-51 | E113006            |
| Controller                                                                                                                                                                                                                                                                                                                                                           | Vibration Source      | VST-9008     | 395352176          |
| Test Laboratory Environment Condition :                                                                                                                                                                                                                                                                                                                              |                       |              |                    |
| Temperature (°C)                                                                                                                                                                                                                                                                                                                                                     | Relative humidity (%) |              | Air pressure (kPa) |
| 15 ~ 35                                                                                                                                                                                                                                                                                                                                                              | 25 ~ 75               |              | 86 ~ 106           |
| Test Location :                                                                                                                                                                                                                                                                                                                                                      |                       |              |                    |
| 13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan.                                                                                                                                                                                                                                                                                     |                       |              |                    |
| Test Method / Specification :                                                                                                                                                                                                                                                                                                                                        |                       |              |                    |
| <b>Shock test –MIL-STD-810H: 2019, Method 516.8, Procedure I – Functional Shock</b><br><b>Sample Condition:</b> operation<br><b>Waveform :</b> Final Peak Sawtooth Wave<br><b>Acceleration :</b> 20G<br><b>Pulse duration :</b> 11 ms<br><b>Shock direction :</b> 6 faces ( ±X, ±Y, ±Z axes, See photo 4~6)<br><b>No of Shock :</b> 3 shock / axis (Total 18 shocks) |                       |              |                    |
| Test Procedure:                                                                                                                                                                                                                                                                                                                                                      |                       |              |                    |
| <ul style="list-style-type: none"> <li>- Check the samples' appearance before the test.</li> <li>- Install the samples on the testing table and set up testing condition.</li> <li>- After testing, take off samples from table and put them in the storage area.</li> <li>- Observe the samples and record for any visible change after testing.</li> </ul>         |                       |              |                    |
| Summary:                                                                                                                                                                                                                                                                                                                                                             |                       |              |                    |
| <ul style="list-style-type: none"> <li>- No visible damage was found on sample appearance after the test.</li> <li>- Sample photo after the test:</li> </ul>                                                                                                                                                                                                         |                       |              |                    |

### Test profile:

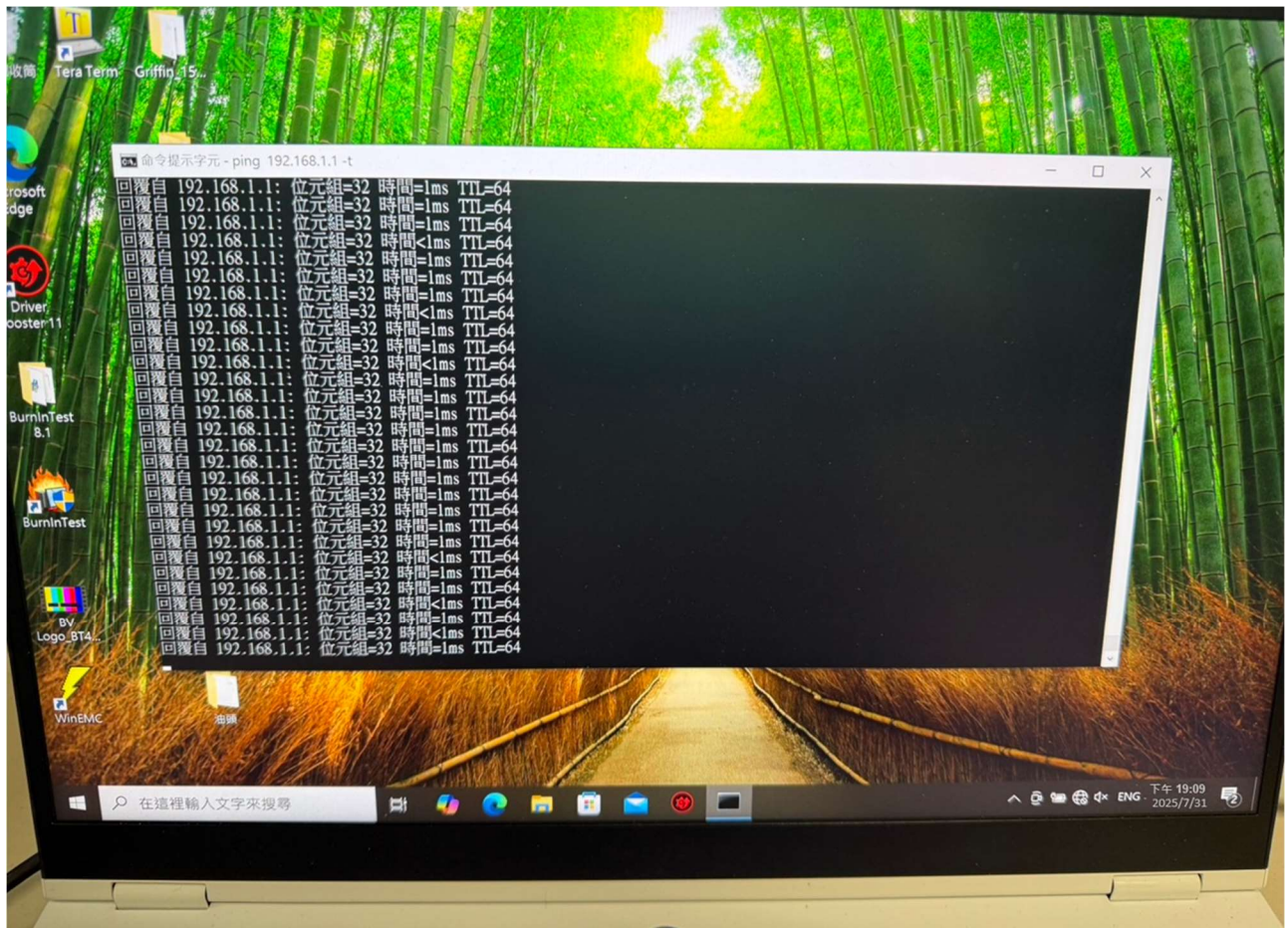


### Test photos:





## Functional Check

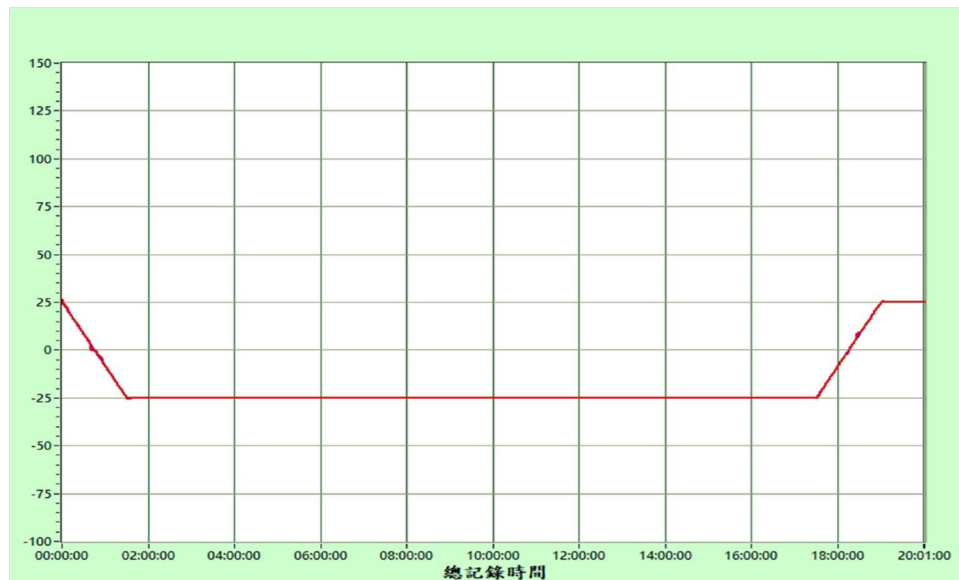


Functional Check

### 3. Low Temperature Test

| 4. Test Equipment :                                                              |                       |                    |             |
|----------------------------------------------------------------------------------|-----------------------|--------------------|-------------|
| Name                                                                             | Brand                 | Model              | Serial No.  |
| Programmable Temperature & Humidity Chamber                                      | Giant Force           | GTH-225-40-CP-AR   | MAA2004-008 |
| Test Laboratory Environment Condition :                                          |                       |                    |             |
| Temperature ( ° C)                                                               | Relative humidity (%) | Air pressure (kPa) |             |
| 15 ~ 35                                                                          | 25 ~ 75               | 86 ~ 106           |             |
| Test Location :                                                                  |                       |                    |             |
| 13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan. |                       |                    |             |
| Test Method / Specification :                                                    |                       |                    |             |
| IEC 60068-2-1 Edition 6.0: 2007 and client's request                             |                       |                    |             |

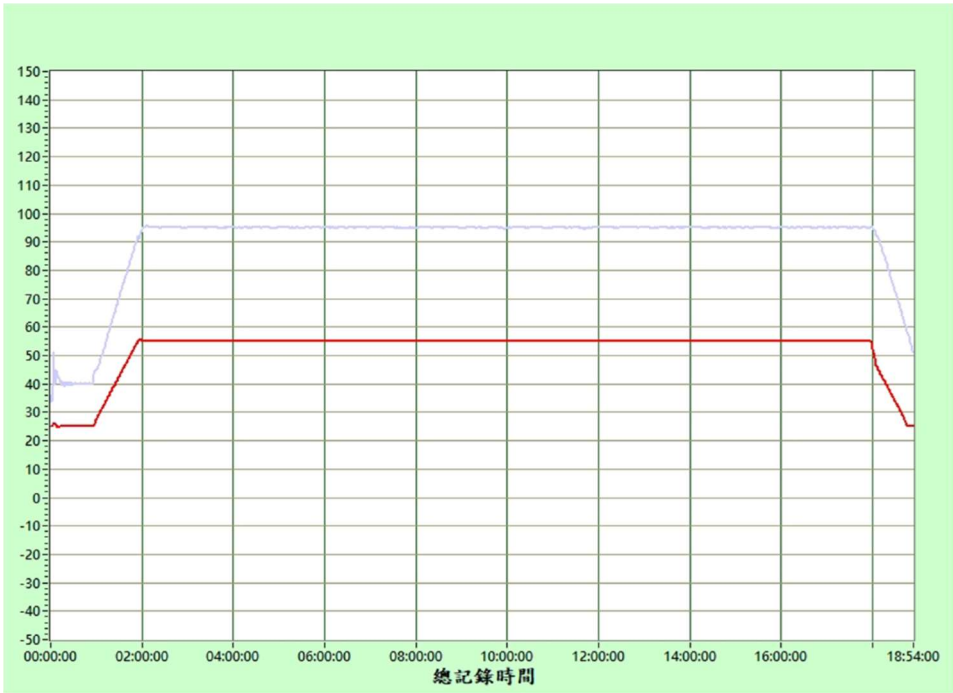
| TABLE: Low Temperature Test |           |                |
|-----------------------------|-----------|----------------|
| Test temperature            | Durations | Curve Chart    |
| -25°C                       | 16hr      | during testing |



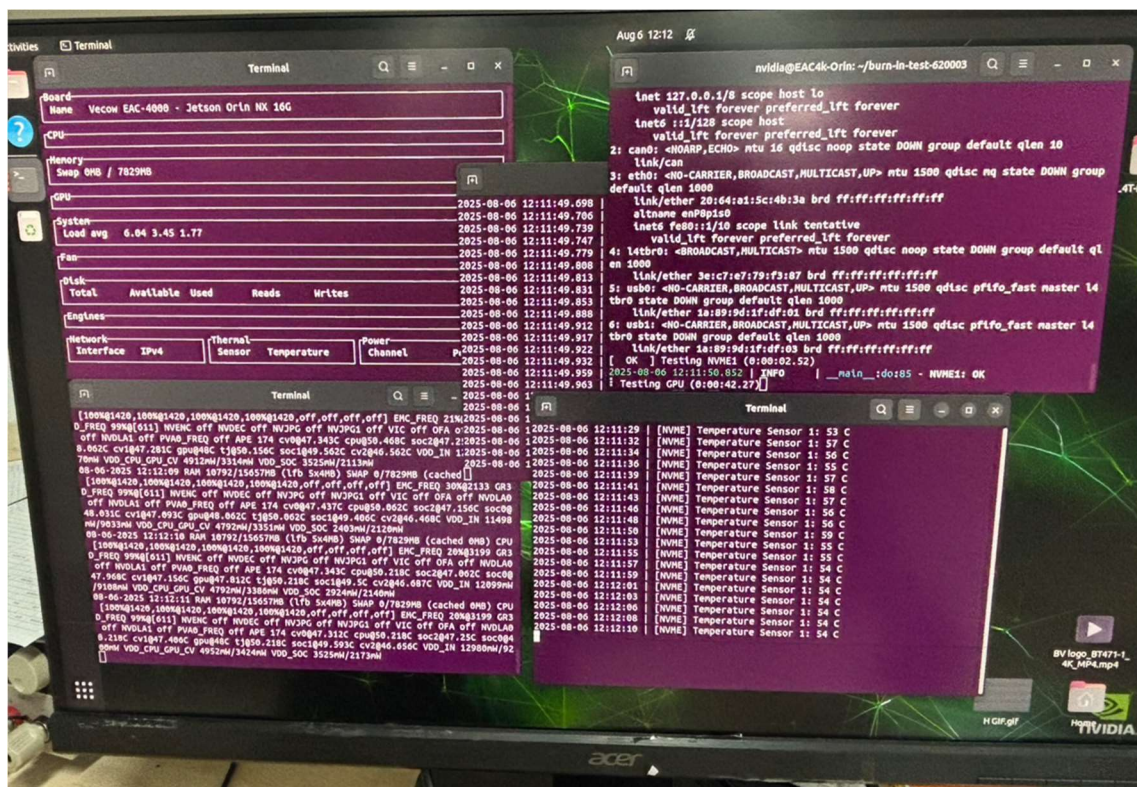
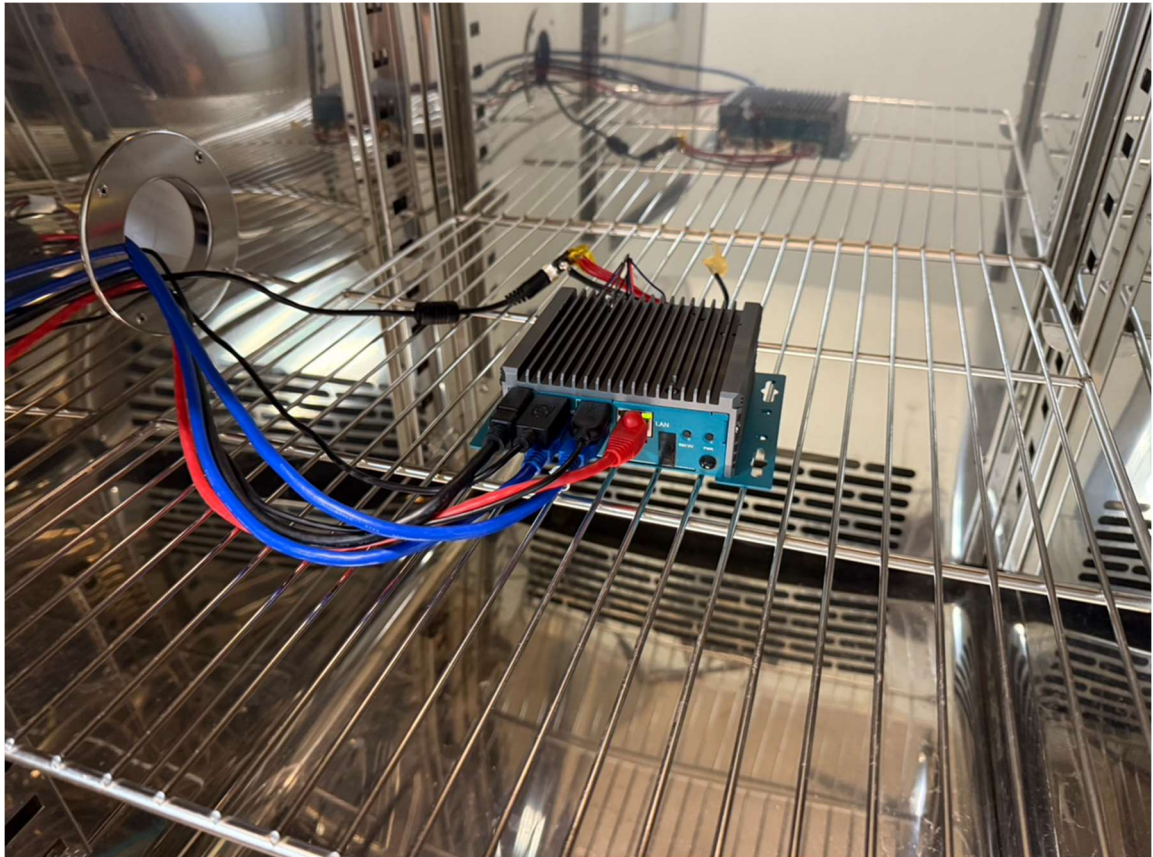
Test Date: 2025-08-05 ~ 2025-08-06

#### 4. Damp Heat Test

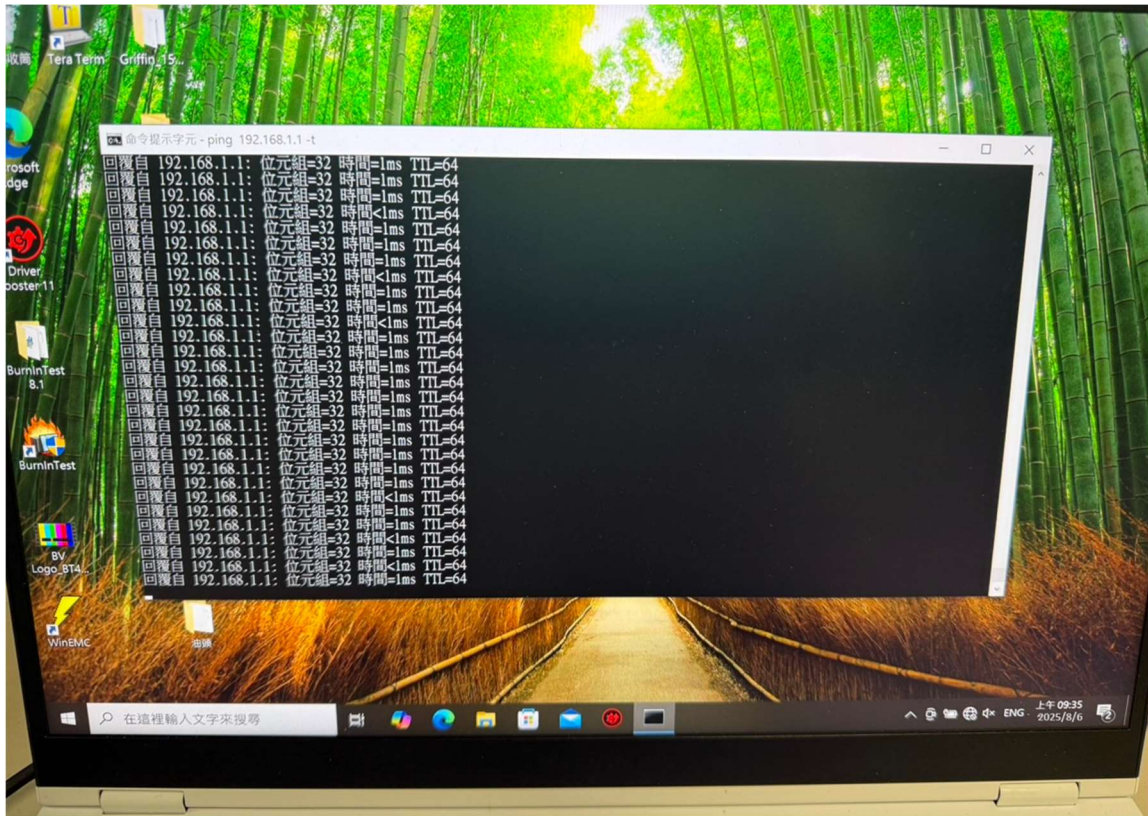
| Test Equipment :                                                                 |                       |                    |             |
|----------------------------------------------------------------------------------|-----------------------|--------------------|-------------|
| Name                                                                             | Brand                 | Model              | Serial No.  |
| Programmable Temperature & Humidity Chamber                                      | Giant Force           | GTH-225-40-CP-AR   | MAA2004-008 |
| Test Laboratory Environment Condition :                                          |                       |                    |             |
| Temperature ( ° C)                                                               | Relative humidity (%) | Air pressure (kPa) |             |
| 15 ~ 35                                                                          | 25 ~ 75               | 86 ~ 106           |             |
| Test Location :                                                                  |                       |                    |             |
| 13F-5, No. 93, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan. |                       |                    |             |
| Test Method / Specification :                                                    |                       |                    |             |
| IEC 60068-2-78 Edition 2.0: 2012 and client’s request                            |                       |                    |             |

| TABLE: Damp Heat Test                                                                                                          |               |           |                |
|--------------------------------------------------------------------------------------------------------------------------------|---------------|-----------|----------------|
| Test temperature                                                                                                               | Test Humidity | Durations | Curve Chart    |
| 55°C                                                                                                                           | 95% RH        | 16hr      | during testing |
|  <p>Test Date: 2025-08-04 ~ 2025-08-05</p> |               |           |                |

### Test photos:



### Functional Check



**Functional Check**



EUT Photo



EUT Photo

— — — The End of Test Report — — —