

# Test Report

## ICR-1745W-EU

### (Product Reliability Test)

Report No: 26E077A0

Report Issue Date: March 10, 2026

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*Tim Chang*

Approval

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*Jim Chou*

Test Engineer

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*QA Lab Reliability test*

# Table of Contents

Table of Contents.....	2
1. History .....	3
2. Test Item List and Sample Quantity.....	4
3. Sample Configuration.....	5
4. Random Vibration Test .....	6
5. Shock Test .....	10
6. Package Drop Test.....	14

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# 1. History

<b>Client</b>	Advantech Co., Ltd. (ICWG / Cellular Router)		
<b>Address</b>	1F, No. 33, Lane 365, Yangguang Street, Neihu District, Taipei 114, Taiwan (R.O.C)		
<b>Report No.</b>	<b>Description</b>	<b>iDesign ID</b>	<b>Received Date</b>
<b>26E077A0</b>	The verification test per customer's request.	4299-047	2026/01/16

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## 2. Test Item List and Sample Quantity

No.	Test Item	Qty	Sample No.					Result
			1					
1	Random Vibration Test	1	V					Normal
2	Shock Test	1	V					Normal
3	Package Drop Test	1	V					Normal

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### 3. Sample Configuration

Using one piece of ICR-1745W-EU with the following options installed:

Sample No.	Sample Configuration
1	Assembly of ICR-1745W-EU A1 01, P/N: 96991745200 PCB P/N: 19A9R174521-01

Using one piece of ICR-1745W-EU with package Material as below:

P/N	Description	Vendor
21BB-CLK3-000001	CLK_v3_NOset	Servisbal Obaly
2100023387T000-CM	Folding card 151Lx157Wx72H mm ICR-1745(W)-EU-A	Servisbal Obaly

## 4. Random Vibration Test

**Test Date:** March 03, 2026

**Test Site:** 1F, No. 33, Lane 365, Yangguang Street, Neihu District, Taipei 114, Taiwan (R.O.C)

**Performed By:** Jim Chou

**Purpose:** The verification test per customer's request.

### Test Standard:

Please refer to the following documents:

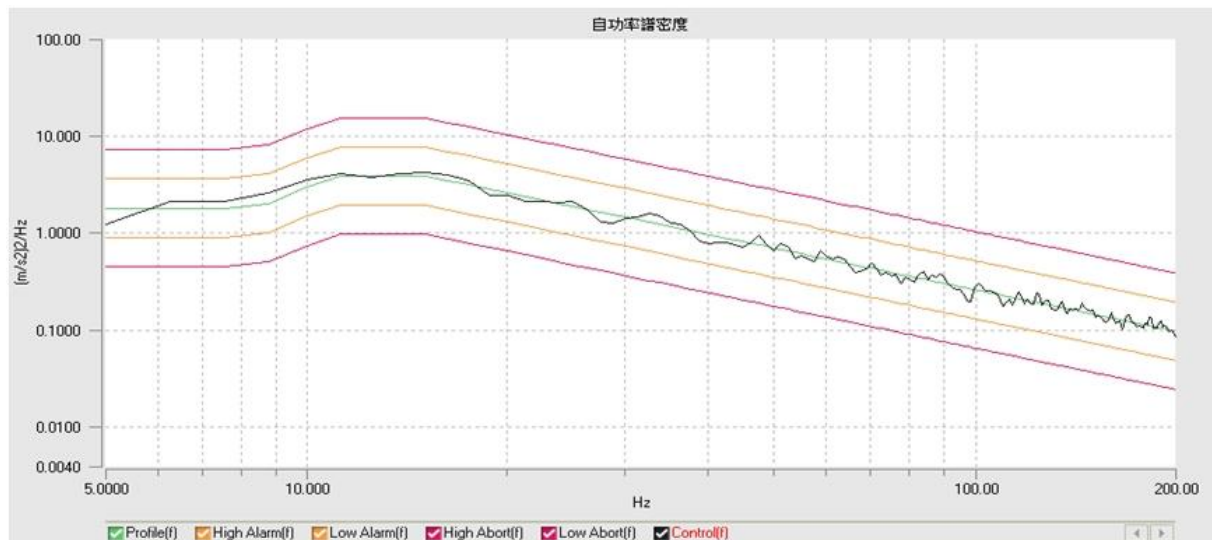
1. IEC60068-2-64: 2019 Testing procedures Test Fh: Vibration broadband random test.
2. The test condition is referenced from B+B for the PD request. (Refer to ICR-3200)

### Test Condition:

1. Test mode: Operation
2. Test Frequency range: 5 - 200 Hz
3. Test Parameters:

Frequency range (Hz)	ASD [ $(\text{m/s}^2)^2/\text{Hz}$ ]
5 Hz	1.86
8.4 Hz	1.86
11 Hz	4
15 Hz	4
200 Hz	0.1

4. Test Axis: X,Y and Z axis
5. Test Time: 1 hour
6. Test Vibration Curve :



*QA Lab Reliability test***Procedure:**

1. Confirm the quality-confirmation items at ambient temperature and humidity level.
2. Set up the EUT on vibration table to vibration simulator tester.
3. Set the test condition of vibration to the vibration simulator tester.
4. Run the test condition for 1 hour and check the EUT function during the test.
5. Repeat step 2 ~4 in X, Y and Z three different axis.
6. Running test program for EUT function check.

**Test Equipment:**

1. Vibration Simulator System
  - 1.1 SHINKEN Co. Ltd  
Model: G-0220NS  
S/N: SG-5707  
Due Date of Calibration: 2025/08/18  
Next Calibration Date: 2026/08/17
2. EKI-7712G-4FI \* 1
3. DC Source
4. KOHJINSHA laptop, Model: SX
5. ASUS laptop T100HA

**Performance Criteria:**

## Electronic function check:

1. The EUT shall continue to operate as intended during and after the test.
2. There should be no abnormalities, which could affect the product-specified functions and performances.

## Mechanical function check:

1. The connectors and components should work properly without any interference.
2. All screws should be tightened up appropriately.

**Test Result:**

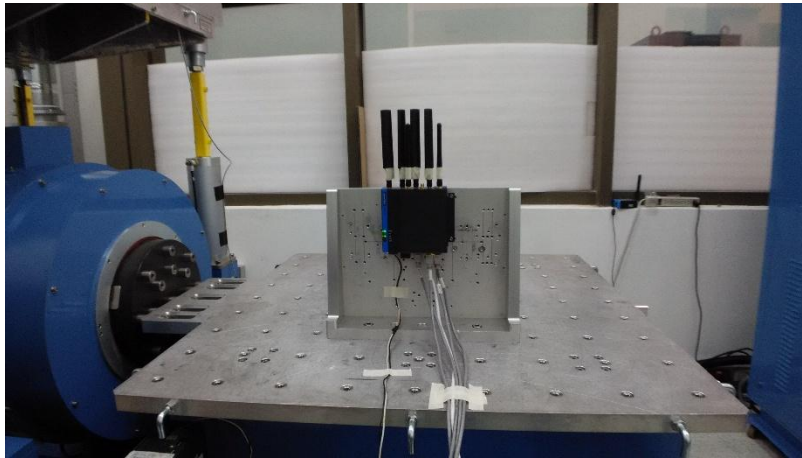
1. There is no damage in electronic and mechanical functions.
2. Performance is maintained with no incurable physical damage.

**Conclusion:**

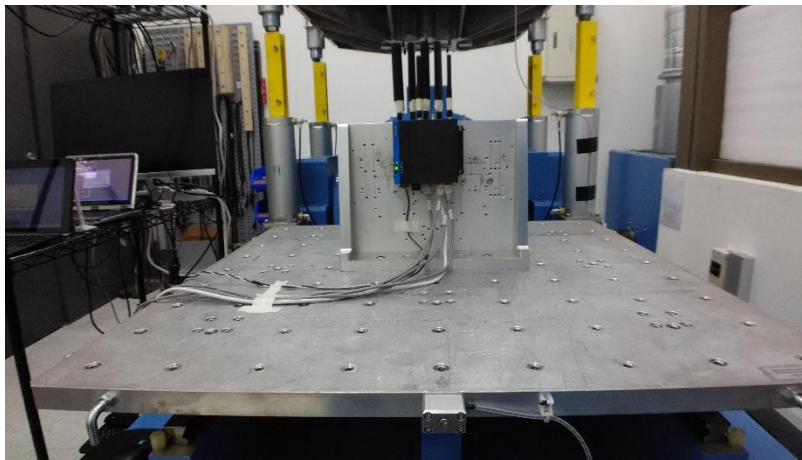
The ICR-1745W-EU meets Random Vibration Test.

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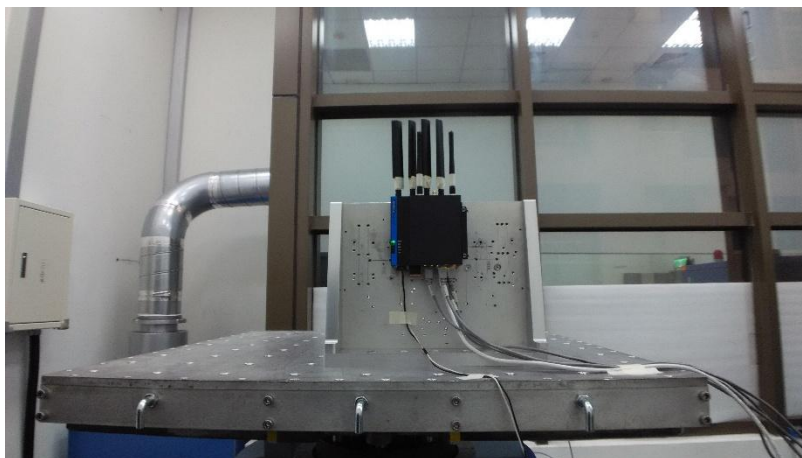
**Photo I:**



X axis



Y axis

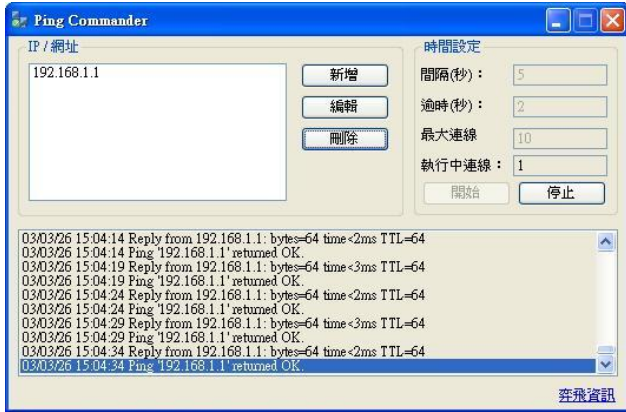


Z axis

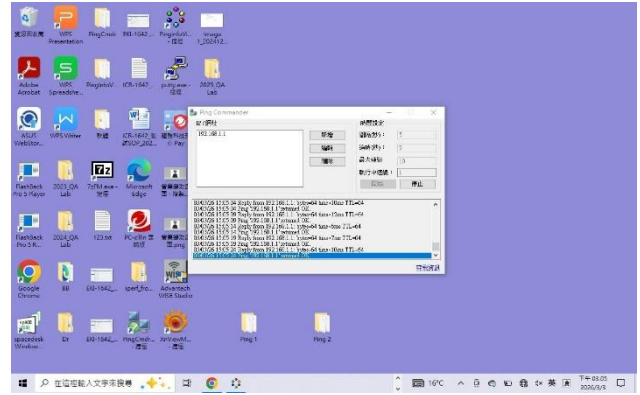
QA Lab Reliability test

● DC input 48V,

X -axis



Lan port function test

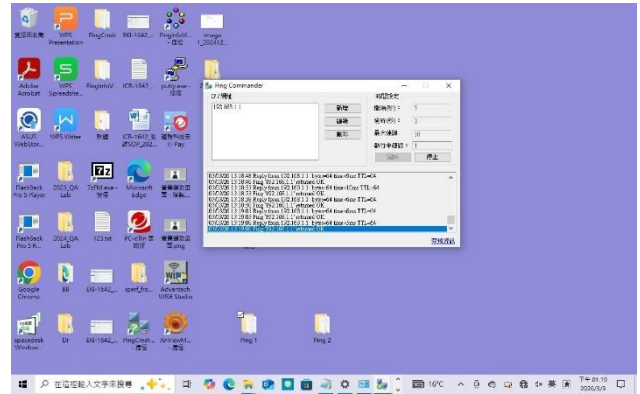


WiFi function test

Y -axis



Lan port function test

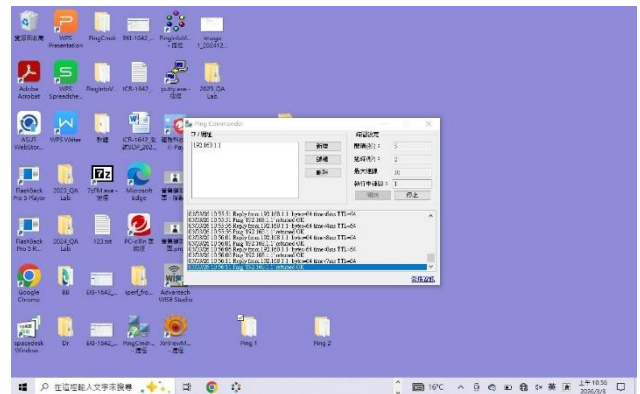


WiFi function test

Z -axis



Lan port function test



WiFi function test

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## 5. Shock Test

**Test Date:** March 03, 2026

**Test Site:** 1F, No. 33, Lane 365, Yangguang Street, Neihu District, Taipei 114, Taiwan (R.O.C)

**Performed By:** Jim Chou

**Purpose:** The verification test per customer's request.

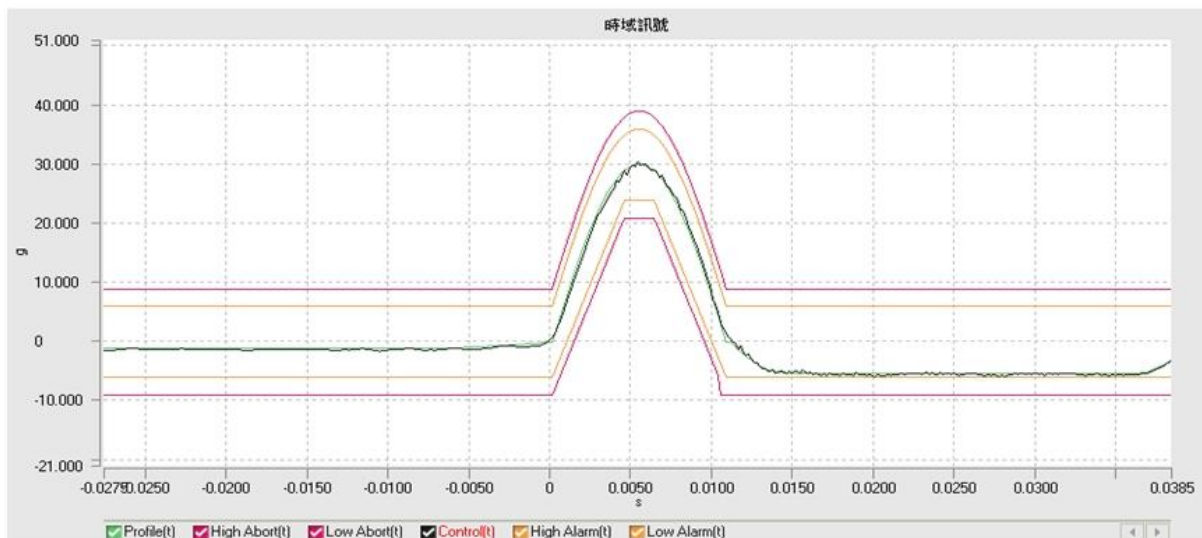
### Test Standard:

Please refer to the following documents:

1. IEC 60068-2-27: 2008, Testing procedures testing procedures Test Ea: Shock test.

### Test Condition:

1. Test mode: Operation
2. Test acceleration: 30G
3. Test pulse duration: 11 ms
4. Test direction ( Axis ) :  $\pm X$ ,  $\pm Y$  and  $\pm Z$  axis
5. Test Time: Three times each Axis
6. Test Vibration Curve:



### Procedure:

1. Confirm the quality-confirmation items at ambient temperature and humidity level.
2. Set up the EUT on Shock (or vibration) table.
3. Set the test condition of Shock to the shock tester or vibration simulator tester.
4. Start the shock testing.
5. Shock three times for each Axis shock test and check the EUT function

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during the testing.

6. Running Test Program for EUT function check.

**Test Equipment:**

1. Vibration Simulator System
  - 1.1 SHINKEN Co. Ltd  
Model: G-0220NS  
S/N: SG-5707  
Due Date of Calibration: 2025/08/18  
Next Calibration Date: 2026/08/17
2. EKI-7712G-4FI \* 1
3. DC Source
4. KOHJINSHA laptop, Model: SX
5. ASUS laptop T100HA

**Performance Criteria:**

Electronic function check:

- 1 The EUT shall continue to operate as intended during and after the test.
- 2 There should be no abnormalities, which could affect the product-specified functions and performances.

Mechanical function check:

1. The connectors and components should work properly without any interference.
2. All screws should be tightened up appropriately.

**Test Result:**

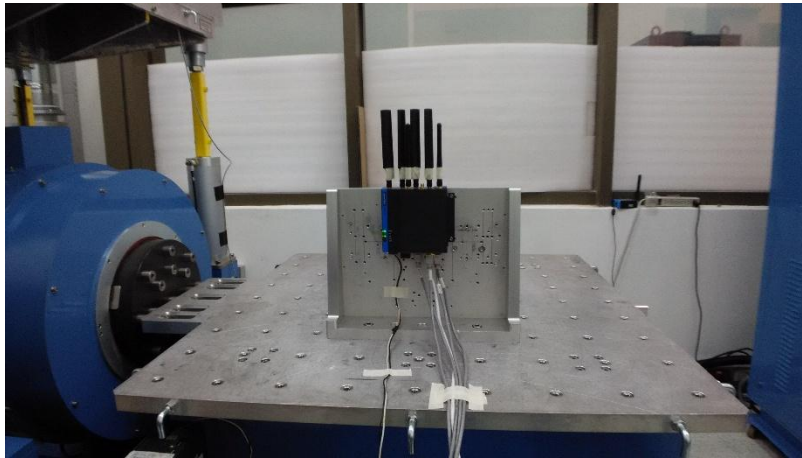
1. There is no damage in electronic and mechanical functions.
2. Performance is maintained with no incurable physical damage.

**Conclusion:**

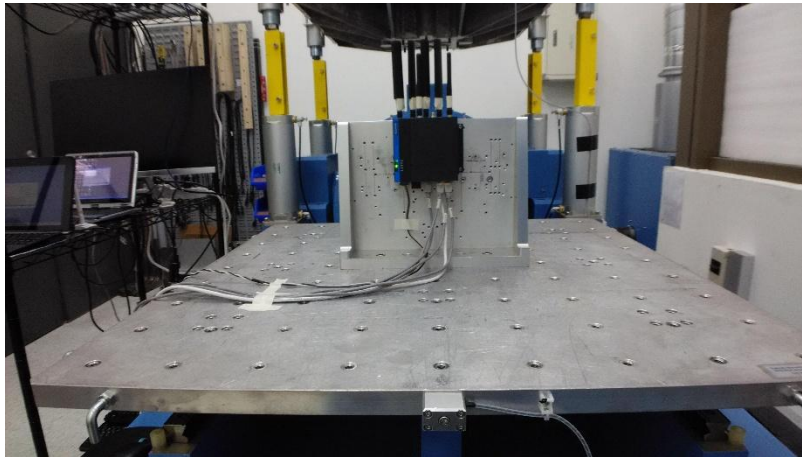
The ICR-1745W-EU meets Shock Test

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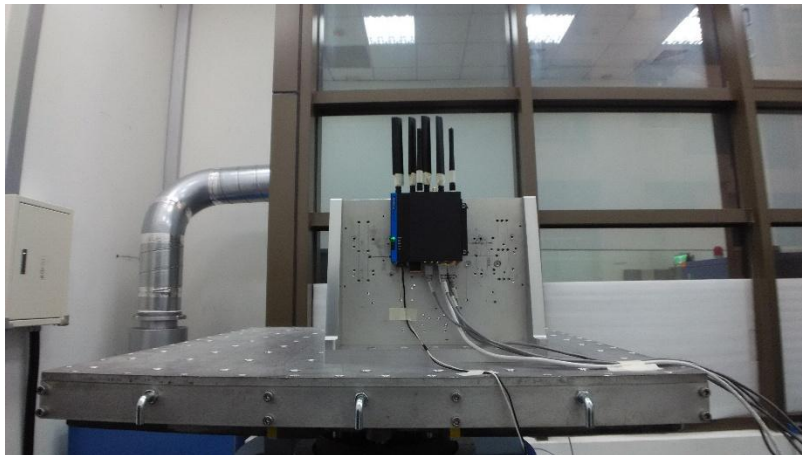
**Photo I:**



$\pm X$  axis



$\pm Y$  axis

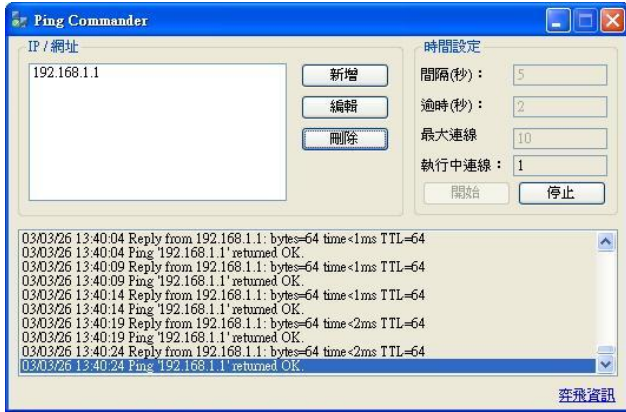


$\pm Z$  axis

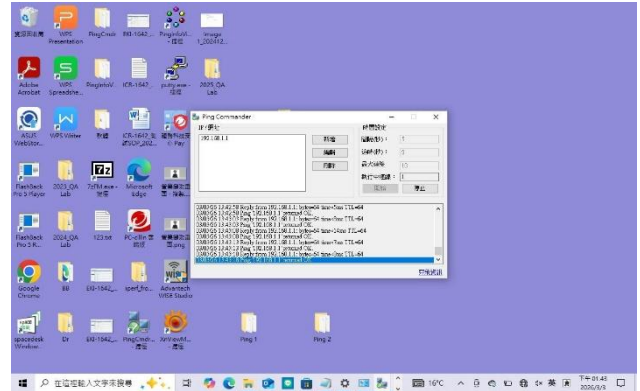
QA Lab Reliability test

● DC input 48V,

±X -axis



Lan port function test

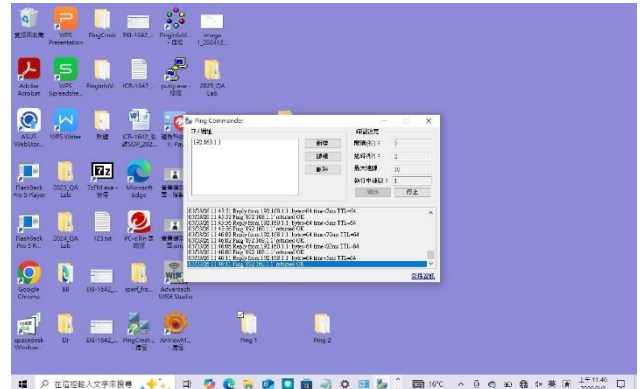


WiFi function test

±Y -axis



Lan port function test

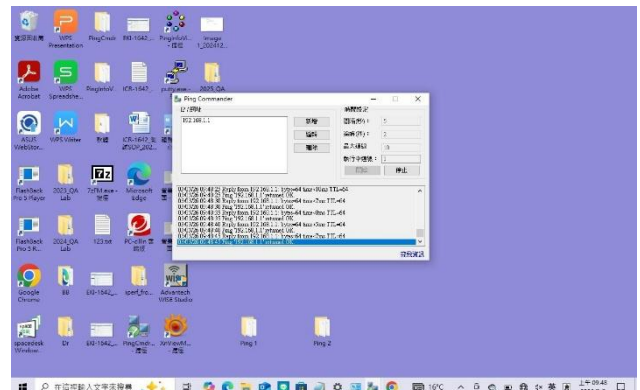


WiFi function test

±Z -axis



Lan port function test



WiFi function test

## 6. Package Drop Test

**Test Date:** February 12, 2026

**Test Site:** 1F, No. 33, Lane 365, Yangguang Street, Neihu District, Taipei 114, Taiwan (R.O.C)

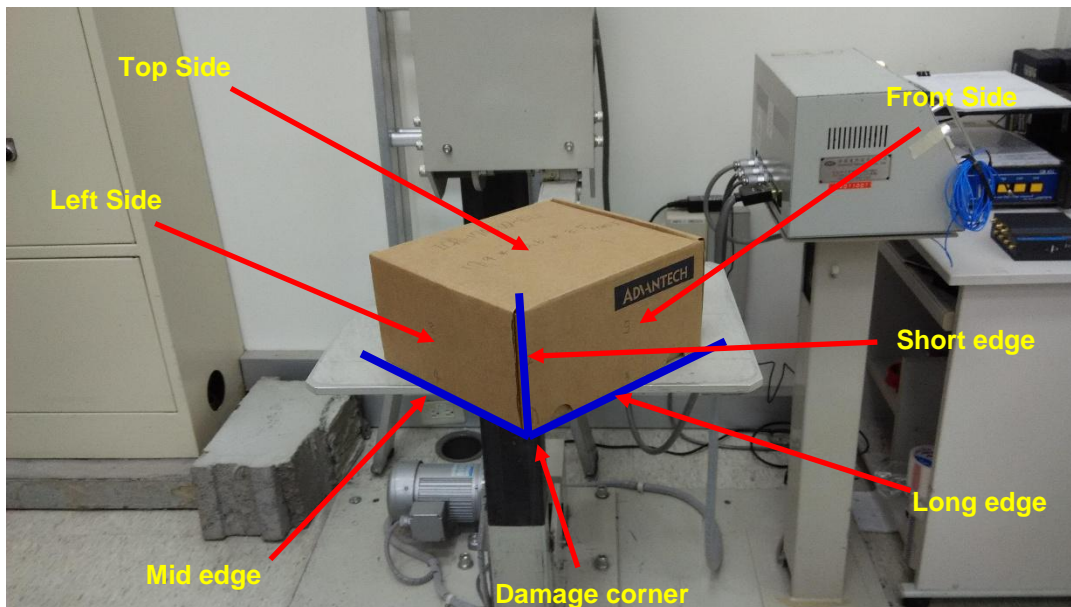
**Performed By:** Jim Chou

**Purpose:** The verification test per customer's request.

**Test Standard:** Reference Federal Standard 101 Method 5007 Testing procedure B

### Test Condition:

1. Test Phase: 1 corner  
3 edges  
6 faces
2. Test Height: 100cm
3. Package Weight: 0.91 kg
4. Package Dimension: 17.8 \* 15.6 \* 8.5cm (L\*W\*H)
5. Test Drawing:



### Procedure:

1. Check the functions and appearance of the EUT.
2. In the position where the product hits the floor; all the dropping sequence should be listed according to the following steps. Also, the EUT should be dropped one time in one orientation.
3. Dropping one corner.
4. Dropping three edges.
5. Dropping six faces

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6. Inspection EUT mechanical function has met specification.
7. After test, Power on for EUT function test.

**Test Equipment:** Drop Tester Machine  
YOSHIDA SEIKI Co. LTD.  
Model: DT-100B  
S/N: 2419

**Performance Criteria:**

Electronic function check:

1. The EUT shall continue to operate as intended after the test.
2. There should be no abnormalities, which could affect the product-specified functions and performances.

Mechanical function check:

1. The connectors and components should work properly without any interference.
2. All screws should be tightened up appropriately.

**Test Result:**

1. There is no damage in electronic and mechanical functions.
2. Performance is maintained with no incurable physical damage.

**Conclusion:**

The ICR-1745W-EU meets Package drop test.

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**Photo I:**



**Package drop test for one corner**



**Package drop test for three edges**



**Package drop test for six faces**



**Package photo**

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Photo II:

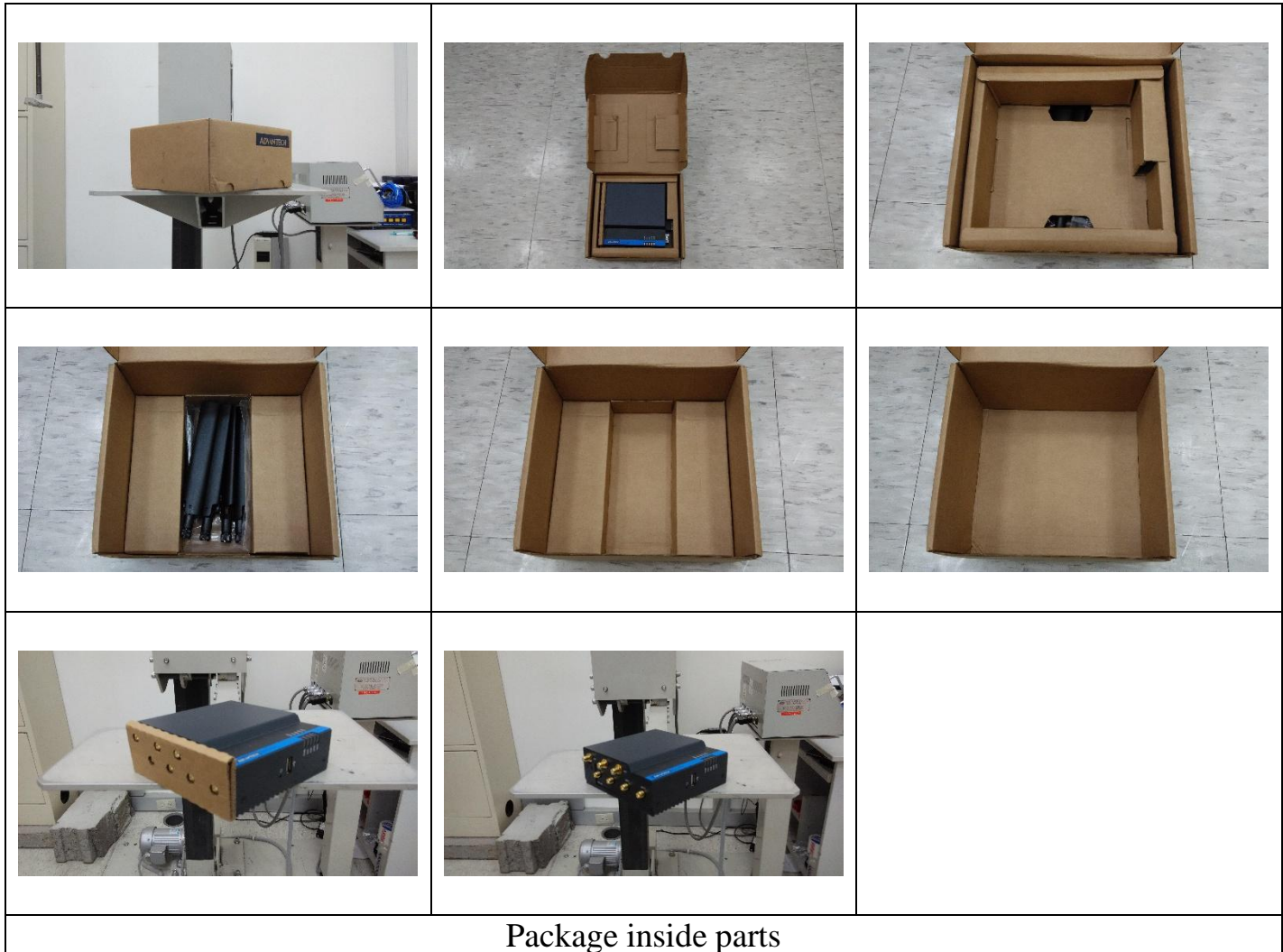
■ Before Package Drop Test



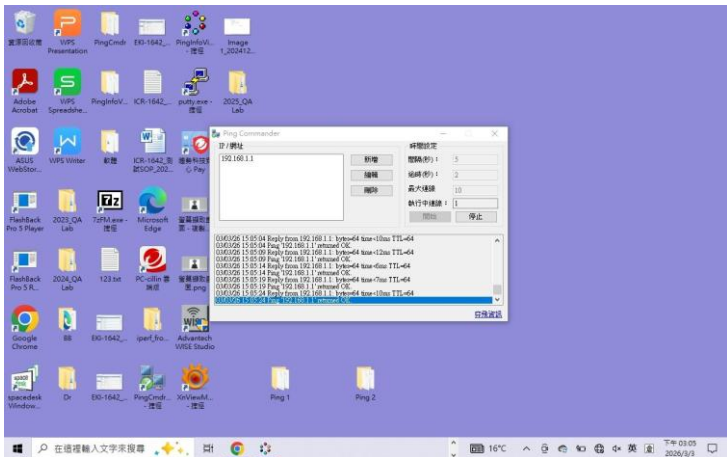
Package inside parts

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■ After Package Drop Test



QA Lab Reliability test  
Function test,  
● DC 48V



--- End of report ---

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