

TEST REPORT

Report No.: HC90065/2015
Page: 1 of 12
Date: September 18, 2015

VECOW CO., LTD.
12 F, NO. 111, ZHONGCHENG RD.,
TUCHENG DIST., NEW TAIPEI CITY,
TAIWAN, R.O.C.

The following merchandise was submitted and identified by the vendor as:

Product Description: High Performance Fanless In – Vehicle System
Style/ Item No.: IVH-7700-QRD/ No.1
Manufacturer/ Vendor: Vecow Co., Ltd.
Country of Origin: Taiwan
Quantity: Total 1 set
Testing Period: Sep. 14, 2015 to Sep. 17, 2015

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.)

1. High Temperature/ Humidity Test
2. Low Temperature Test
3. Random Vibration Test
4. Mechanical Shock Test

Test Results: – PLEASE SEE ATTACHED SHEETS –

Signed for and on behalf of
SGS TAIWAN Ltd.



Hank Chiou
Supervisor

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1. High Temperature/ Humidity Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature and Humidity Chamber	KSON	THS-C4T-150	2806

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Method/ Specification:

Sample Condition: Operating (Power on)

Test temperature: 85°C

Test humidity: 95%RH

Test duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen(s) with monitor and mouse separately then turn on the power of specimen(s), examine whether the booting function of specimen(s) could be work normally or not.

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Specimen:

Style/ Item No.: IVH-7700-QRD / No.1

Quantity: Total 1 set

Test Result:

Check Item	Appearance check (Visual check)	Functional check
Style/ Item No. IVH-7700-QRD/ No.1	No visible damage	Normal

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2. Low Temperature Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature and Humidity Chamber	KSON	THS-D6TS-150+LN2	A0494

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Method/ Specification:

Sample Condition: Operating (Power on)

Test temperature: -40°C

Test duration: 16 hours

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen(s) with monitor and mouse separately then turn on the power of specimen(s), examine whether the booting function of specimen(s) could be work normally or not.

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Specimen:

Style/ Item No.: IVH-7700-QRD / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
	IVH-7700-QRD/ No.1		No visible damage

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3. Random Vibration Test:

Test Equipment:

Name	Brand	Model	Serial No.
Vibration Tester	King Design	EM-5000F2K-75N600	10923742
Controller	Crystal	spider	1001664
Control Accelerometer	WR	793-6	A4632

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Method/ Specification:

Sample condition: Operating (Power on)

Wave form: Random

Frequency: (5 ~ 500) Hz

Frequency (Hz)	Left Slope (dB/Oct.)	PSD (G^2/Hz)	Right Slope (dB/Oct.)
5	-	0.05	0
500	0	0.05	-
⇨ equivalent to 5.0 Grms			

Direction: X, Y, Z axes (see photo 5 ~ 7)

Duration: 30 minutes/ axis

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen(s) with monitor and mouse separately then turn on the power of specimen(s), examine whether the booting function of specimen(s) could be work normally or not.

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Specimen:

Style/ Item No.: IVH-7700-QRD/ No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
IVH-7700-QRD/ No.1		No visible damage	Normal

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4. Mechanical Shock Test:

Test Equipment:

Name	Brand	Model	Serial No.
Shock Testing System	LANSMONT	65-81 TTSII	M-13418
Data Acquisition and Analysis System	LANSMONT	103570-2-B	0503-73
ICP Accelerometer	PCB	353B14	79347

Lab Environmental Conditions:

Ambient temperature: $(25 \pm 3) ^\circ\text{C}$

Ambient humidity: $(55 \pm 20) \% \text{RH}$

Test Method/ Specification:

Specimen Condition: Operating (Power on)

Pulse shape: Half-sine

Acceleration: 50 G

Velocity Change: 11 ms

Shock direction: 6 faces ($\pm X$, $\pm Y$, $\pm Z$ axes, see photo 8 ~ 13)

No. of shock: 1 shock/ face (total 6 shocks)

- Examine the appearance of specimen(s) by visual check and perform functional check after this test
- Functional check: Connect the specimen(s) with monitor and mouse separately then turn on the power of specimen(s), examine whether the booting function of specimen(s) could be work normally or not.

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Specimen:

Style/ Item No.: IVH-7700-QRD/ No.1







Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
IVH-7700-QRD/ No.1		No visible damage	Normal

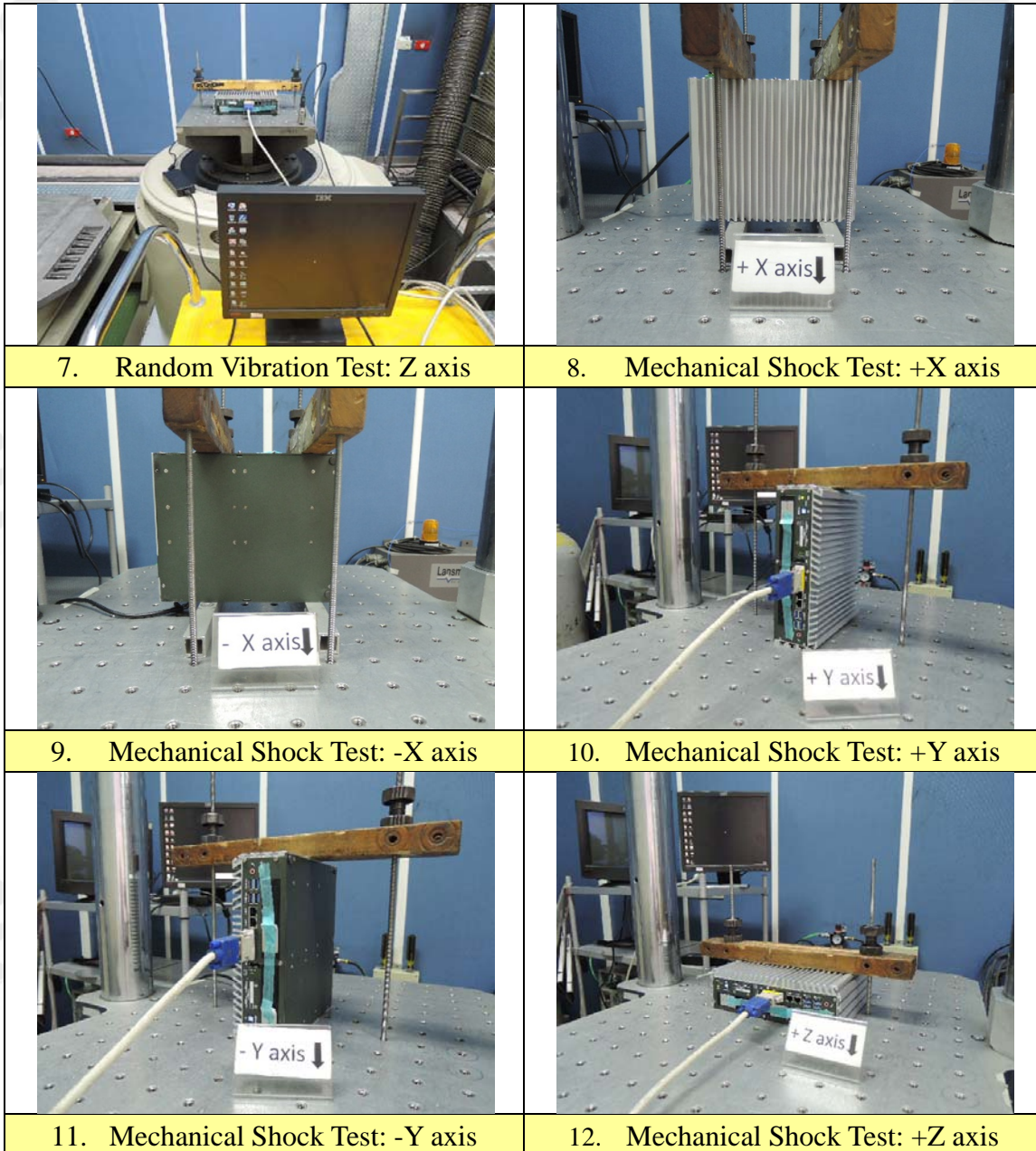
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Test Photos:

	
<p>1. Appearance of specimen</p>	<p>2. Appearance of specimen</p>
	
<p>3. High Temperature/ Humidity Test</p>	<p>4. Low Temperature Test</p>
	
<p>5. Random Vibration Test: X axis</p>	<p>6. Random Vibration Test: Y axis</p>

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Test Photos--Continued:

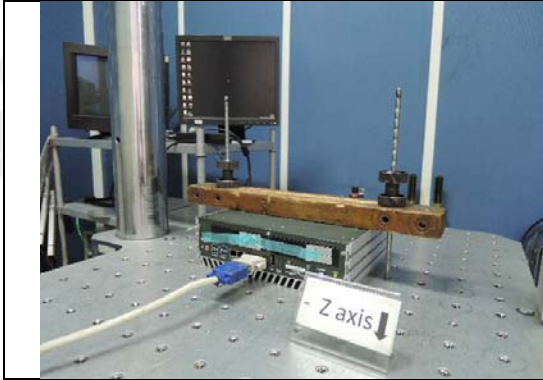


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13. Mechanical Shock Test: -Z axis



14. Functional check

— — —The End of Test Report — — —

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