

TEST REPORT

Report No.: HC10056/2016

Page: 1 of 12

Date: January 19, 2016

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: Ultra-Compact Embedded System
Style/ Item No.: ECS-4000-POE/ No.1
Manufacturer/ Vendor: Vecow Co., Ltd.
Country of Origin: Taiwan
Quantity: Total 1 set
Testing Period: Jan. 13, 2016 to Jan. 18, 2016

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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TEST REPORT

Report No.: HC10056/2016

Page: 2 of 12

1. High Temperature/ Humidity Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature and Humidity Chamber	KSON	THS-D6TS-150+LN2	6155KT

Lab Environmental Conditions:

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

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

Test Method/ Specification:

Test Method: Refer to IEC 60068-2-78, Edition 2.0:2012

Sample Condition: Operating

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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TEST REPORT

Report No.: HC10056/2016

Page: 3 of 12

Specimen:

Style/ Item No.: ECS-4000-POE / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
ECS-4000-POE/ No.1		No visible damage	Normal

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TEST REPORT

Report No.: HC10056/2016

Page: 4 of 12

2. Low Temperature Test:

Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature and Humidity Chamber	KSON	THS-D6TS-150+LN2	6155KT

Lab Environmental Conditions:

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

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

Test Method/ Specification:

Test Method: Refer to IEC 60068-2-1, Edition 6.0:2007

Sample Condition: Operating

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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TEST REPORT

Report No.: HC10056/2016

Page: 5 of 12

Specimen:

Style/ Item No.: ECS-4000-POE / No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
	ECS-4000-POE/ No.1		No visible damage

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TEST REPORT

Report No.: HC10056/2016

Page: 6 of 12

3. Random Vibration Test:

Test Equipment:

Name	Brand	Model	Serial No.
Vibration Test System	King Design	EM-800F2K-50N120	RU104080389
Controller	Dactron	COMET 200	10539718
Control Accelerometer	PCB	353B34	139174

Lab Environmental Conditions:

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

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

Test Method/ Specification:

Test Method: Refer to IEC 60068-2-64, Edition 2.0:2008

Sample condition: Operating

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.

TEST REPORT

Report No.: HC10056/2016

Page: 7 of 12

Specimen:

Style/ Item No.: ECS-4000-POE/ No.1

Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
ECS-4000-POE/ No.1		No visible damage	Normal

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TEST REPORT

Report No.: HC10056/2016

Page: 8 of 12

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:

Test Method: Refer to IEC 60068-2-27, Edition 4.0:2008

Specimen Condition: Operating

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.

TEST REPORT

Report No.: HC10056/2016

Page: 9 of 12

Specimen:

Style/ Item No.: ECS-4000-POE/ No.1







Quantity: Total 1 set

Test Result:

Style/ Item No.	Check Item	Appearance check (Visual check)	Functional check
ECS-4000-POE/ No.1		No visible damage	Normal

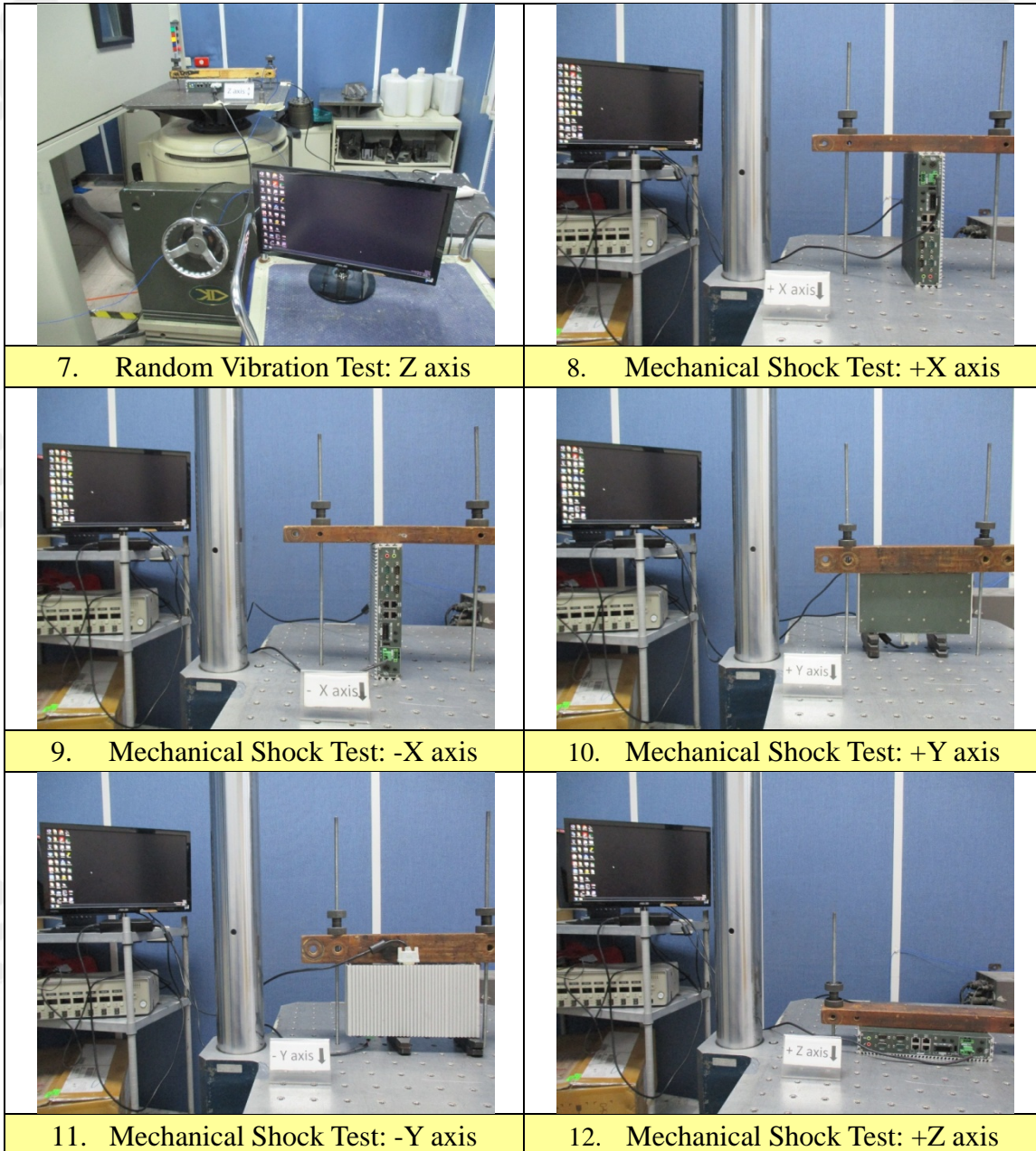
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Test Photos:

	
<p>1. Appearance of specimen</p>	<p>2. Appearance of specimen</p>
	
<p>3. High Temperature/ Humidity Test Low Temperature Test</p>	<p>4. High Temperature/ Humidity Test 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:

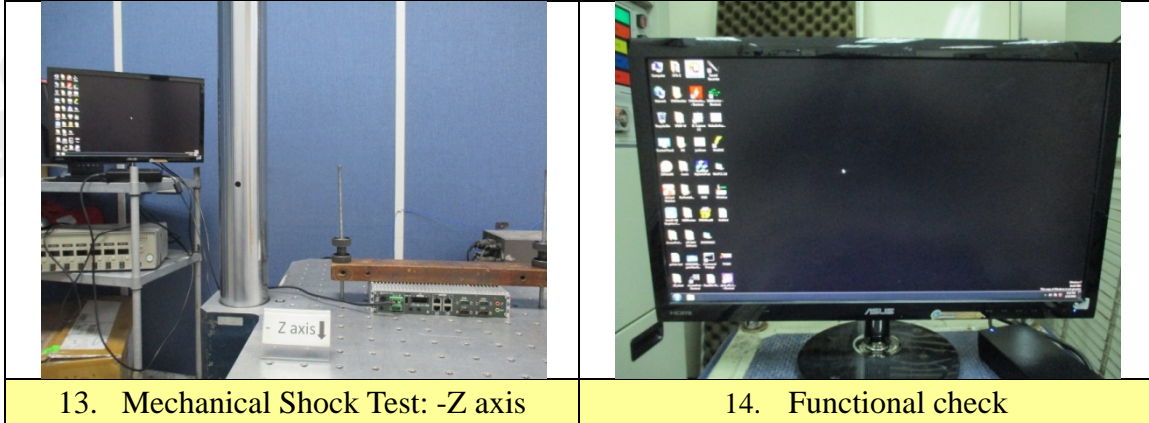


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TEST REPORT

Report No.: HC10056/2016

Page: 12 of 12



13. Mechanical Shock Test: -Z axis

14. Functional check

— — —The End of Test Report — — —

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