

Report No.: HC30037A/2022

Page: 1 of 11

Date: March 23, 2022

VECOW CO., LTD. 3F., NO. 10, JIANKANG RD., ZHONGHE DIST., NEW TAIPEI CITY, TAIWAN

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

<u>Product Description:</u> AI computing System

Style/ Item No.: MIG-2000/ No.1;

MIG-2000 (NVIDIA RTX 2080)/ No.2

Quantity: Total 2 pieces

Testing Period: Mar. 7, 2022 to Mar. 15, 2022

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 Test

2. Low Temperature Test

3. Vibration Test

4. Mechanical Shock Test

Test Results: - PLEASE SEE ATTACHED SHEETS -

\*HC30037/2022, dated on March 16, 2022, is hereby canceled and replaced by HC30037A/2022.

Signed for and on behalf of SGS TAIWAN Ltd.

Alex Chen Asst. Supervisor



Report No.: HC30037A/2022

Page: 2 of 11

#### 1. High Temperature Test:

## Test Equipment:

Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	KSON	THS-D6TS-150+LN2	A0347

#### Lab Environmental Conditions:

Ambient temperature:  $(25 \pm 3)$  °C

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

**Test Location:** No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District,

New Taipei City, Taiwan.

#### Test Method/ Specification:

Test Method: IEC 60068-2-2, Edition 5.0: 2007 and client's request

Test Temperature: 60 °C 95 % RH Test Humidity: Test duration: 16 hours

- Sample condition: Operating.
- Examine the appearance of specimen by visual check and perform functional check after this test.
- Functional Check: Turn on the power of specimen(s) then examine whether the booting function of specimen(s) could be work normally or not.



Report No.: HC30037A/2022

Page: 3 of 11

Specimen:

Style/ Item No.: MIG-2000/ No.1

Quantity: Total 1 piece

Test Result:

Check Item Style/ Item No.	Appearance Check (Visual check)	Functional check
MIG-2000/ No.1	No visible damage	Normal

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/terms-and-Conditions">www.sgs.com/en/terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions</a> in the imitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

\*\*Pollability Laboratory No 31 Wit Characony No 31



Report No.: HC30037A/2022

Page: of 11

#### 2. Low Temperature Test:

#### **Test Equipment:**

Name	Brand	Model	Serial No.
Programmable Temperature & Humidity Chamber	KSON	THS-D6TS-150+LN2	A0347

#### Lab Environmental Conditions:

Ambient temperature:  $(25 \pm 3)$  °C

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

**Test Location:** No.31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District,

New Taipei City, Taiwan.

#### Test Method/ Specification:

IEC 60068-2-1, Edition 6.0: 2007 and client's request Test Method:

Test Temperature: -25 °C Test duration: 16 hours

- Sample condition: Operating.
- Examine the appearance of specimen by visual check and perform functional check after this test.
- Functional Check: Turn on the power of specimen(s) then examine whether the booting function of specimen(s) could be work normally or not.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/w/Terms-and-Conditions">www.sgs.com/w/Terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document,">www.sgs.com/w/Terms-and-Conditions</a> and, for electronic format documents, which is document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Reliability Laboratory/ No.31, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan



Report No.: HC30037A/2022

Page: of 11

Specimen:

Style/ Item No.: MIG-2000/ No.1

Quantity: Total 1 piece

Test Result:

Check Item Style/ Item No.	Appearance Check (Visual check)	Functional check
MIG-2000/ No.1	No visible damage	Normal

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/en/terms-and-Conditions">www.sgs.com/en/terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document">www.sgs.com/en/terms-and-Conditions</a> in the imitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

\*\*Pollability Laboratory No 31 Wit Characony No 31



Report No.: HC30037A/2022

Page: 11 of

#### 3. Vibration Test:

Test Equipment:

Name	Brand	Model	Serial No.
Vibration Test System	IMV	J260/SA7M	14101899
Controller	IMV	K2+	14101899
Control Accelerometer	PCB	353B34	LW228240
Vibration Tester	King Design	EM-5000F2K-75N600	WR109237101
Controller	Crystal	spider	1001664
Control Accelerometer	PCB	353B34	35618

## Lab Environmental Conditions:

Ambient temperature:  $(25 \pm 3)$  °C Ambient humidity:  $(55 \pm 20)$  % RH

No.31 & No.33, Wu Chyuan Road, New Taipei Industrial Park, WuKu **Test Location:** 

District, New Taipei City, Taiwan.

#### Test Method/ Specification:

Test Method: IEC 61373, Edition 2.0: 2010, Table 1, Class B - Body mounted

Wave form: Random Frequency:  $(5 \sim 150) \text{ Hz}$ 

Transver	se - X axis	Longitudinal - Y axis		Vertical - Z axis	
Frequency (Hz)	PSD (m <sup>2</sup> /s <sup>3</sup> )	Frequency (Hz)	PSD (m <sup>2</sup> /s <sup>3</sup> )	Frequency (Hz)	PSD (m <sup>2</sup> /s <sup>3</sup> )
5	0.0060	5	0.0144	5	0.0301
20	0.0060	20	0.0144	20	0.0301
150	0.00010814	150	0.0002595	150	0.00054254
equivale	ent to $0.44 \text{ (m/s}^2)\text{rms}$	equivaler	nt to $0.68  (m/s^2)  rms$	—\ equivaler	of to $0.99  (m/s^2)  rms$

Direction: X, Y, Z axes (as show in photo  $3 \sim 5$ )

Test duration: 30 minutes/axis

- Sample condition: Operating.
- Examine the appearance of specimen by visual check and perform functional check after this test.
- Functional check: Turn on the power of specimen then execute the test program "Burn-In Test" and "3D Mark" while performing functional check.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.gs.com/tw/Terms-and-Conditions">www.gs.com/tw/Terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.gs.com/ten/terms-and-conditions/terms-e-document">www.gs.com/ten/terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.gs.com/ten/terms-and-conditions/terms-e-document">www.gs.com/ten/terms-and-Conditions</a> and, for electronic format document, Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document its advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if advised the company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. unlawful and offenders may be prosecuted to the fullest extent of the law

Reliability Laboratory/ No.31, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan SGS Taiwan Ltd



Report No.: HC30037A/2022

Page: of 11

Specimen:

Style/ Item No.: MIG-2000 (NVIDIA RTX 2080)/ No.2

Quantity: Total 1 piece

Test Result:

Check Item Style/ Item No.	Appearance Check (Visual check)	Functional check
MIG-2000 (NVIDIA RTX 2080)/ No.2	No visible damage	Normal



Report No.: HC30037A/2022

Page: 8 of 11

#### 4. Mechanical Shock Test:

#### **Test Equipment:**

Name	Brand	Model	Serial No.
Vibration Tester	King Design	EM-5000F2K-75N600	WR109237101
Controller	Crystal	spider	1001664
Control Accelerometer	PCB	353B34	35618

#### Lab Environmental Conditions:

 $(25 \pm 3)$  °C Ambient temperature:

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

No. 31, Wu Chyuan Road, New Taipei Industrial Park, WuKu District, **Test Location:** 

New Taipei City, Taiwan

#### Test Method/ Specification:

Test Method: IEC 61373, Edition 2.0: 2010, Table 3, Class A and Class B - Body mounted

Pulse shape: Half-sine

Vertical-Z: 3 g; Acceleration:

> Transverse-X: 3 g; Longitudinal-Y: 5 g

Pulse duration: 30 ms

Shock direction: 6 faces ( $\pm X$ ,  $\pm Y$ ,  $\pm Z$  axes, see photo 3 ~ 5)

No. of shock: 3 shocks/ axis (total 18 shocks)

- Sample condition: Non-Operating
- Examine the appearance of specimen by visual check and perform functional check after this test.
- Functional check: Turn on the power of specimen then execute the test program "Burn-In Test" and "3D Mark" while performing functional check.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.gs.com/tw/Terms-and-Conditions">www.gs.com/tw/Terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.gs.com/ten/terms-and-conditions/terms-e-document">www.gs.com/ten/terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.gs.com/ten/terms-and-conditions/terms-e-document">www.gs.com/ten/terms-and-Conditions</a> and, for electronic format document, Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document its advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if advised the company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. unlawful and offenders may be prosecuted to the fullest extent of the law

Reliability Laboratory/ No.31, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan



Report No.: HC30037A/2022

Page: of 11

Specimen:

Style/ Item No.: MIG-2000 (NVIDIA RTX 2080)/ No.2

Quantity: Total 1 piece

Test Result:

Check Item Style/ Item No.	Appearance Check (Visual check)	Functional check
MIG-2000 (NVIDIA RTX 2080)/ No.2	No visible damage	Normal



**Reliability Laboratory** 

## **TEST REPORT**

Report No.: HC30037A/2022

Page: 10 of 11

## **Test Photos:**





Appearance of specimen

Appearance of specimen





High/ Low Temperature Test

High/ Low Temperature Test





Vibration Test (X axis)

Vibration Test (Y axis)



Report No.: HC30037A/2022

Page: 11 of 11

#### **Test Photos--Continued:**



Vibration Test (Z axis)



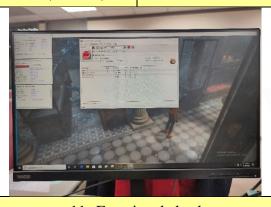
Mechanical Shock Test (±X axis)



Mechanical Shock Test (±Y axis)



10. Mechanical Shock Test (±Z axis)



11. Functional check

# The End of Test Report — — —

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. This test report cannot be reproduced, except in full, without prior written permission of the Company. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留 90 天。本報告未經本公司書面許可,不可部份複製。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <a href="https://www.sgs.com/w/Terms-and-Conditions">www.sgs.com/w/Terms-and-Conditions</a> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <a href="https://www.sgs.com/en/terms-and-conditions/terms-e-document.">www.sgs.com/en/terms-and-conditions/terms-e-document.</a> Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

\*\*Polishibity Laboratory/No 31 Wit Churan Pond New Tainel Industrial Park With District, New Tainel City, Taiwan

\*\*Polishibity Laboratory/No 31 Wit Churan Pond New Tainel Industrial Park With District, New Tainel City, Taiwan

Reliability Laboratory/ No.31, Wu Chyuan Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan

可靠度實驗室/新北市五股區新北產業園區五權路 31 號

t (886-2) 2299-3279 f (886-2) 2299-9558