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Test Report

Verified Code:201063

Report No.: H202409309799-01EN-G1

Customer: Casper Bilgisayar Sistemleri A.Ş.

Address: Fatih Sultan Mehmet Mahallesi Balkan Caddesi No:47 Casper Plaza Tepeüstü
Umraniye Istanbul Türkiye

Sample Name: AIO Computer

Sample Model: Nirvana A800 Serisi, Nirvana A900 Serisi

Receive
Sample Date: October 10, 2024

Test Date: October 11, 2024 - October 14, 2024

Reference
Document: MIL-STD-810H-2019

Test Result: Meet the requirements

Prepared by

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Reviewed by

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Approved by

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GRG METROLOGY & TEST GROUP CO., LTD.

Issued Date: 2024/10/24

APPROVED(04)

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H202409309799-01EN-G1



Statement

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5. The test report only used for scientific research, teaching, internal quality control and other purposes.
6. The function / performance test / compliance judgment of this report is not within the scope of our company CNAS approval.
7. This report H202409309799-01EN-G1 is the modification of report H202409309799-01EN. On the basis of the original report, the content of Fatih Sultan Mehmet Mah.Balkan Cad. No: 47 Ümraniye / İstanbul in page 1 is modified to Fatih Sultan Mehmet Mahallesi Balkan Caddesi No:47 Casper Plaza Tepeüstü Umraniye İstanbul Türkiye, and the original report H202403122883-09EN is invalid.

Test type	☒ Commissioning Test ☐ Routine test ☐ DV ☐ ECV ☐ PV ☐ OTS ☐ R&D test ☐ Others_____			
Sample Source	☒ Commissioned units send sample ☐ Others:			
Sample	Model	Quantity	Sample No.	Test No.
AIO Computer	Nirvana A800 Serisi	1 PC	/	H202409309799-0001
	Nirvana A900 Serisi	1 PC	/	H202409309799-0002
Sample Components and Accessories	Components: / Accessories: /			
Test with packaging or not	☐ Yes, Outer Packing _____ ☒ No			
Sample quality before test	☒ Conformity Product ☐ Non-conformity Product ☐ Prototype ☐ Others			
Abnormal condition of sample before test	No Abnormalities			
Environmental requirements	Temperature: 15.0℃~35.0℃ Relative Humidity: 25%~75% Atmospheric pressure: 86kPa~106kPa			
Test Address	GRG METROLOGY &TEST GROUP CO., LTD. No.10, Dafu Industrial Zone, Guanguang Road, Guanlan Subdistrict, Longhua District, Shenzhen, Guangdong, China.			

Summary of Test Information

No.	Item Name	Test Standard	Test Result	Page	Is it within the scope approved by CNAS
1	High temperature operating test	MIL-STD-810H-2019	Pass	Page5	Yes

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1 High Temperature Operating Test

1.1 Test Condition

According to MIL-STD-810H-2019 501.7 Procedure II

Test Item:5.2 High temperature method 501.7 Procedure II - operating

1.1.1 Test temperature: 33 °C~43 °C;

1.1.2 Test duration : 24hrs/cycle;

1.1.3 Test cycles : 3;

1.1.4 Temperate rate: 1 °C /min;

1.1.5 Unit is operational during test.

MIL-STD-810H
METHOD 501.7

Table 501.7-II. High temperature cycles, climatic category A2 - Basic Hot.^{1/}

Time of Day	Ambient Air Conditions		Induced (Storage and Transit) Conditions	
	Temperature ^{2/} °C (°F)	Humidity ^{2/} % RH	Temperature ^{2/} °C (°F)	Humidity ^{2/} % RH
0100	33 (91)	36	33 (91)	36
0200	32 (90)	38	32 (90)	38
0300	32 (90)	41	32 (90)	41
0400	31 (88)	44	31 (88)	44
0500	30 (86)	44	30 (86)	44
0600	30 (86)	44	31 (88)	43
0700	31 (88)	41	34 (93)	32
0800	34 (93)	34	38 (101)	30
0900	37 (99)	29	42 (107)	23
1000	39 (102)	24	45 (113)	17
1100	41 (106)	21	51 (124)	14
1200	42 (107)	18	57 (134)	8
1300	43 (109)	16	61 (142)	6
1400	43 (110)	15	63 (145)	6
1500	43 (110)	14	63 (145)	5
1600	43 (110)	14	62 (144)	6
1700	43 (109)	14	60 (140)	6
1800	42 (107)	15	57 (134)	6
1900	40 (104)	17	50 (122)	10
2000	38 (100)	20	44 (111)	14
2100	36 (97)	22	38 (101)	19
2200	35 (95)	25	35 (95)	25
2300	34 (93)	28	34 (93)	28
2400	33 (91)	33	33 (91)	33

^{1/} These cycles were obtained from AR 70-38, 1 August 1979 (see paragraph 6.1, reference c), and essentially conform to those in MIL-HDBK-310 and NATO STANAG 4370, AECTP 230 (paragraph 6.1, references a and b). These values represent typical conditions throughout a typical day in this climatic category. "Induced Conditions" are air temperature levels to which materiel may be exposed during storage or transit situations that are aggravated by solar loading, or during non-operating situations but in an operational configuration and not containerized.

^{2/} Humidity control during high temperature testing is generally not necessary. Use these values only in special cases where, for instance, it is known that high levels of temperature and low humidity may adversely affect your items.

^{3/} Data were originally recorded in °F and converted to °C. Hence, table data conversion may not be consistent.

Figure 1-1 Temperature test conditions

1.2 Sample Information

Sample information is shown in Table 1-1.

Table 1-1 Sample Information

Sample Name	Model	Quantity	Test No.	Comment
AIO Computer	Nirvana A800 Serisi	1 PC	H202409309799-0001	White
	Nirvana A900 Serisi	1 PC	H202409309799-0002	Black

1.3 Test Requirements

According to the client's requirements

1.3.1 Appearance requirements (Visual inspection): appearance should intact.

1.3.2 Function requirements:

- a) Power on the sample , it can work normally.
- b) The network port, TF card slot, USB port, and type-c port can be used normally.
- c) Microphone, headset, speaker, camera, wifi, Bluetooth function can be used normally.

1.3.3 Performance requirements: run the "burn-in" program for 15min. After the test, "TESTS PASSED" is displayed.

1.4 Test Result

The test result is shown in Table 1-2.

Table 1-2 Test Result

Test No.	Visual inspection	Before test	After test	Conclusion
H202409309799-0001	Appearance check	appearance should intact	Appearance intact	Meet the requirements
	Function check	a) Power on the sample , it can work normally. b) The network port, TF card slot, USB port, and type-c port can be used normally. c) Microphone, headset, speaker, camera, wifi, Bluetooth function can be used normally.	a) Power on the sample , it can work normally. b) The network port, TF card slot, USB port, and type-c port can be used normally. c) Microphone, headset, speaker, camera, wifi, Bluetooth function can be used normally.	
	Performance check	run the "burn-in" program for 15min. After the test, "TESTS PASSED" is displayed	run the "burn-in" program for 15min. After the test, "TESTS PASSED" is displayed	
H202409309799-0002	Appearance check	appearance should intact	appearance intact	Meet the requirements
	Function check	a) Power on the sample , it can work normally. b) The network port, TF card slot, USB port, and type-c port can be used normally. c) Microphone, headset, speaker, camera, wifi, Bluetooth function can be used normally.	a) Power on the sample , it can work normally. b) The network port, TF card slot, USB port, and type-c port can be used normally. c) Microphone, headset, speaker, camera, wifi, Bluetooth function can be used normally.	
	Performance check	run the "burn-in" program for 15min. After the test, "TESTS PASSED" is displayed	run the "burn-in" program for 15min. After the test, "TESTS PASSED" is displayed	

1.5 Test Photos



Fig.1-1 Before experiment - Appearance check (H202409309799-0001)



Fig.1-2 Pre-experiment - Functional check 1 (H202409309799-0001)



Fig.1-3 Pre-experiment - Functional check 2 (H202409309799-0001)

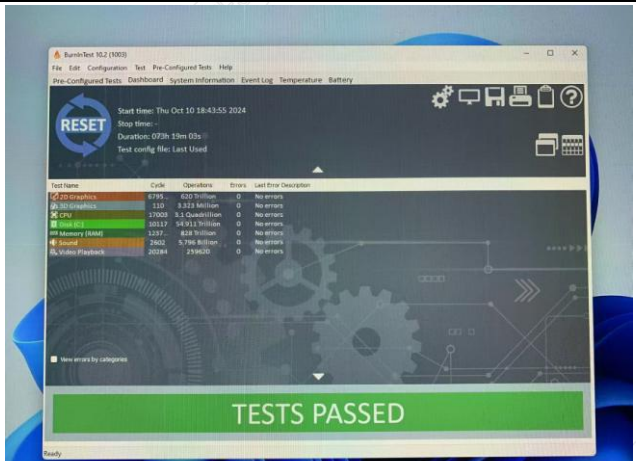


Fig.1-4 Pre-experiment - Functional check 3 (H202409309799-0001)

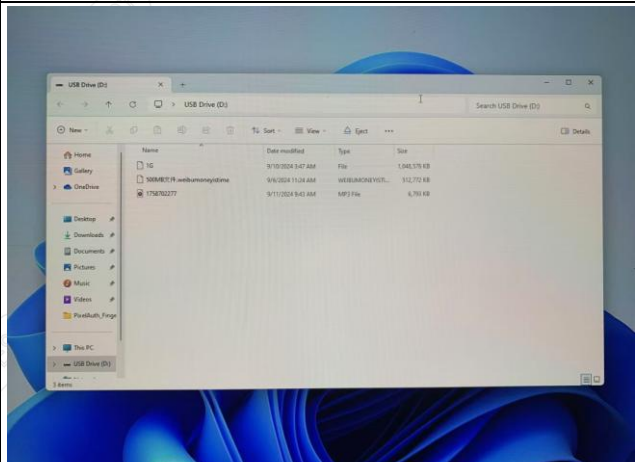


Fig.1-5 Pre-experiment - Functional check 4 (H202409309799-0001)

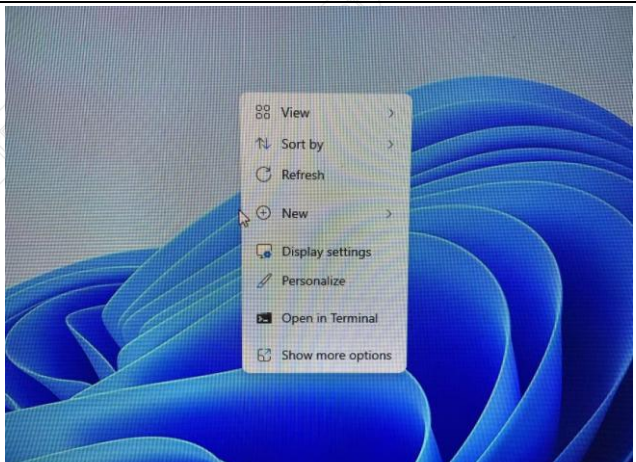


Fig.1-6 Pre-experiment - Functional check 5 (H202409309799-0001)

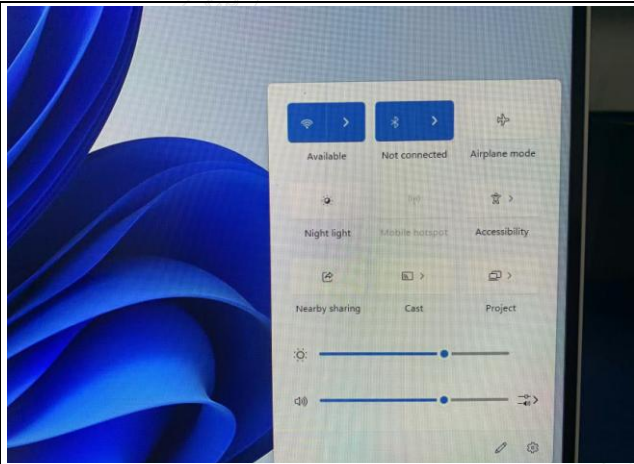


Fig.1-7 Pre-experiment - Functional check 6
(H202409309799-0001)

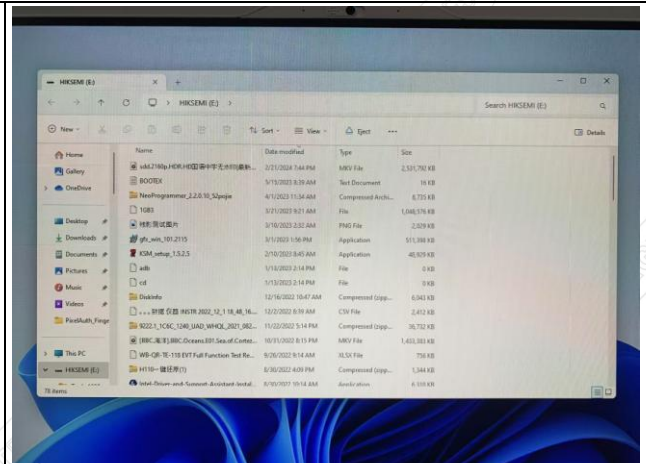


Fig.1-8 Pre-experiment - Functional check 7
(H202409309799-0001)

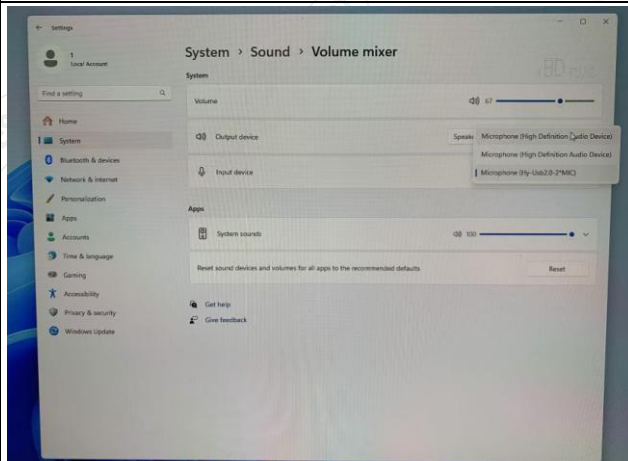


Fig.1-9 Pre-experiment - Functional check 8
(H202409309799-0001)

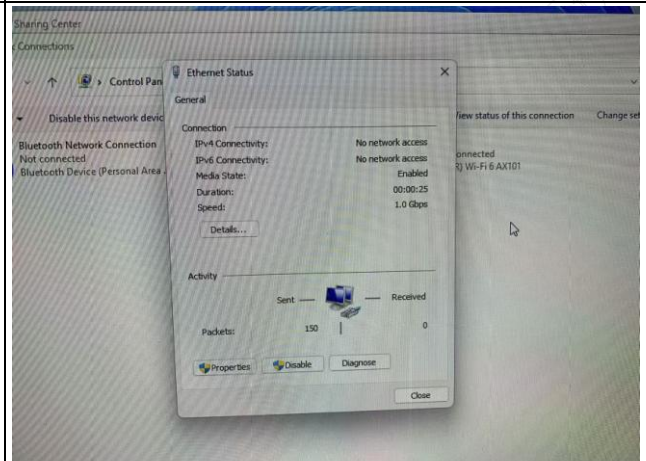


Fig.1-10 Pre-experiment - Functional check 9
(H202409309799-0001)



Fig.1-11 Pre-experiment - Functional check 10
(H202409309799-0001)

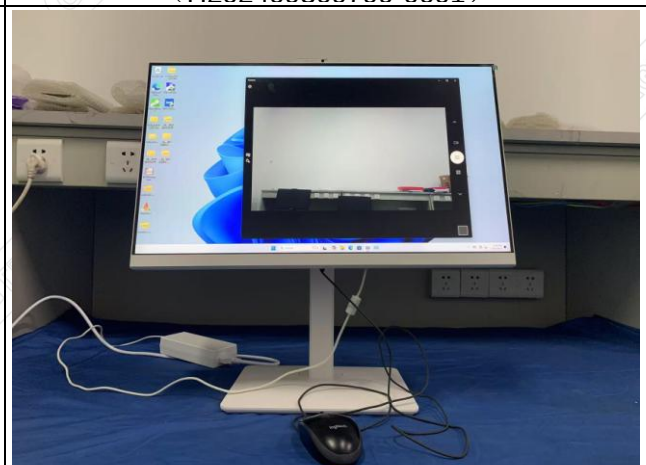


Fig.1-12 Pre-experiment - Functional check 11
(H202409309799-0001)

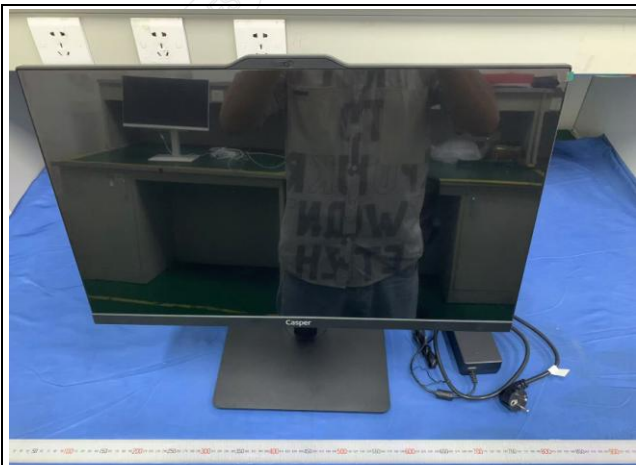


Fig.1-13 Before experiment - Appearance check
(H202409309799-0002)



Fig.1-14 Pre-experiment - Functional check 1
(H202409309799-0002)



Fig.1-15 Pre-experiment - Functional check 2
(H202409309799-0002)

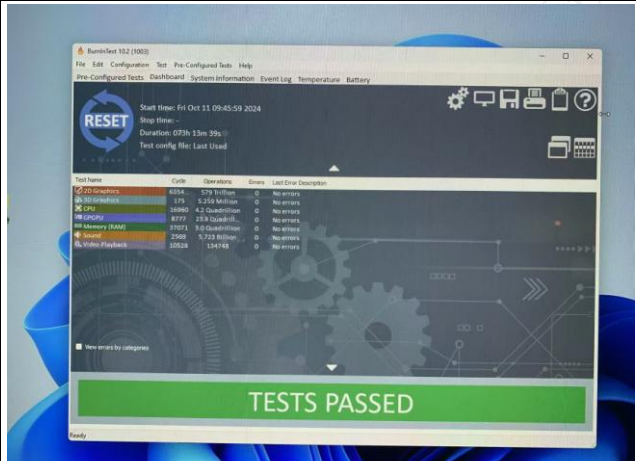


Fig.1-16 Pre-experiment - Functional check 3
(H202409309799-0002)

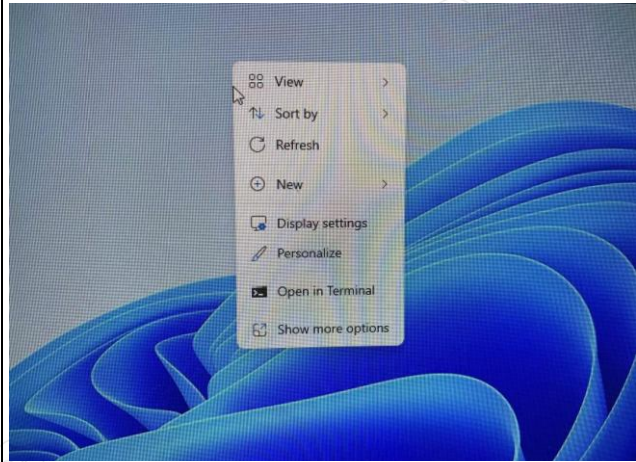


Fig.1-17 Pre-experiment - Functional check 4
(H202409309799-0002)

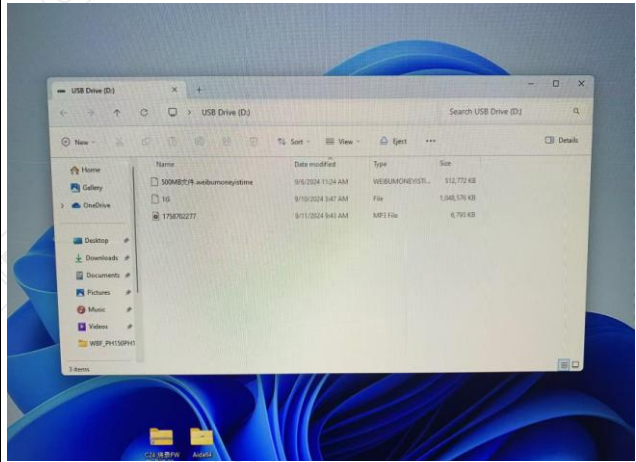


Fig.1-18 Pre-experiment - Functional check 5
(H202409309799-0002)

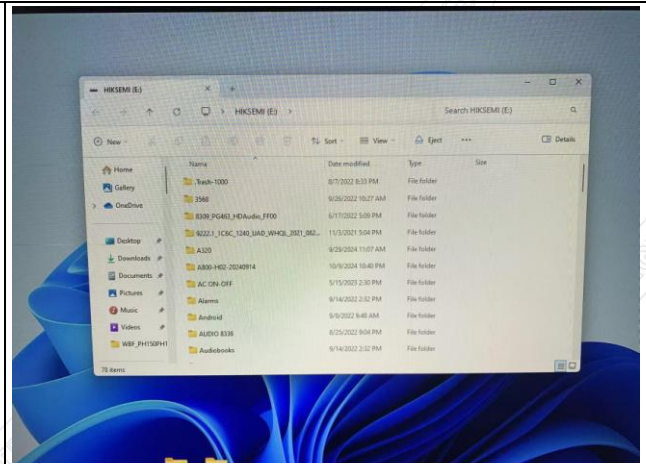


Fig.1-20 Pre-experiment - Functional check 7
(H202409309799-0002)

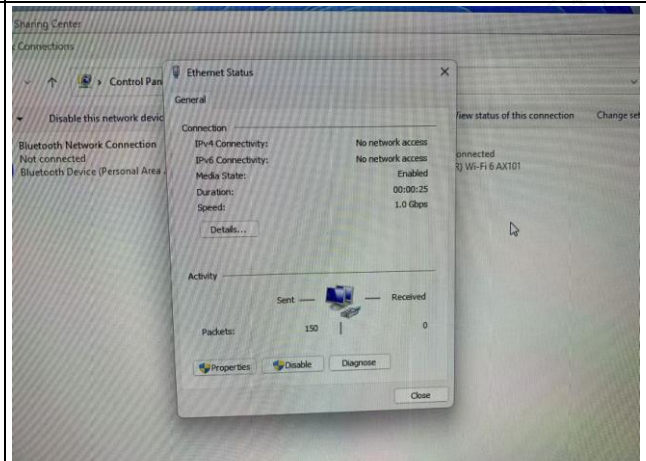


Fig.1-22 Pre-experiment - Functional check 9
(H202409309799-0002)



Fig.1-24 Pre-experiment - Functional check 11
(H202409309799-0002)

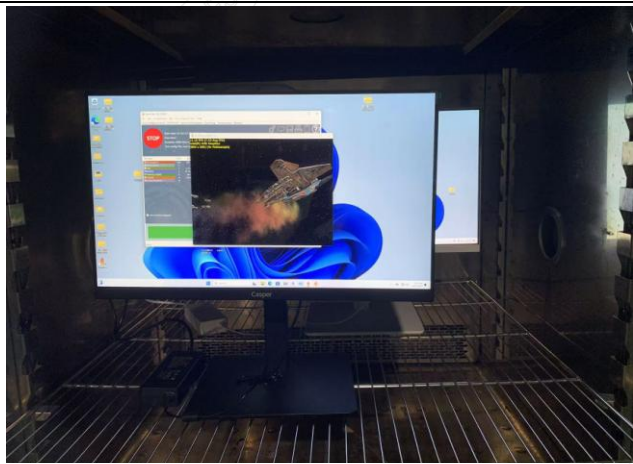


Fig.1-25 Erection plan

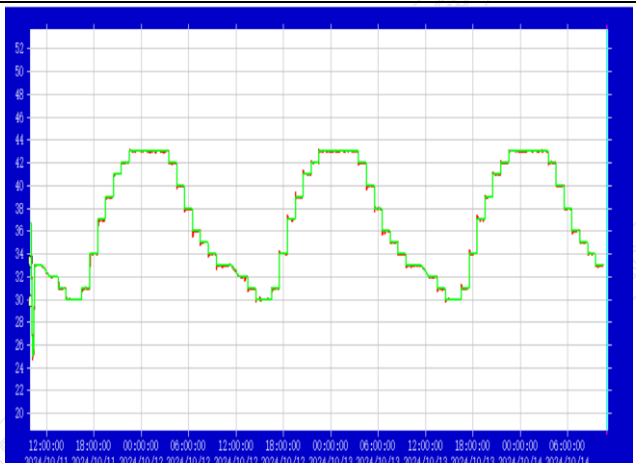


Fig.1-26 Temperature curve



Fig.1-27 After experiment - appearance check
(H202409309799-0001)



Fig.1-28 Post-experiment - Functional check 1
(H202409309799-0001)



Fig.1-29 Post-experiment - Functional check 2
(H202409309799-0001)

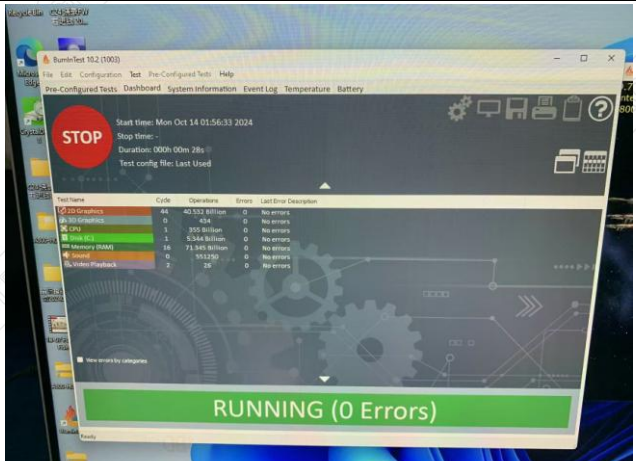


Fig.1-30 Post-experiment - Functional check 3
(H202409309799-0001)

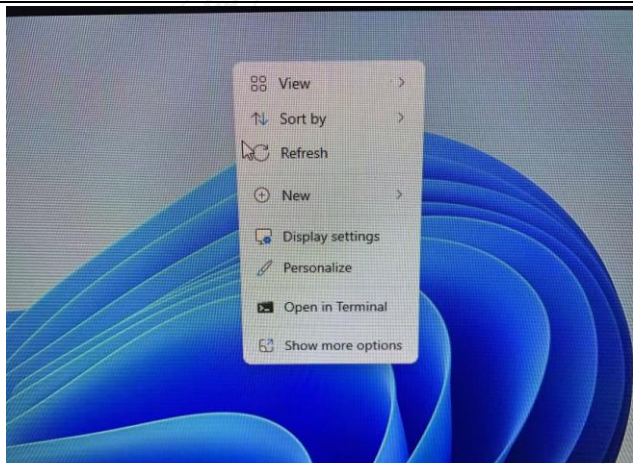


Fig.1-31 Post-experiment - Functional check 4
(H202409309799-0001)

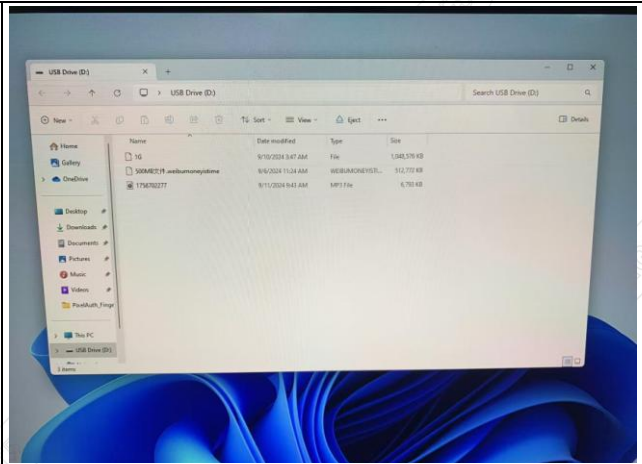


Fig.1-32 Post-experiment - Functional check 5
(H202409309799-0001)

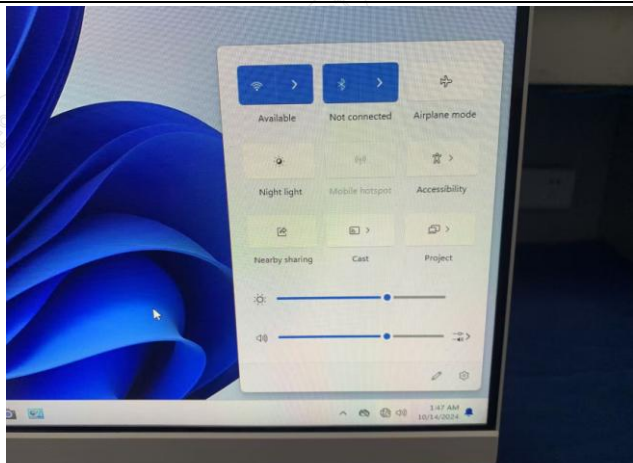


Fig.1-33 Post-experiment - Functional check 6
(H202409309799-0001)

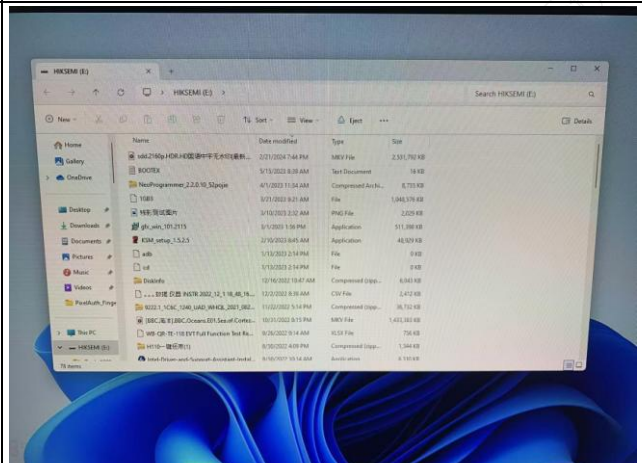


Fig.1-34 Post-experiment - Functional check 7
(H202409309799-0001)

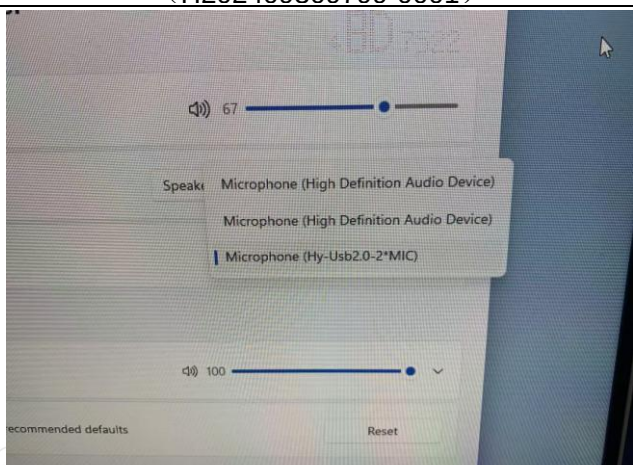


Fig.1-35 Post-experiment - Functional check 8
(H202409309799-0001)

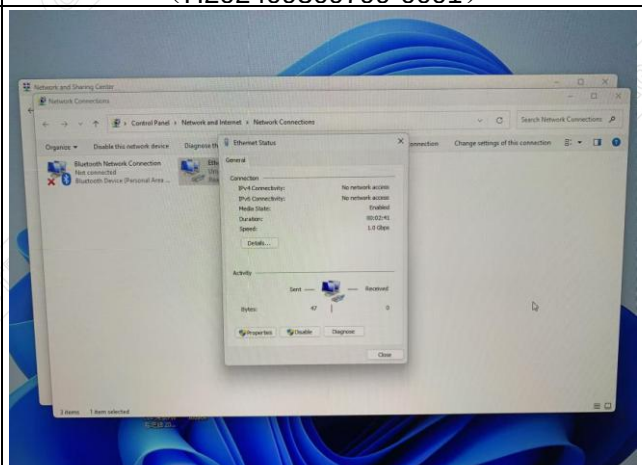


Fig.1-36 Post-experiment - Functional check 9
(H202409309799-0001)



Fig.1-37 Post-experiment - Functional check 10
(H202409309799-0001)



Fig.1-38 Post-experiment - Functional check 11
(H202409309799-0001)

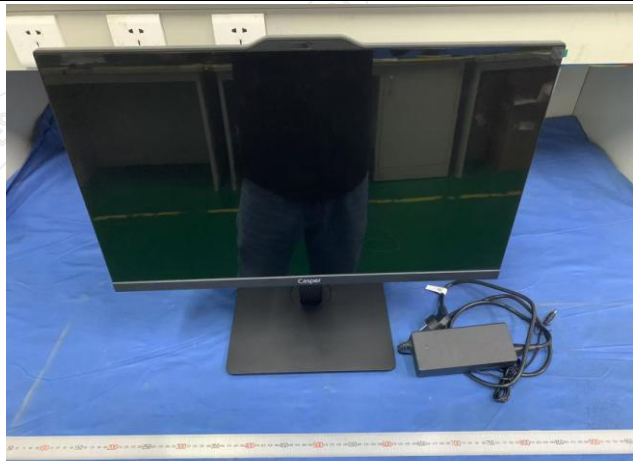


Fig.1-39 After experiment - appearance check
(H202409309799-0002)



Fig.1-40 Post-experiment - Functional check 1
(H202409309799-0002)



Fig.1-41 Post-experiment - Functional check 2
(H202409309799-0002)

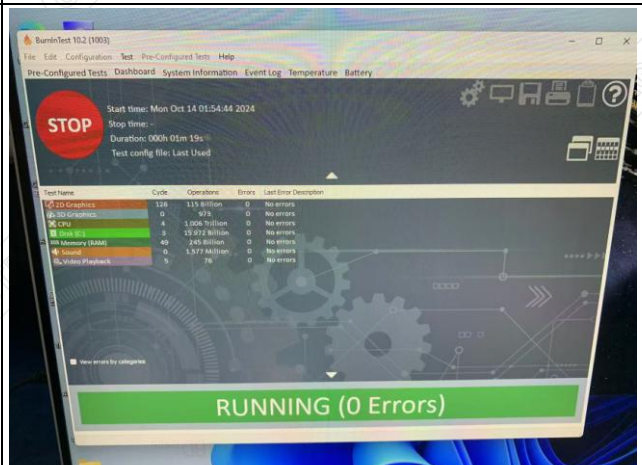


Fig.1-42 Post-experiment - Functional check 3
(H202409309799-0002)

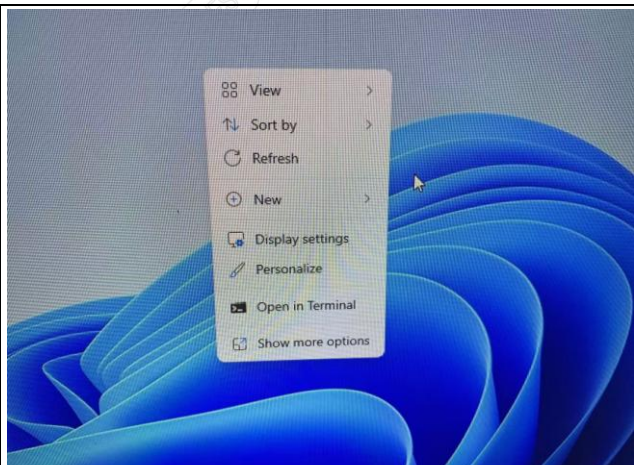


Fig.1-43 Post-experiment - Functional check 4
(H202409309799-0002)

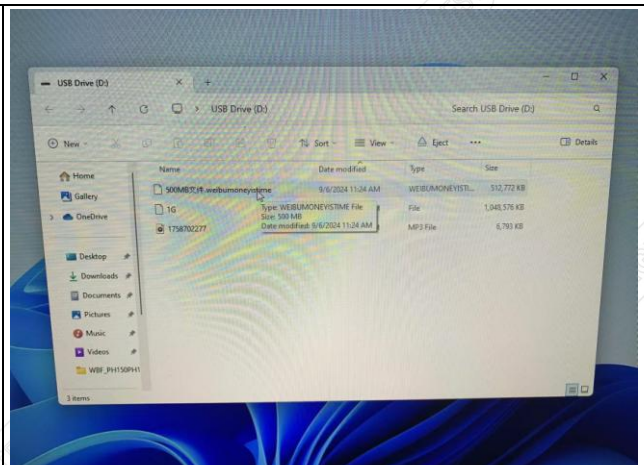


Fig.1-44 Post-experiment - Functional check 5
(H202409309799-0002)

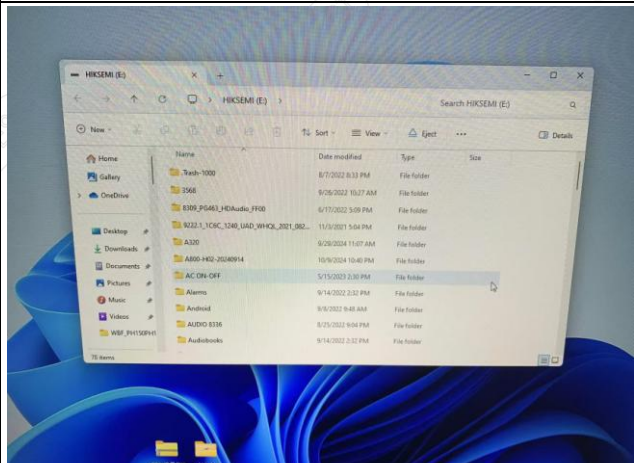


Fig.1-45 Post-experiment - Functional check 6
(H202409309799-0002)

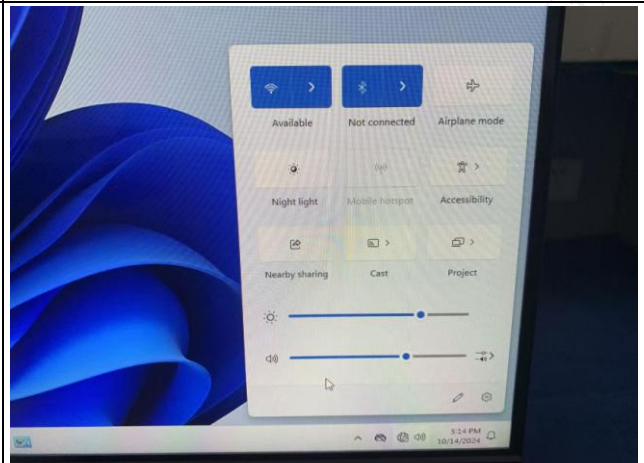


Fig.1-46 Post-experiment - Functional check 7
(H202409309799-0002)

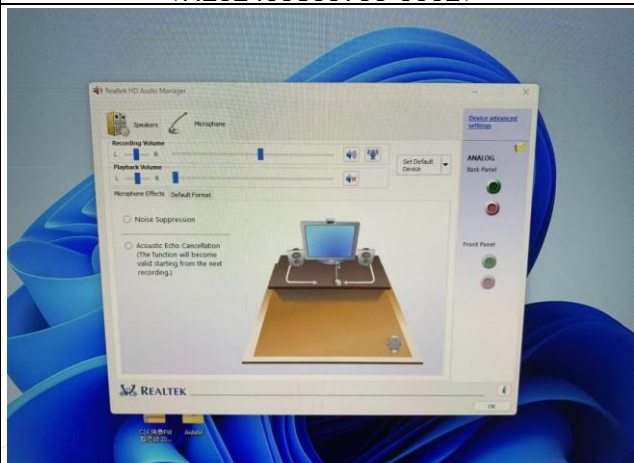


Fig.1-47 Post-experiment - Functional check 8
(H202409309799-0002)

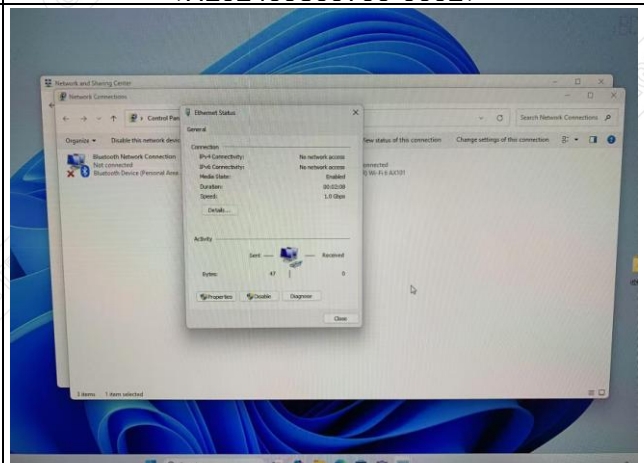


Fig.1-48 Post-experiment - Functional check 9
(H202409309799-0002)



Fig.1-49 Post-experiment - Functional check 10
(H202409309799-0002)



Fig.1-50 Post-experiment - Functional check 11
(H202409309799-0002)

2 Test Instrument & Equipment

List of Instrument for Testing Equipment					
No.	Testing Item	Instrument/Equipment	Type	Serial No.	Calibration Valid Date
1	Low temperature operating test	Temperature and humidity test chamber	CH1000C	161266	2024.02.21~2025.02.20
2	Function check Performance check	USB port USB flash drive	/	/	/
		Type-c interface flash drive	/	/	/
		Headphone, microphone	/	/	/
		TF card	/	/	/
		Net cable	/	/	/

----- End of Report -----