



PRODUCT OUTGOING QUALITY INSPECTION REPORT

SR200-X4-A20

S/N: SR2025051502

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1. SPECIFICATION

1-1. SYSTEM CONFIGURATION

Motherboard	OXY5741B Chipset: CM246 BIOS Version: 5.13 SMBIOS Version: 3.2
CPU	Intel® Xeon® E-2276ML Processor Total Cores: 6 Total Threads: 12 Max Turbo Frequency: 4.20 GHz Intel® Turbo Boost Technology 2.0 Frequency: 4.20 GHz Processor Base Frequency: 2.00 GHz Cache: 12 MB TDP 25 W
Memory	SAMSUNG M471A4G43AB1-CWE 32GB SO-DIMM
Storage	M.2 2280 4TB SSD
GPU	NVIDIA RTX A2000 Embedded GPU BIOS Version: 94.07.63.00.A2 Driver Version: 31.0.15.2895(NVIDIA 528.95) DCH / WIN64 CUDA Parallel-Processing Cores: 2560 CUDA® cores GPU Base/Boost Clock: 607 MHz / 1117 MHz

1-2. PRODUCT INTERIOR PHOTOS



2. TEST PLAN

2-1. THERMAL MEASUREMENT PROCESS

Test Purpose	The purpose of performing thermal profile testing is to identify potential thermal issues with the EUT. Considering that semiconductor failure rates rise rapidly with increasing junction temperature, it can aid product reliability assessment. As the system cools down, the mode will change with stack selection, temperature/heat. Mapping can help develop the best tracking arrangements.
Test Equipment	1. KSON THS-B4T-150 Chamber.
Quantity Tested	Minimum 1 Set
Test Software	1. Stress CPU: PassMark BurnInTest Professional 9.0 build 1014 2. Stress GPU: AIDA64_extreme590 3. LAN Speed: iPerf3 4. USB Test: PassMark USB 3.0 Loop Back Plug
Test Procedure	1. Thermal pre-scan measurement: Temperature: -40°C ~60°C Humidity: 60%RH 2. Actual thermal measurement: 2-1. Select the test point based on the infrared photo and connect the thermocouple to the hot spot. 2-2. Place the EUT into the hot chamber and set the test temperature curve Specification. 2-3. Open the hot cell and power up the EUT, enter the Windows 10 Pro environment and perform a maximum power test + stress application. 2-4. After the EUT executes the test software for 8 hours, record the maximum heat generation of each thermocouple point. 2-5. Turn off the hot cell and EUT. 2-6. Verify and check that the recorded information for each component complies with the operating temperature range listed in the specification/approval sheet for each component being tested. 3. For the Operating system software compatibility testing: 3-1.open the thermal chamber and power on the device under test. Enter the Ubuntu 24.02 LTS environment and perform the maximum power test and stress test.
Test Diagram of Curves	Environment defines for 60 hours. The graph illustrates the thermal and humidity profile for the test. The Temperature testing period (red line) begins at 1.0 hour, reaching -40°C, and continues until 18.0 hours. The Humidity testing period (blue line) begins at 26.5 hours, reaching 60%RH, and continues until 60.0 hours. The Temperature curve shows a series of steps: 25°C (0-1.0h), -40°C (1.0-9.5h), -20°C (9.5-17.5h), -20°C (17.5-18.0h), 26.0°C (18.0-26.5h), 25°C (26.5-34.5h), 40°C (34.5-43.0h), 50°C (43.0-51.5h), 50°C (51.5-52.0h), 60°C (52.0-60.0h), and 25°C (60.0-60.5h). The Humidity curve shows a step from 0%RH (0-26.5h) to 60%RH (26.5-60.0h) and then back to 0%RH (60.0-60.5h).

2-2. Test Result

2-2-1. Temperature Cycle

Aging test of various parts at different temperatures under maximum load and full load conditions.

Test Temperature	Test Result
-40°C / 0%RH	PASS
-20°C / 0%RH	PASS
0°C / 0%RH	PASS
25°C / 60%RH	PASS
40°C / 60%RH	PASS
50°C / 60%RH	PASS
60°C / 60%RH	PASS

2-2-2. I/O Function

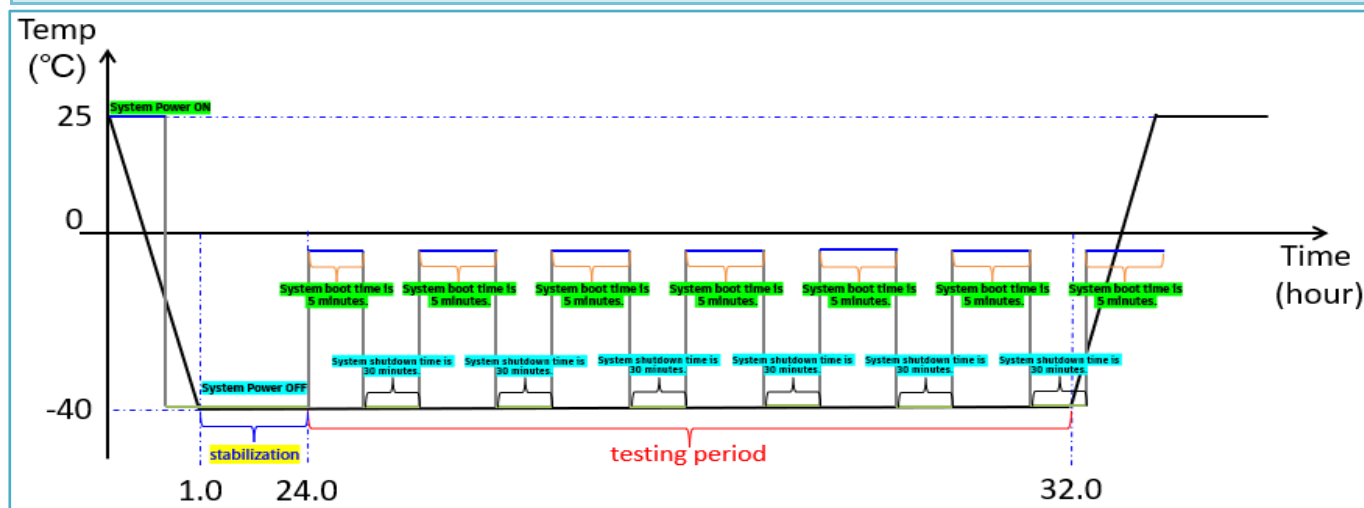
#Confirm the system specifications and I/O connection to ensure that they are functioning properly

Item	Test Criteria	Result
LAN Port (1Gbps)	Connecting to a LAN switch/hub for data transmission test works properly.	PASS
LAN Port (1Gbps)	Connecting to a LAN switch/hub for data transmission test works properly.	PASS
COM Port (RS232)	The two devices RS232 are connected to each other, and the data transmission test shows no loss, functioning properly.	PASS
USB 3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
USB 3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
USB 3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
USB 3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
Display Port	Check work well. (4K Resolution: 3,840 x 2,160)	PASS
Display Port	Check work well. (4K Resolution: 3,840 x 2,160)	PASS
Display Port	Check work well. (4K Resolution: 3,840 x 2,160)	PASS
Display Port	Check work well. (4K Resolution: 3,840 x 2,160)	PASS
Mic-in	Connect the microphone and check if it is receiving sound properly.	PASS
Line-Out	Connect external speakers and ensure that music is outputting correctly.	PASS

2-2-3. Low-temperature & Boot-up

#Power supply under -40°C and ensure that the system boot up properly

Ambient Temp.	Cold Boot Test Times	Test Result
-40°C	10 times	PASS



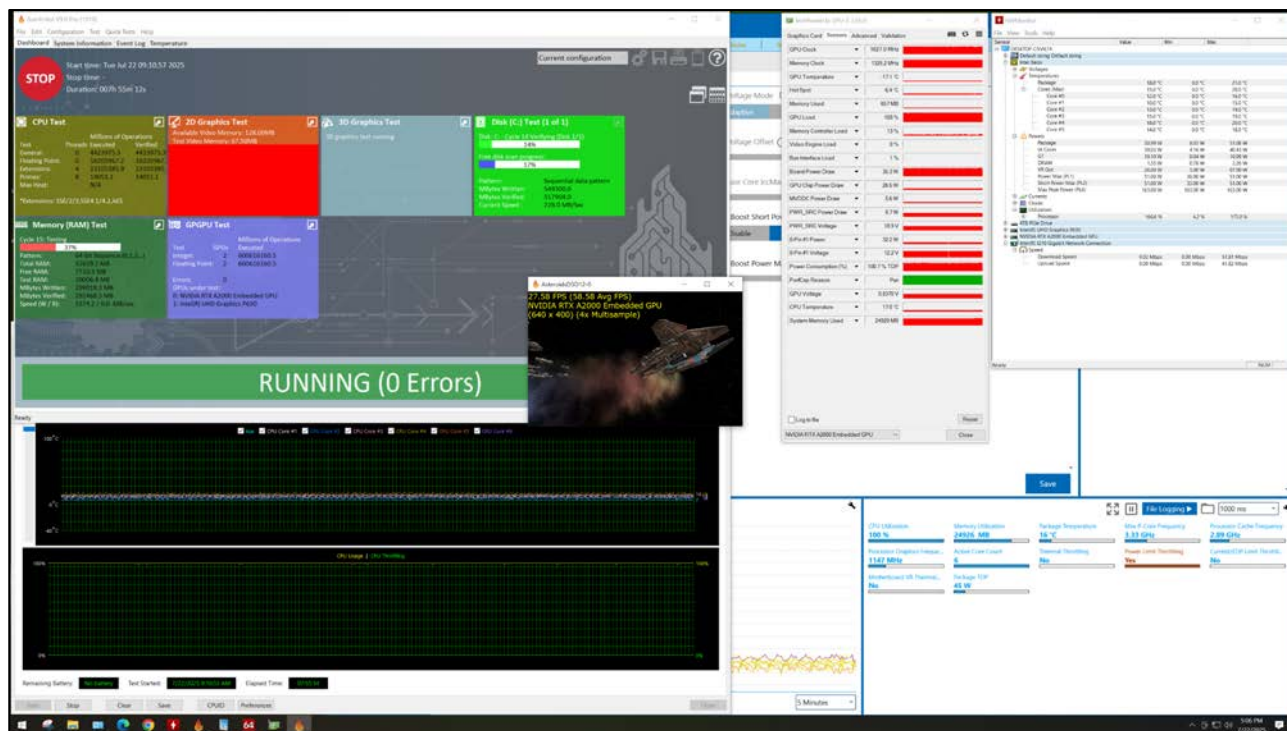
2-3. POWER CONSUMPTION

Voltage	Current	Wattage
9.0V	12.0A	108W
12.0V	9.0A	108W
18.0V	6.0A	108W
24.0V	4.5A	108W
36.0V	3.0A	108W

3. TEST PHOTO IN LAB

3-1. ENVIRONMENTAL TEMPERATURE TEST

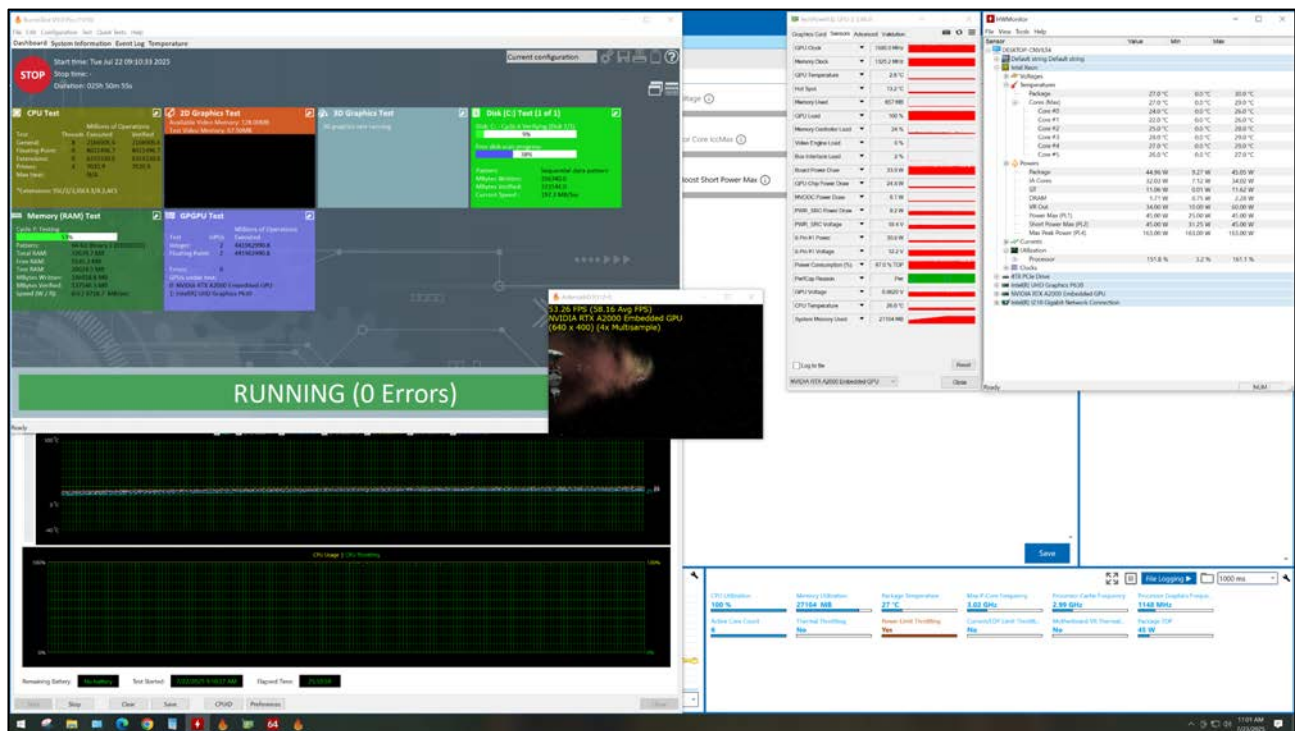
- Chamber in -40°C



Outgoing Quality Inspection

SR200-X4-A20

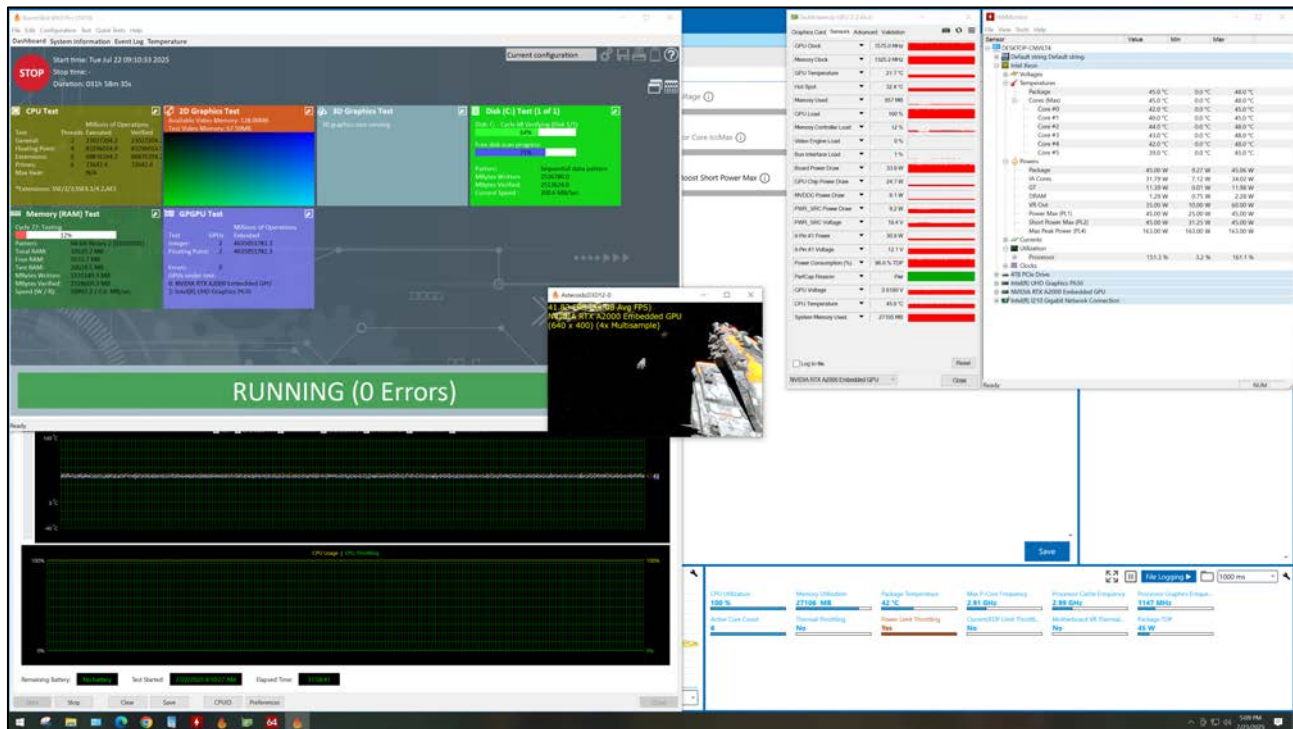
- Chamber in -20°C



Outgoing Quality Inspection

SR200-X4-A20

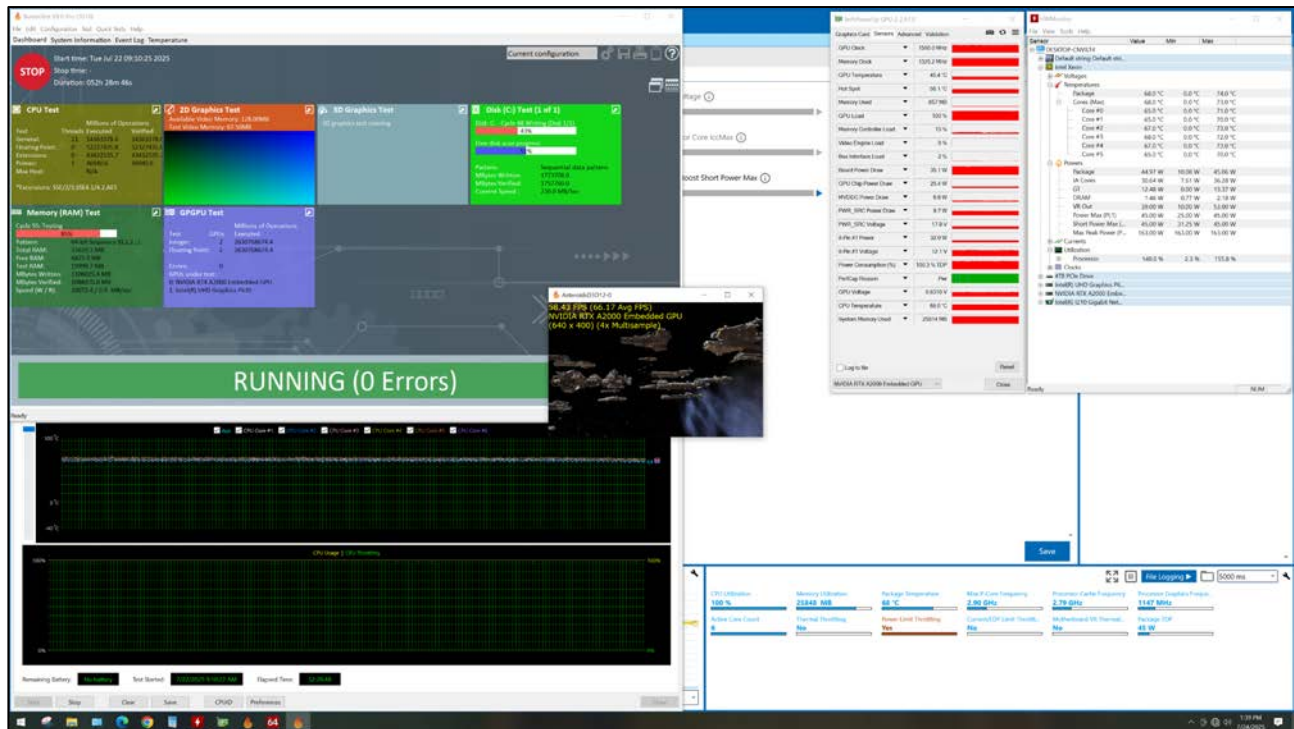
- Chamber in 0°C



Outgoing Quality Inspection

SR200-X4-A20

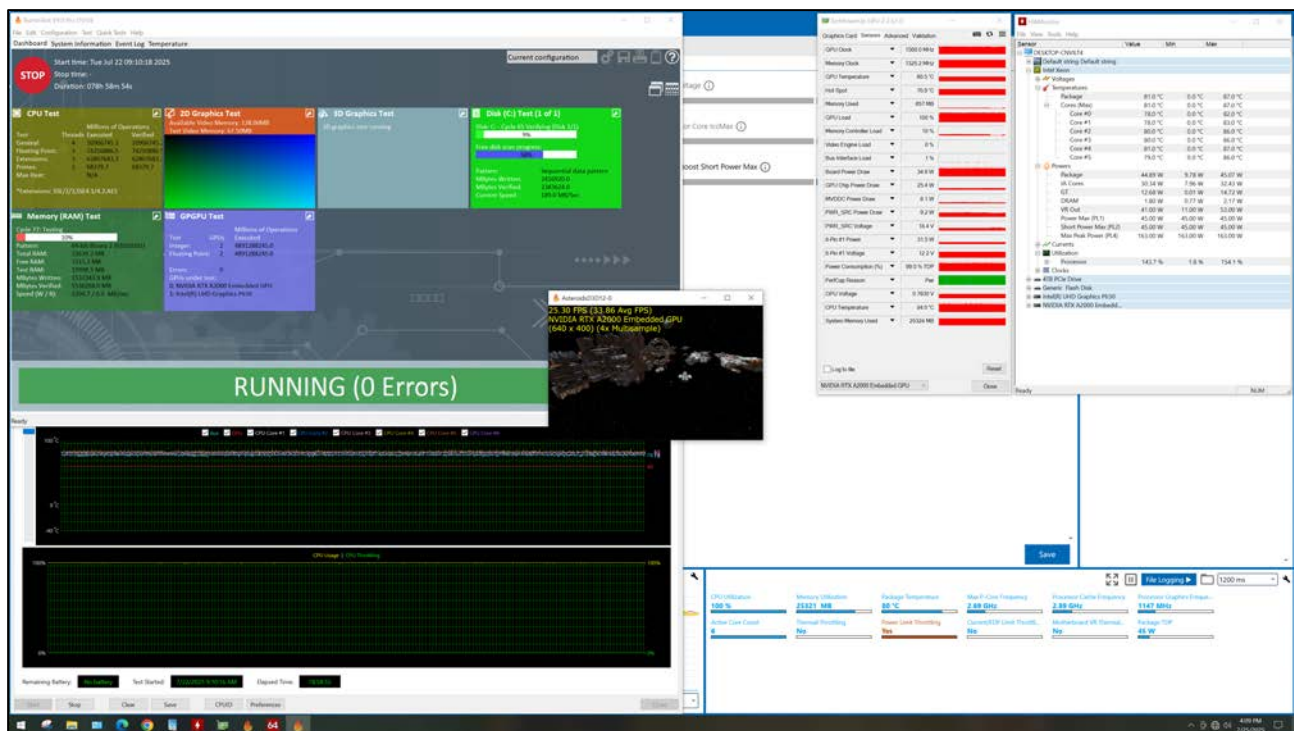
- Chamber in 25°C



Outgoing Quality Inspection

SR200-X4-A20

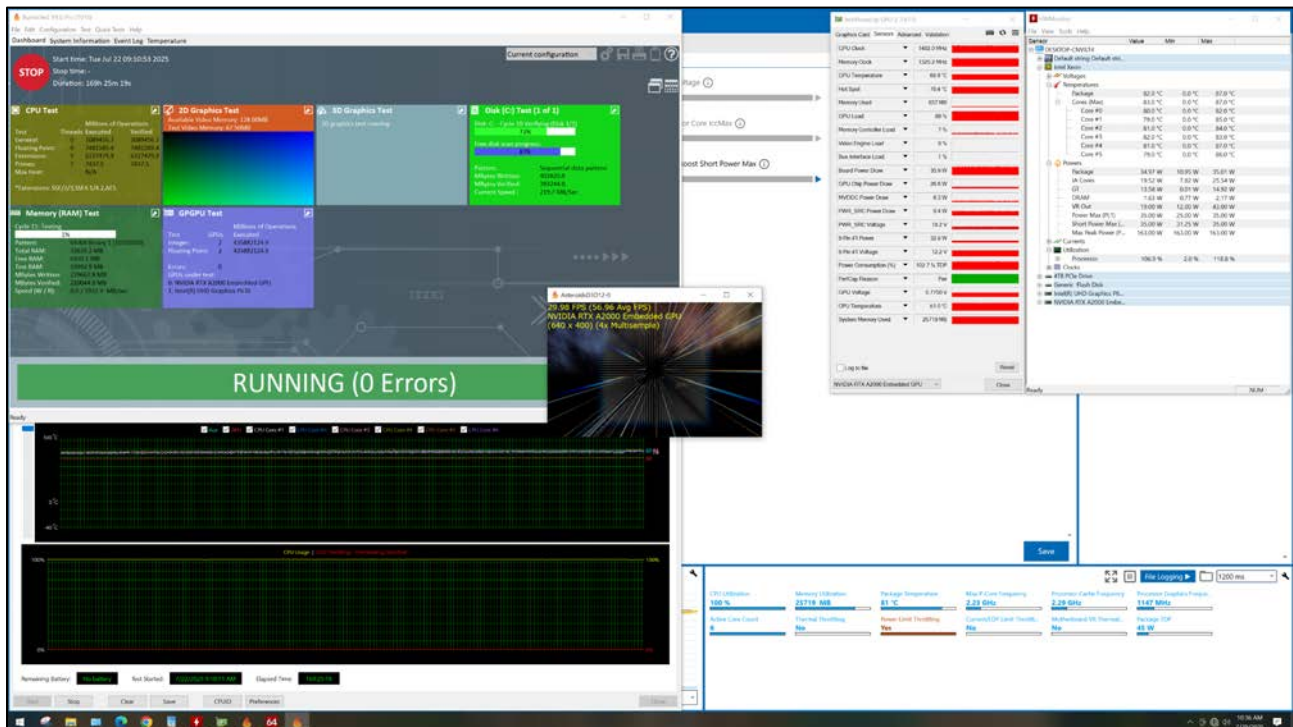
- Chamber in 40°C



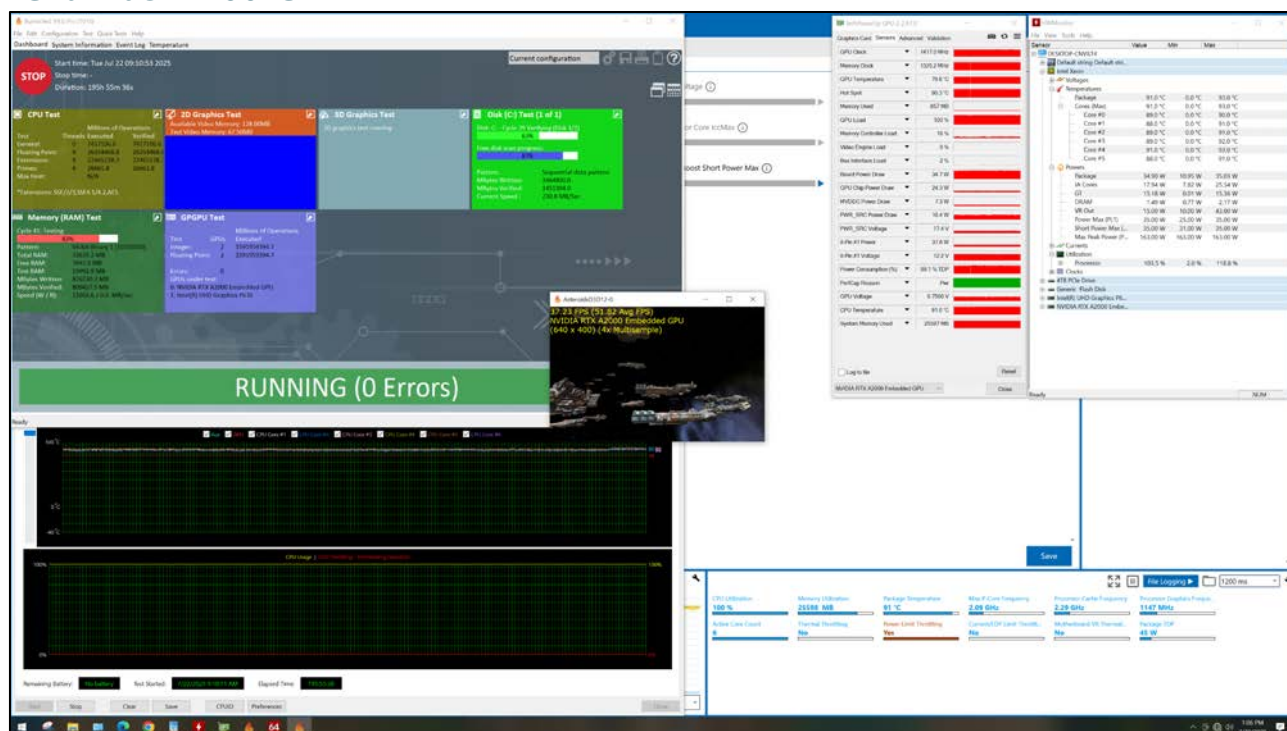
Outgoing Quality Inspection

SR200-X4-A20

- Chamber in 50°C



- Chamber in 60°C

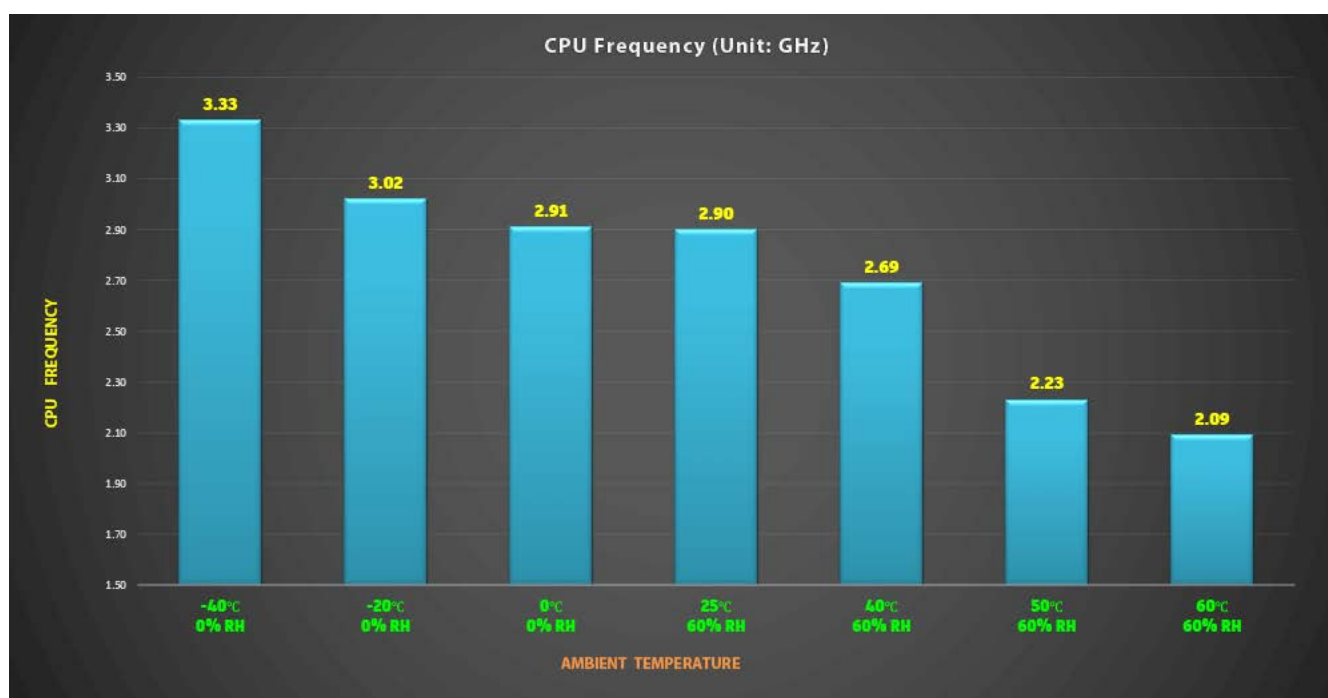
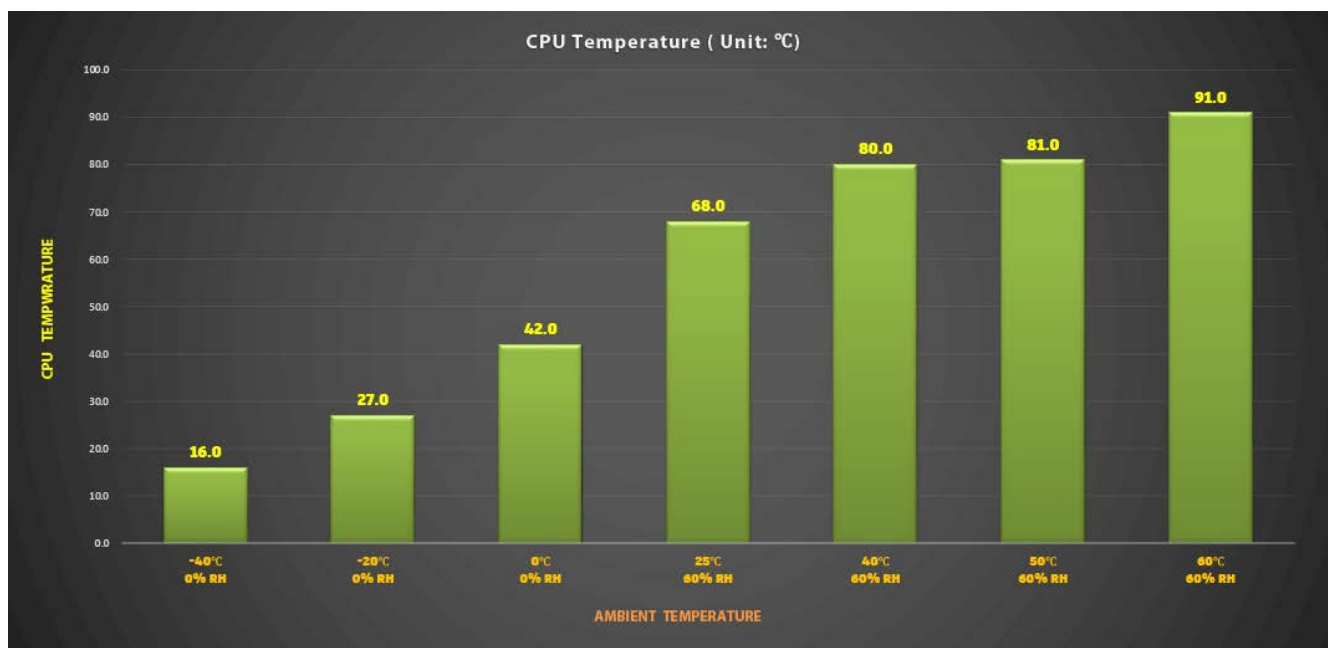


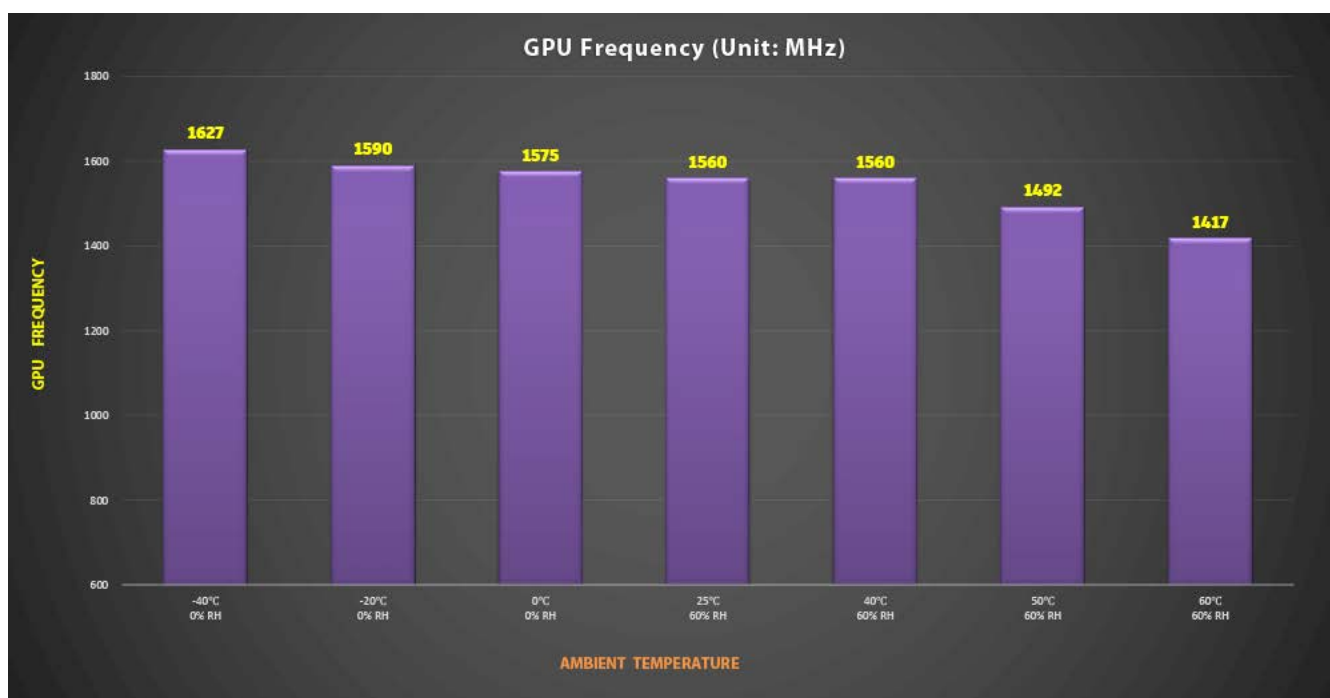
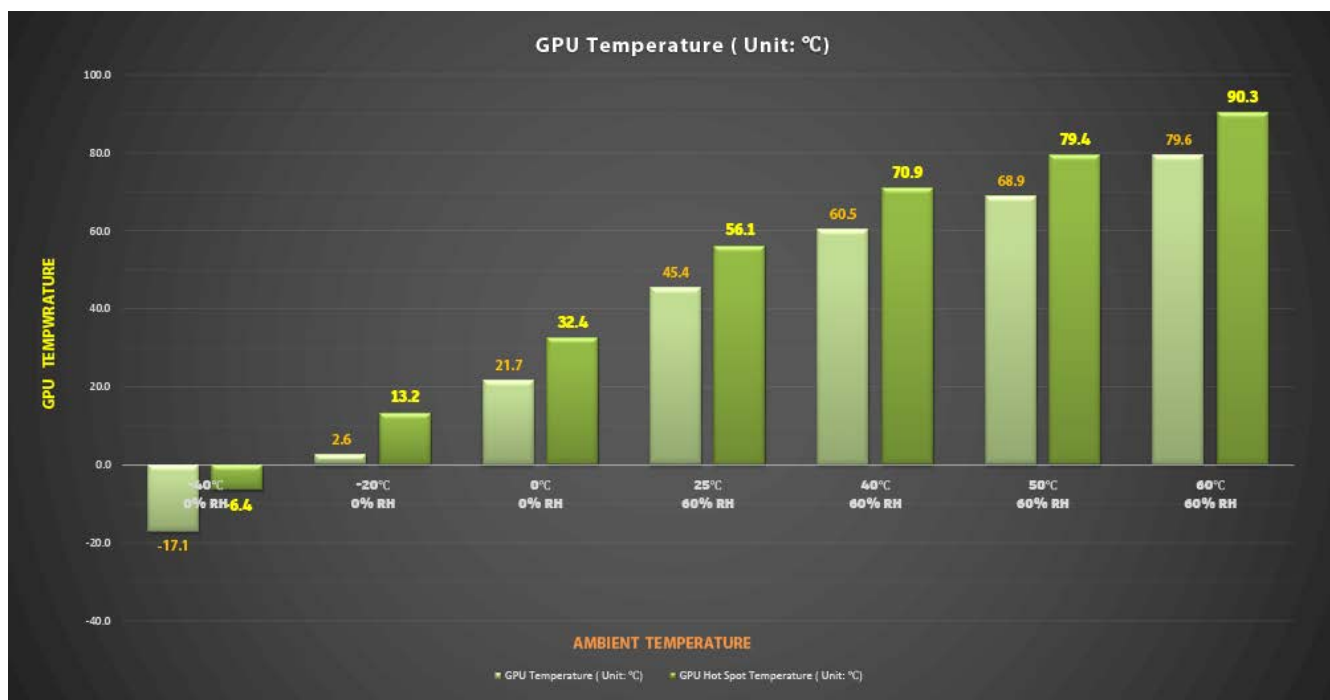
4. THERMAL TEST RESULT(-40°C ~ +60°C)

Temperature Frequency	Ambient Temp.	-40°C 0% RH	-20°C 0% RH	0°C 0% RH	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Cores Max Temperature (Unit: °C)		16.0	27.0	42.0	68.0	80.0	81.0	91.0
CPU Cores Frequency (Unit: GHz) Processor Base Frequency: 2.0GHz		3.33	3.02	2.91	2.90	2.69	2.23	2.09
GPU Temperature (Unit: °C)		-17.1	2.6	21.7	45.4	60.5	68.9	79.6
GPU Hot Spot Temperature (Unit: °C)		-6.4	13.2	32.4	56.1	70.9	79.4	90.3
GPU Frequency (Unit: MHz)		1627	1590	1575	1560	1560	1492	1417

Outgoing Quality Inspection

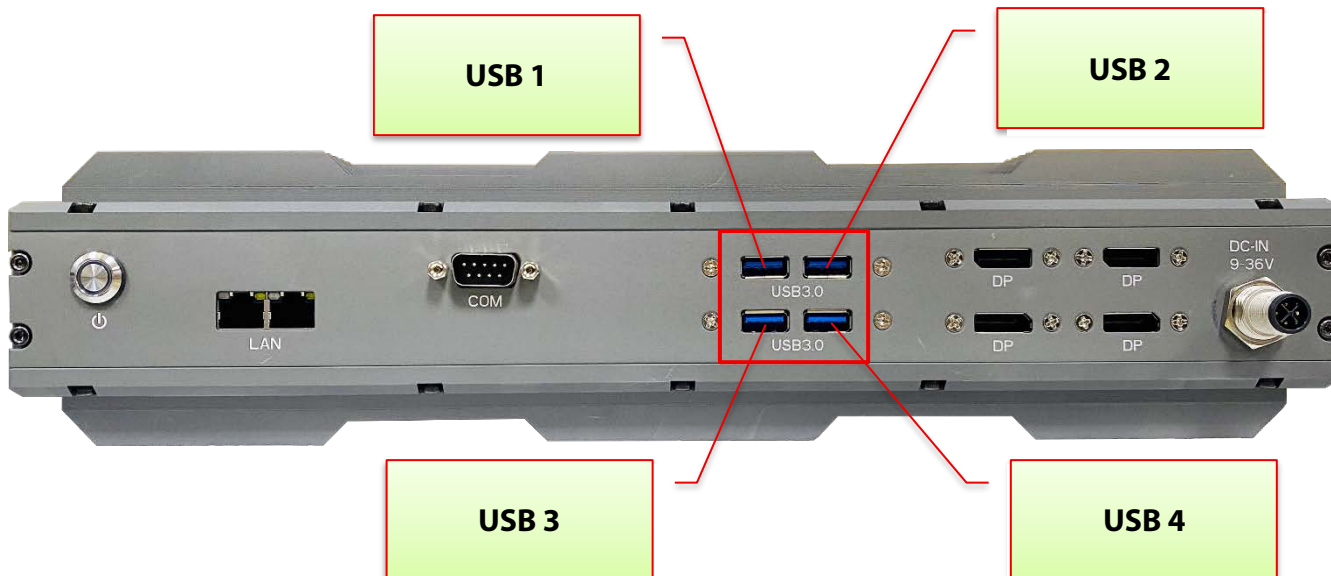
SR200-X4-A20





5. I/O FUNCTION TEST

5-1. USB 3.0



PassMark(TM) USB3Test

Select USB Device

Device: PMU33ZQ2DG (SuperSpeed 5Gb/s)

Connection Type: SuperSpeed 5Gb/s

Test mode

☐ Loopback

☒ Benchmark

Results	Status: BENCHMARK test - Complete	
Duration: 000h 30m 00s	Operations: 0 Errors: 0	
Read block 2545: 3361.2 Mb/s (420.2 MB/s)	Max. Rate 3367 4000 3000 2000 1000 0 (Mb/s) R/W	
Write block 2545: 3331.5 Mb/s (416.4 MB/s)		
Read block 2546: 3359.5 Mb/s (419.9 MB/s)		
Write block 2546: 3334.2 Mb/s (416.8 MB/s)		
Read block 2547: 3356.6 Mb/s (419.6 MB/s)		
Write block 2547: 3338.4 Mb/s (417.3 MB/s)		
Read block 2548: 3353.9 Mb/s (419.2 MB/s)		
Write block 2548: 3345.9 Mb/s (418.2 MB/s)		
OVERALL BENCHMARK RESULT:		
Test Start time:		
Duration: 000h 30m 00s		
Total number of bytes written: 324870 MB		
Total number of bytes read: 324870 MB		
Maximum Write Data Rate: 3367.0 Mb/s (420.9 MB/s)		
Maximum Read Data Rate: 3366.0 Mb/s (420.8 MB/s)		
Minimum Write Data Rate: 3148.1 Mb/s (393.5 MB/s)		
Minimum Read Data Rate: 3346.8 Mb/s (418.4 MB/s)		
Average Write Data Rate: 3350.2 Mb/s (418.8 MB/s)		
Average Read Data Rate: 3360.0 Mb/s (420.0 MB/s)		
Average Data Rate: 3355.1 Mb/s (419.4 MB/s)		
Minimum Data Rate: 3148.1 Mb/s (393.5 MB/s)		

USB 1

Voltage 4.98V

Speed 5Gb/s

Duration 30 Minutes

Start

Stop

Configure

Flash LEDs

Clear Serial

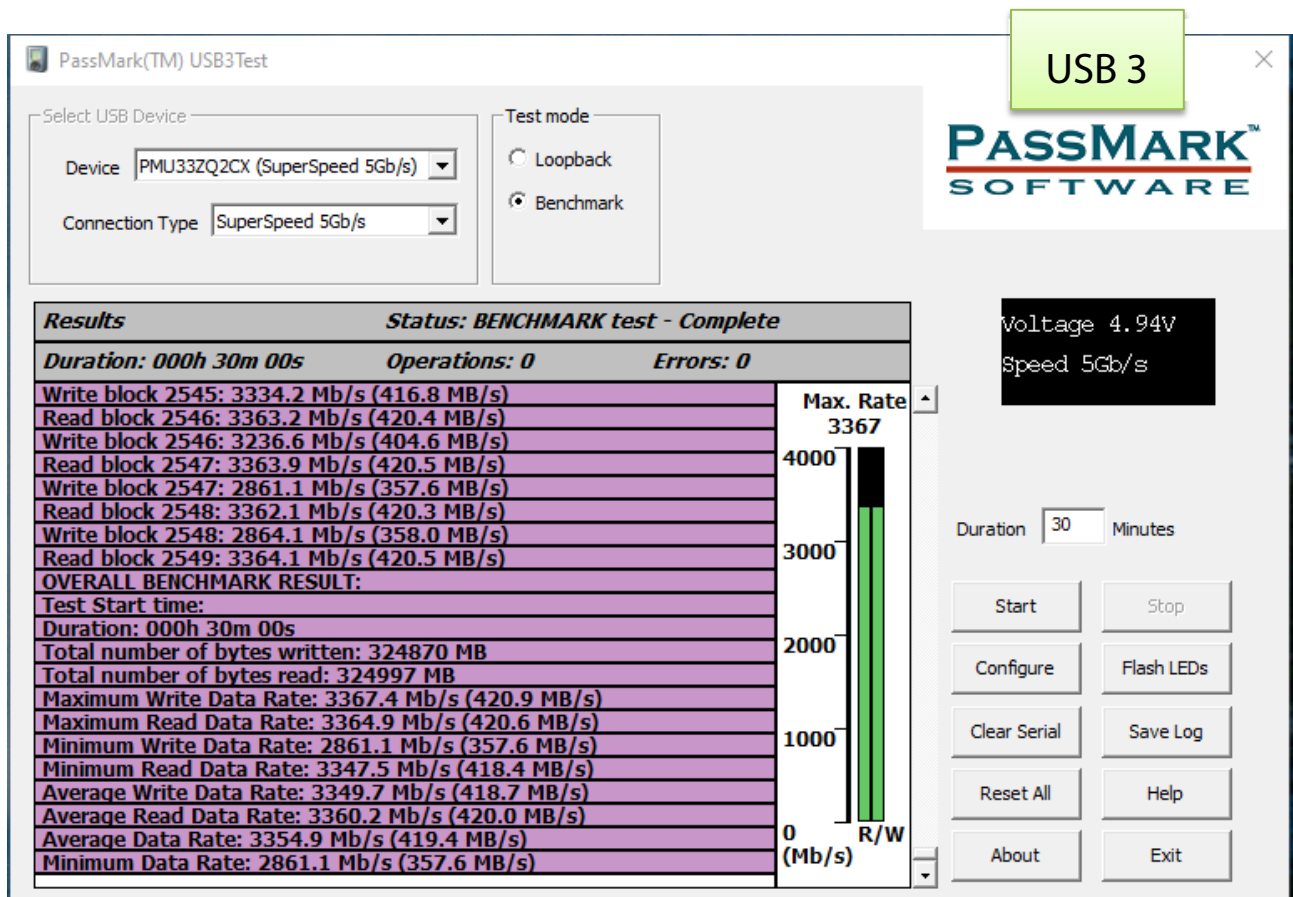
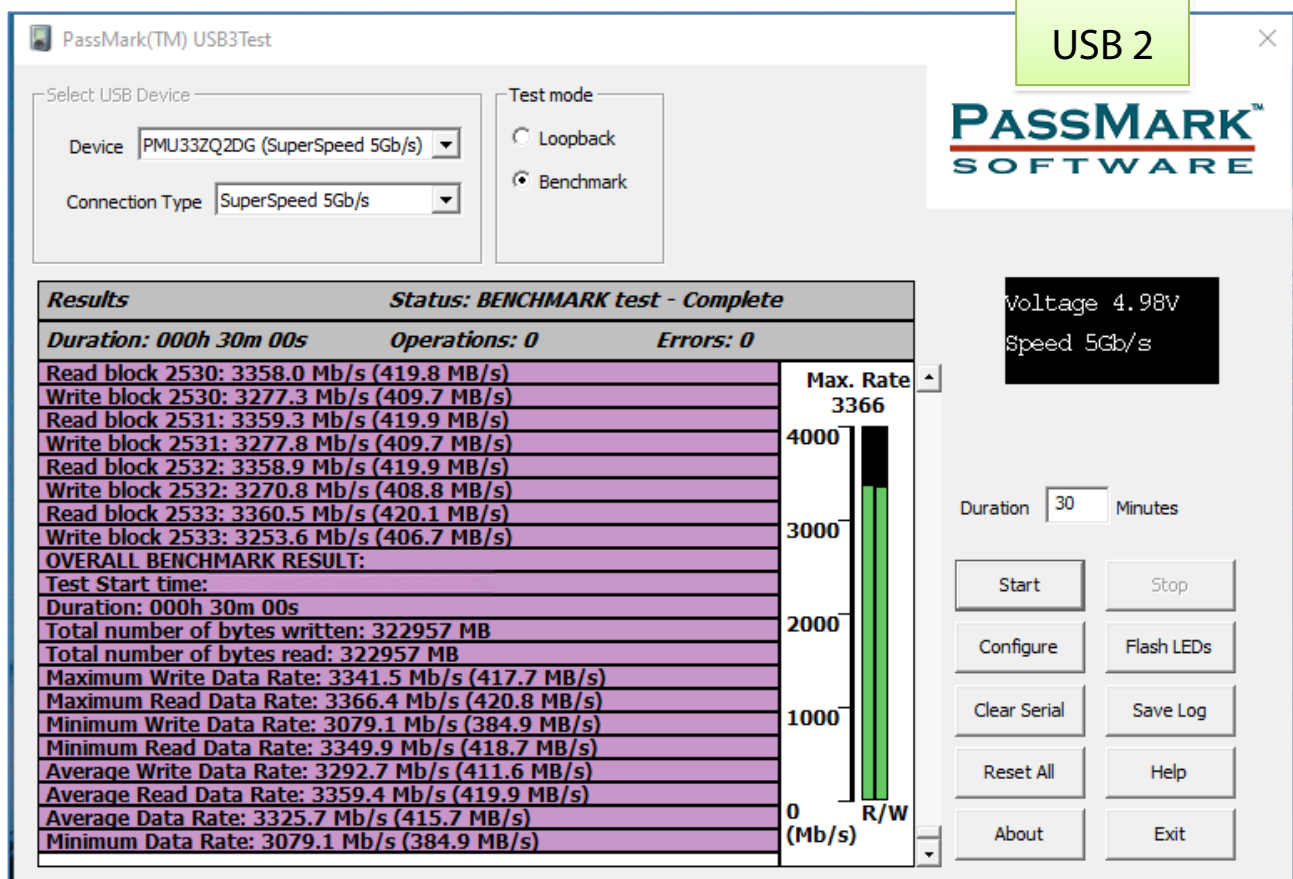
Save Log

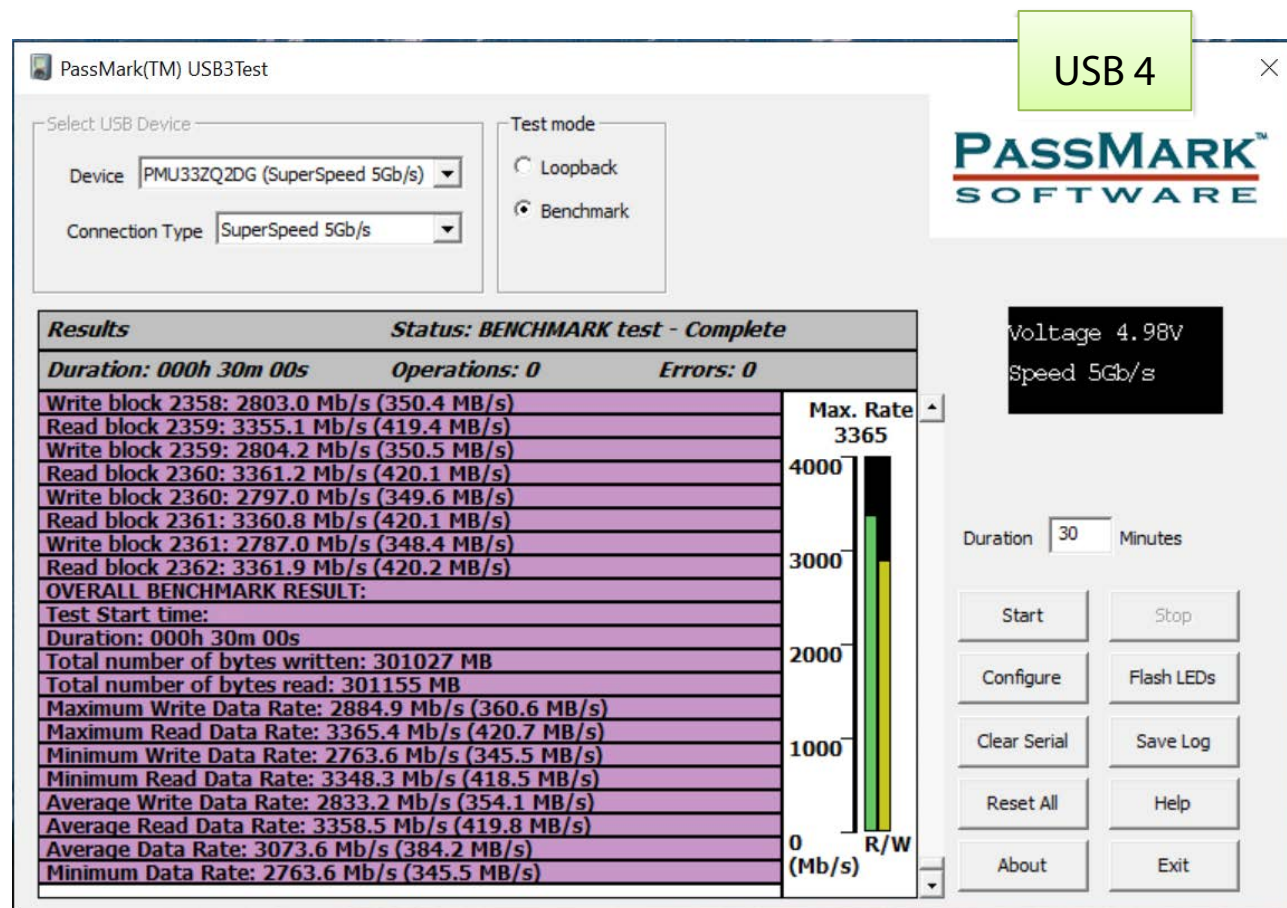
Reset All

Help

About

Exit





5-2. LAN PORT



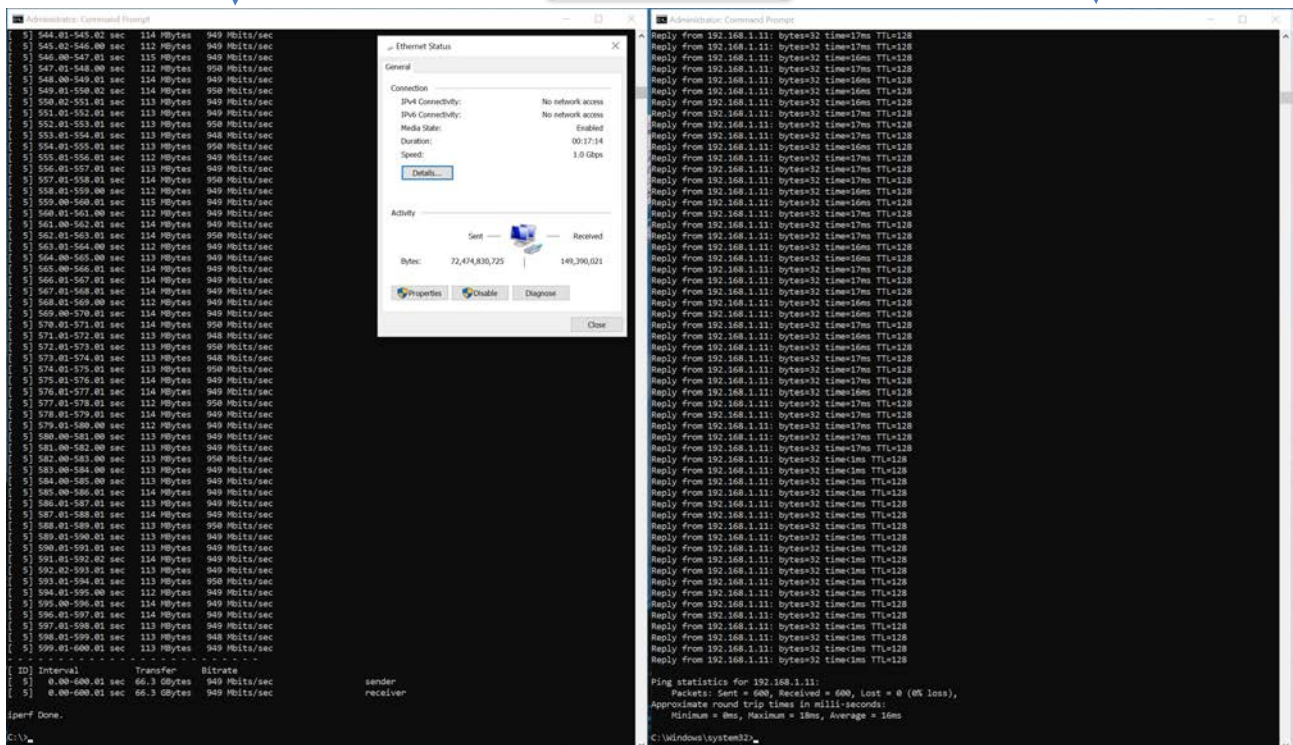
LAN 2
1Gbps

LAN 1
1Gbps

LAN SPEED

LAN Data-Packet

LAN 1



LAN Speed Test Result: Pass

LAN Data-Packet Test Result: 0 Lost (0% loss)

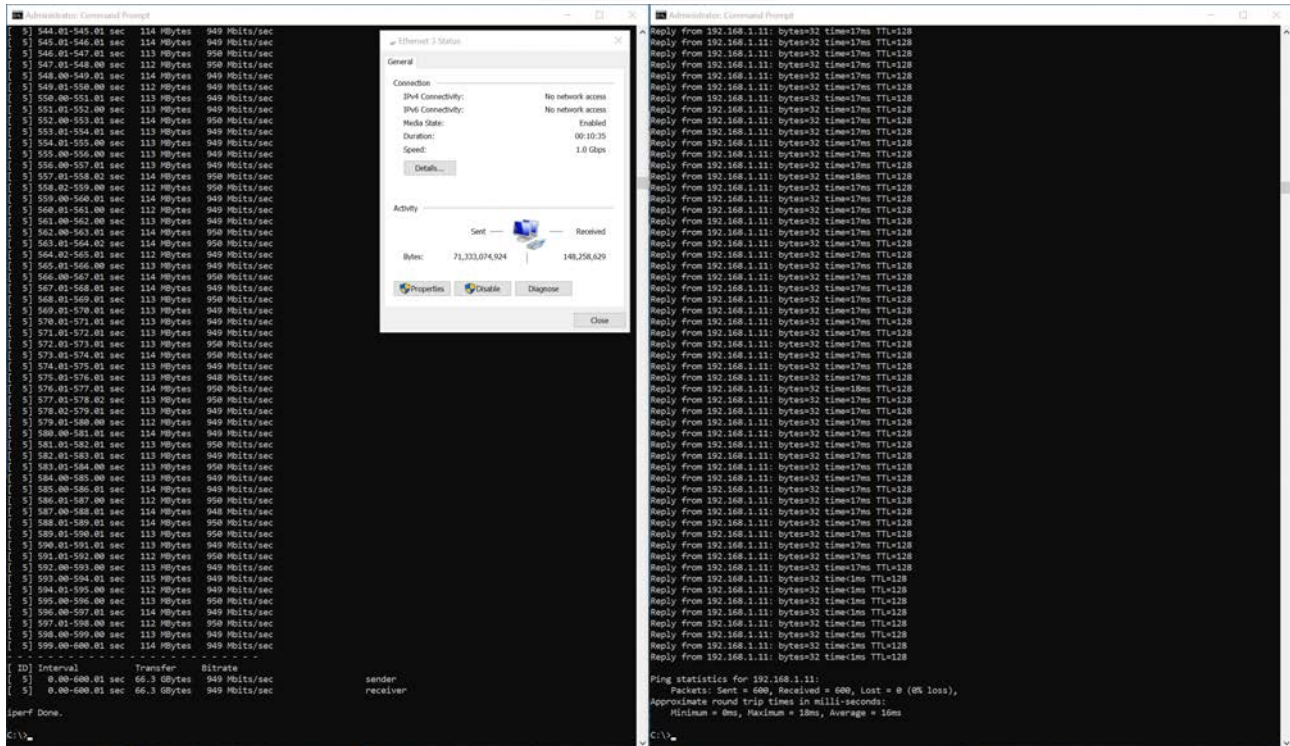
Outgoing Quality Inspection

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LAN SPEED

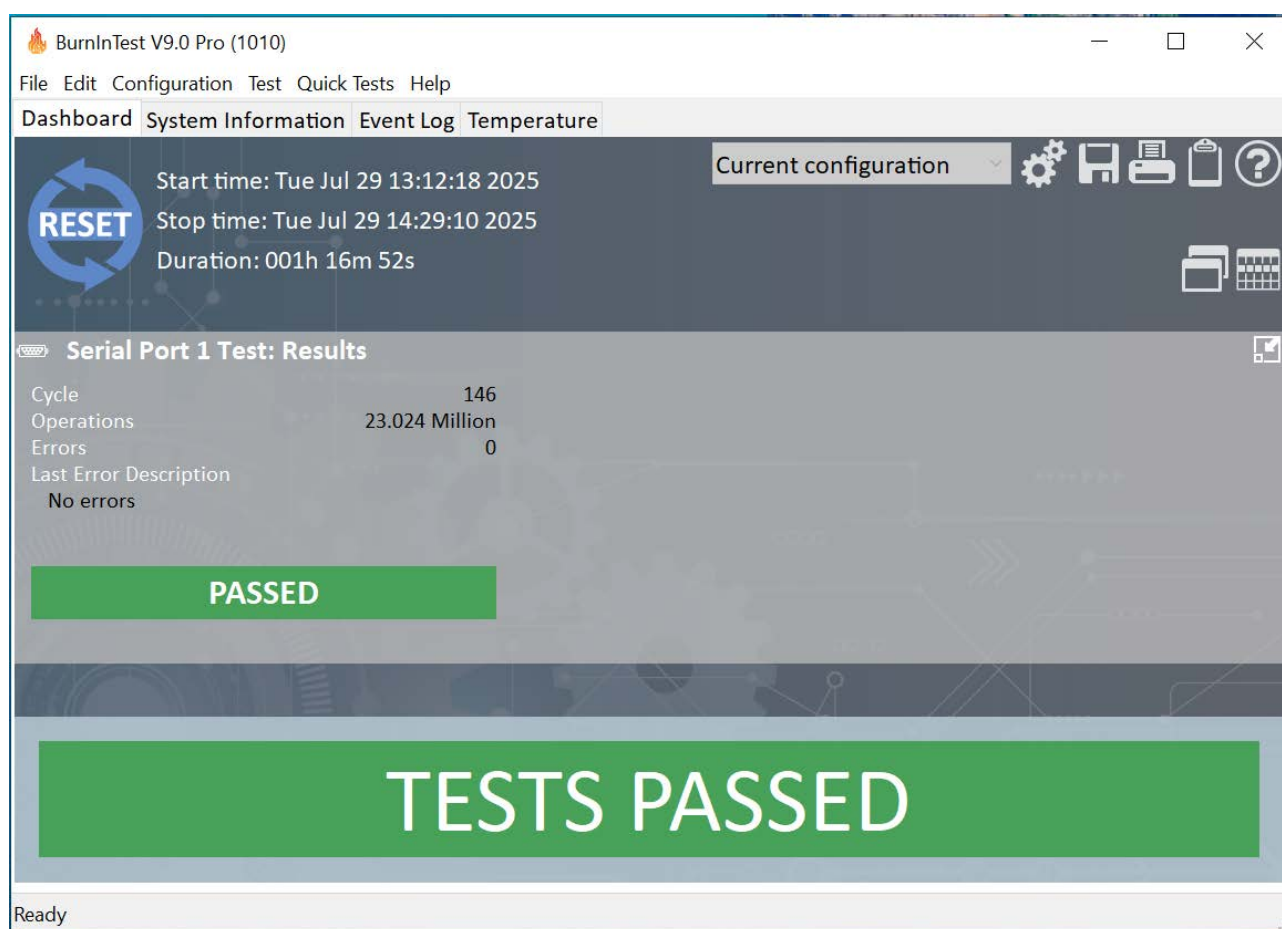
LAN Data-Packet

LAN 2



LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

5-3. SERIAL PORT



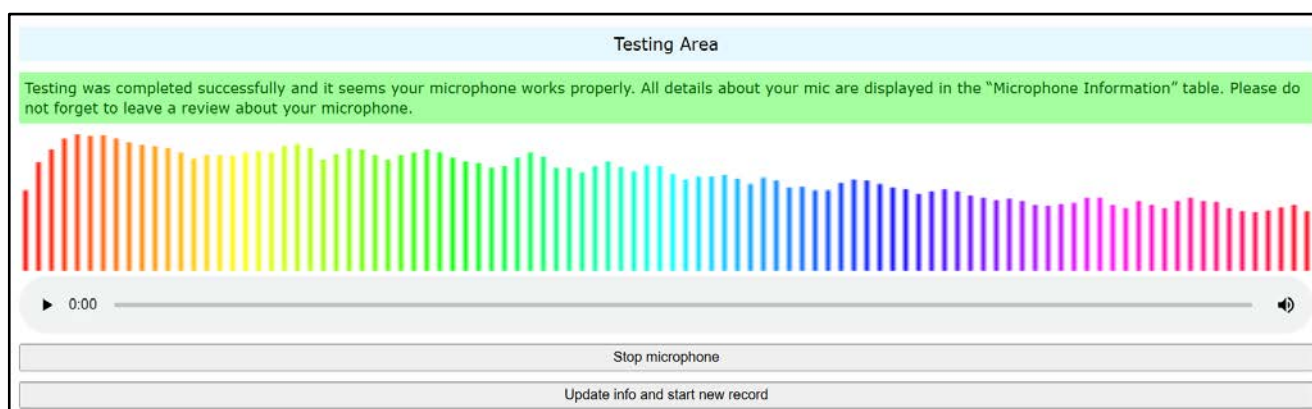
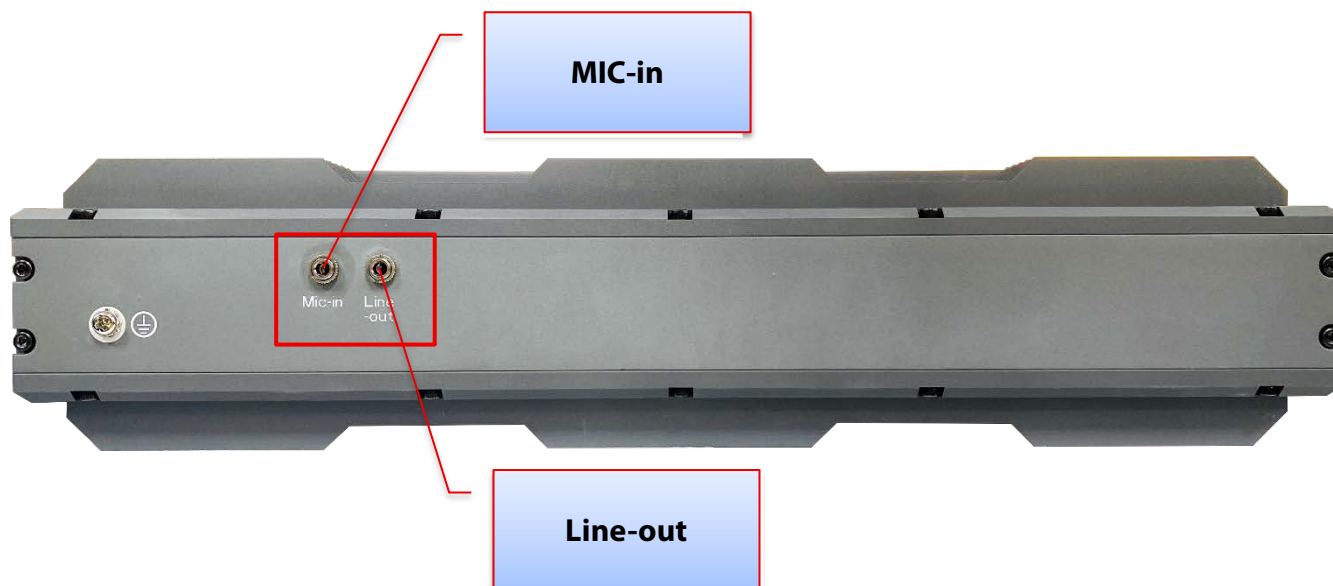
5-4. DVI PORT SYNCHRONOUS OUTPUT TEST



DP Port



5-5. LINE-OUT & MIC-IN



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