PERFORMANCE TEST REPORT

HORUS420-R1

S/N: SR2025100901

Product Manager	Mechanical Engineer	System Engineer	Test Engineer
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Date: January 27, 2026


LAN1
LAN3
LAN2
LAN4
USB3.0
DP
HDMI
DP1
DP2
DP3
AC-IN 100~240V
GND


USB2.0
HDD
POWER

INDEX

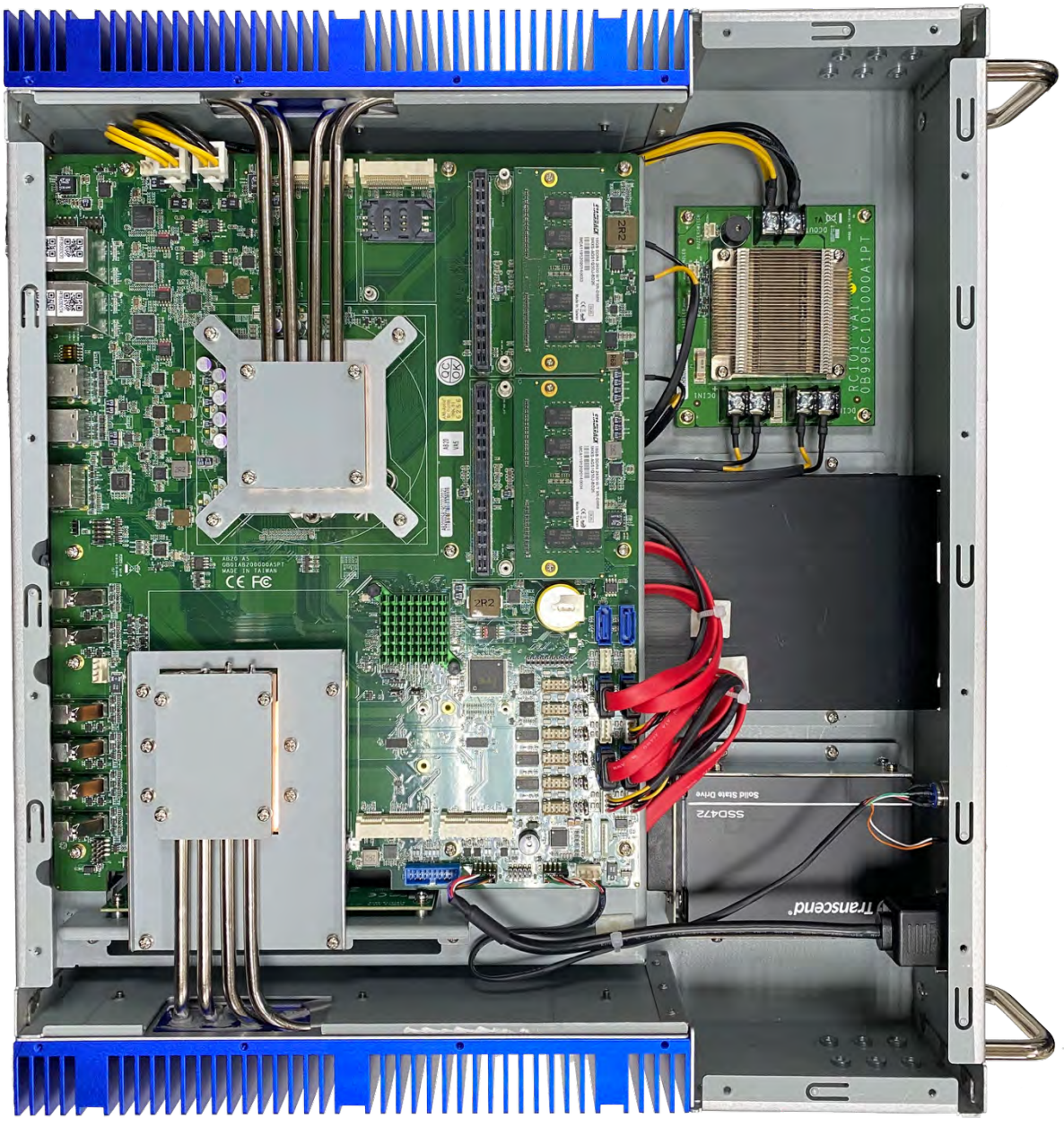
1. SPECIFICATION 3
1-1. System Configuration 3
1-2. Product Interior Photo 4
2. TEST PLAN 5
2-1. Thermal Measurement Process 5
2-2. Test Result 6
2-2-1. Temperature Cycle 6
2-2-2. I/O Function 7
2-2-3. Low Temperature Power Cycle Test 8
2-3. Peak Instantaneous Current and Power 9
2-4. Power Consumption 10
3. TEST PHOTO IN LAB 11
4. THERMAL TEST RESULT(-40°C ~ +60°C) 18
5. I/O FUNCTION TEST 21
5-1. LAN Port 21
5-2. USB Port(Rear) 25
5-3. Display Port 29
5-4. USB Port (Front) 30

1. SPECIFICATION

1-1. System Configuration

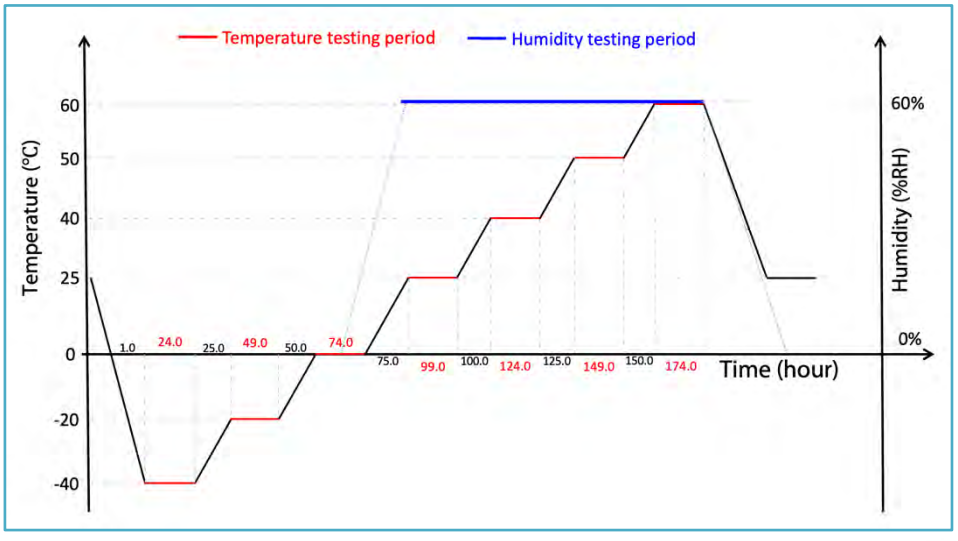
Motherboard	AB20 BIOS Version: 5.11 SMBIOS Version: 3.0 Supports Intel® LGA 1151 14nm Skylake-S Processor Operating Temp. -40°C~85°C
CPU	Intel® Core™ i7-6700TE ProcessorTotal Cores: 14 Total Cores: 4 Total Threads: 8 Max Turbo Frequency: 3.40 GHz Intel® Turbo Boost Technology 2.0 Frequency‡: 3.40 GHz Processor Base Frequency: 2.40 GHz TDP: 35 W
Memory	32GB DDR4 XR-DIMM
Storage	Internal: 2TB *2 3D TLC SSD External: 2TB *2 3D TLC SSD
GPU	NVIDIA GeForce GTX 1050 Ti Embedded GPU BIOS Version: 86.07.59.00.E3 CUDA parallel-processing cores: 768 CUDA® cores GPU base/boost clock: 1291 MHz / 1392 MHz Max Power Consumption: 75 W
Add-on cards	Perfectron MT201 Intel® 82599ES 10Gb/s 2 x LAN port 2 x SFP+ LAN ports Supports 10Gb/s per port Intel® 82599ES PCIe x8 (Gen2 x8 bus)
Power Module	2 x 200W AC-DC PSU With reduandant Power

1-2. Product Interior Photo



2. TEST PLAN

2-1. THERMAL MEASUREMENT PROCESS

Test Purpose	The purpose of conducting thermal profile testing is to identify potential thermal issues in the Equipment Under Test (EUT). Given that semiconductor failure rates increase significantly with rising junction temperatures, this testing contributes to the overall assessment of product reliability. As the system undergoes a cooling phase, operational modes may shift depending on stack configuration, temperature, and heat dissipation characteristics. Thermal mapping provides critical insight for optimizing thermal management strategies and determining the most effective component layout and monitoring arrangements.
Test Equipment	1. KSON THS-B4T-150 Chamber.
Quantity Tested	Minimum 1 Set
Test Software	CPU Stress: PassMark BurnIn Test v9.0 GPU Stress: AIDA64 Business v6.90 LAN Speed Test: iPerf3
Test Procedure	1. Thermal Pre-Scan Measurement: Temperature Range: **-40°C to 60°C** Humidity Condition: **60% RH** (when temperature exceeds 25°C) 2. Actual Thermal Measurement Procedure: 2.1. Identify the test points using the infrared thermal image and attach thermocouples to the identified hot spots. 2.2. Place the Equipment Under Test (EUT) in the thermal chamber and configure the test temperature profile according to the specified requirements. 2.3. Power on the EUT after closing the thermal chamber. Boot into Windows 10 Pro and initiate a maximum power consumption and stress test. 2.4. After running the test software continuously for 8 hours, record the peak temperature observed at each thermocouple measurement point. 2.5. Power off both the thermal chamber and the EUT. 2.6. Verify that the recorded temperature data for each component remains within its specified operating temperature range, as defined in the component specification or approval documents.
Test Diagram of Curves	Environment defines for 174 hours. 

2-2. Test Result

2-2-1. Temperature Cycle

Aging tests were performed on individual components across a range of temperature settings, under both maximum load and full load conditions, to evaluate thermal endurance and operational stability over time.

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

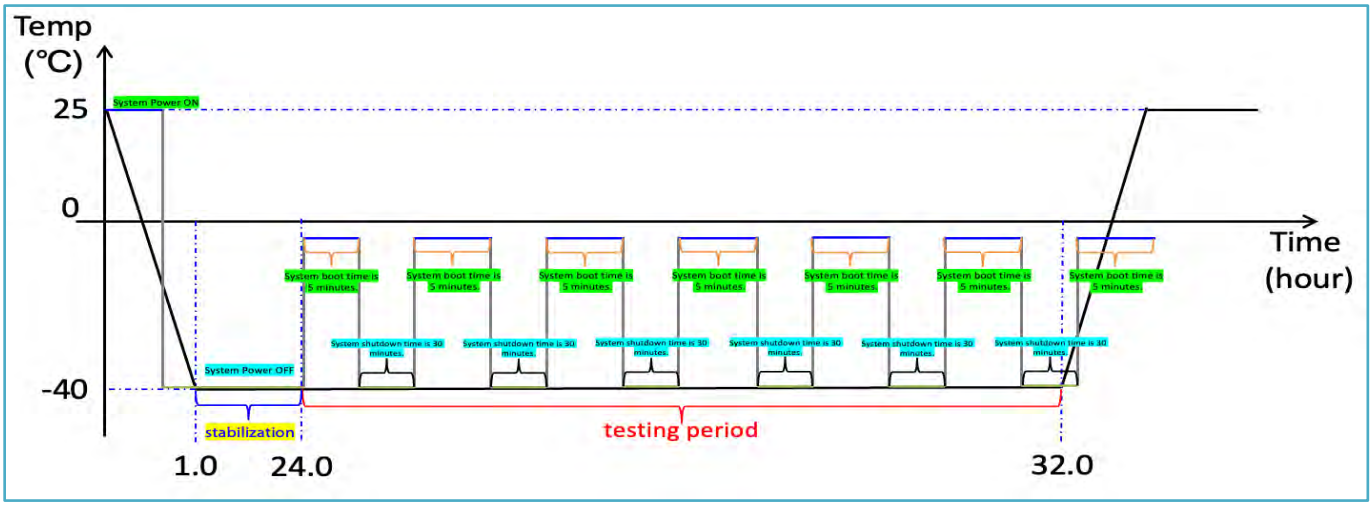
Confirm that the system specifications and all input/output (I/O) interfaces are correctly configured and functioning as intended, in accordance with the defined technical standards.

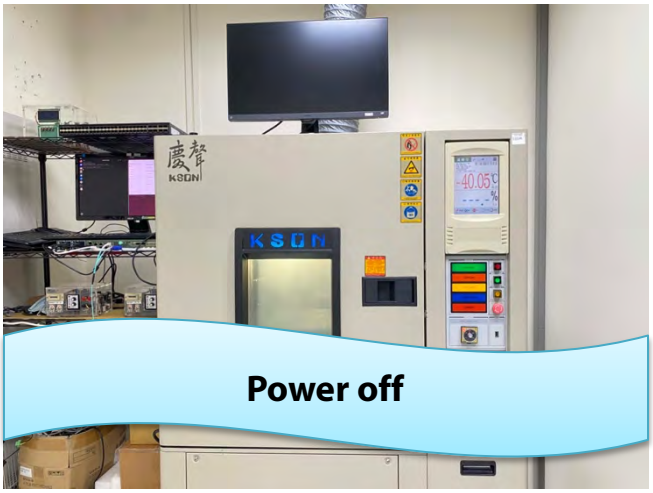
Item	Test Criteria	Result
USB 2.0	A PassMark USB_2.0 Loopback was connected for testing and was found to be functioning normally.	PASS
USB 3.0	A PassMark USB_3.0 Loopback was connected for testing and was found to be functioning normally.	PASS
Display Port	The DP output has been verified to be working properly, and the resolution can be adjusted according to the monitor size.	PASS
1GbE LAN	Data transmission via connection to a 1 Gbps LAN switch has been tested. The transfer speed meets the required standard with zero packet loss, confirming normal functionality.	PASS
10GbE LAN	Data transmission via connection to a 10 Gbps LAN switch has been tested. The transfer speed meets the required standard with zero packet loss, confirming normal functionality.	PASS

2-2-3. Low Temperature Power Cycle Test

Apply power to the system under a -40°C ambient condition and confirm successful system boot-up, ensuring stable initialization and operation at low temperatures.

Ambient Temp.	Cold Boot Test Times	Test Result
-40°C	125 times	PASS



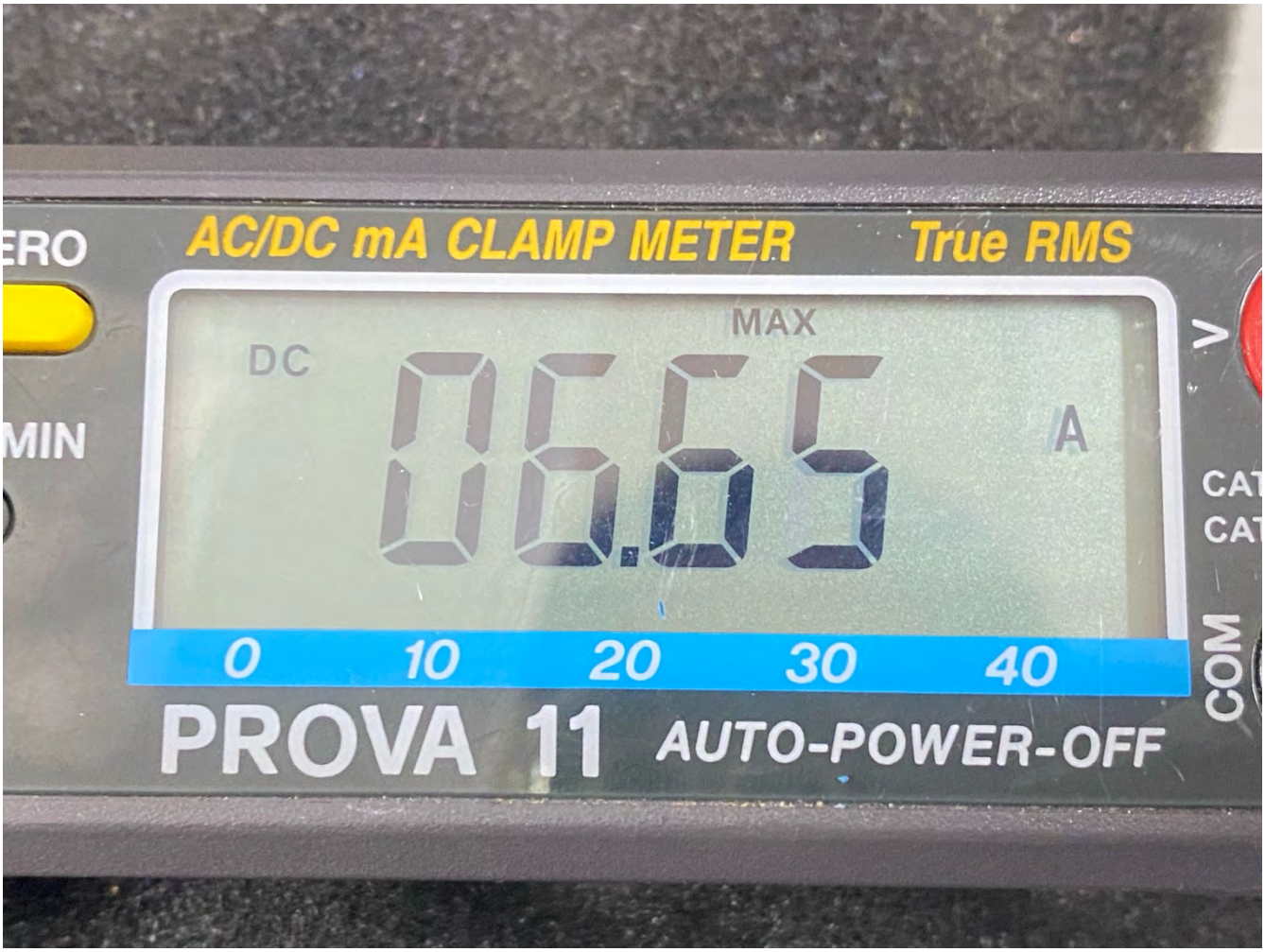


2-3. Peak Instantaneous Current and Power

Maximum instantaneous current and power measured during the entire period from system power-on to operating system initialization.

The current value was measured at the output terminal of the internal DC-DC redundant board.

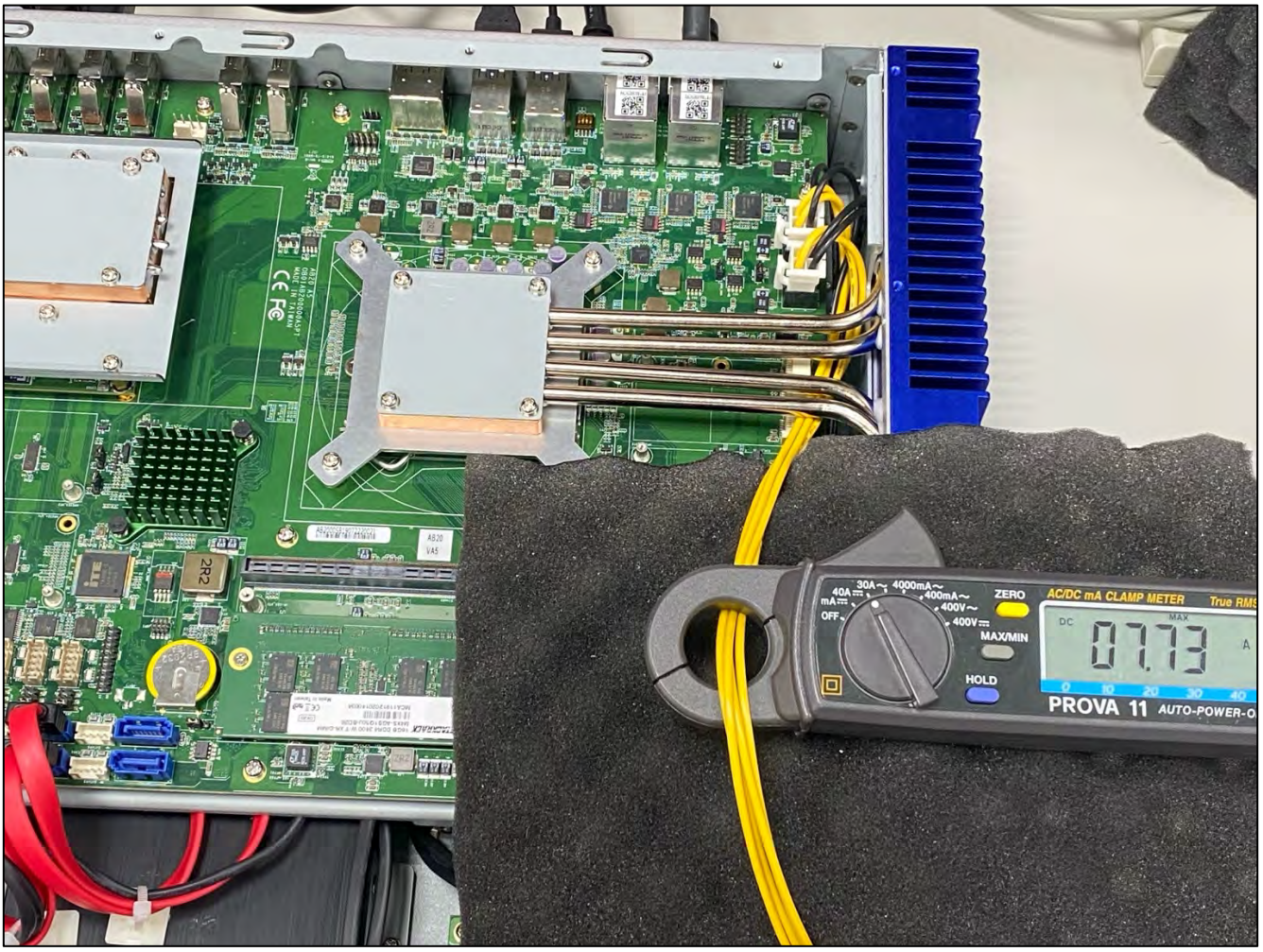
Voltage (V)	Peak Instantaneous Current (A)	Peak Instantaneous Power (W)
12.0	6.65	79.8



2-4. Power Consumption

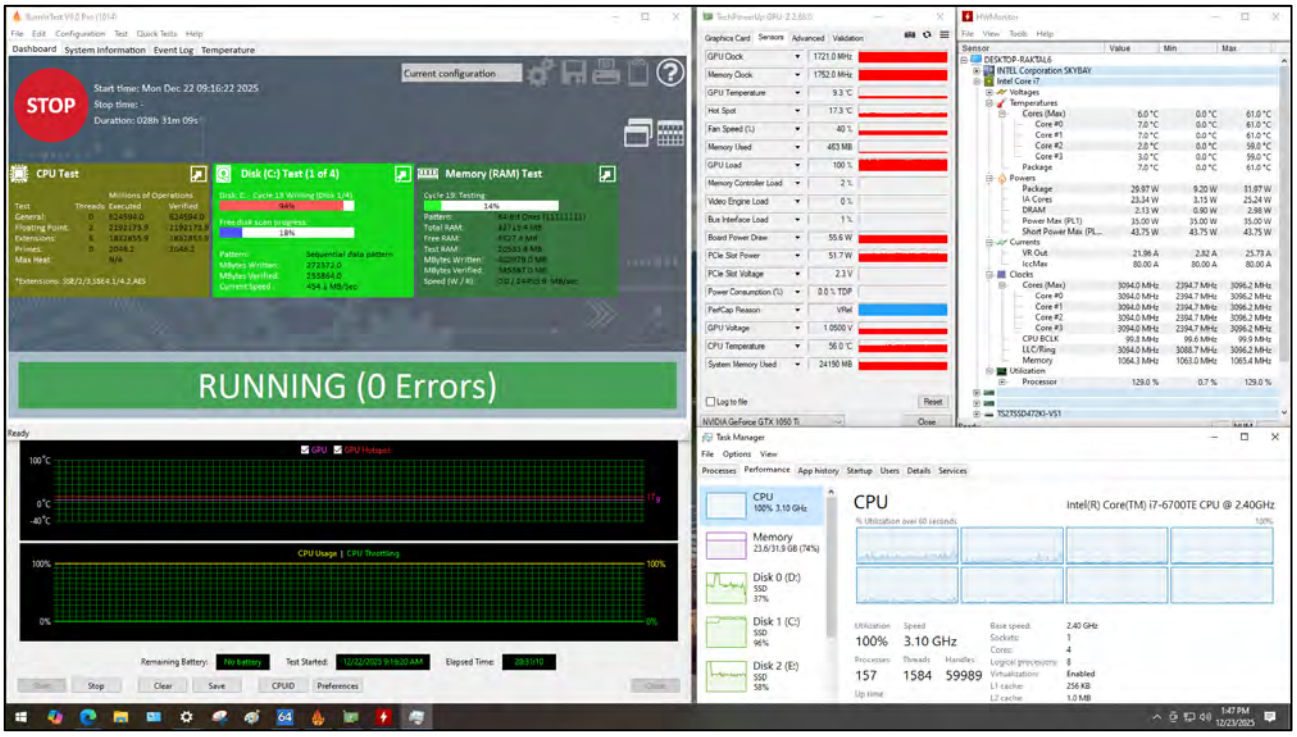
The current value was measured at the output terminal of the internal DC-DC redundant board.

Voltage (V)	Current (A)	Wattage (W)
12.0	7.73	92.76

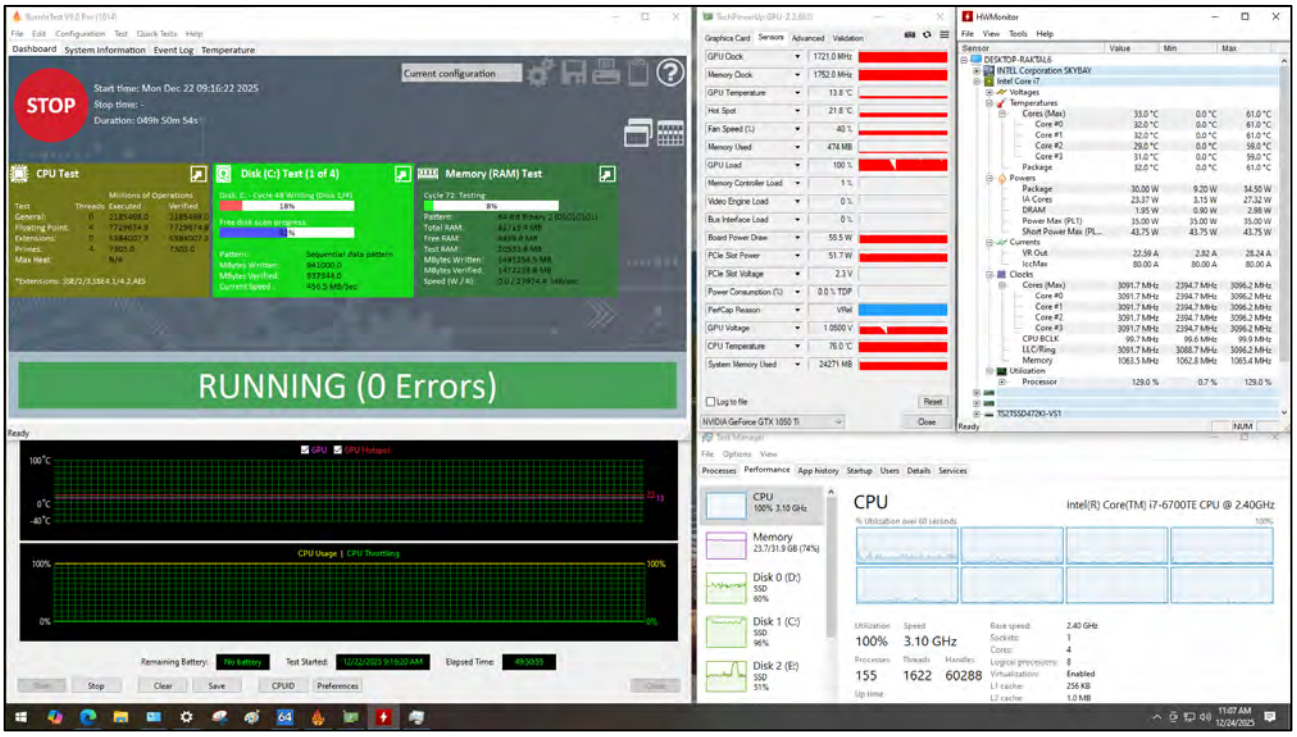


3. TEST PHOTO IN LAB

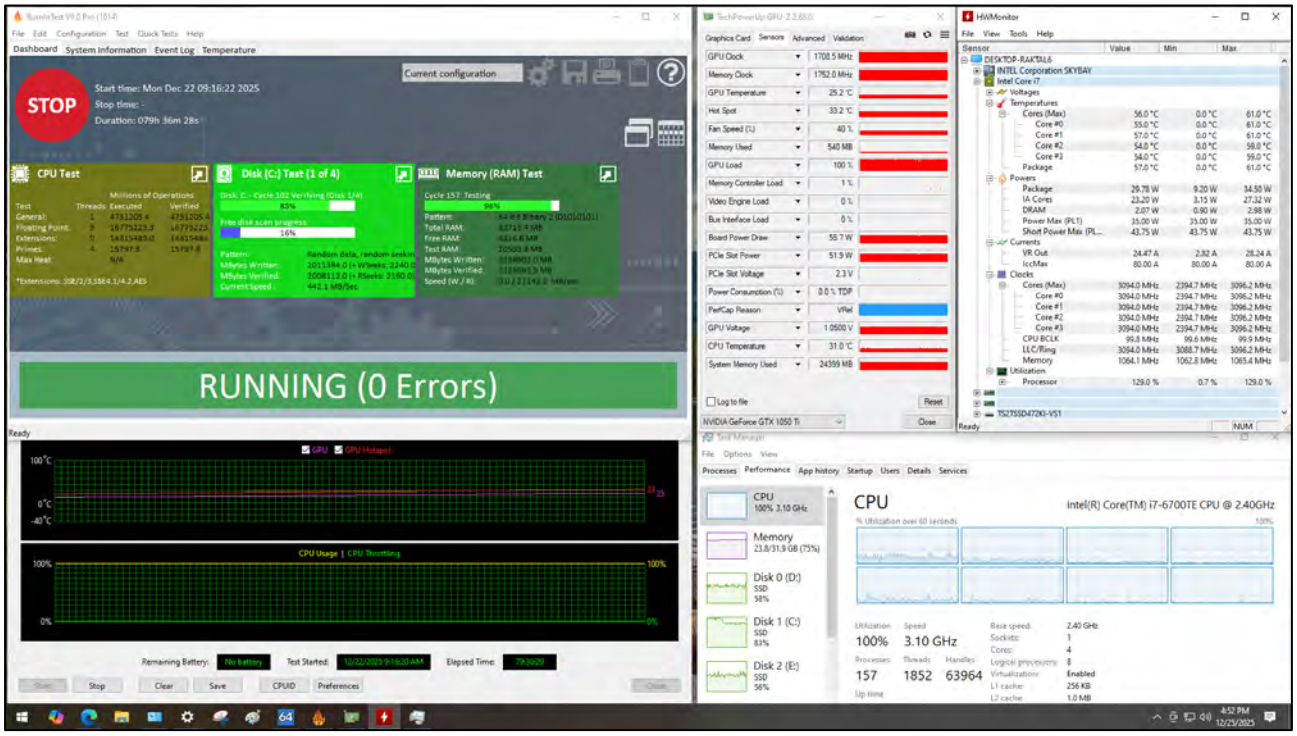
- Chamber in -40°C / 0%RH



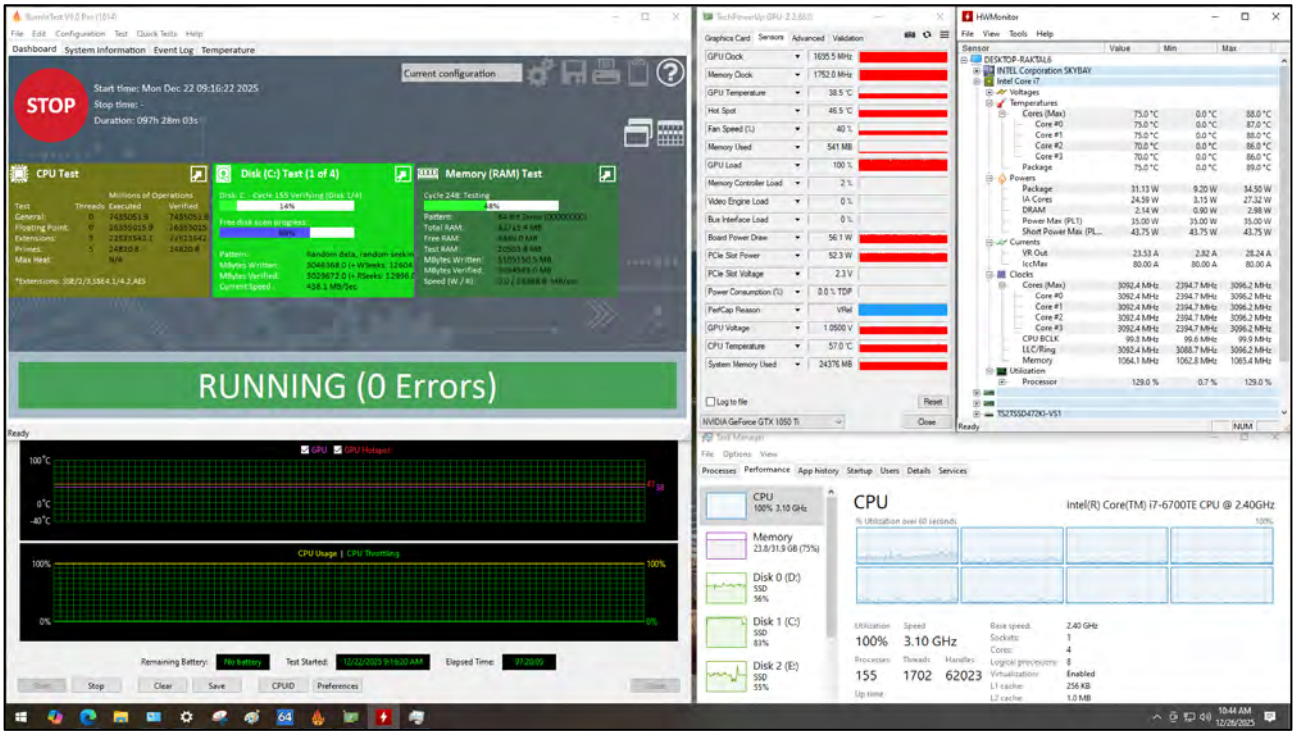
- Chamber in -20°C / 0%RH



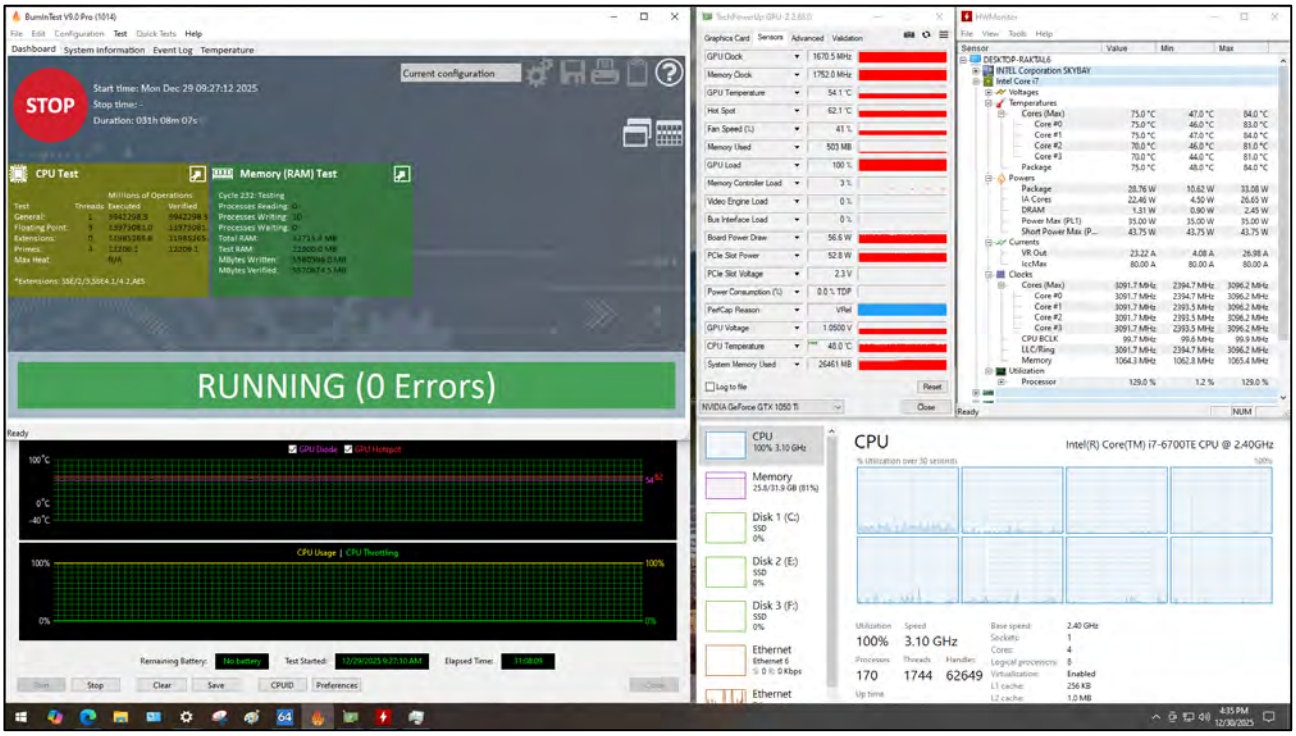
- Chamber in 0°C / 0%RH



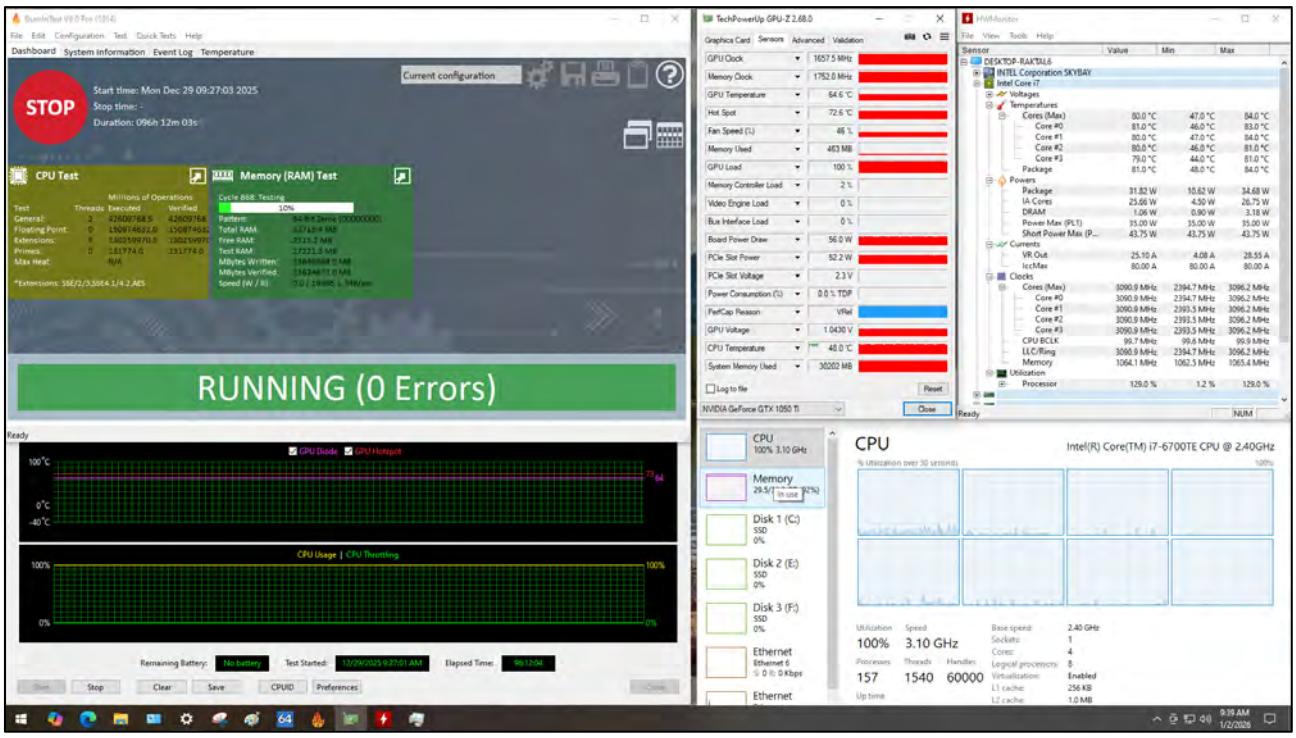
- Chamber in 25°C / 60%RH



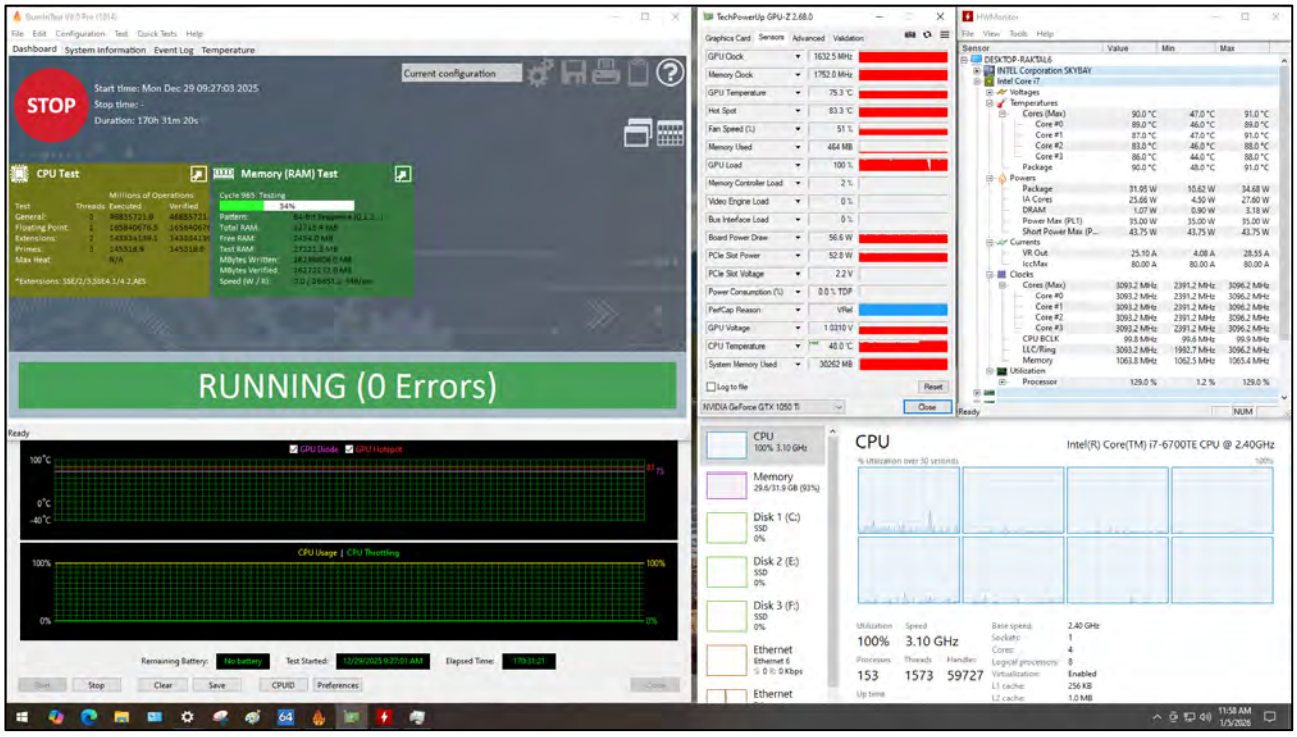
- Chamber in 40°C / 60%RH



- Chamber in 50°C / 60%RH



- Chamber in 60°C / 60%RH

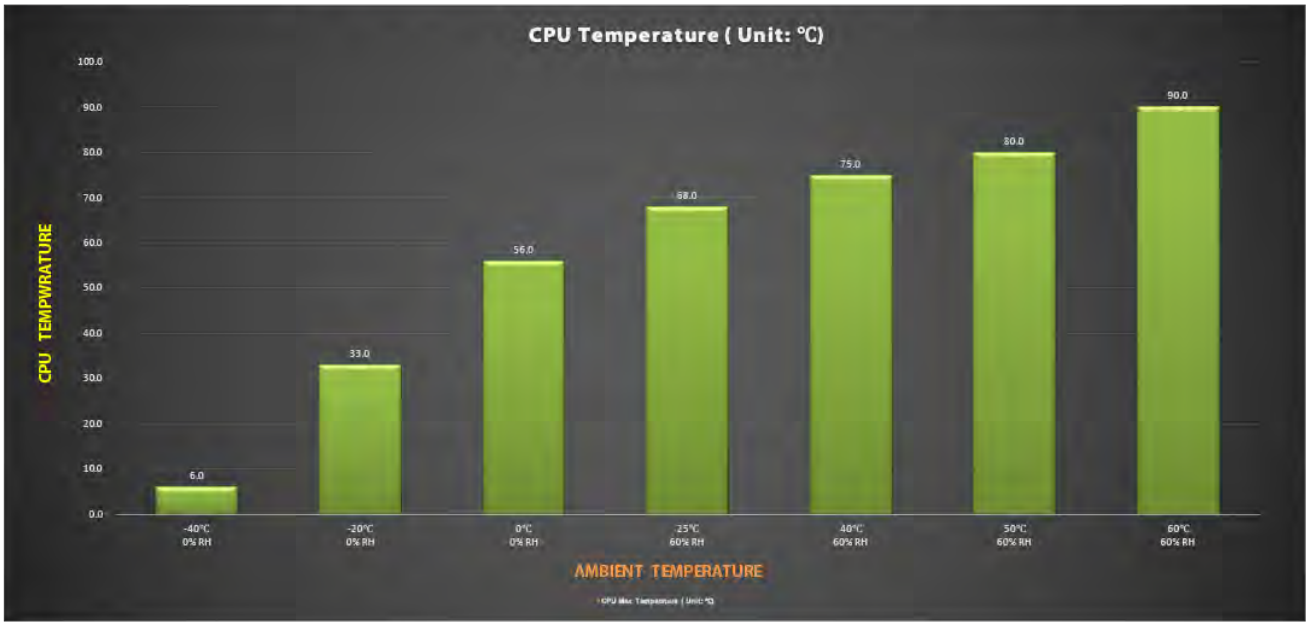


4. THERMAL TEST RESULT(-40°C ~ +60°C)

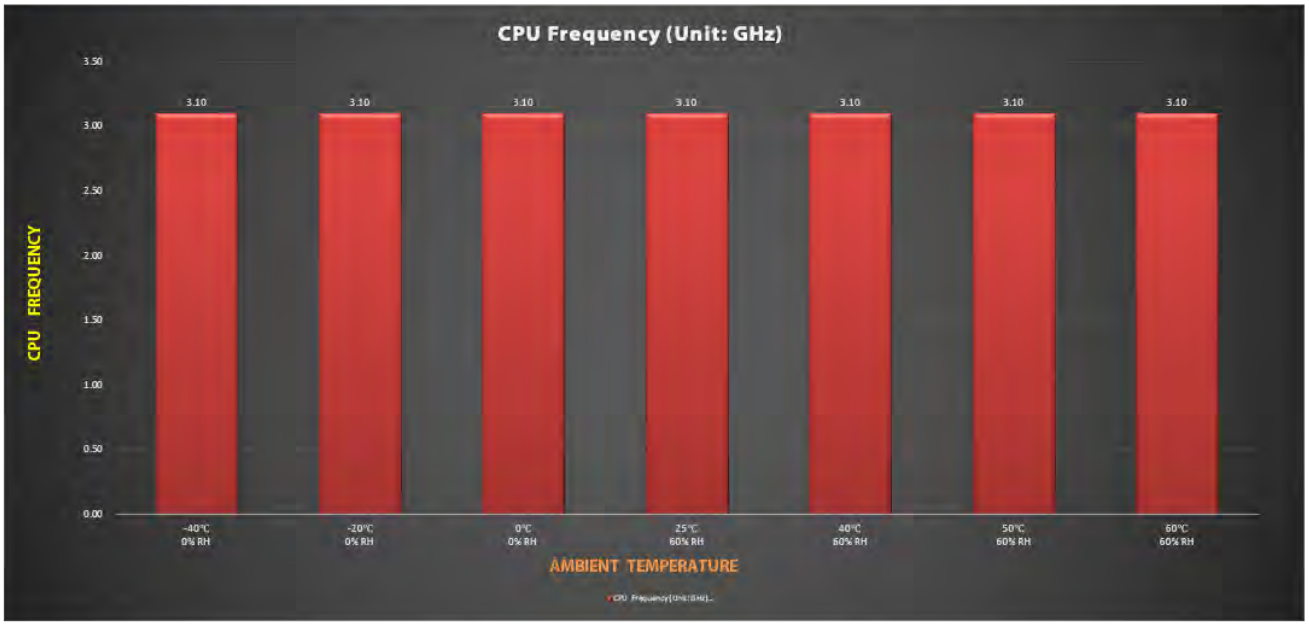
CPU & GPU Temperature and Frequency

Temperature / Ambient Temp. / Frequency	-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 Max Temperature (Unit: °C)	6.0	33.0	56.0	68.0	75.0	80.0	90.0
CPU Frequency (Unit: GHz)	3.10	3.10	3.10	3.10	3.10	3.10	3.10
GPU Temperature (Unit: °C)	9.3	13.8	25.2	38.5	54.1	64.6	75.3
GPU Hot Spot Temperature (Unit: °C)	17.3	21.8	33.2	46.5	62.1	72.6	83.3
GPU Frequency (Unit: MHz)	1721	1721	1709	1696	1671	1658	1633

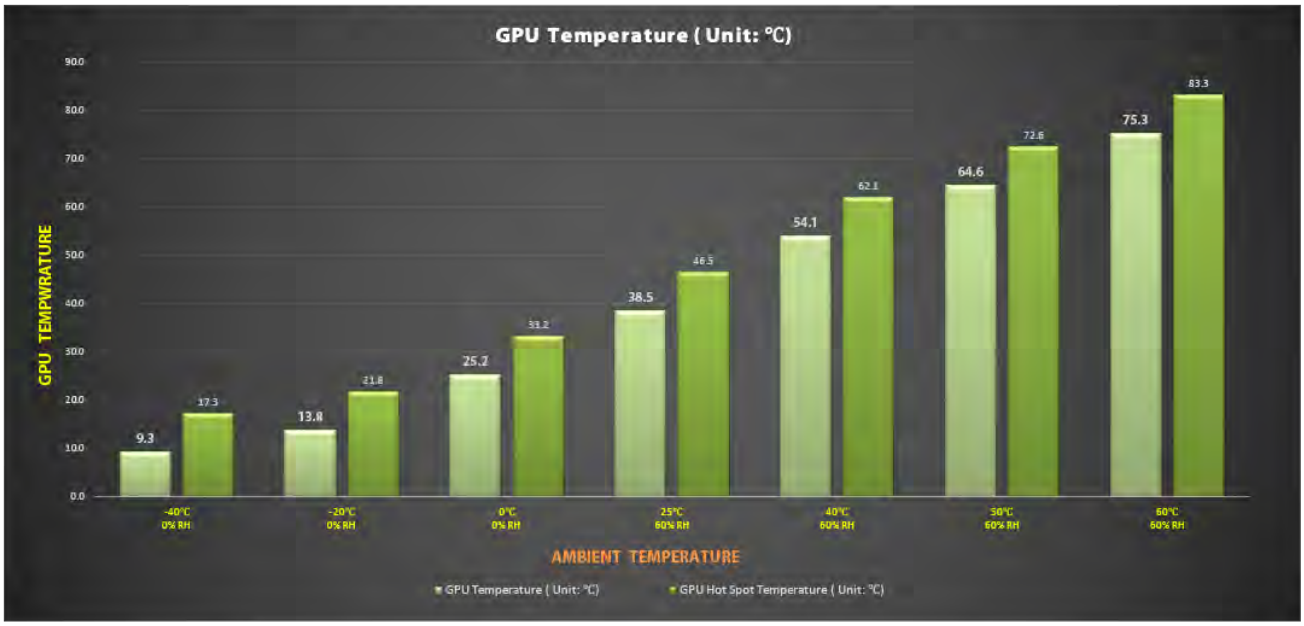
CPU Core Temprature / Ambient Temperature	-40°C 0% RH	-20°C 0% RH	0°C 0% RH	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Max Temperature (Unit: ℃)	6.0	33.0	56.0	68.0	75.0	80.0	90.0



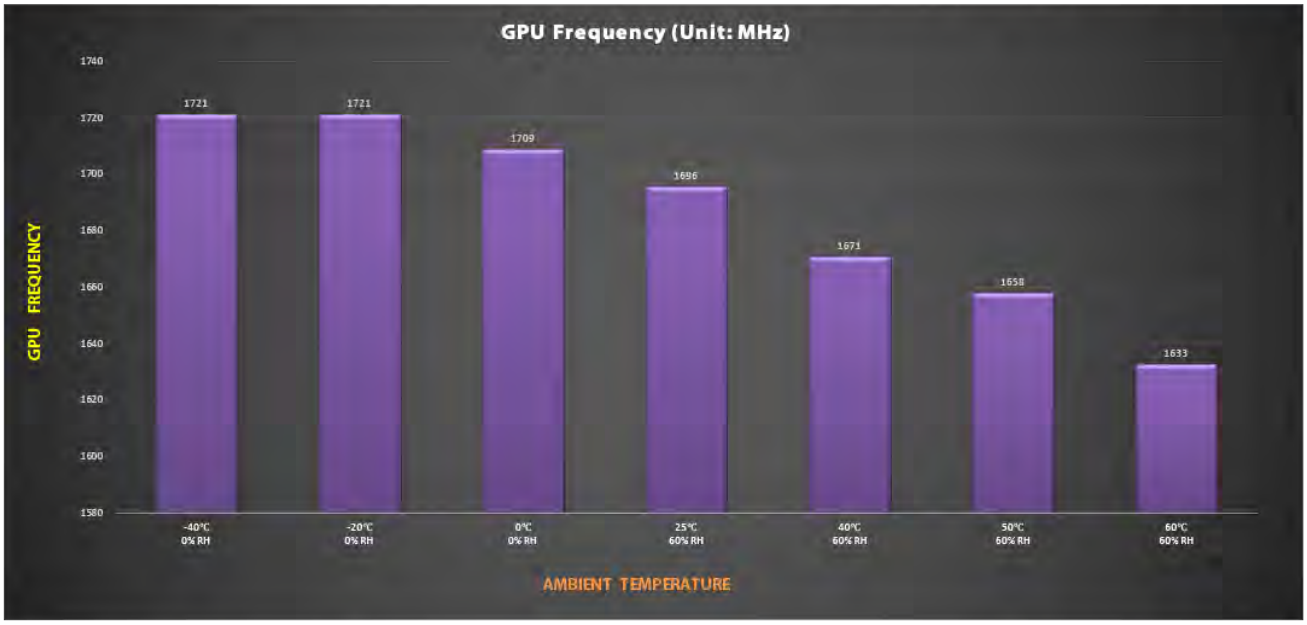
CPU Frequency / Ambient Temperature	-40°C 0% RH	-20°C 0% RH	0°C 0% RH	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Frequency (Unit: GHz) Processor Base Frequency: 2.40 GHz	3.10	3.10	3.10	3.10	3.10	3.10	3.10



GPU Temperature / Ambient Temperature	-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
GPU Temperature (Unit: ℃)	9.3	13.8	25.2	38.5	54.1	64.6	75.3
GPU Hot Spot Temperature (Unit: ℃)	17.3	21.8	33.2	46.5	62.1	72.6	83.3



GPU Frequency / Ambient Temperature	-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
GPU Frequency (Unit: MHz)	1721	1721	1709	1696	1671	1658	1633



5. I/O FUNCTION TEST

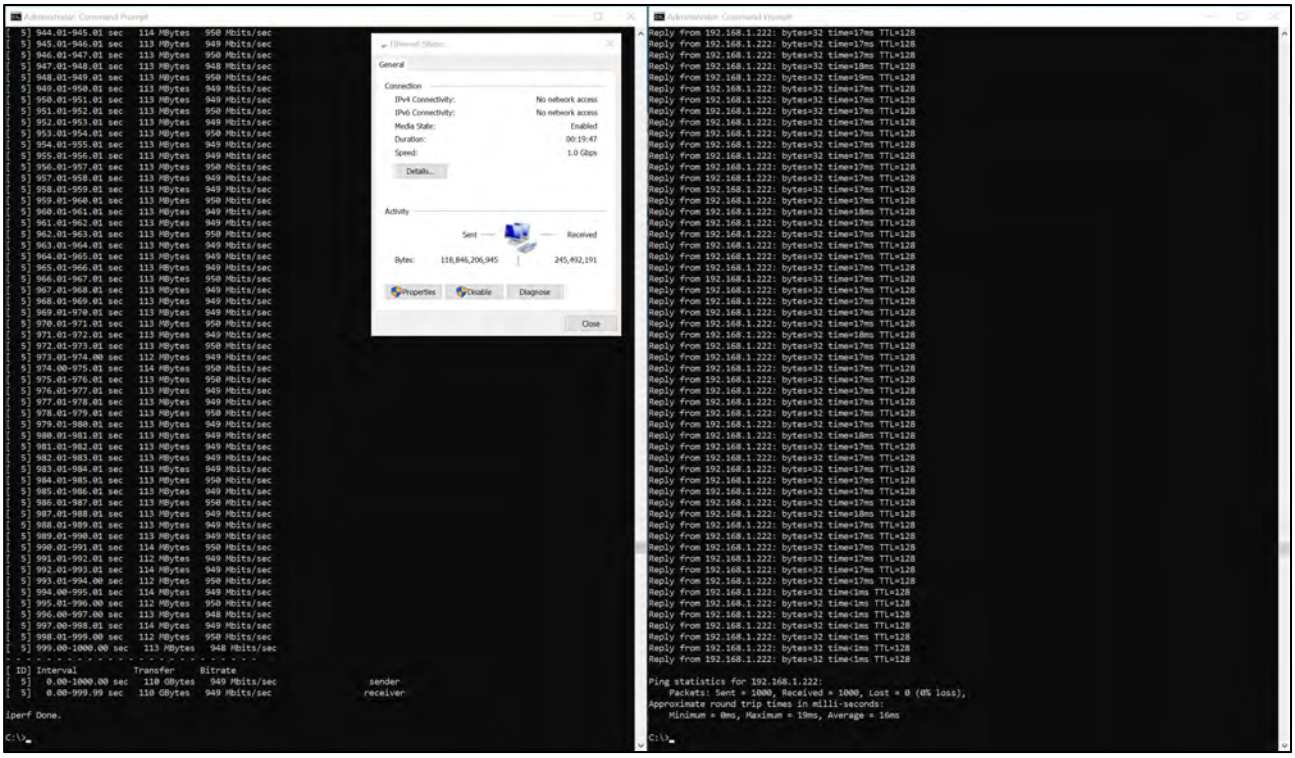
5-1. LAN PORT

1GbE

LAN SPEED

LAN Data-Packet

LAN 1

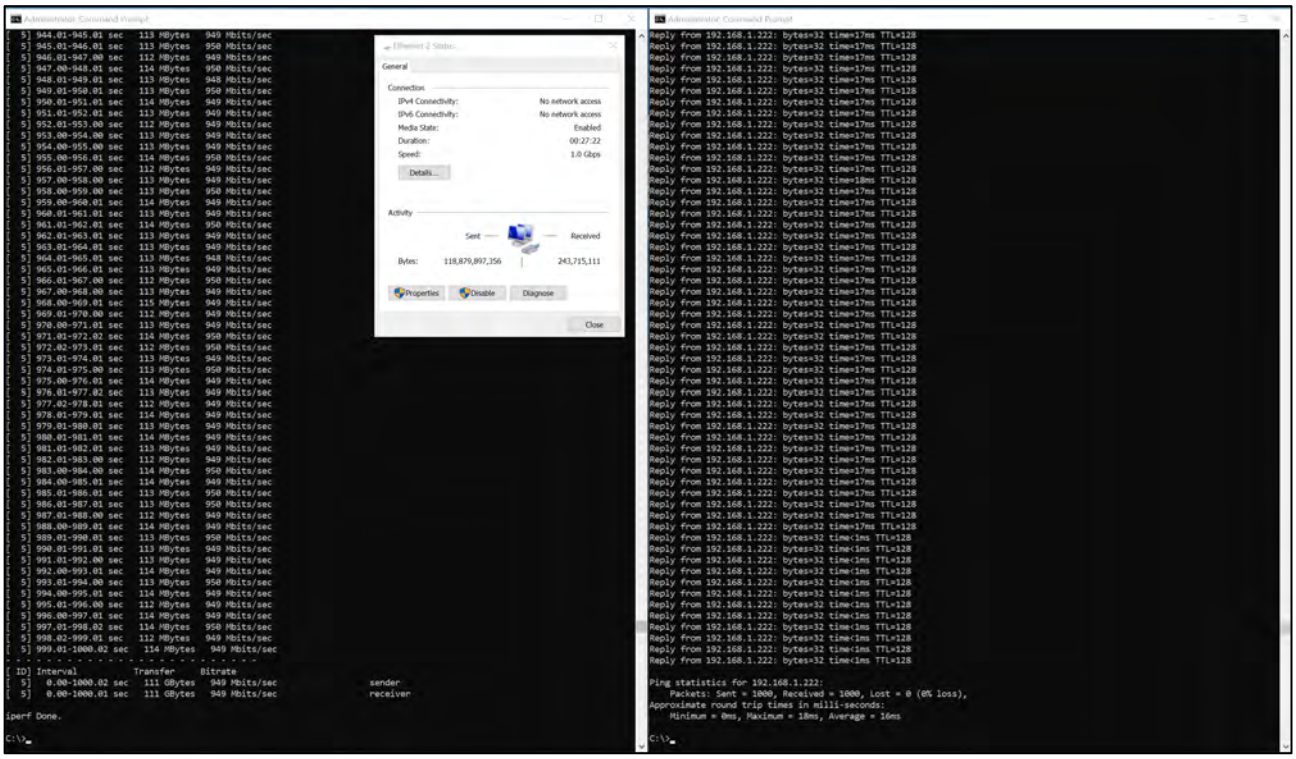


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

LAN Data-Packet

LAN 2

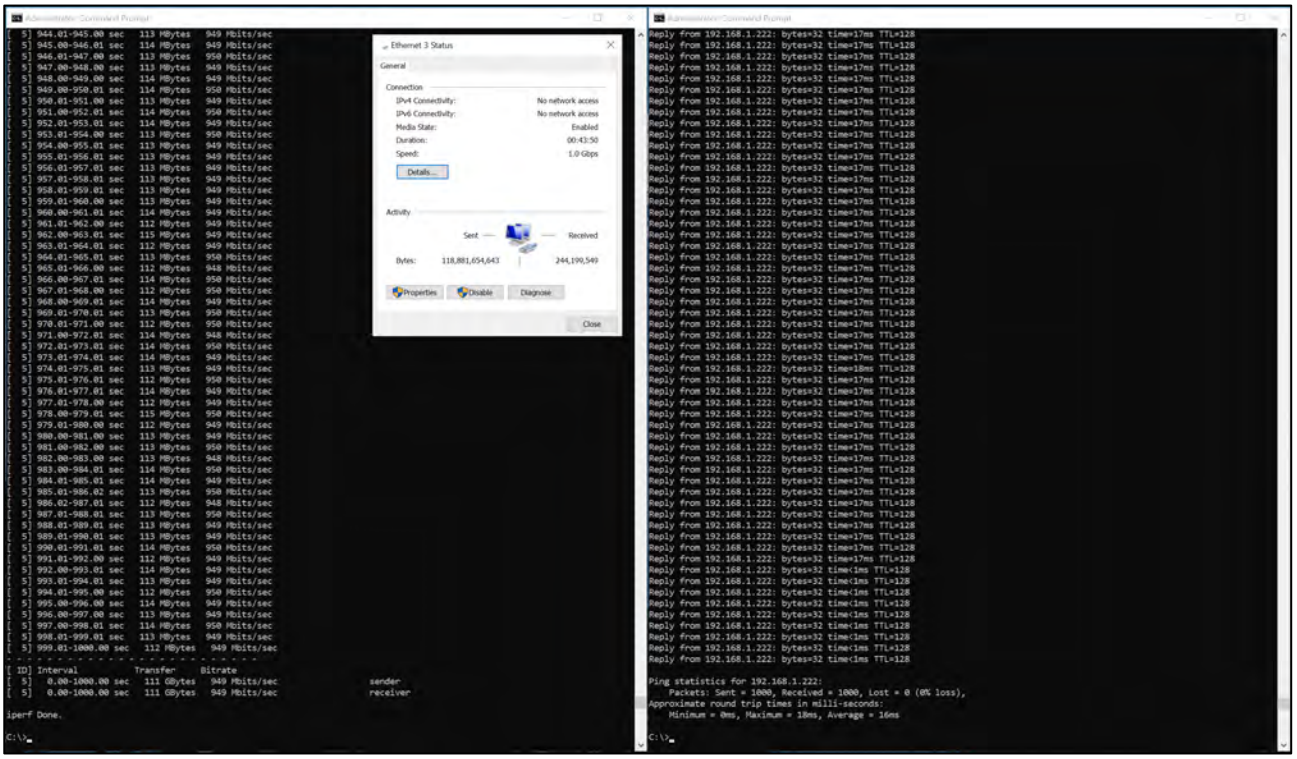


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

LAN Data-Packet

LAN 3

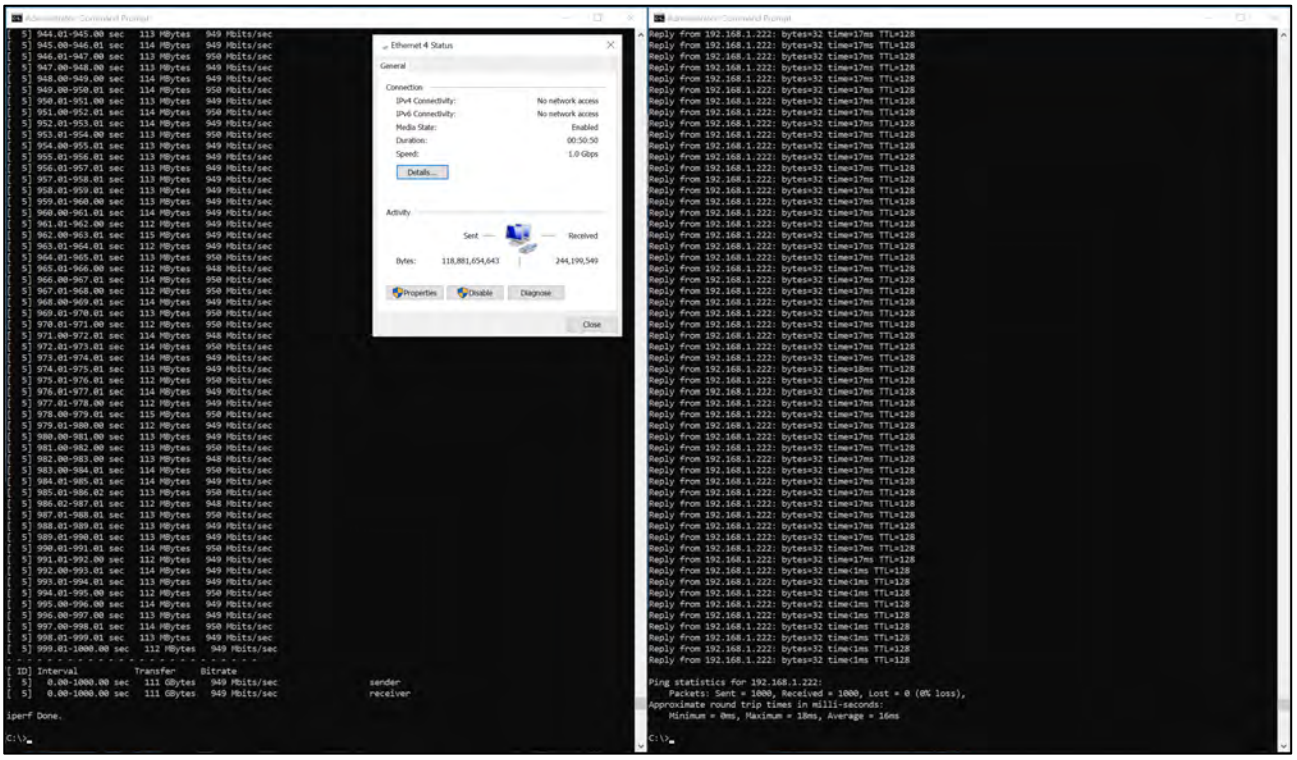


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

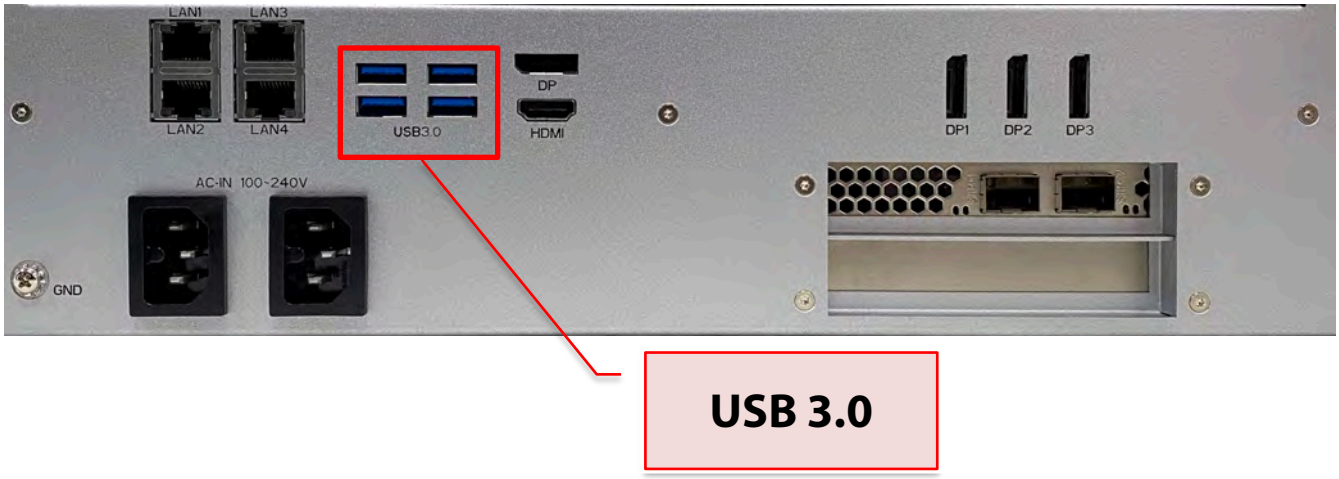
LAN Data-Packet

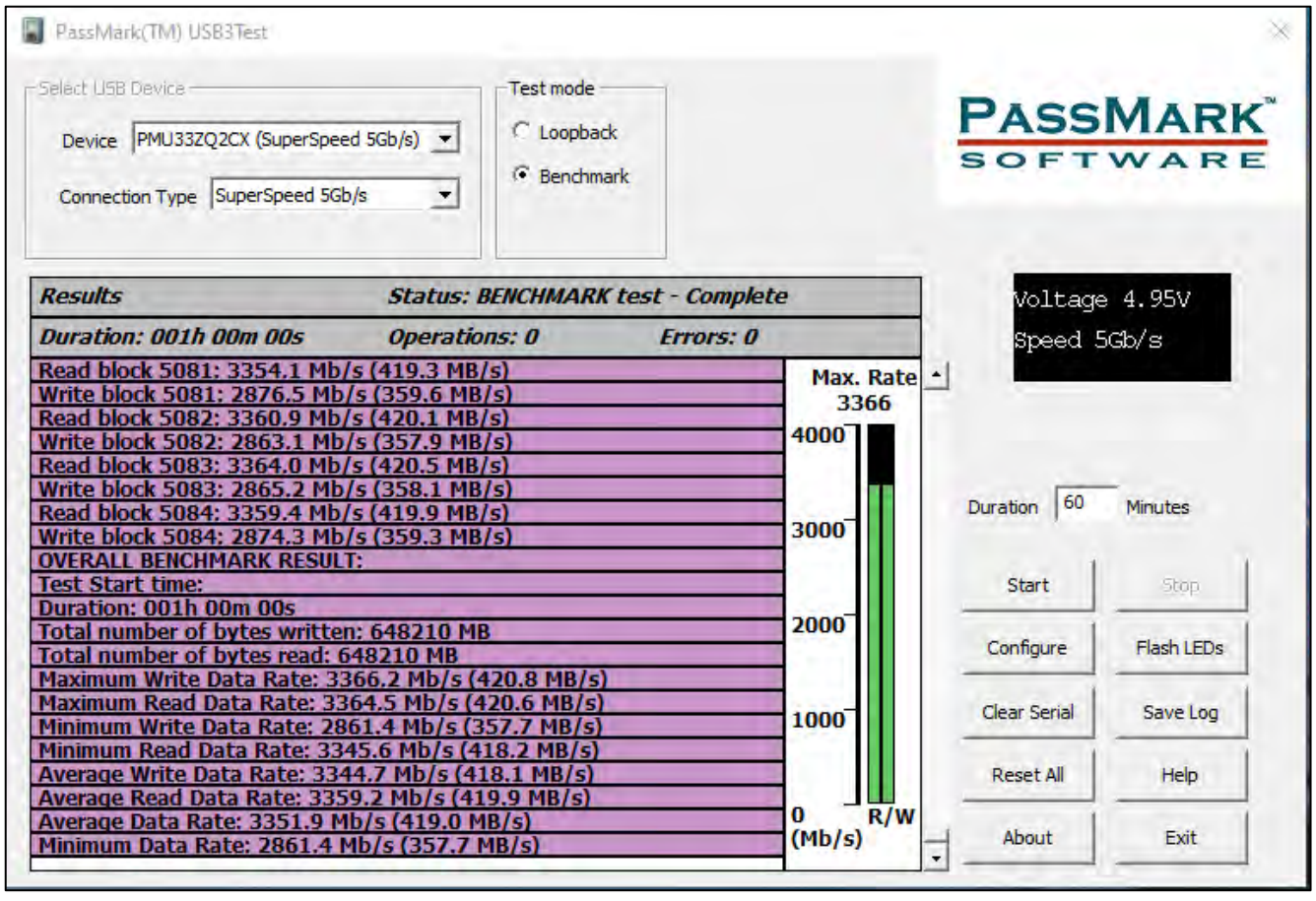
LAN 4

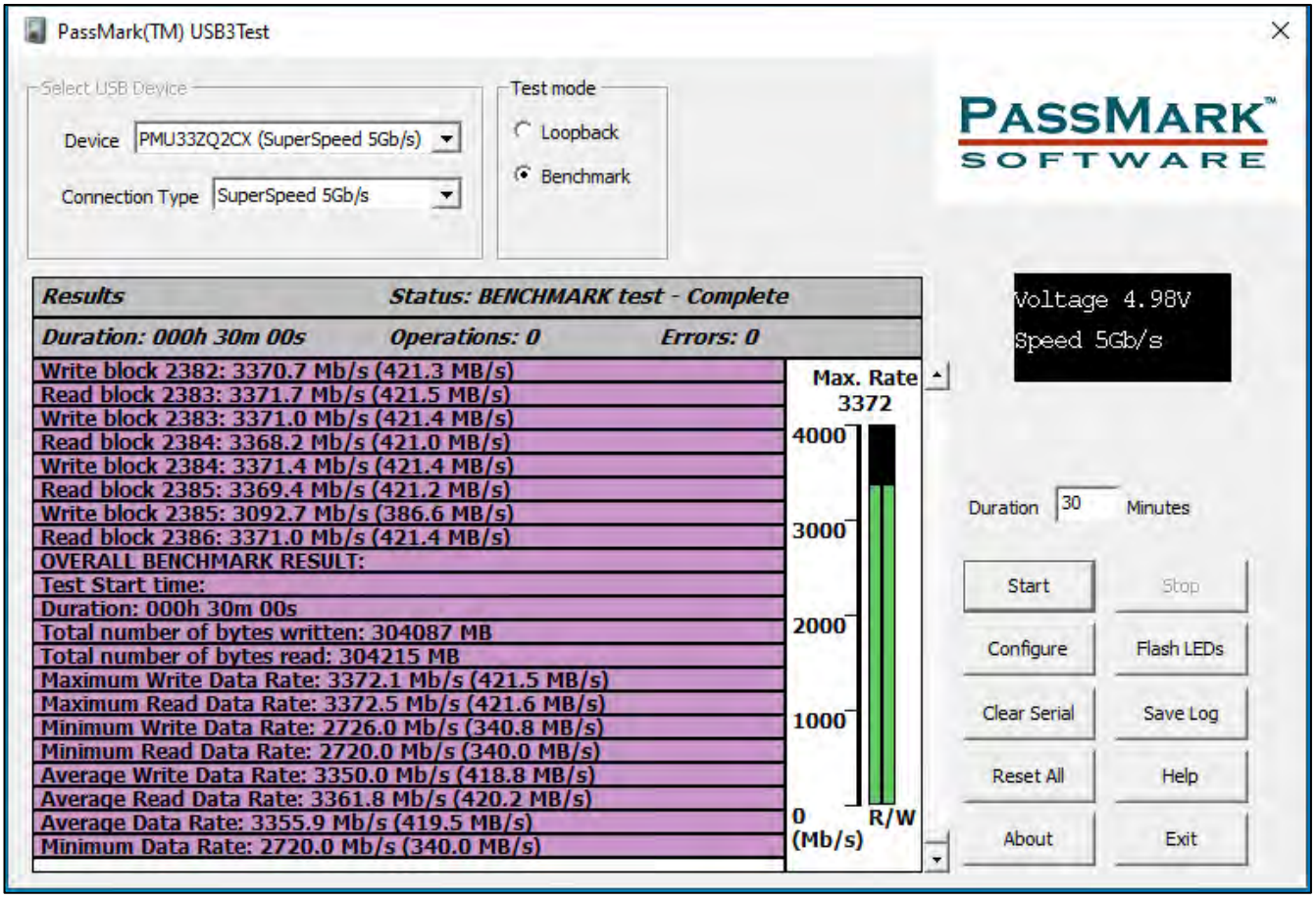


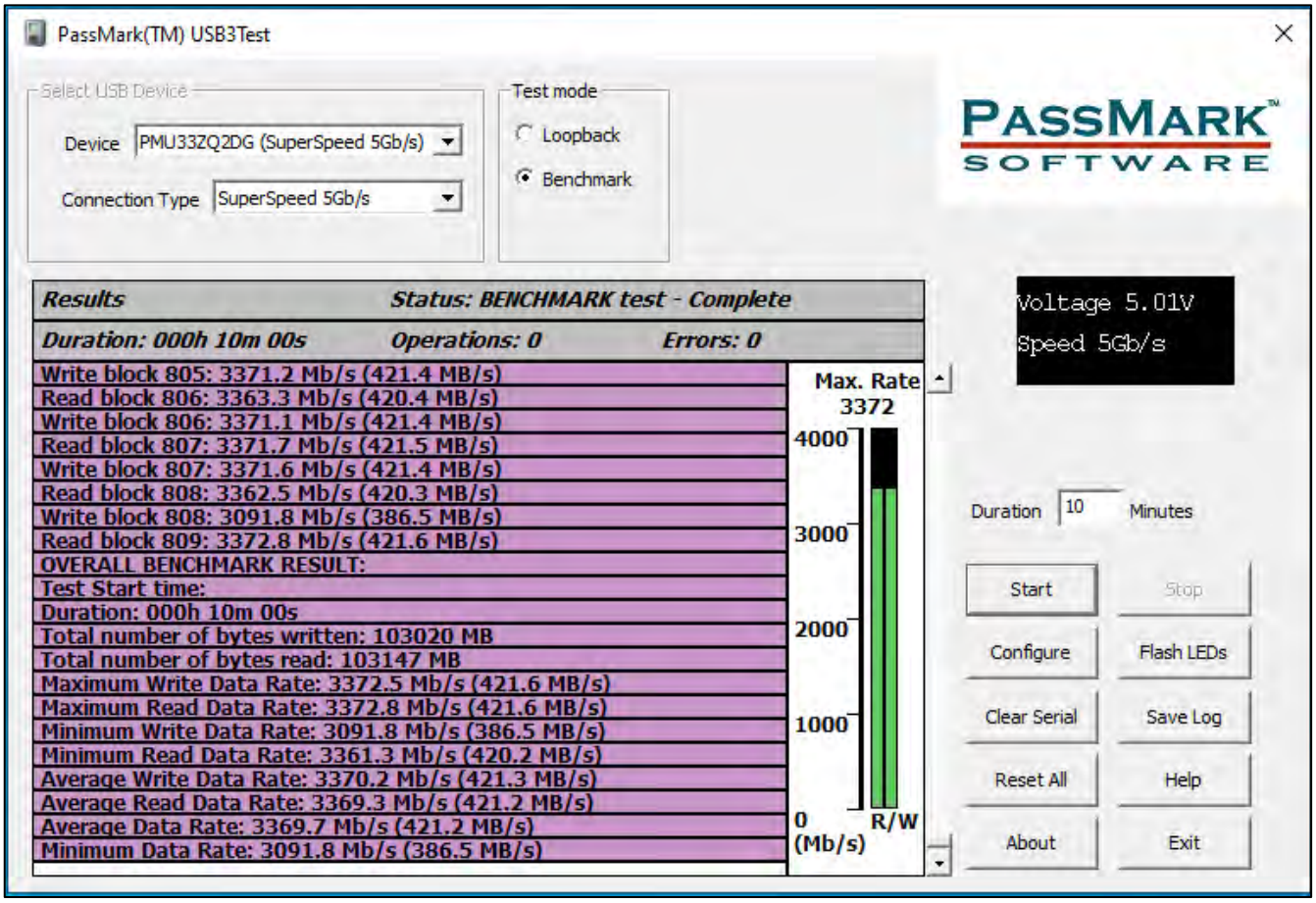
LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

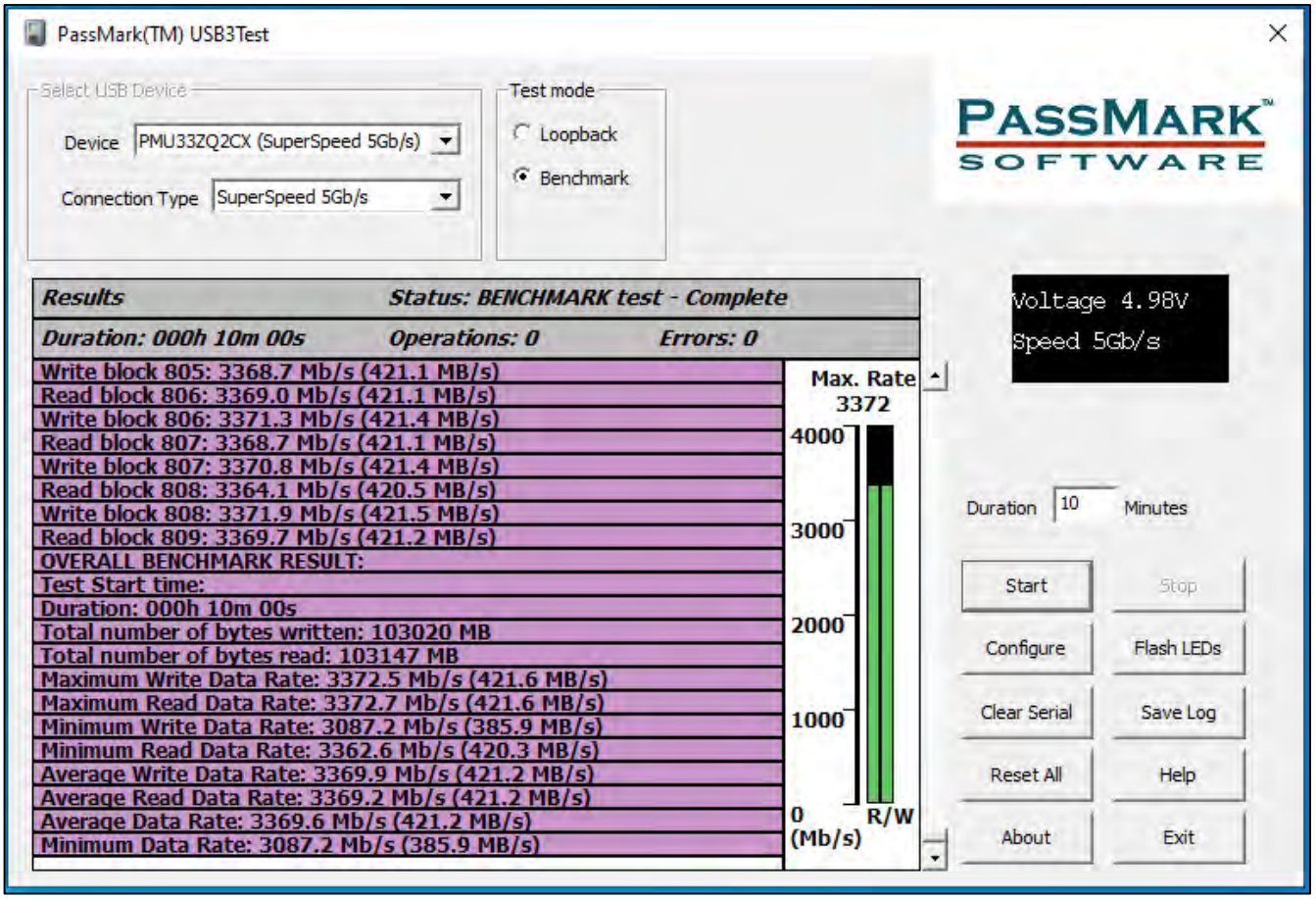
5-2. USB PORT(REAR)



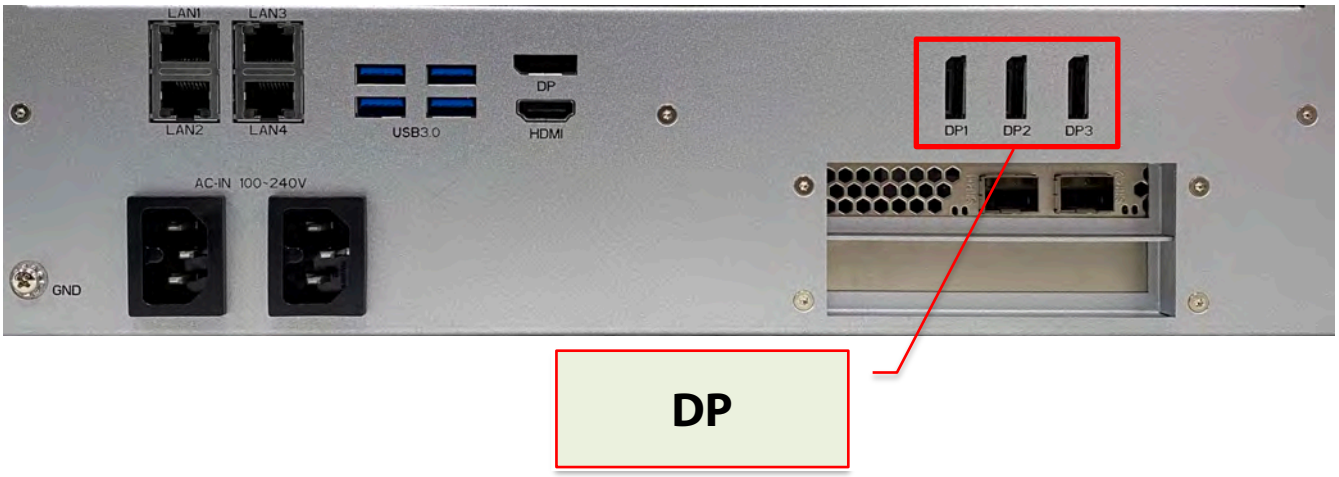


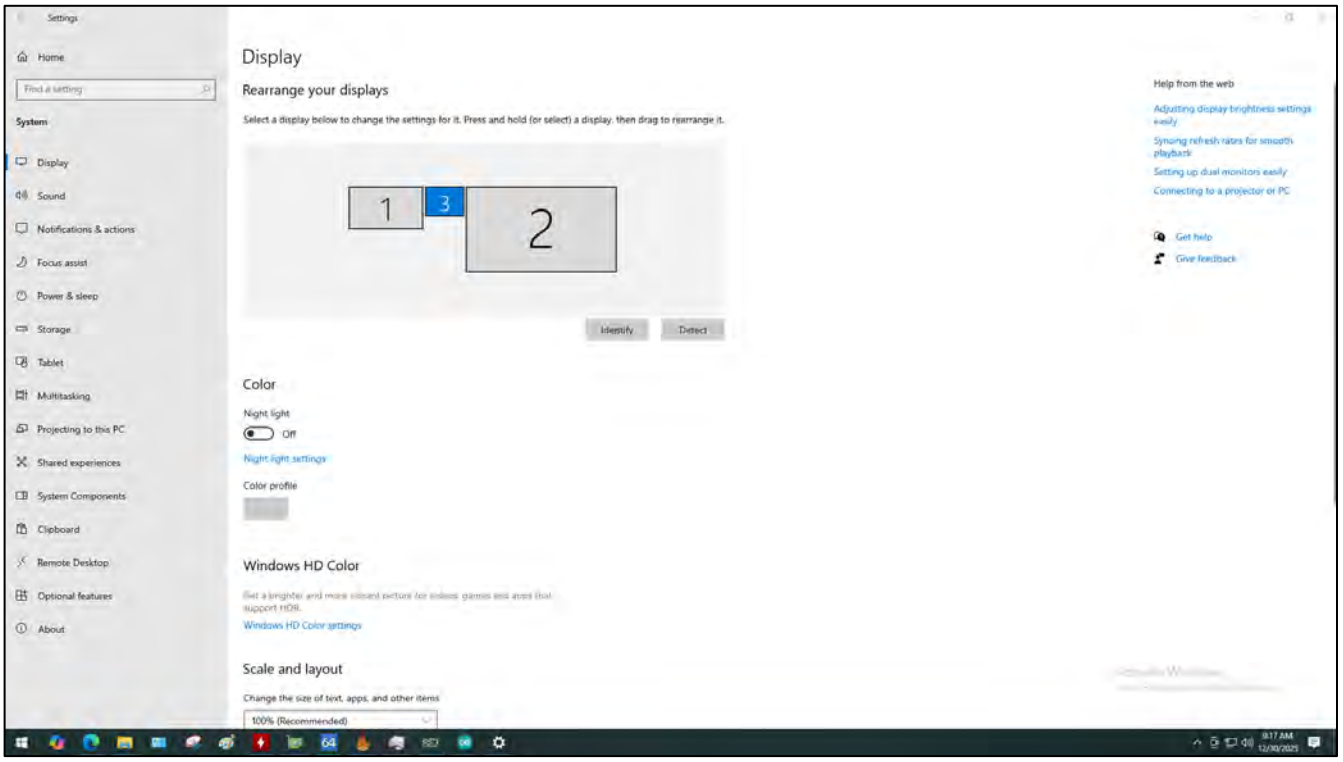

PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2CX (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 30m 00s
Operations: 0
Errors: 0
Write block 2382: 3370.7 Mb/s (421.3 MB/s)
Read block 2383: 3371.7 Mb/s (421.5 MB/s)
Write block 2383: 3371.0 Mb/s (421.4 MB/s)
Read block 2384: 3368.2 Mb/s (421.0 MB/s)
Write block 2384: 3371.4 Mb/s (421.4 MB/s)
Read block 2385: 3369.4 Mb/s (421.2 MB/s)
Write block 2385: 3092.7 Mb/s (386.6 MB/s)
Read block 2386: 3371.0 Mb/s (421.4 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 30m 00s
Total number of bytes written: 304087 MB
Total number of bytes read: 304215 MB
Maximum Write Data Rate: 3372.1 Mb/s (421.5 MB/s)
Maximum Read Data Rate: 3372.5 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 2726.0 Mb/s (340.8 MB/s)
Minimum Read Data Rate: 2720.0 Mb/s (340.0 MB/s)
Average Write Data Rate: 3350.0 Mb/s (418.8 MB/s)
Average Read Data Rate: 3361.8 Mb/s (420.2 MB/s)
Average Data Rate: 3355.9 Mb/s (419.5 MB/s)
Minimum Data Rate: 2720.0 Mb/s (340.0 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 4.98V
Speed 5Gb/s
Duration
30
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit


PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2DG (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 10m 00s
Operations: 0
Errors: 0
Write block 805: 3371.2 Mb/s (421.4 MB/s)
Read block 806: 3363.3 Mb/s (420.4 MB/s)
Write block 806: 3371.1 Mb/s (421.4 MB/s)
Read block 807: 3371.7 Mb/s (421.5 MB/s)
Write block 807: 3371.6 Mb/s (421.4 MB/s)
Read block 808: 3362.5 Mb/s (420.3 MB/s)
Write block 808: 3091.8 Mb/s (386.5 MB/s)
Read block 809: 3372.8 Mb/s (421.6 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Total number of bytes written: 103020 MB
Total number of bytes read: 103147 MB
Maximum Write Data Rate: 3372.5 Mb/s (421.6 MB/s)
Maximum Read Data Rate: 3372.8 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 3091.8 Mb/s (386.5 MB/s)
Minimum Read Data Rate: 3361.3 Mb/s (420.2 MB/s)
Average Write Data Rate: 3370.2 Mb/s (421.3 MB/s)
Average Read Data Rate: 3369.3 Mb/s (421.2 MB/s)
Average Data Rate: 3369.7 Mb/s (421.2 MB/s)
Minimum Data Rate: 3091.8 Mb/s (386.5 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 5.01V
Speed 5Gb/s
Duration
10
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit

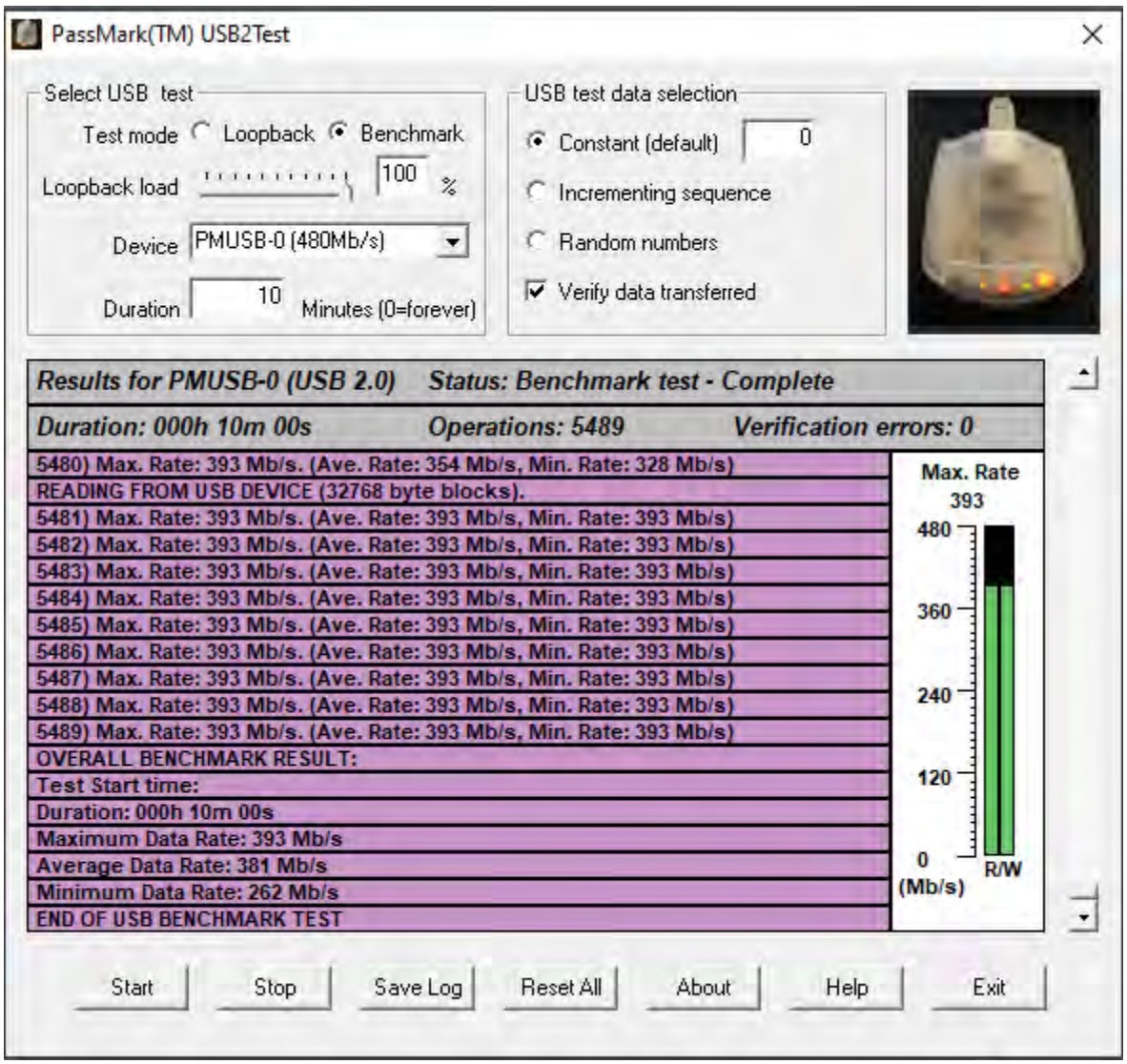

PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2CX (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 10m 00s
Operations: 0
Errors: 0
Write block 805: 3368.7 Mb/s (421.1 MB/s)
Read block 806: 3369.0 Mb/s (421.1 MB/s)
Write block 806: 3371.3 Mb/s (421.4 MB/s)
Read block 807: 3368.7 Mb/s (421.1 MB/s)
Write block 807: 3370.8 Mb/s (421.4 MB/s)
Read block 808: 3364.1 Mb/s (420.5 MB/s)
Write block 808: 3371.9 Mb/s (421.5 MB/s)
Read block 809: 3369.7 Mb/s (421.2 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Total number of bytes written: 103020 MB
Total number of bytes read: 103147 MB
Maximum Write Data Rate: 3372.5 Mb/s (421.6 MB/s)
Maximum Read Data Rate: 3372.7 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 3087.2 Mb/s (385.9 MB/s)
Minimum Read Data Rate: 3362.6 Mb/s (420.3 MB/s)
Average Write Data Rate: 3369.9 Mb/s (421.2 MB/s)
Average Read Data Rate: 3369.2 Mb/s (421.2 MB/s)
Average Data Rate: 3369.6 Mb/s (421.2 MB/s)
Minimum Data Rate: 3087.2 Mb/s (385.9 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 4.98V
Speed 5Gb/s
Duration
10
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit

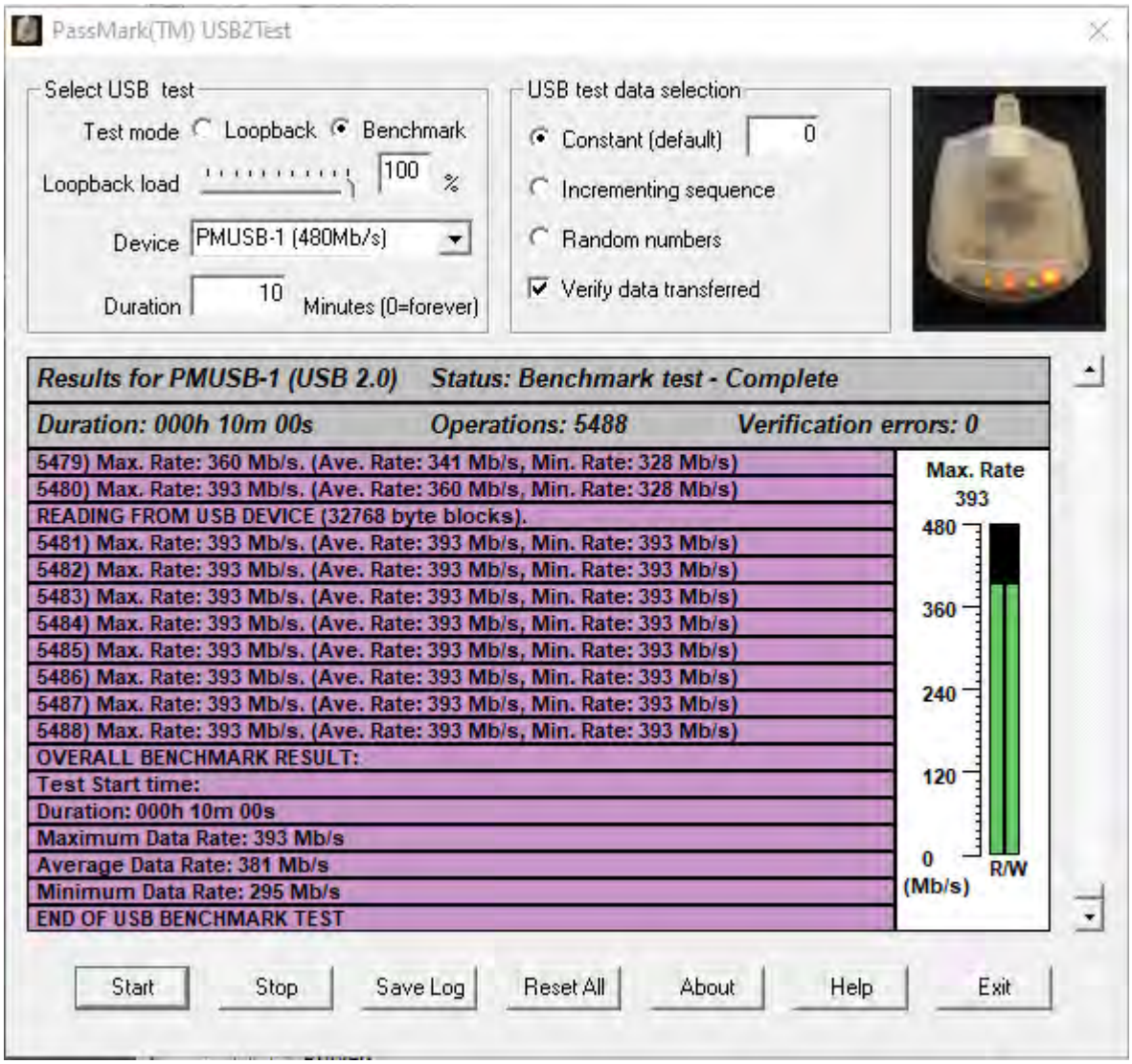
5-3. DISPLAY PORT





5-4. USB PORT (FRONT)




PassMark(TM) USB2Test
Select USB test
Test mode
Loopback
Benchmark
Loopback load
100
%
Device
PMUSB-1 (480Mb/s)
Duration
10
Minutes (0=forever)
USB test data selection
Constant (default)
0
Incrementing sequence
Random numbers
Verify data transferred
Results for PMUSB-1 (USB 2.0)
Status: Benchmark test - Complete
Duration: 000h 10m 00s
Operations: 5488
Verification errors: 0
5479) Max. Rate: 360 Mb/s, (Ave. Rate: 341 Mb/s, Min. Rate: 328 Mb/s)
5480) Max. Rate: 393 Mb/s, (Ave. Rate: 360 Mb/s, Min. Rate: 328 Mb/s)
READING FROM USB DEVICE (32768 byte blocks).
5481) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5482) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5483) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5484) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5485) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5486) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5487) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5488) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Maximum Data Rate: 393 Mb/s
Average Data Rate: 381 Mb/s
Minimum Data Rate: 295 Mb/s
END OF USB BENCHMARK TEST
Max. Rate
393
480
360
240
120
0
(Mb/s)
R/W
Start
Stop
Save Log
Reset All
About
Help
Exit

-----END-----

PERFORMANCE TEST REPORT

HORUS420-R1

S/N: SR2025100902

Product Manager	Mechanical Engineer	System Engineer	Test Engineer
Honwen Huang	Jeff Lin	Orpheus Hsiung	Mike Chen

Date: January 27, 2026


LAN1
LAN3
LAN2
LAN4
USB3.0
DP
HDMI
DP1
DP2
DP3
AC-IN 100-240V
GND


USB2.0
HDD
POWER

INDEX

1. SPECIFICATION 3

1-1. System Configuration 3
1-2. Product Interior Photo 4

2. TEST PLAN 5

2-1. Thermal Measurement Process 5
2-2. Test Result 6
2-2-1. Temperature Cycle 6
2-2-2. I/O Function 7
2-2-3. Low Temperature Power Cycle Test 8
2-3. Peak Instantaneous Current and Power 9
2-4. Power Consumption 10

3. TEST PHOTO IN LAB 11

4. THERMAL TEST RESULT(-40°C ~ +60°C) 18

5. I/O FUNCTION TEST 21

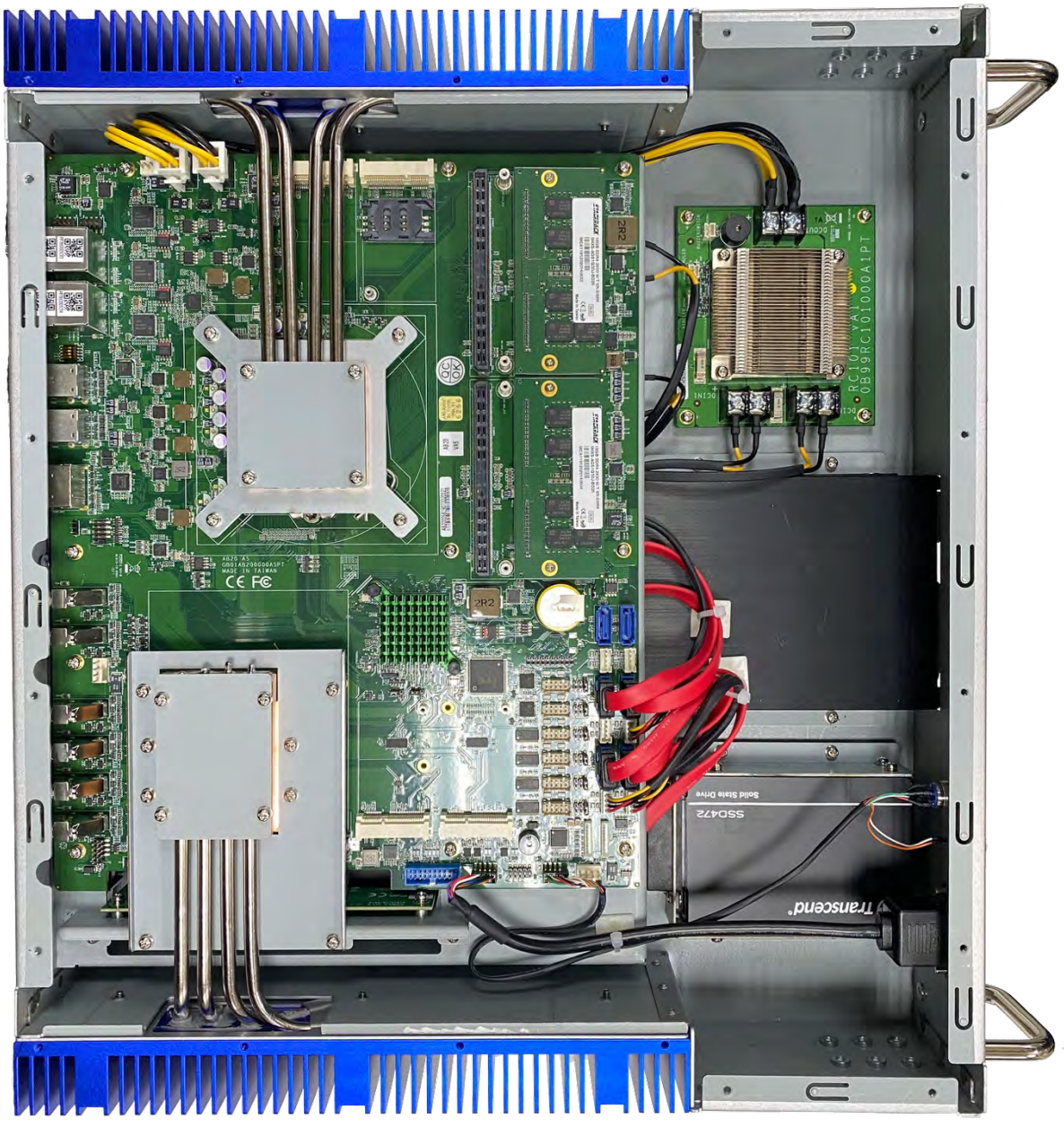
5-1. LAN Port 21
5-2. USB Port(Rear) 25
5-3. Display Port 29
5-4. USB Port (Front) 30

1. SPECIFICATION

1-1. System Configuration

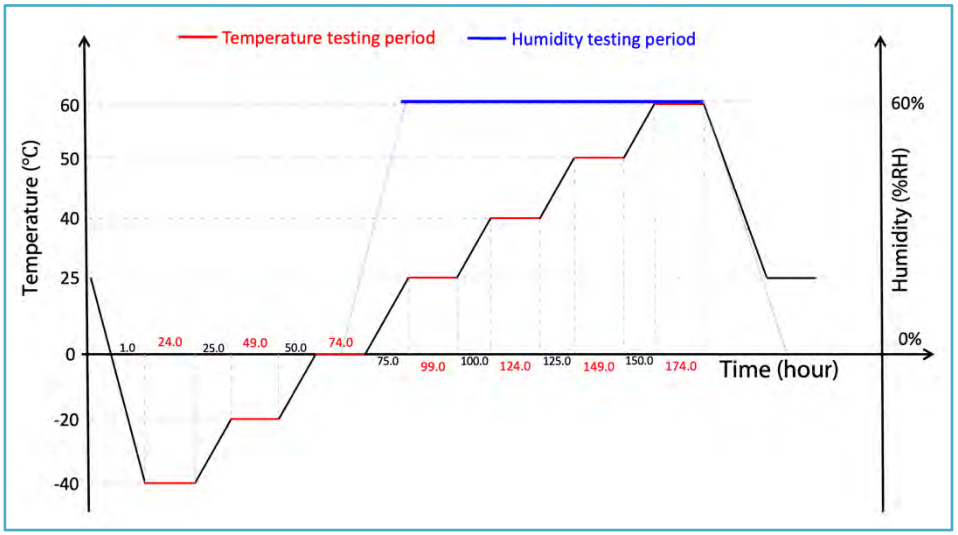
Motherboard	AB20 BIOS Version: 5.11 SMBIOS Version: 3.0 Supports Intel® LGA 1151 14nm Skylake-S Processor Operating Temp. -40°C~85°C
CPU	Intel® Core™ i7-6700TE ProcessorTotal Cores: 14 Total Cores: 4 Total Threads: 8 Max Turbo Frequency: 3.40 GHz Intel® Turbo Boost Technology 2.0 Frequency‡: 3.40 GHz Processor Base Frequency: 2.40 GHz TDP: 35 W
Memory	32GB DDR4 XR-DIMM
Storage	Internal: 2TB *2 3D TLC SSD External: 2TB *2 3D TLC SSD
GPU	NVIDIA GeForce GTX 1050 Ti Embedded GPU BIOS Version: 86.07.59.00.E3 CUDA parallel-processing cores: 768 CUDA® cores GPU base/boost clock: 1291 MHz / 1392 MHz Max Power Consumption: 75 W
Add-on cards	Perfectron MT201 Intel® 82599ES 10Gb/s 2 x LAN port 2 x SFP+ LAN ports Supports 10Gb/s per port Intel® 82599ES PCIe x8 (Gen2 x8 bus)
Power Module	2 x 200W AC-DC PSU With reduandant Power

1-2. Product Interior Photo



2. TEST PLAN

2-1. THERMAL MEASUREMENT PROCESS

Test Purpose	The purpose of conducting thermal profile testing is to identify potential thermal issues in the Equipment Under Test (EUT). Given that semiconductor failure rates increase significantly with rising junction temperatures, this testing contributes to the overall assessment of product reliability. As the system undergoes a cooling phase, operational modes may shift depending on stack configuration, temperature, and heat dissipation characteristics. Thermal mapping provides critical insight for optimizing thermal management strategies and determining the most effective component layout and monitoring arrangements.
Test Equipment	1. KSON THS-B4T-150 Chamber.
Quantity Tested	Minimum 1 Set
Test Software	CPU Stress: PassMark BurnIn Test v9.0 GPU Stress: AIDA64 Business v6.90 LAN Speed Test: iPerf3
Test Procedure	1. Thermal Pre-Scan Measurement: Temperature Range: **-40°C to 60°C** Humidity Condition: **60% RH** (when temperature exceeds 25°C) 2. Actual Thermal Measurement Procedure: 2.1. Identify the test points using the infrared thermal image and attach thermocouples to the identified hot spots. 2.2. Place the Equipment Under Test (EUT) in the thermal chamber and configure the test temperature profile according to the specified requirements. 2.3. Power on the EUT after closing the thermal chamber. Boot into Windows 11 Pro and initiate a maximum power consumption and stress test. 2.4. After running the test software continuously for 8 hours, record the peak temperature observed at each thermocouple measurement point. 2.5. Power off both the thermal chamber and the EUT. 2.6. Verify that the recorded temperature data for each component remains within its specified operating temperature range, as defined in the component specification or approval documents.
Test Diagram of Curves	Environment defines for 174 hours. 

2-2. Test Result

2-2-1. Temperature Cycle

Aging tests were performed on individual components across a range of temperature settings, under both maximum load and full load conditions, to evaluate thermal endurance and operational stability over time.

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

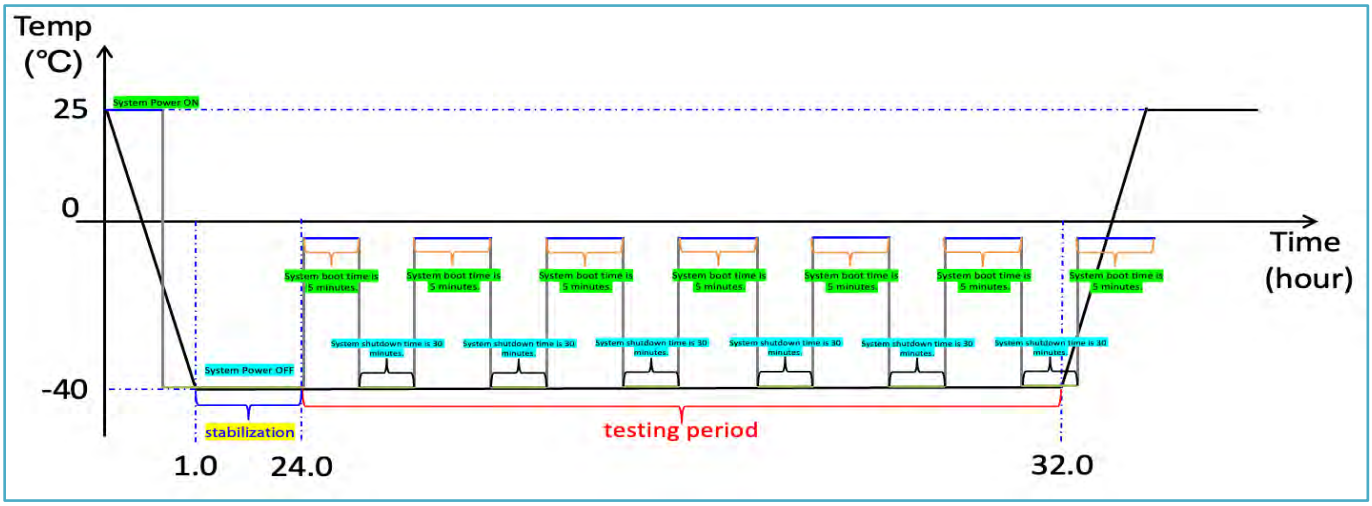
Confirm that the system specifications and all input/output (I/O) interfaces are correctly configured and functioning as intended, in accordance with the defined technical standards.

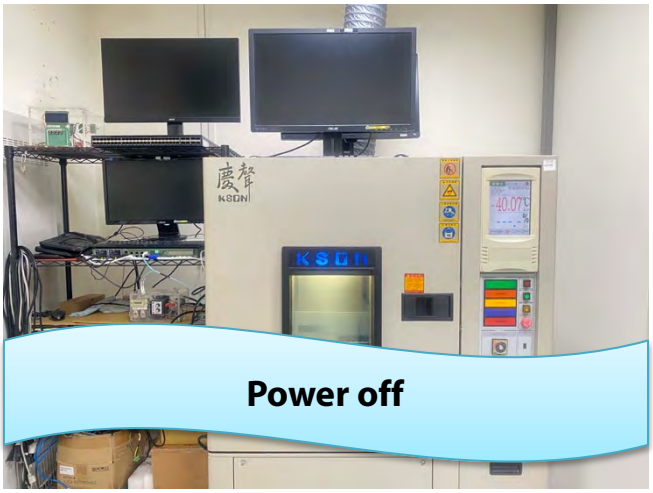
Item	Test Criteria	Result
USB 2.0	A PassMark USB_2.0 Loopback was connected for testing and was found to be functioning normally.	PASS
USB 3.0	A PassMark USB_3.0 Loopback was connected for testing and was found to be functioning normally.	PASS
Display Port	The DP output has been verified to be working properly, and the resolution can be adjusted according to the monitor size.	PASS
1GbE LAN	Data transmission via connection to a 1 Gbps LAN switch has been tested. The transfer speed meets the required standard with zero packet loss, confirming normal functionality.	PASS
10GbE LAN	Data transmission via connection to a 10 Gbps LAN switch has been tested. The transfer speed meets the required standard with zero packet loss, confirming normal functionality.	PASS

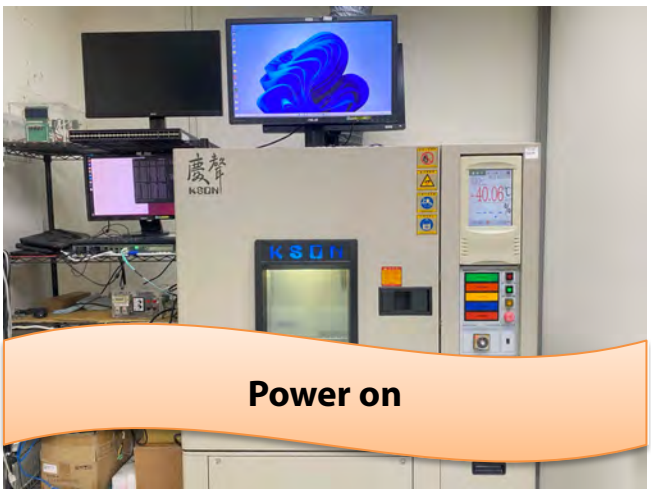
2-2-3. Low Temperature Power Cycle Test

Apply power to the system under a -40°C ambient condition and confirm successful system boot-up, ensuring stable initialization and operation at low temperatures.

Ambient Temp.	Cold Boot Test Times	Test Result
-40°C	125 times	PASS





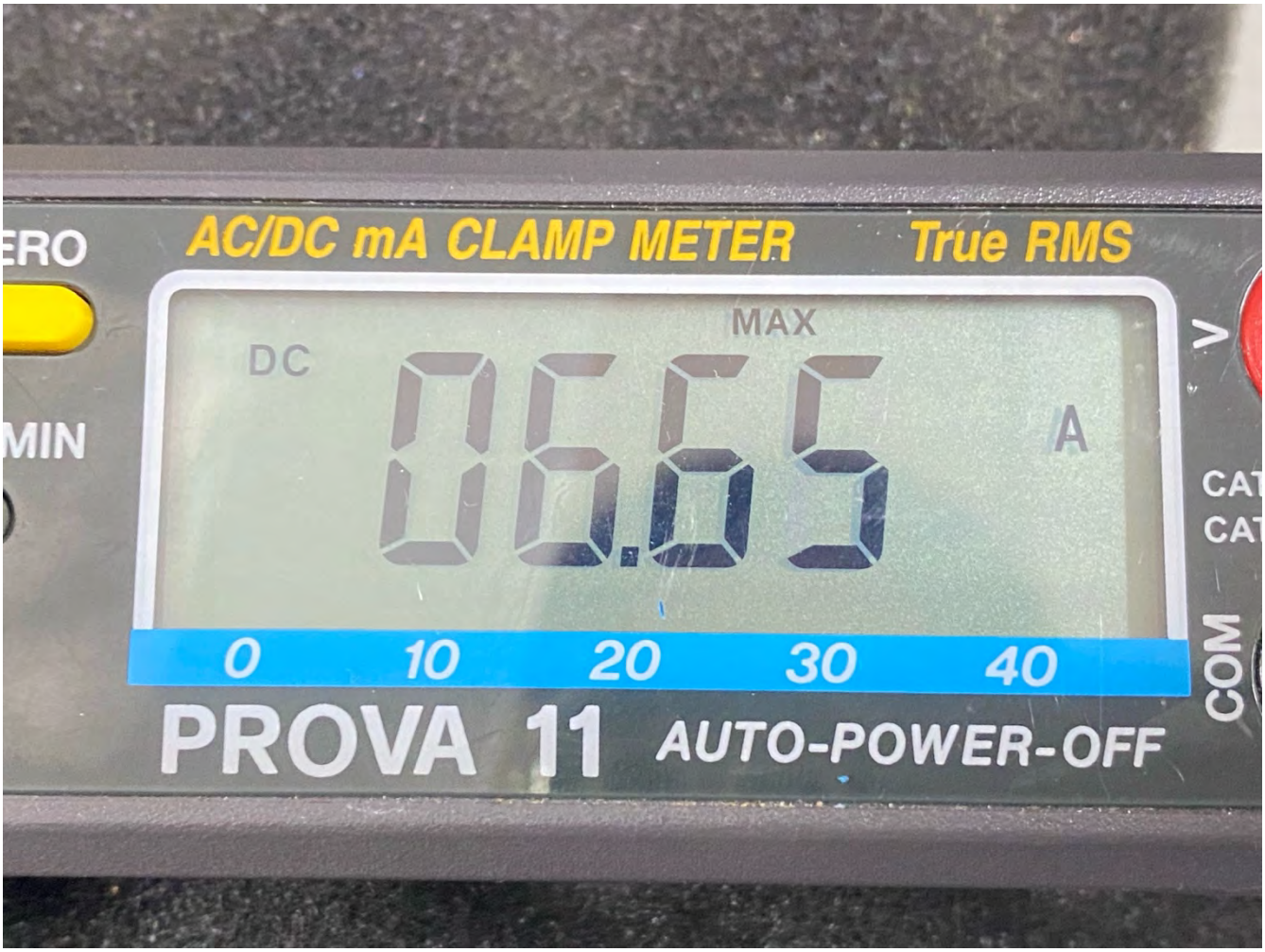


2-3. Peak Instantaneous Current and Power

Maximum instantaneous current and power measured during the entire period from system power-on to operating system initialization.

The current value was measured at the output terminal of the internal DC-DC redundant board.

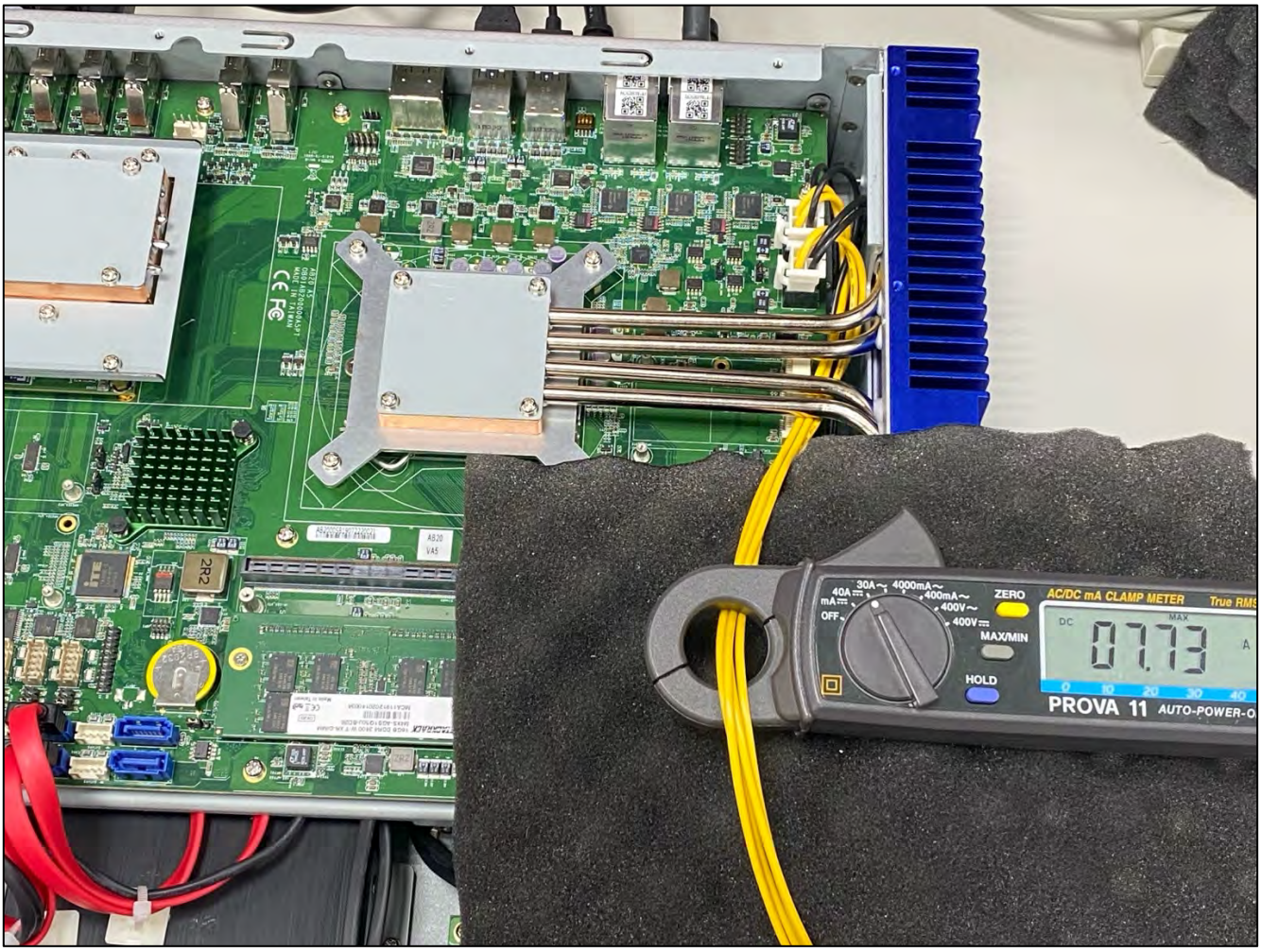
Voltage (V)	Peak Instantaneous Current (A)	Peak Instantaneous Power (W)
12.0	6.65	79.8



2-4. Power Consumption

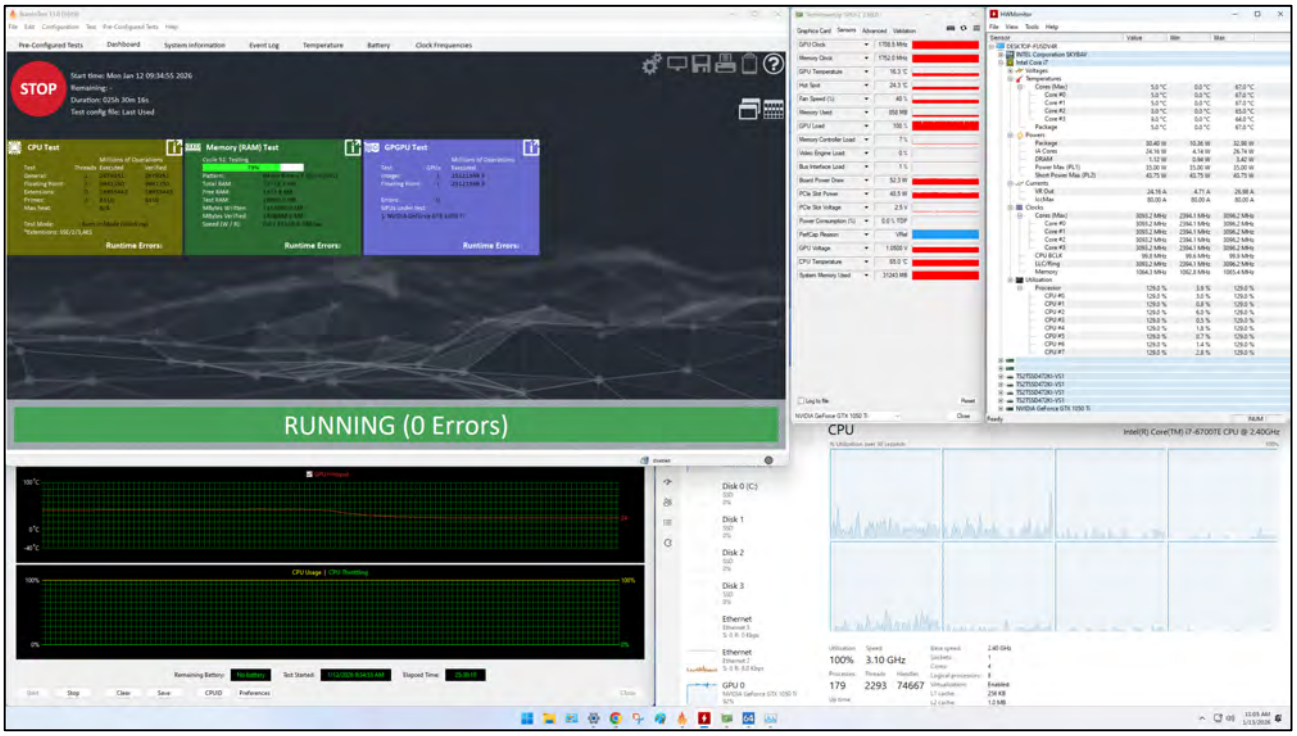
The current value was measured at the output terminal of the internal DC-DC redundant board.

Voltage (V)	Current (A)	Wattage (W)
12.0	7.73	92.76

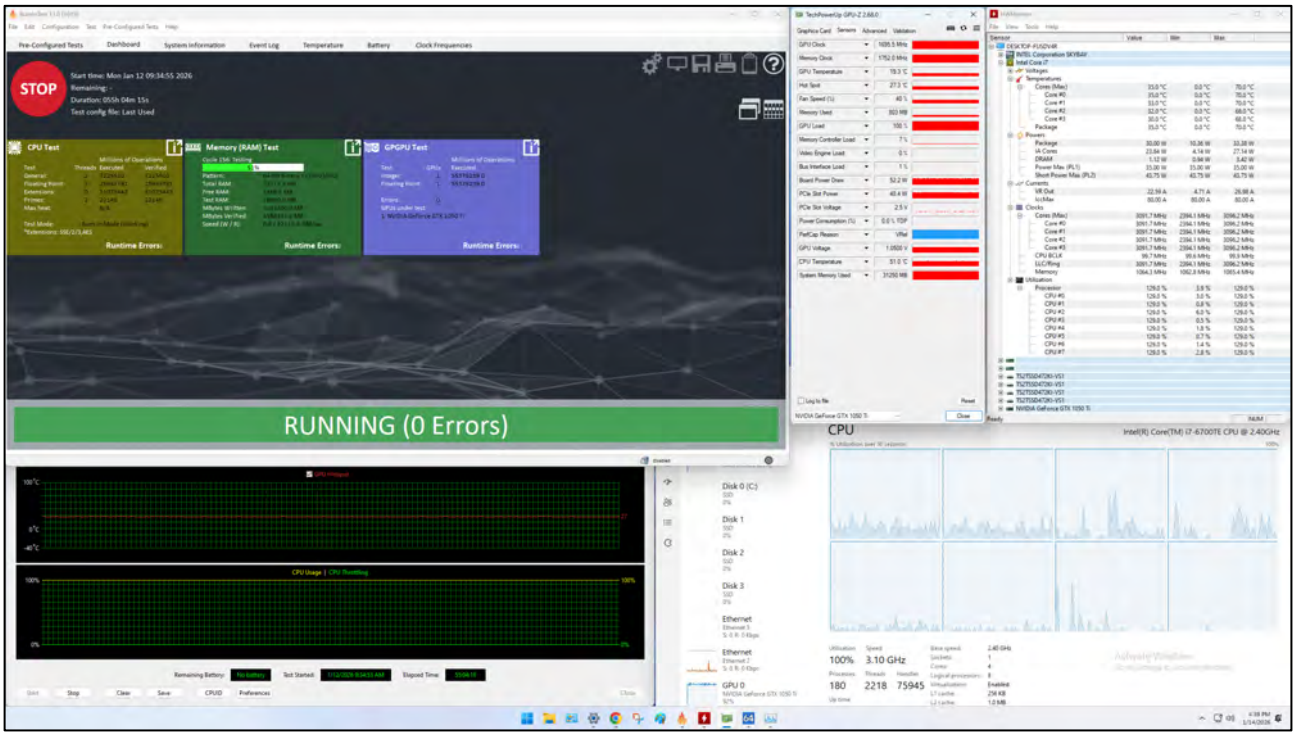


3. TEST PHOTO IN LAB

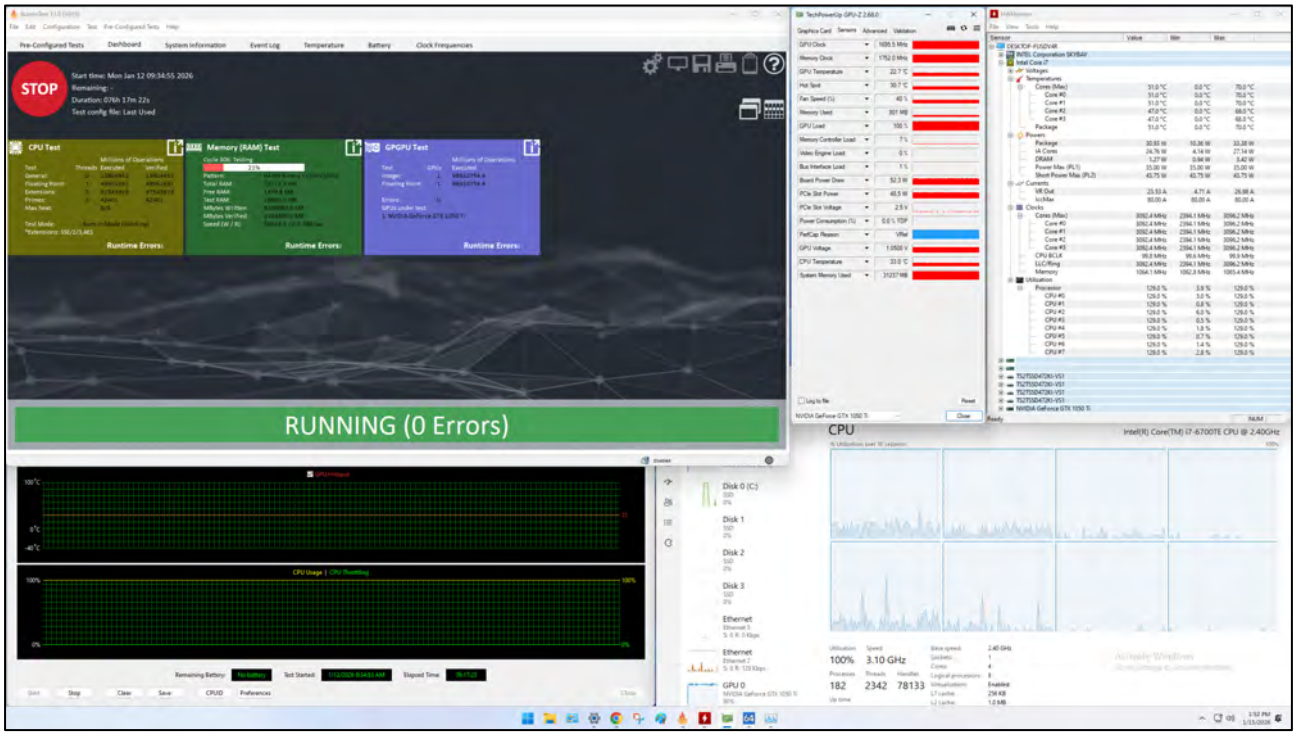
- Chamber in -40°C / 0%RH



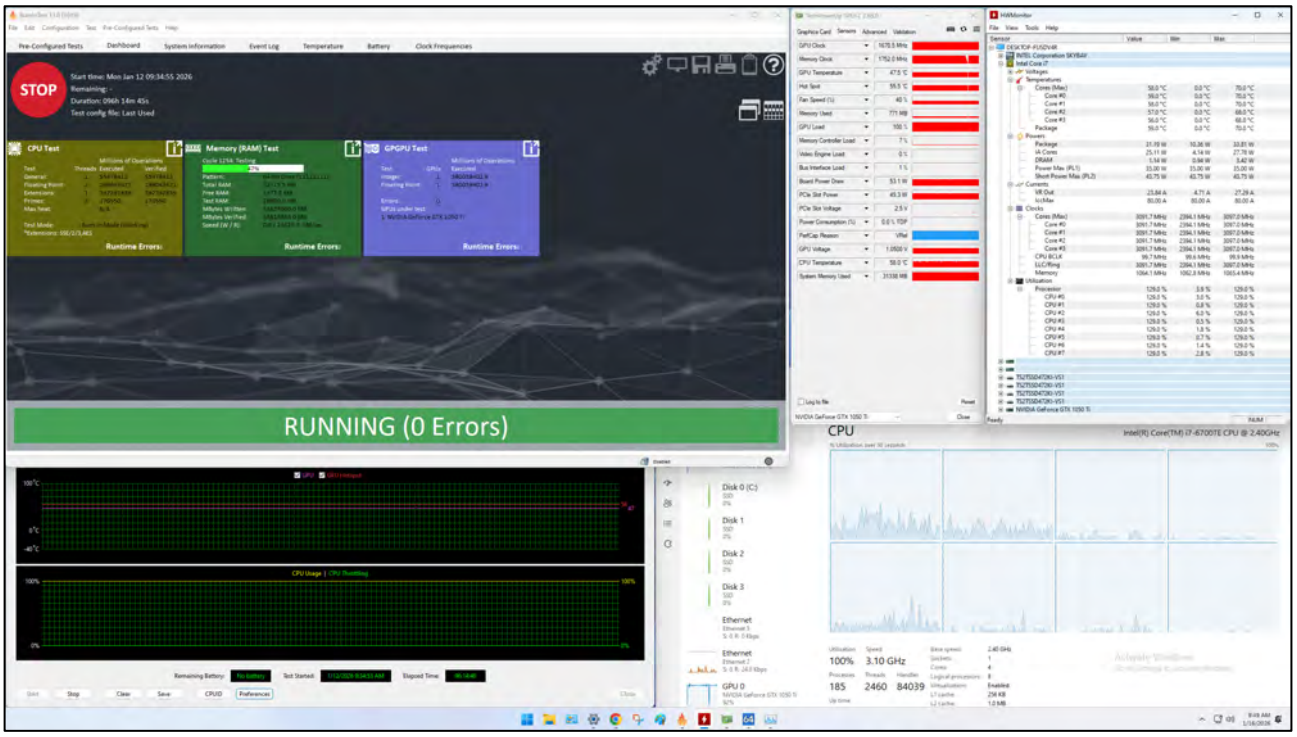
- Chamber in -20°C / 0%RH



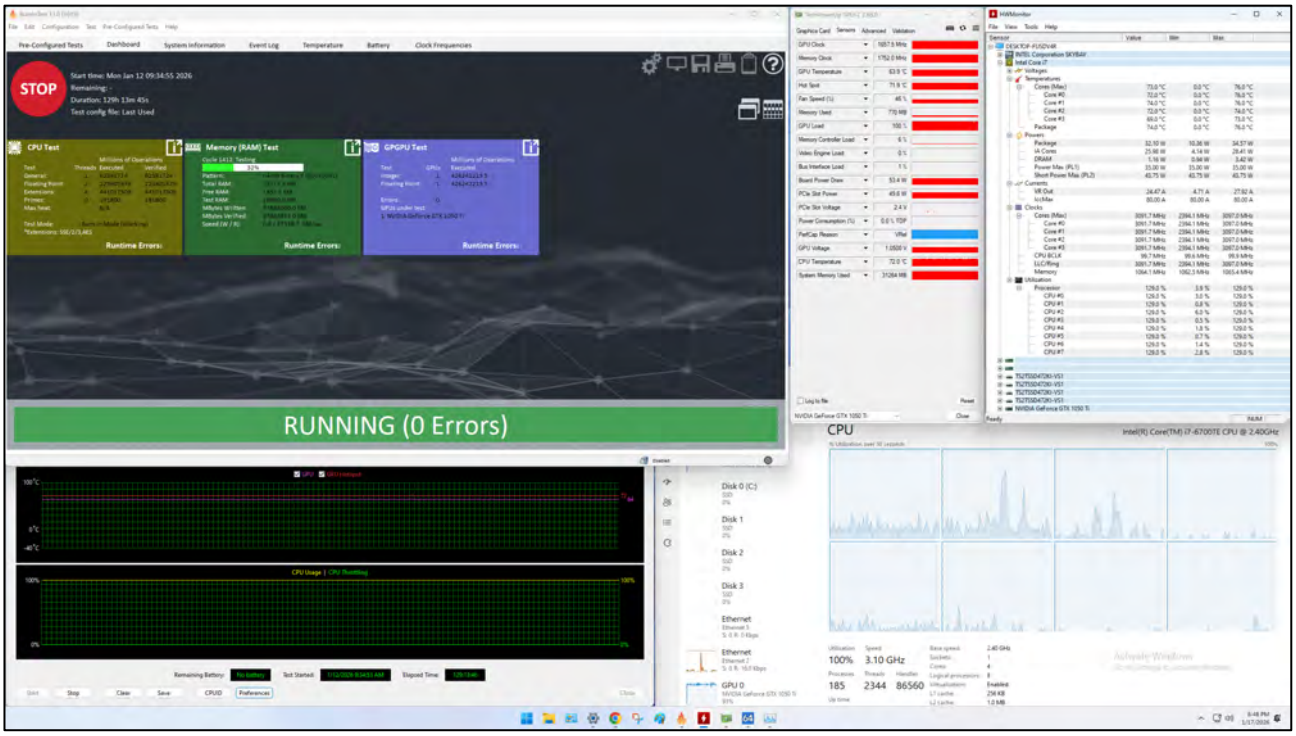
- Chamber in 0°C / 0%RH



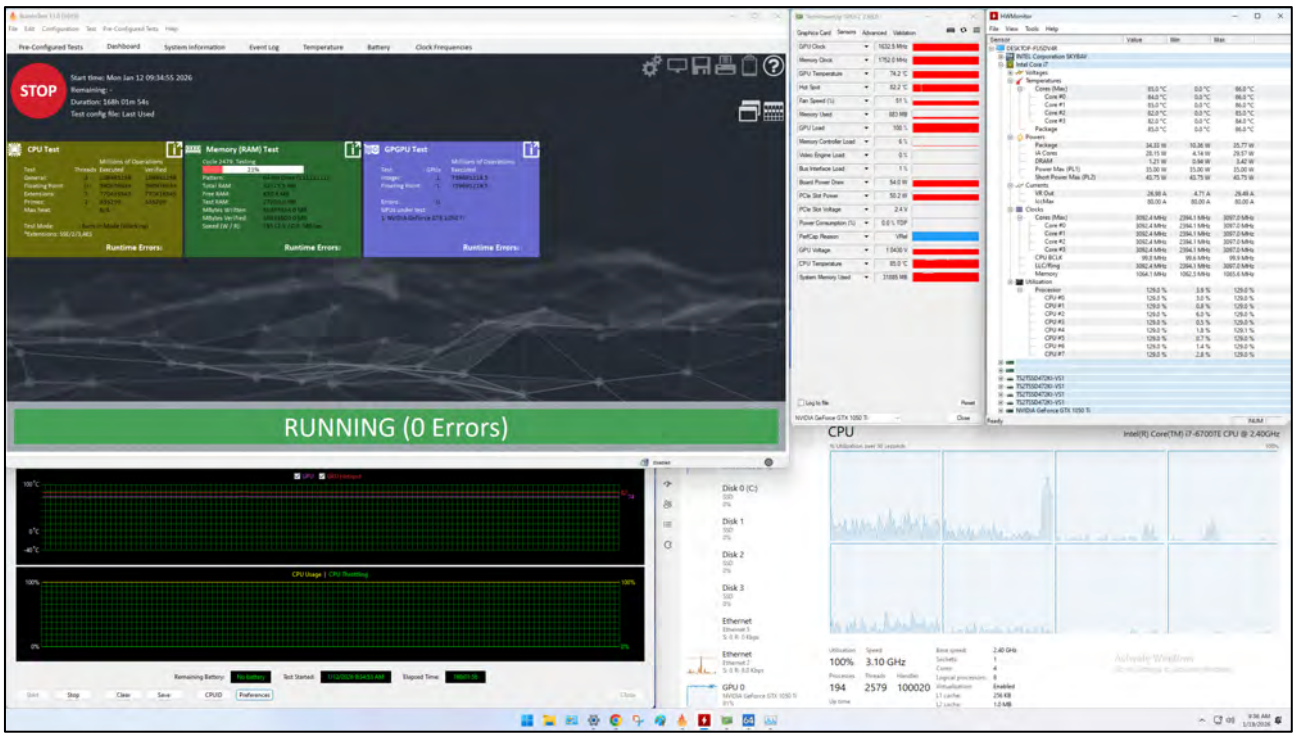
- Chamber in 25°C / 60%RH



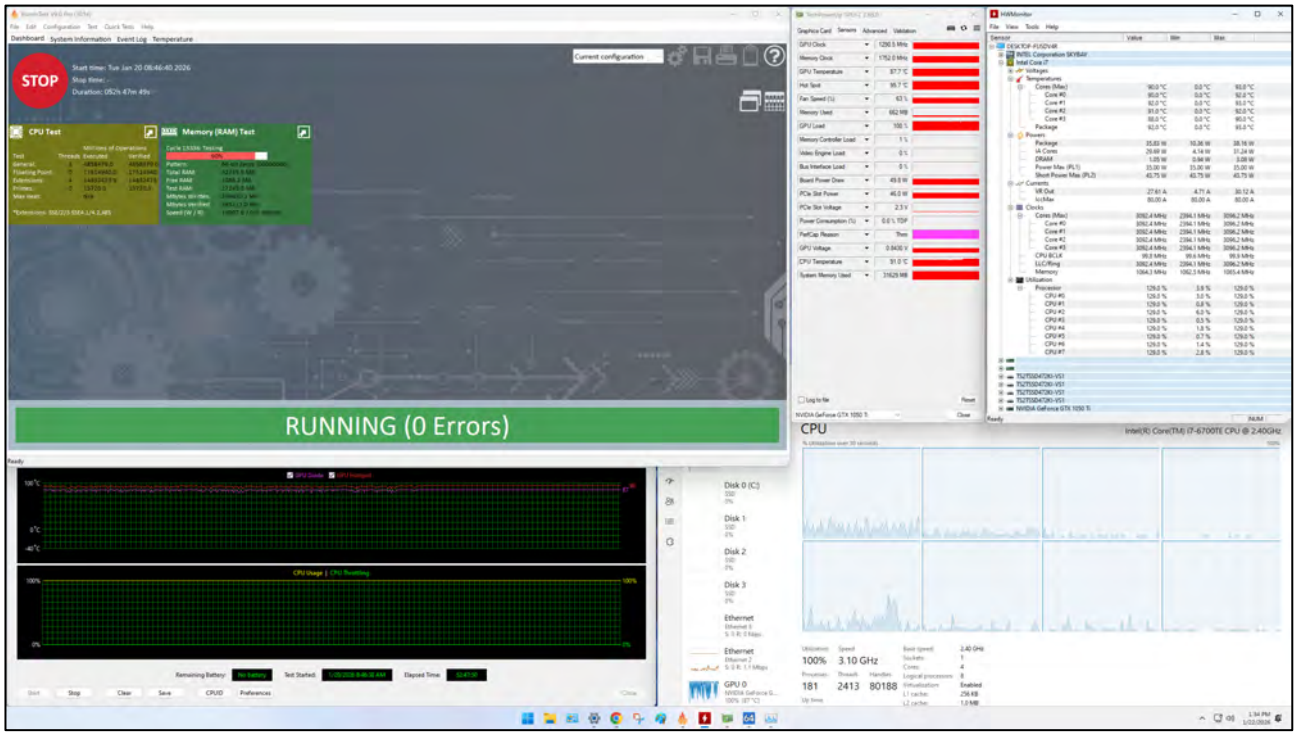
- Chamber in 40°C / 60%RH



- Chamber in 50°C / 60%RH



- Chamber in 60°C / 60%RH

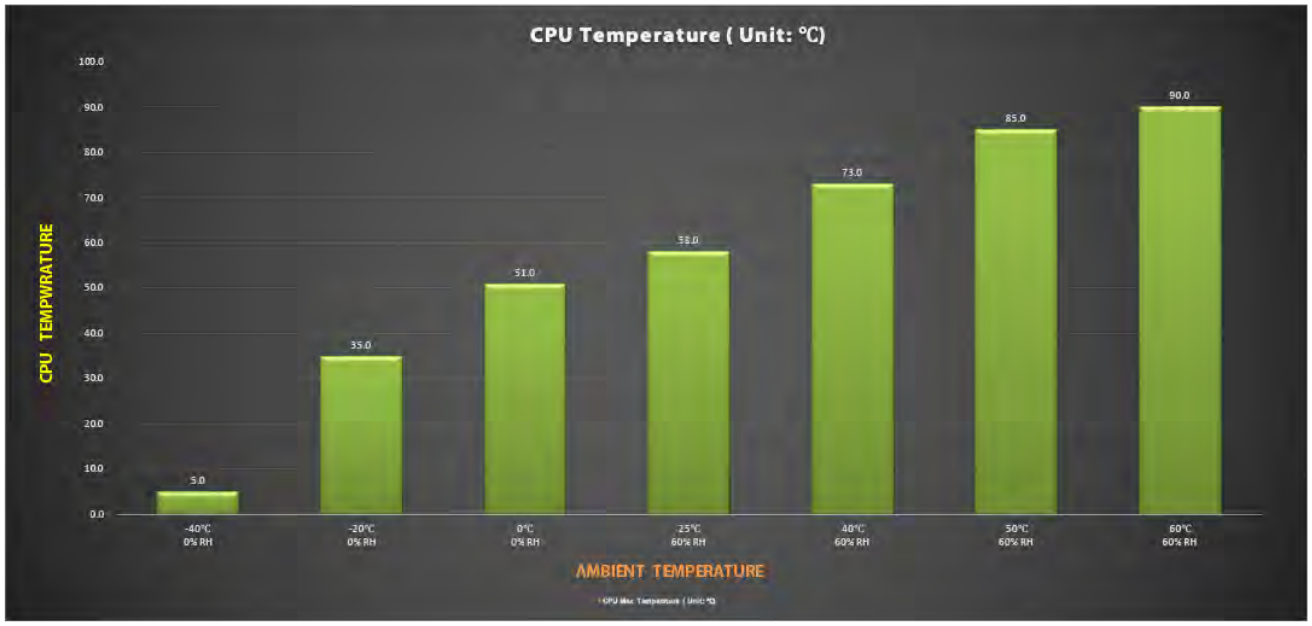


4. THERMAL TEST RESULT(-40°C ~ +60°C)

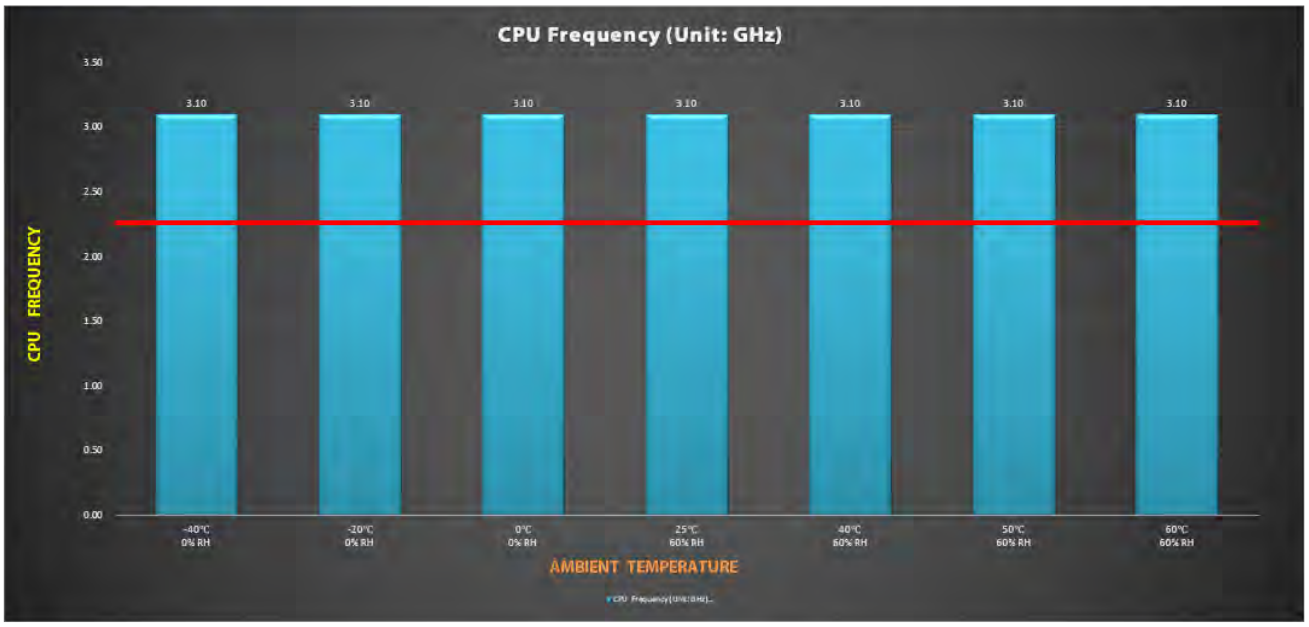
CPU & GPU Temperature and Frequency

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 Max Temperature (Unit: °C)	5.0	35.0	51.0	58.0	73.0	85.0	90.0
CPU Frequency (Unit: GHz)	3.10	3.10	3.10	3.10	3.10	3.10	3.10
GPU Temperature (Unit: °C)	16.3	19.3	22.7	47.5	63.9	74.2	87.7
GPU Hot Spot Temperature (Unit: °C)	24.3	27.3	30.7	55.5	71.9	82.2	95.7
GPU Frequency (Unit: MHz)	1708.5	1695.5	1695.5	1670.5	1657.5	1632.5	1290.5

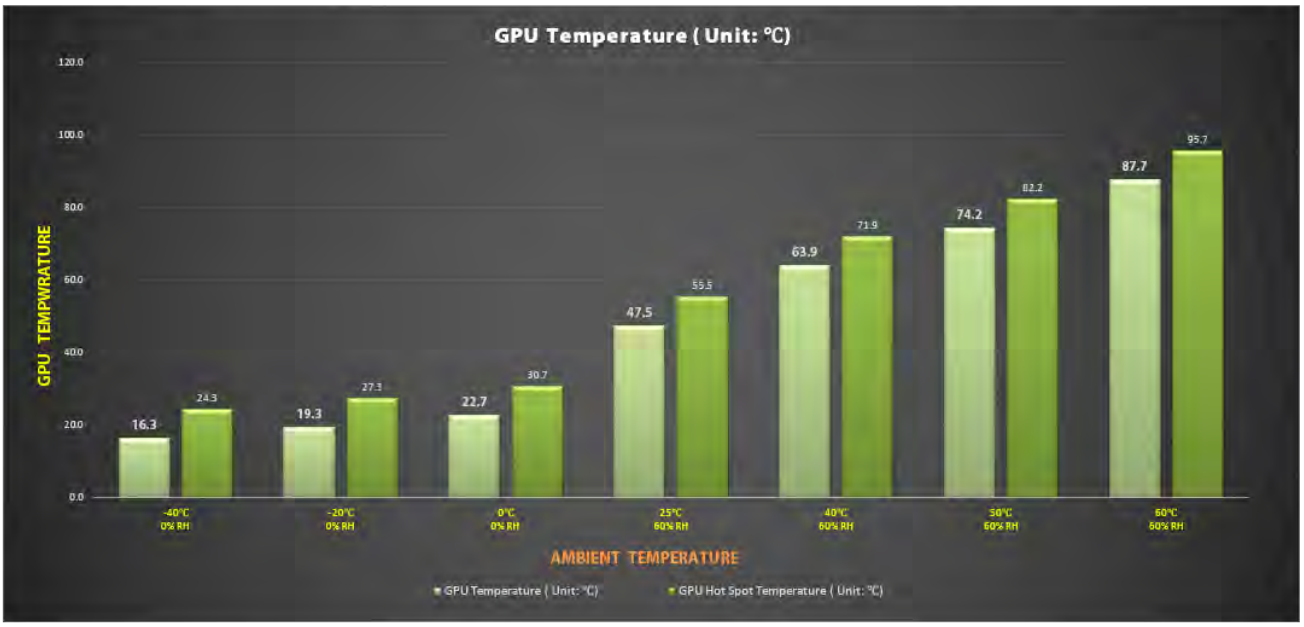
CPU Core Temprature / Ambient Temperature	-40°C 0% RH	-20°C 0% RH	0°C 0% RH	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Max Temperature (Unit: ℃)	5.0	35.0	51.0	58.0	73.0	85.0	90.0



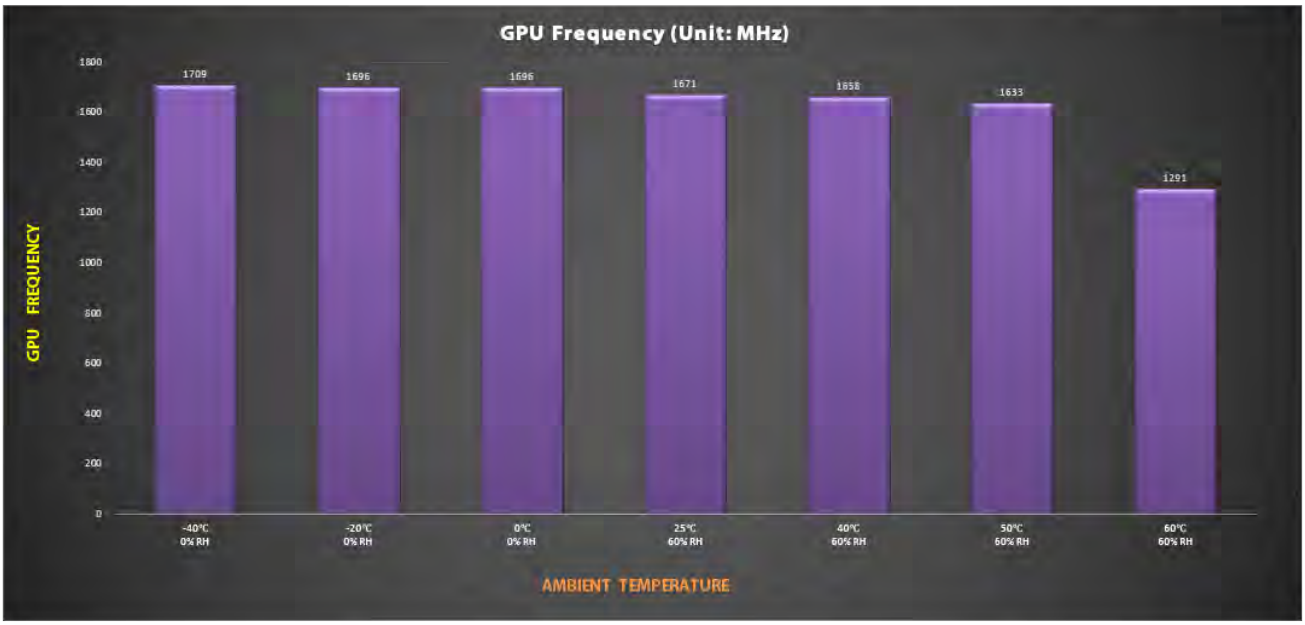
CPU Frequency / Ambient Temperature	-40°C 0% RH	-20°C 0% RH	0°C 0% RH	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Frequency (Unit: GHz) Processor Base Frequency: 2.40 GHz	3.10	3.10	3.10	3.10	3.10	3.10	3.10



GPU Temperature \ Ambient Temperature	-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
GPU Temperature (Unit: ℃)	16.3	19.3	22.7	47.5	63.9	74.2	87.7
GPU Hot Spot Temperature (Unit: ℃)	24.3	27.3	30.7	55.5	71.9	82.2	95.7



GPU Frequency \ Ambient Temperature	-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
GPU Frequency (Unit: MHz)	1709	1696	1696	1671	1658	1633	1291



5. I/O FUNCTION TEST

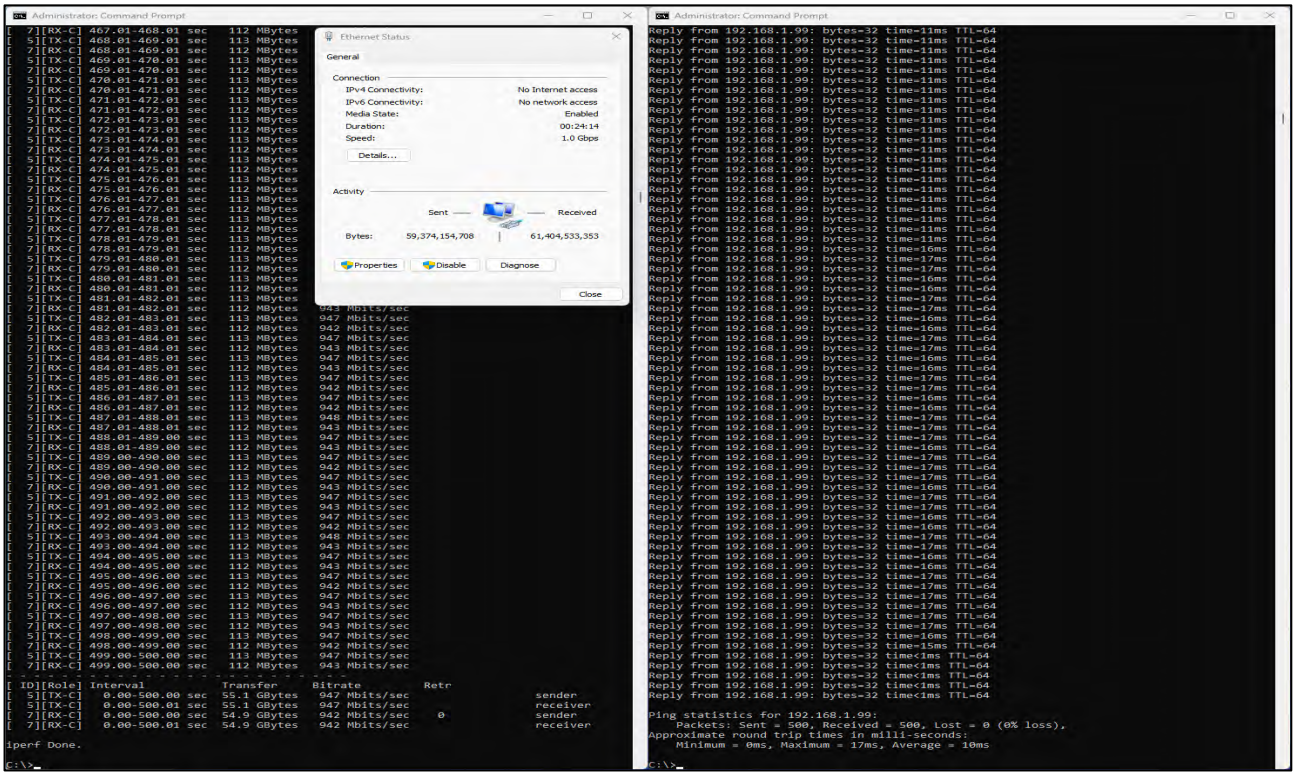
5-1. LAN PORT

1GbE

LAN SPEED

LAN Data-Packet

LAN 1

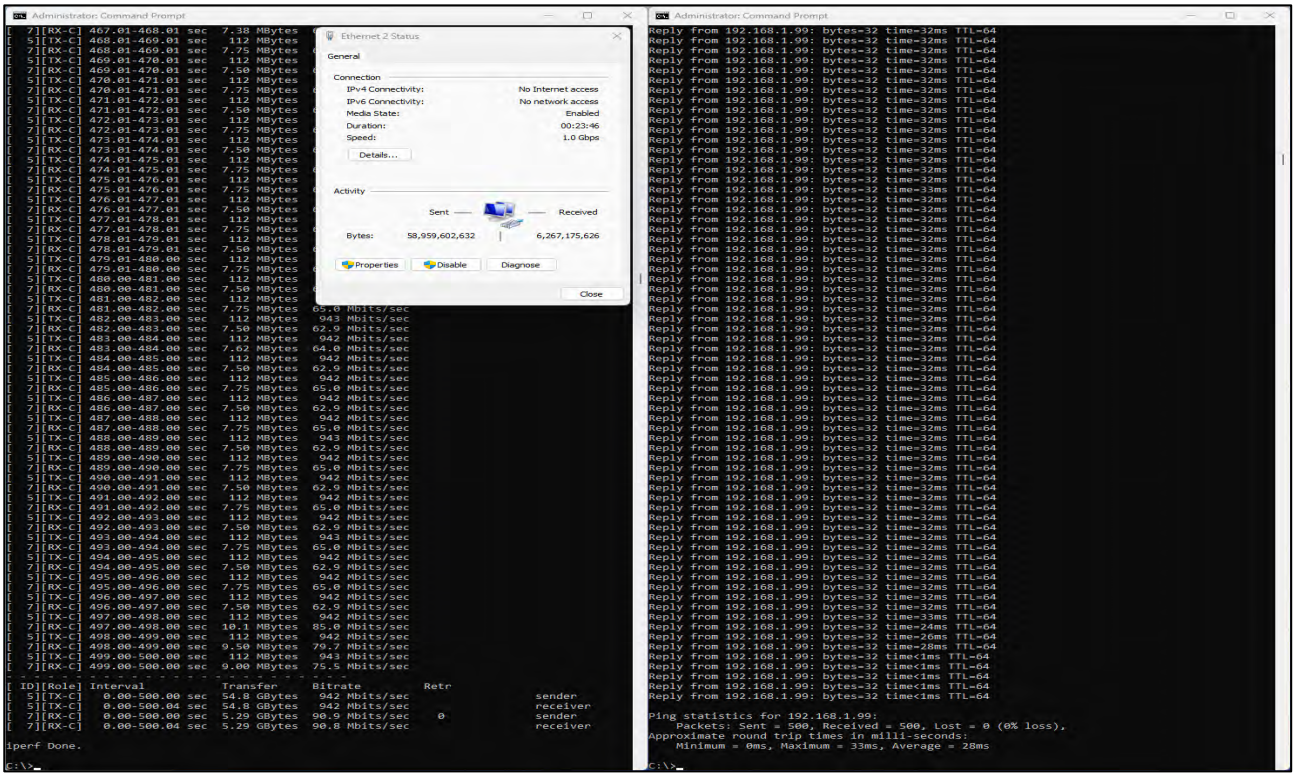


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

LAN Data-Packet

LAN 2

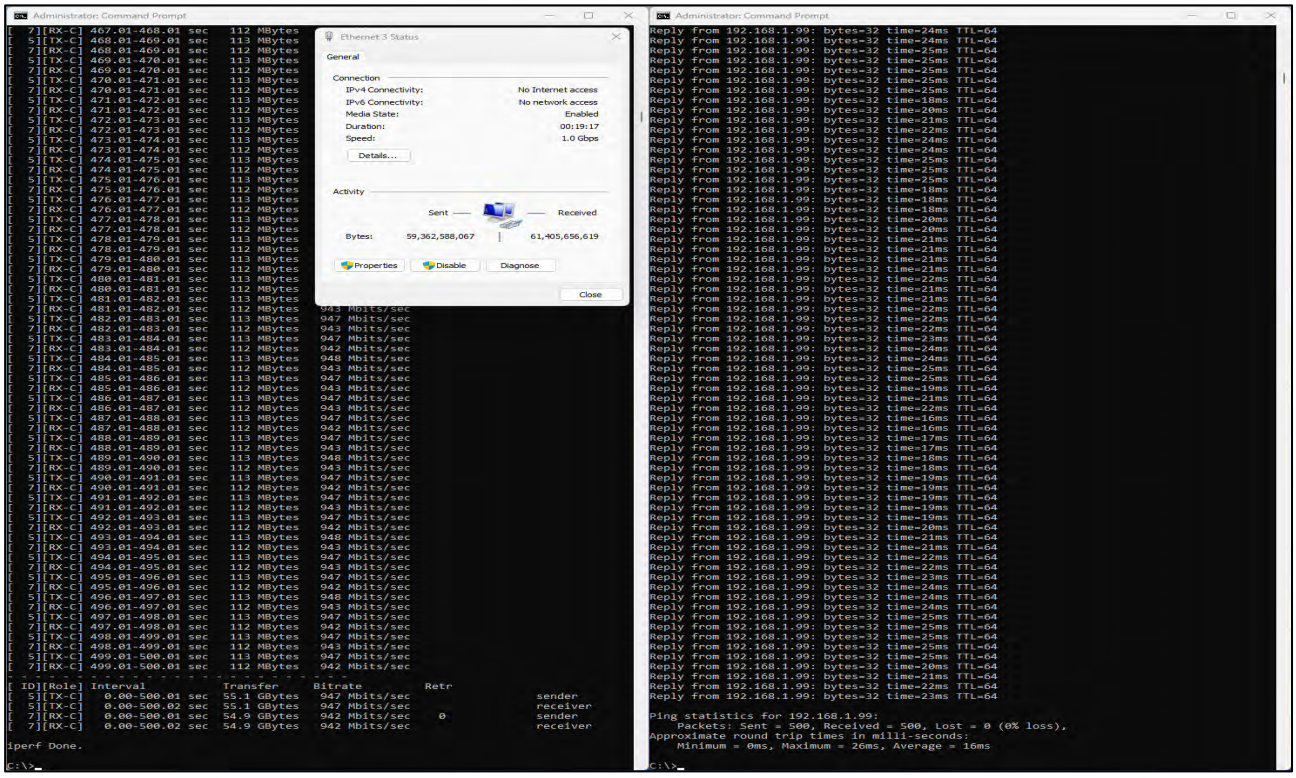


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

LAN Data-Packet

LAN 3

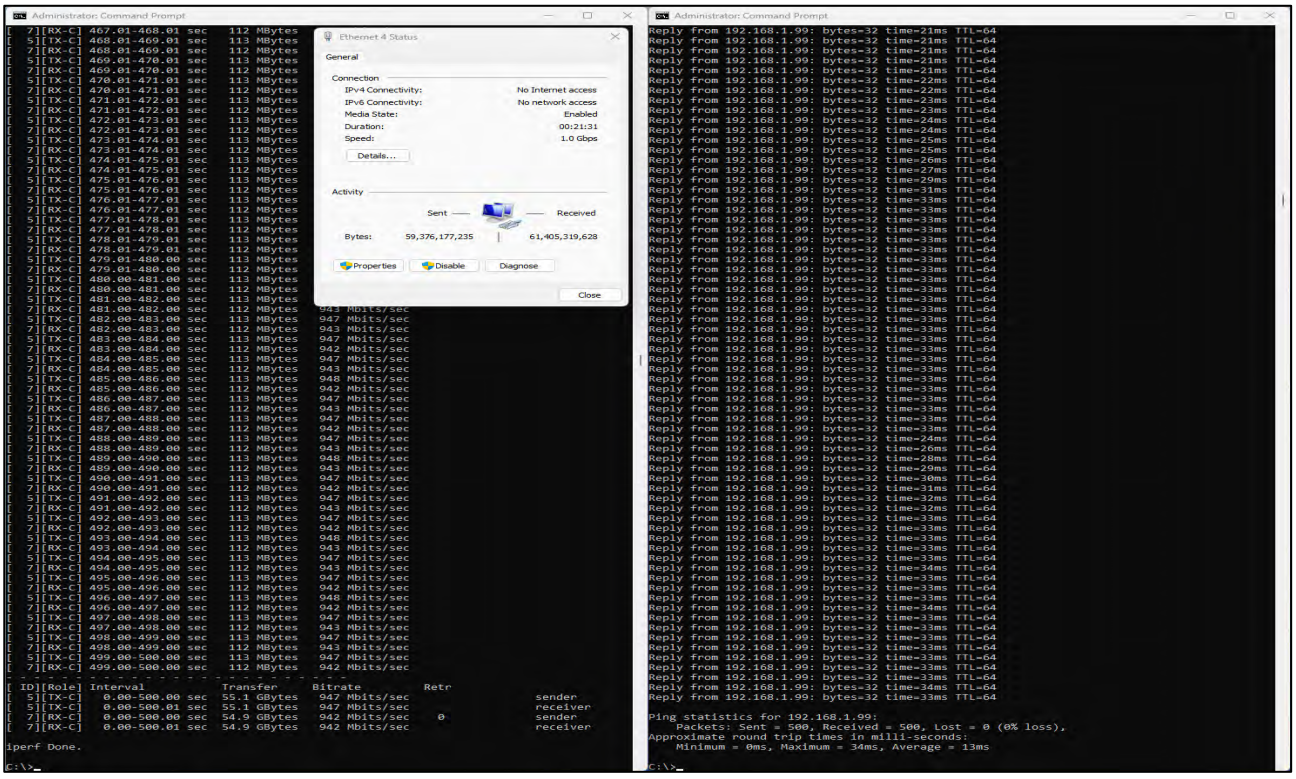


LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

LAN SPEED

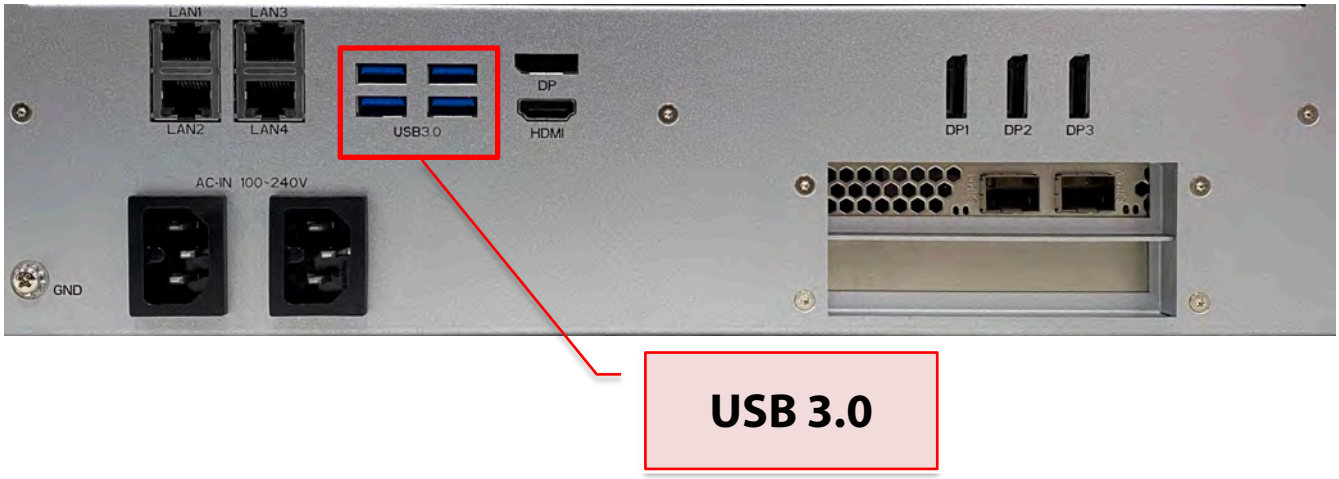
LAN Data-Packet

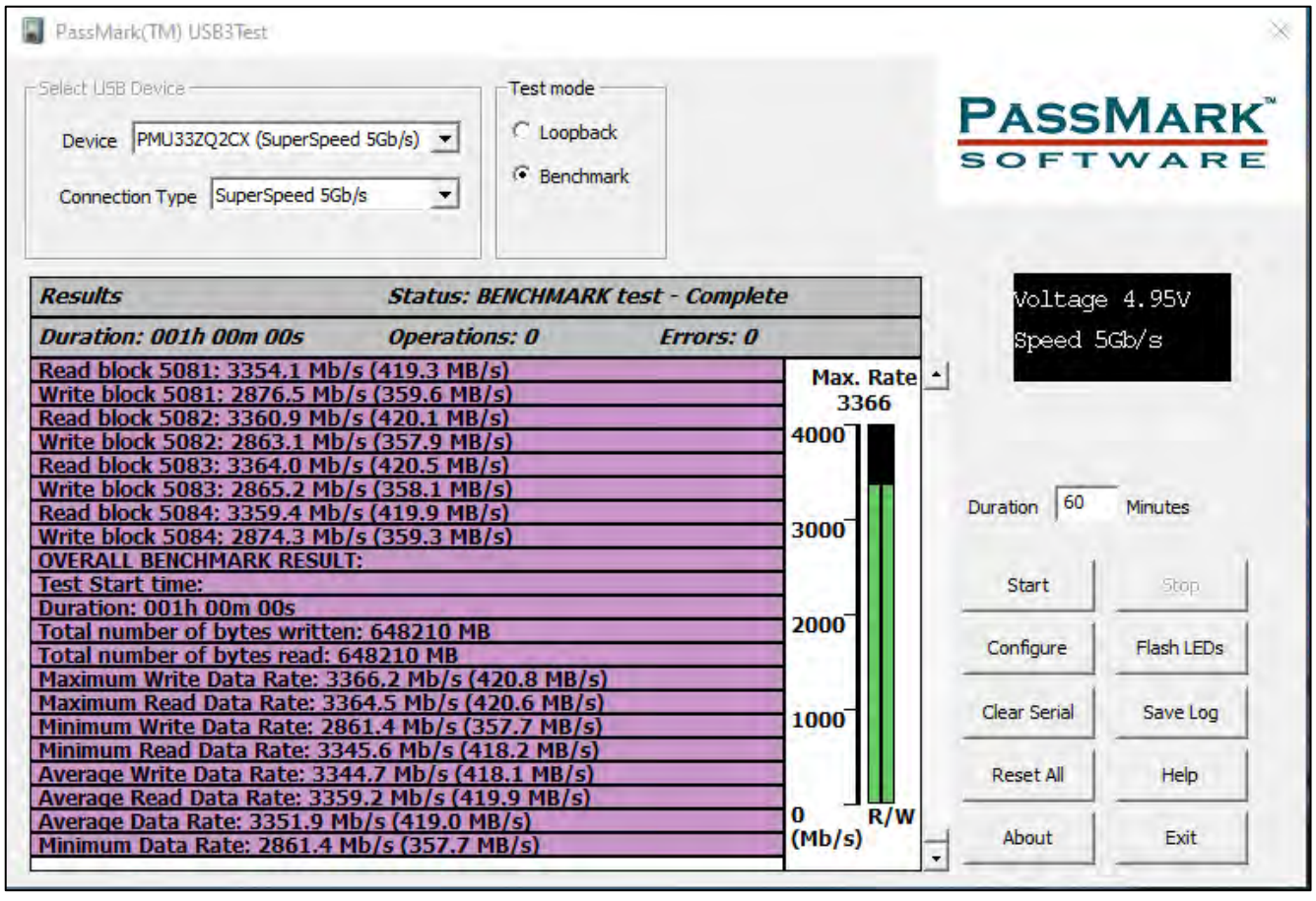
LAN 4

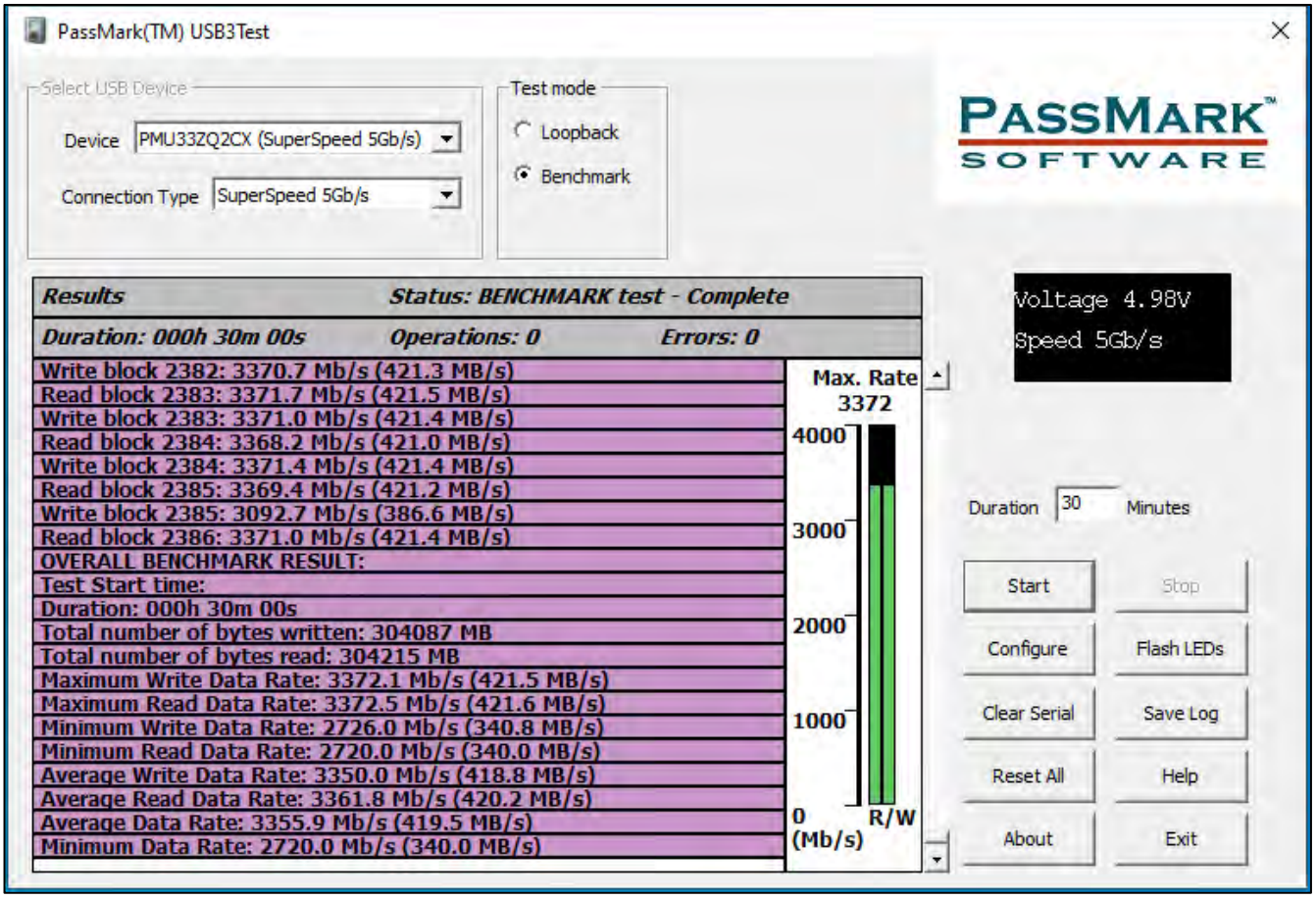


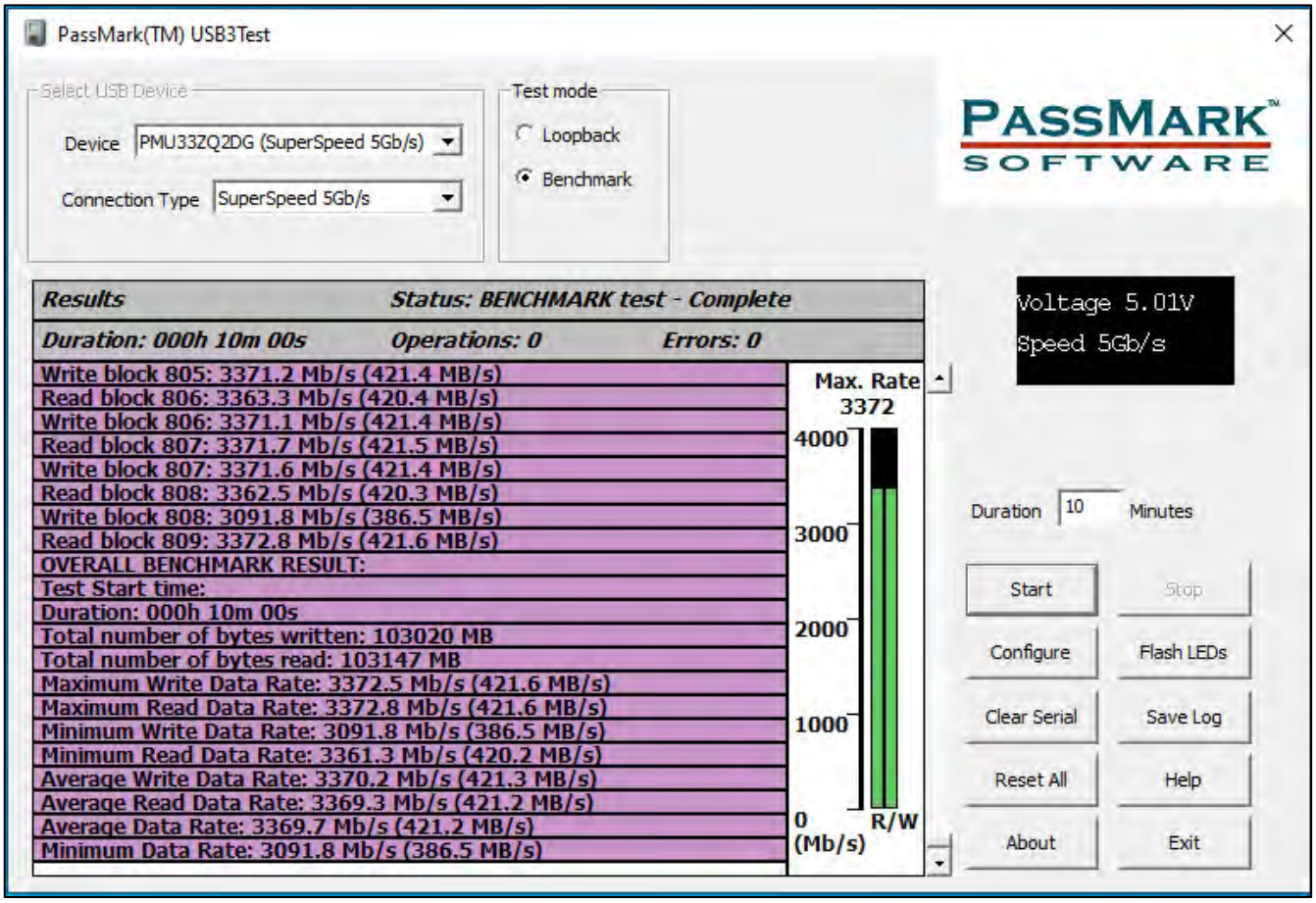
LAN Speed Test Result: Pass
LAN Data-Packet Test Result: 0 Lost (0% loss)

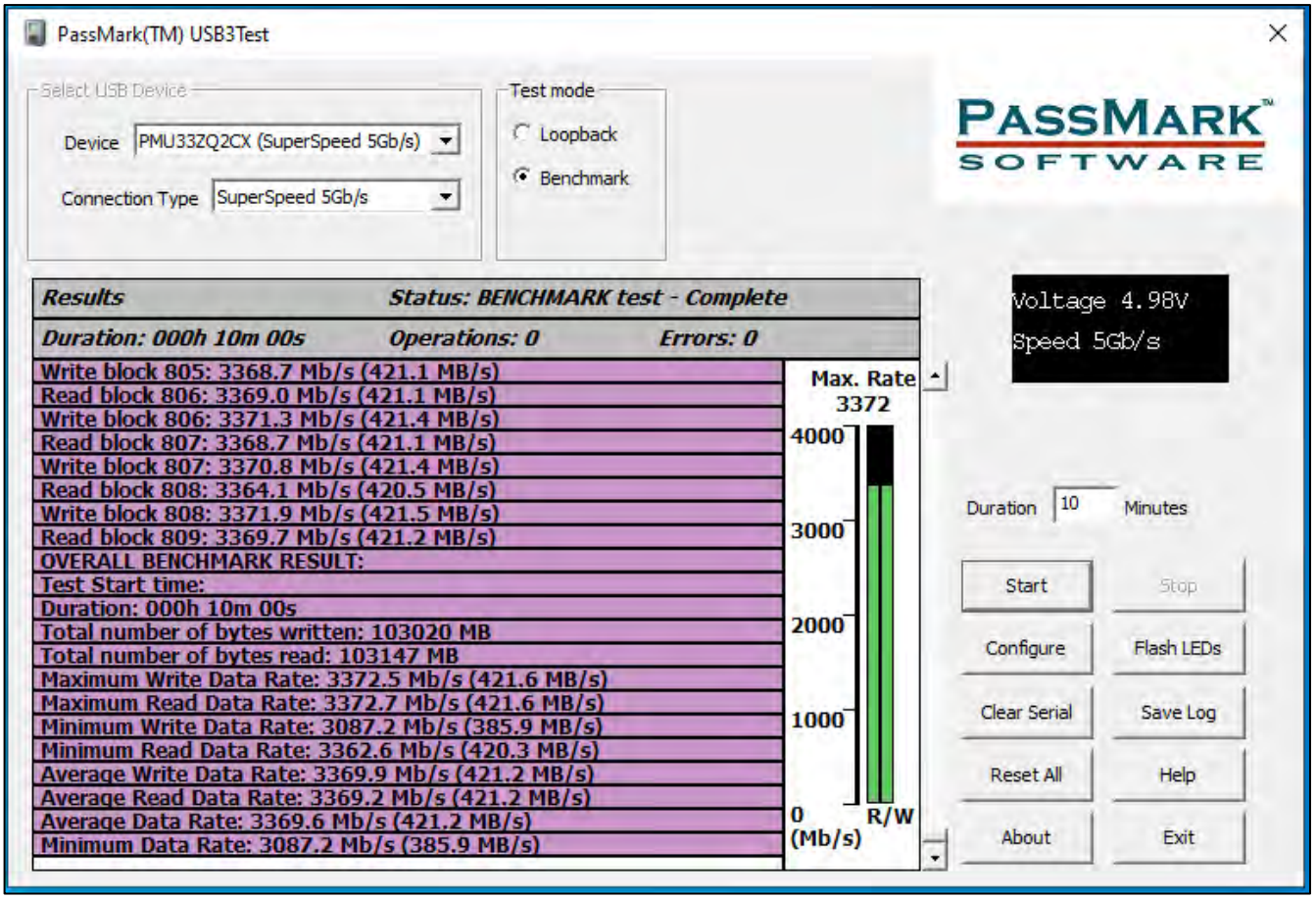
5-2. USB PORT(REAR)



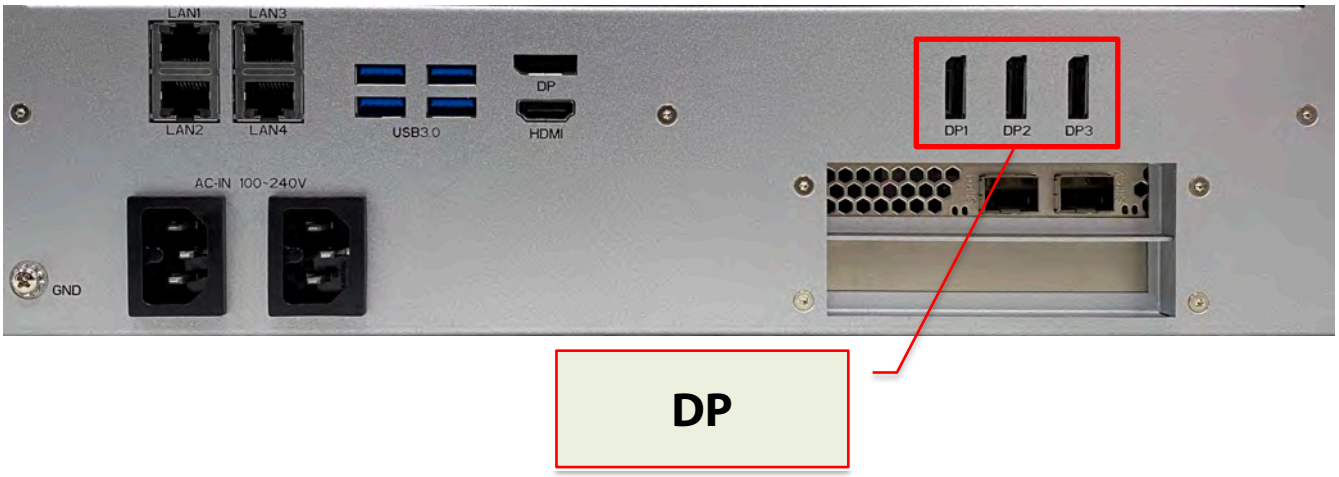


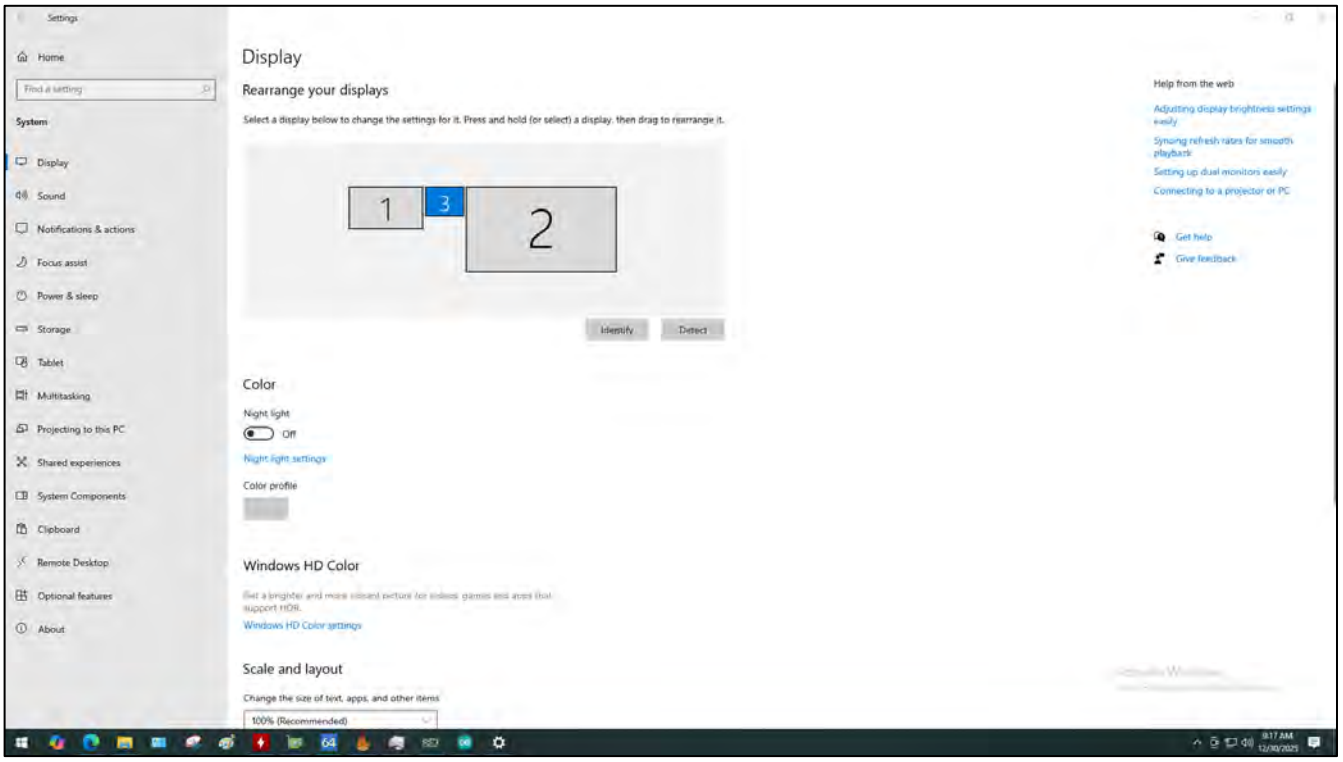

PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2CX (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 30m 00s
Operations: 0
Errors: 0
Write block 2382: 3370.7 Mb/s (421.3 MB/s)
Read block 2383: 3371.7 Mb/s (421.5 MB/s)
Write block 2383: 3371.0 Mb/s (421.4 MB/s)
Read block 2384: 3368.2 Mb/s (421.0 MB/s)
Write block 2384: 3371.4 Mb/s (421.4 MB/s)
Read block 2385: 3369.4 Mb/s (421.2 MB/s)
Write block 2385: 3092.7 Mb/s (386.6 MB/s)
Read block 2386: 3371.0 Mb/s (421.4 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 30m 00s
Total number of bytes written: 304087 MB
Total number of bytes read: 304215 MB
Maximum Write Data Rate: 3372.1 Mb/s (421.5 MB/s)
Maximum Read Data Rate: 3372.5 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 2726.0 Mb/s (340.8 MB/s)
Minimum Read Data Rate: 2720.0 Mb/s (340.0 MB/s)
Average Write Data Rate: 3350.0 Mb/s (418.8 MB/s)
Average Read Data Rate: 3361.8 Mb/s (420.2 MB/s)
Average Data Rate: 3355.9 Mb/s (419.5 MB/s)
Minimum Data Rate: 2720.0 Mb/s (340.0 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 4.98V
Speed 5Gb/s
Duration
30
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit


PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2DG (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 10m 00s
Operations: 0
Errors: 0
Write block 805: 3371.2 Mb/s (421.4 MB/s)
Read block 806: 3363.3 Mb/s (420.4 MB/s)
Write block 806: 3371.1 Mb/s (421.4 MB/s)
Read block 807: 3371.7 Mb/s (421.5 MB/s)
Write block 807: 3371.6 Mb/s (421.4 MB/s)
Read block 808: 3362.5 Mb/s (420.3 MB/s)
Write block 808: 3091.8 Mb/s (386.5 MB/s)
Read block 809: 3372.8 Mb/s (421.6 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Total number of bytes written: 103020 MB
Total number of bytes read: 103147 MB
Maximum Write Data Rate: 3372.5 Mb/s (421.6 MB/s)
Maximum Read Data Rate: 3372.8 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 3091.8 Mb/s (386.5 MB/s)
Minimum Read Data Rate: 3361.3 Mb/s (420.2 MB/s)
Average Write Data Rate: 3370.2 Mb/s (421.3 MB/s)
Average Read Data Rate: 3369.3 Mb/s (421.2 MB/s)
Average Data Rate: 3369.7 Mb/s (421.2 MB/s)
Minimum Data Rate: 3091.8 Mb/s (386.5 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 5.01V
Speed 5Gb/s
Duration
10
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit

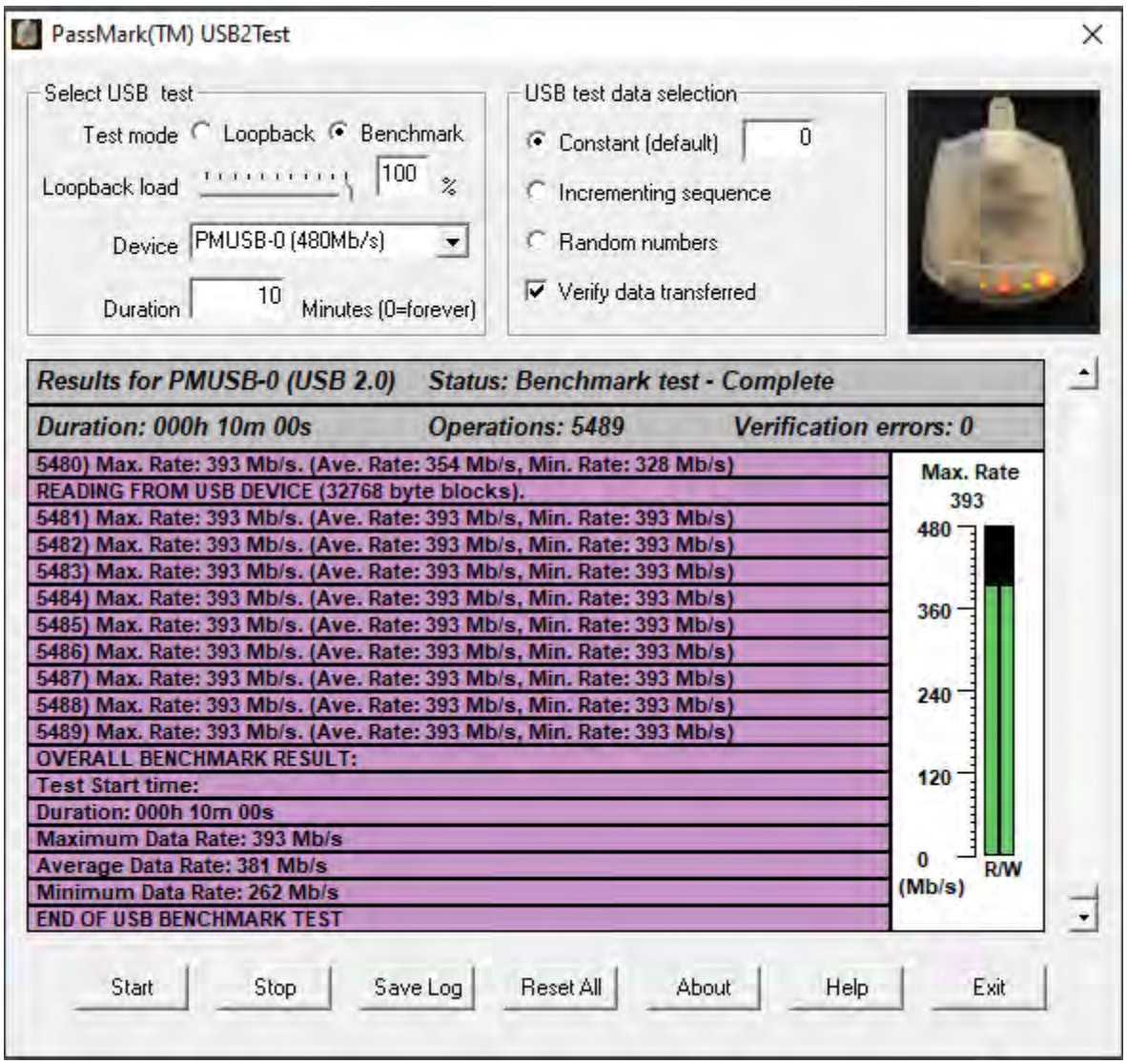

PassMark(TM) USB3Test
Select USB Device
Device
PMU33ZQ2CX (SuperSpeed 5Gb/s)
Connection Type
SuperSpeed 5Gb/s
Test mode
Loopback
Benchmark
PASSMARK SOFTWARE
Results
Status: BENCHMARK test - Complete
Duration: 000h 10m 00s
Operations: 0
Errors: 0
Write block 805: 3368.7 Mb/s (421.1 MB/s)
Read block 806: 3369.0 Mb/s (421.1 MB/s)
Write block 806: 3371.3 Mb/s (421.4 MB/s)
Read block 807: 3368.7 Mb/s (421.1 MB/s)
Write block 807: 3370.8 Mb/s (421.4 MB/s)
Read block 808: 3364.1 Mb/s (420.5 MB/s)
Write block 808: 3371.9 Mb/s (421.5 MB/s)
Read block 809: 3369.7 Mb/s (421.2 MB/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Total number of bytes written: 103020 MB
Total number of bytes read: 103147 MB
Maximum Write Data Rate: 3372.5 Mb/s (421.6 MB/s)
Maximum Read Data Rate: 3372.7 Mb/s (421.6 MB/s)
Minimum Write Data Rate: 3087.2 Mb/s (385.9 MB/s)
Minimum Read Data Rate: 3362.6 Mb/s (420.3 MB/s)
Average Write Data Rate: 3369.9 Mb/s (421.2 MB/s)
Average Read Data Rate: 3369.2 Mb/s (421.2 MB/s)
Average Data Rate: 3369.6 Mb/s (421.2 MB/s)
Minimum Data Rate: 3087.2 Mb/s (385.9 MB/s)
Max. Rate
3372
4000
3000
2000
1000
0
(Mb/s)
R/W
Voltage 4.98V
Speed 5Gb/s
Duration
10
Minutes
Start
Stop
Configure
Flash LEDs
Clear Serial
Save Log
Reset All
Help
About
Exit

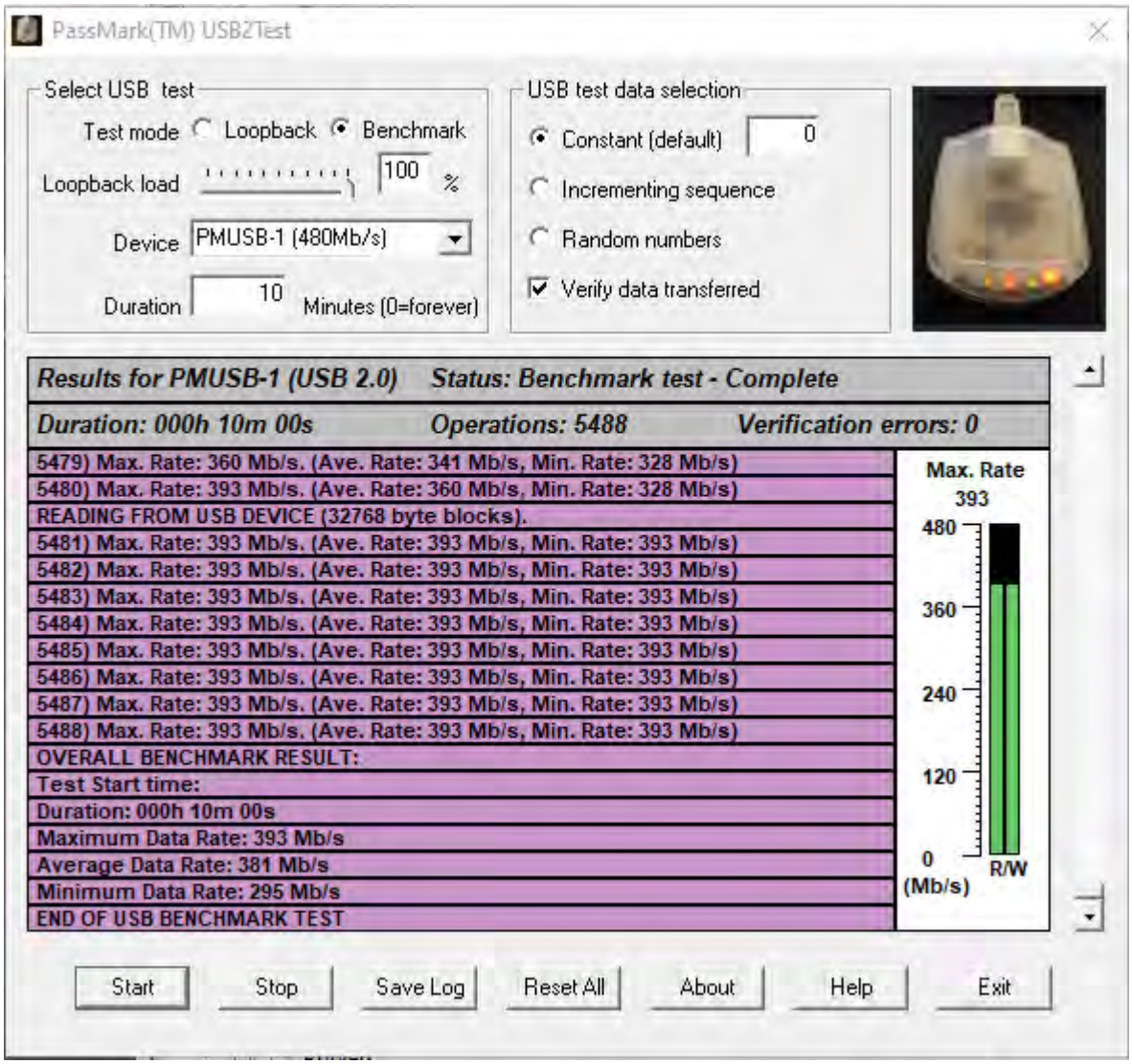
5-3. DISPLAY PORT





5-4. USB PORT (FRONT)




PassMark(TM) USB2Test
Select USB test
Test mode
Loopback
Benchmark
Loopback load
100
%
Device
PMUSB-1 (480Mb/s)
Duration
10
Minutes (0=forever)
USB test data selection
Constant (default)
0
Incrementing sequence
Random numbers
Verify data transferred
Results for PMUSB-1 (USB 2.0)
Status: Benchmark test - Complete
Duration: 000h 10m 00s
Operations: 5488
Verification errors: 0
5479) Max. Rate: 360 Mb/s, (Ave. Rate: 341 Mb/s, Min. Rate: 328 Mb/s)
5480) Max. Rate: 393 Mb/s, (Ave. Rate: 360 Mb/s, Min. Rate: 328 Mb/s)
READING FROM USB DEVICE (32768 byte blocks).
5481) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5482) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5483) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5484) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5485) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5486) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5487) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
5488) Max. Rate: 393 Mb/s, (Ave. Rate: 393 Mb/s, Min. Rate: 393 Mb/s)
OVERALL BENCHMARK RESULT:
Test Start time:
Duration: 000h 10m 00s
Maximum Data Rate: 393 Mb/s
Average Data Rate: 381 Mb/s
Minimum Data Rate: 295 Mb/s
END OF USB BENCHMARK TEST
Max. Rate
393
480
360
240
120
0
(Mb/s)
R/W
Start
Stop
Save Log
Reset All
About
Help
Exit

-----END-----