



PRODUCT OUTGOING QUALITY INSPECTION REPORT

SCH-202

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Outgoing Quality Inspection

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1. SPECIFICATION

1-1. SYSTEM CONFIGURATION

Motherboard	INS8365B(PH14FEI) S/N: OI1301PH14FEI00L BIOS Version: D798PE04 Compliance: UEFI 2.7 ; PI 1.6 ME Firmware Version: 12.0.40.1433 TPM Firmware Version: 403.1
CPU	Intel® Core™ i7-9700TE Processor Total Cores: 8 Total Threads: 8 Max Turbo Frequency: 3.80 GHz Intel® Turbo Boost Technology 2.0 Frequency: 3.80 GHz Processor Base Frequency: 1.80 GHz Cache: 12 MB Bus Speed: 8 GT/s TDP: 35 W
Memory	8GB SO-DIMM DDR4 2400/2600MHz *2 pcs
Storage	512GB M.2 SSD
Power Module	200W Redundant PCU *2 pcs DC 125V input

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	KSON THS-B4T-150 Chamber.
Quantity Tested	Minimum 1 Set
Test Software	1. Stress CPU: PassMark BurnInTest software (Version 9.0)
Test Procedure	1. Thermal pre-scan measurement: Temperature: -20°C~60°C Humidity: 80% (Temperature above 25°C) 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.
Test Diagram of Curves	Environment defines for 53 hours.

2-2. Test Result <Test Item>

2-2-1. TEMPERATURE CYCLE

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

Test Temperature	Test Result
-20°C	PASS
0°C	PASS
25°C / 80%H	PASS
40°C / 80%H	PASS
50°C / 80%H	PASS
60°C / 80%H	PASS

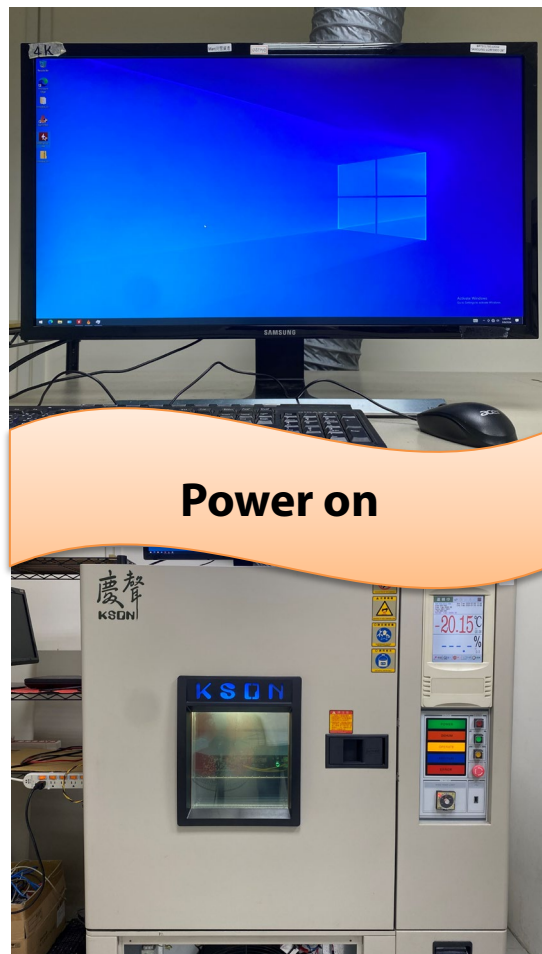
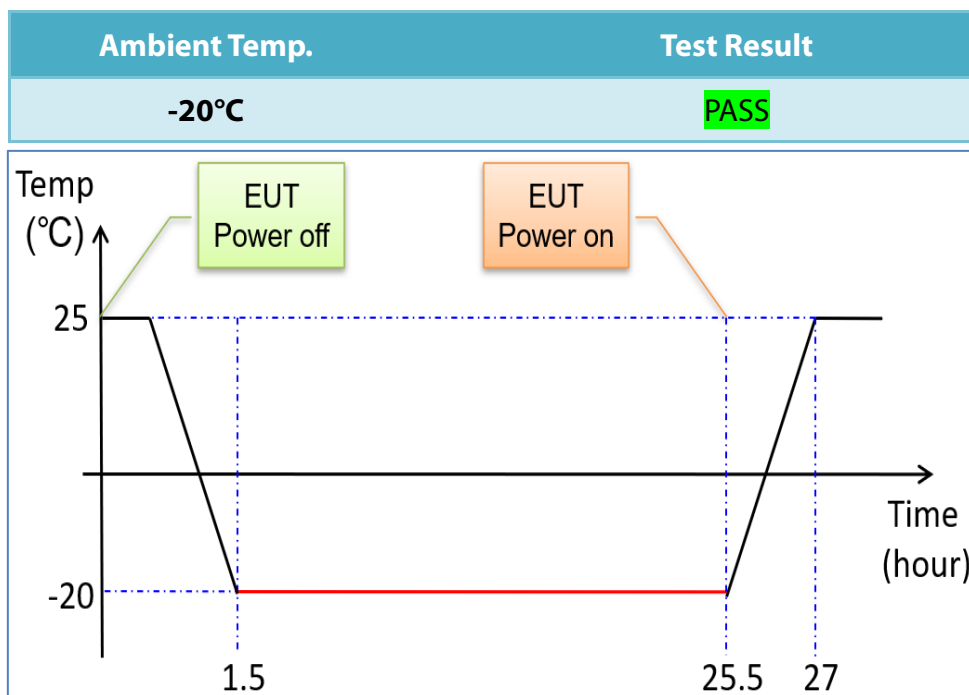
2-2-2. I/O FUNCTION

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

Item	Test Criteria	Result
LAN (1Gbps)	Connection 1G/10G/100G SWITCH HUB transfer data test, it can work normally.	PASS
LAN (1Gbps)	Connection 1G/10G/100G SWITCH HUB transfer data test, it can work normally.	PASS
Fiber Ethernet (100Mbps)	Connection 100M/1G/ SWITCH HUB transfer data test, it can work normally.	PASS
USB3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
Serial Port	Connected the Loopback for testing and it works normally.	PASS
Display Port	Check work well.	PASS
HDMI Port	Check work well.	PASS

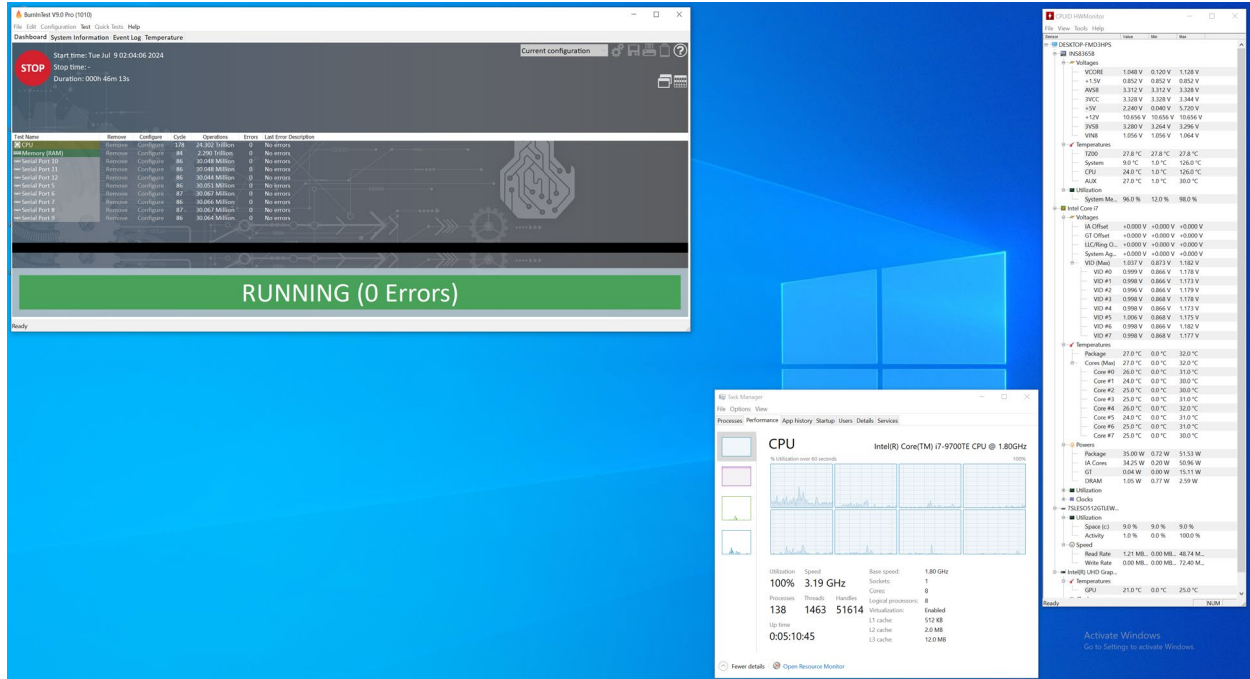
2-2-3. LOW-TEMPERATURE & BOOT-UP

#Power supply under -20°C and ensure that the system boot up properly



3. TEST PHOTO IN LAB

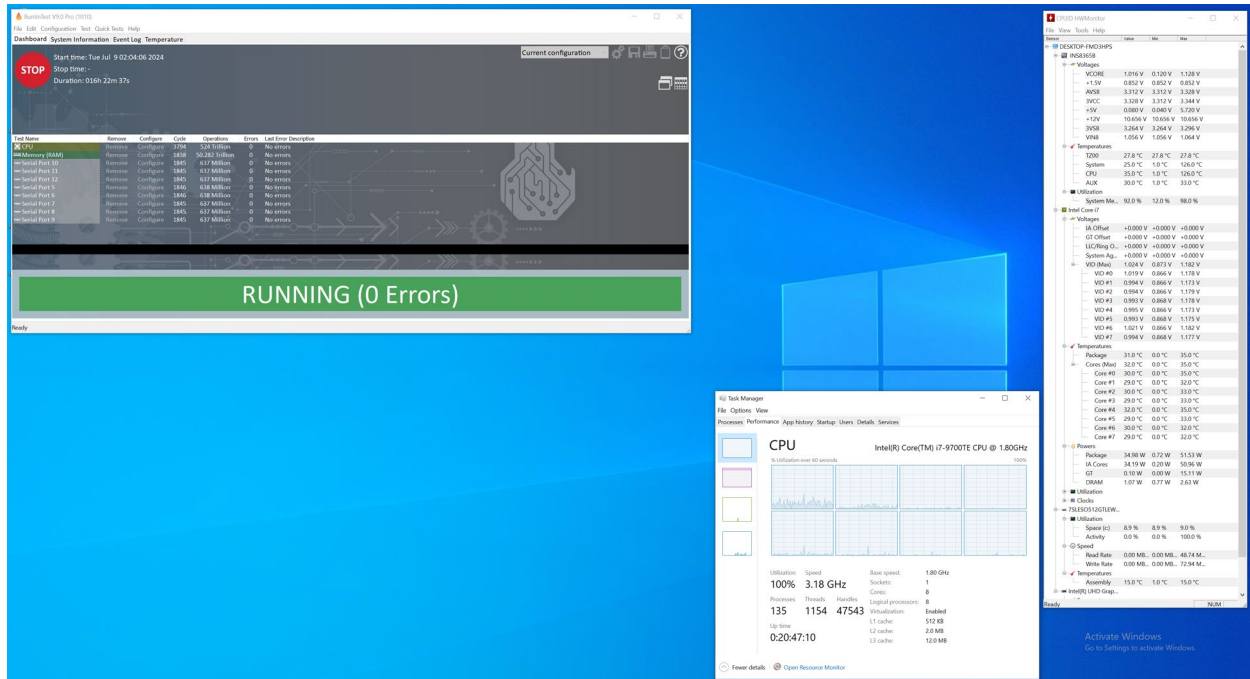
- Chamber in -20°C



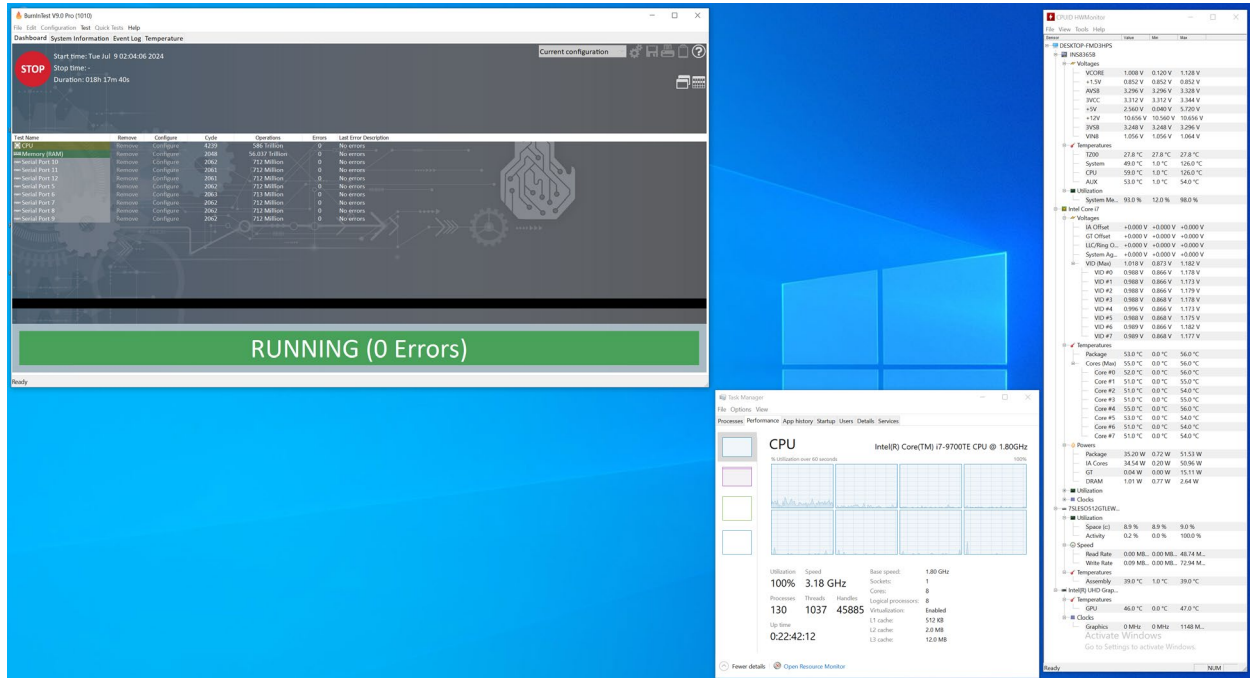
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- Chamber in 0°C



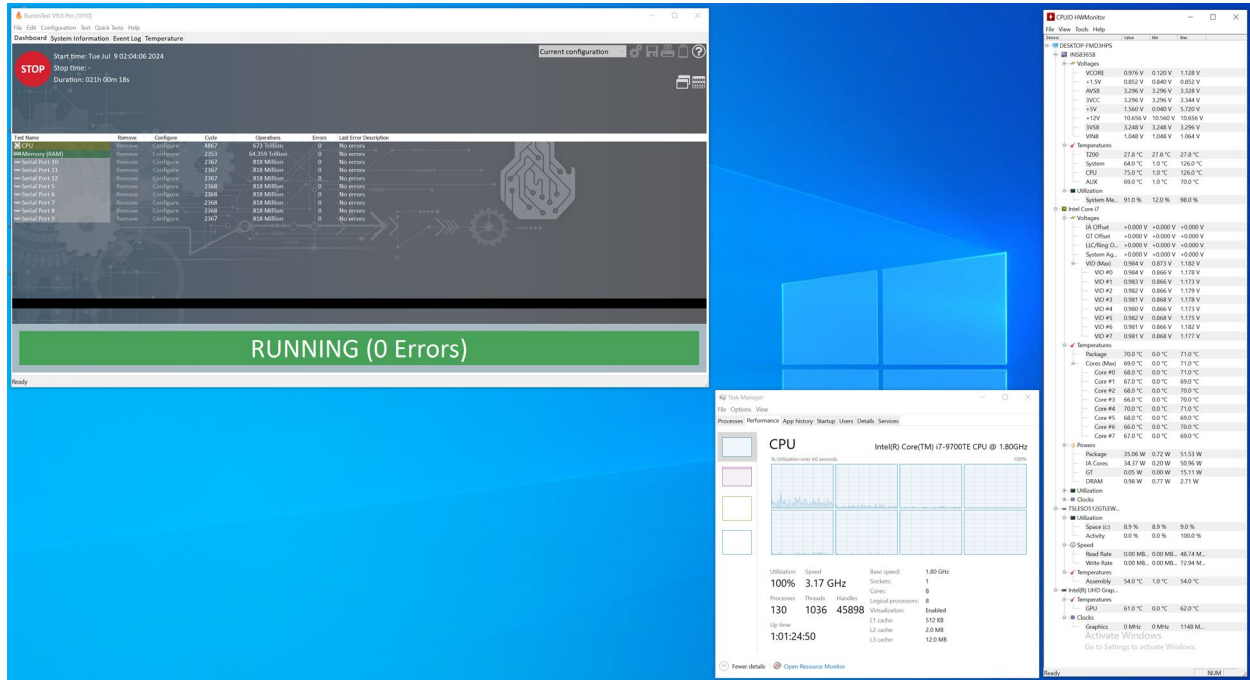
- Chamber in 25°C



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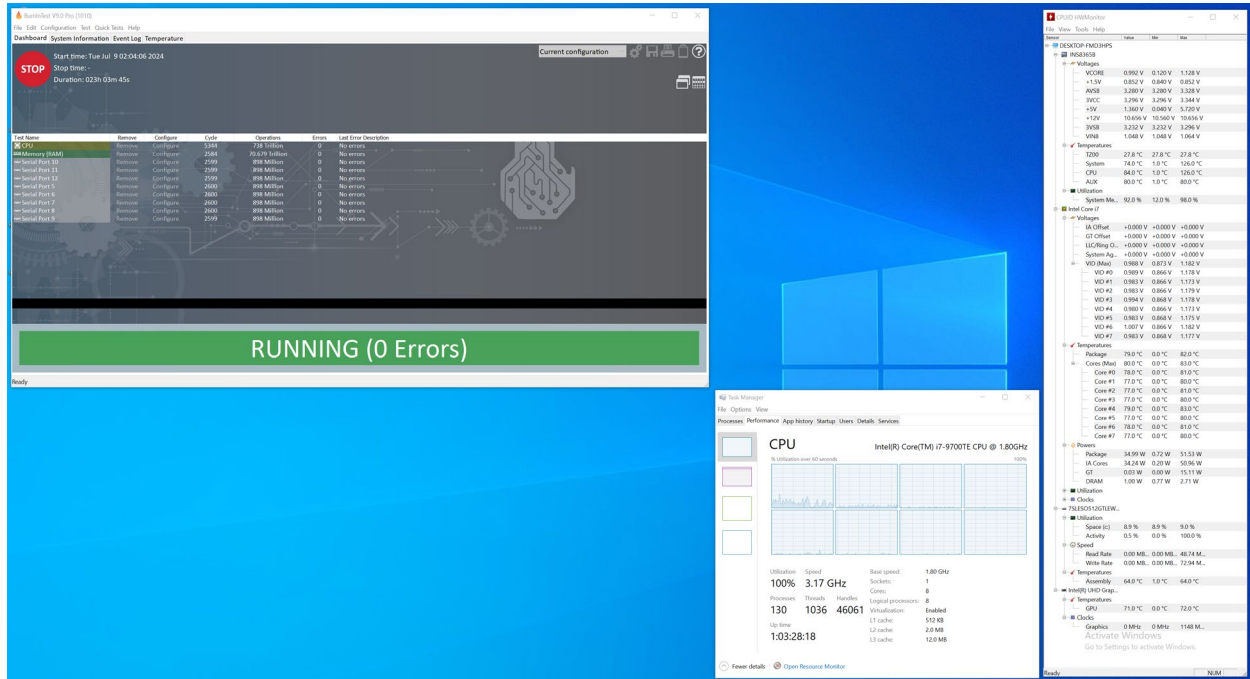
- Chamber in 40°C



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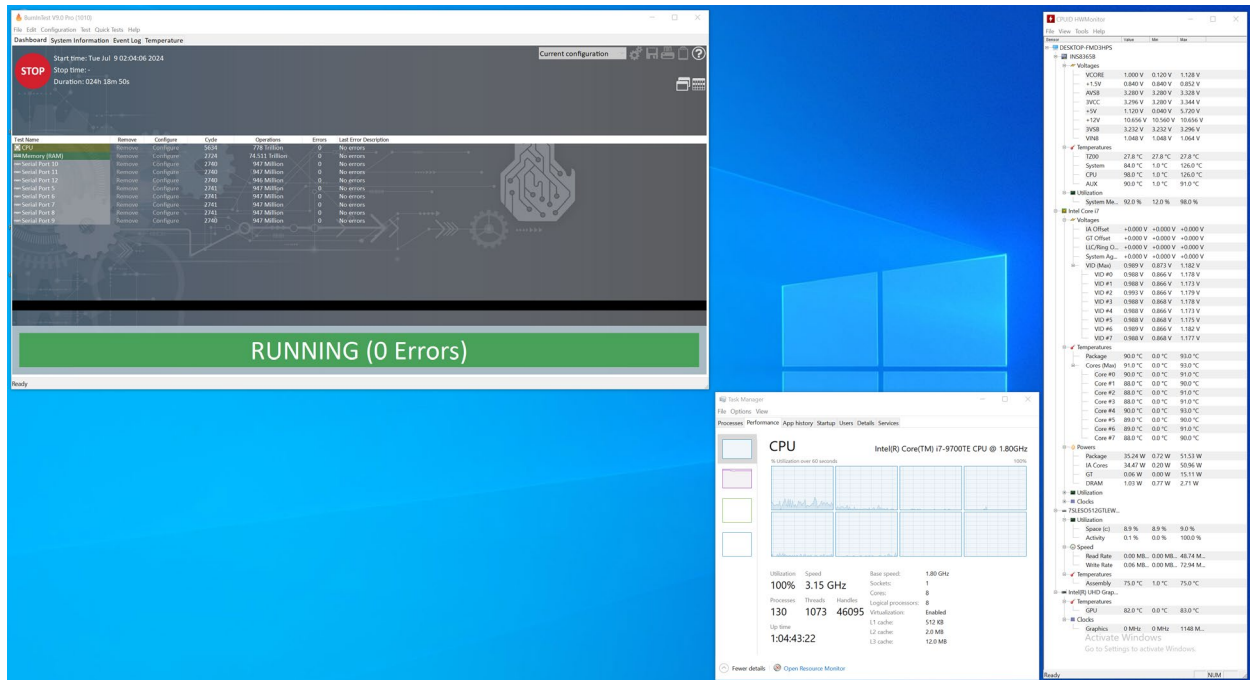
- Chamber in 50°C



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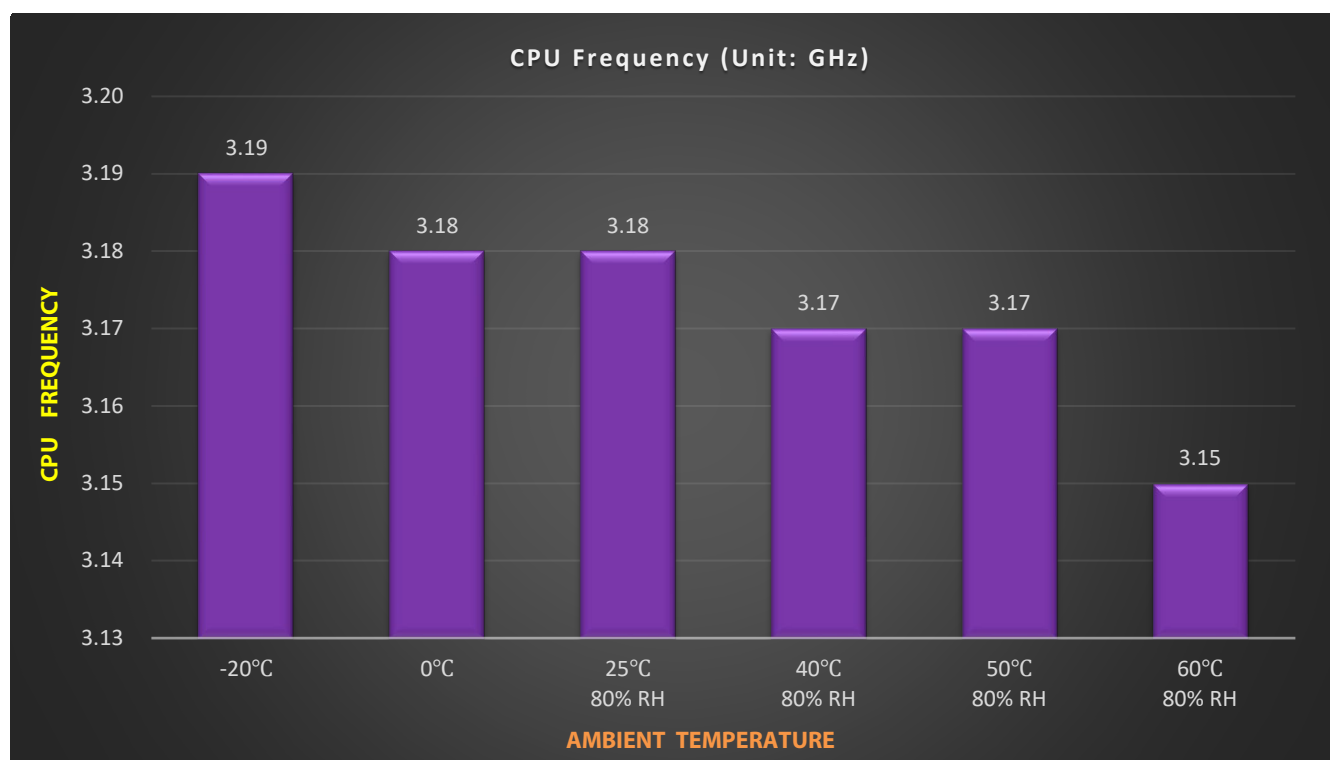
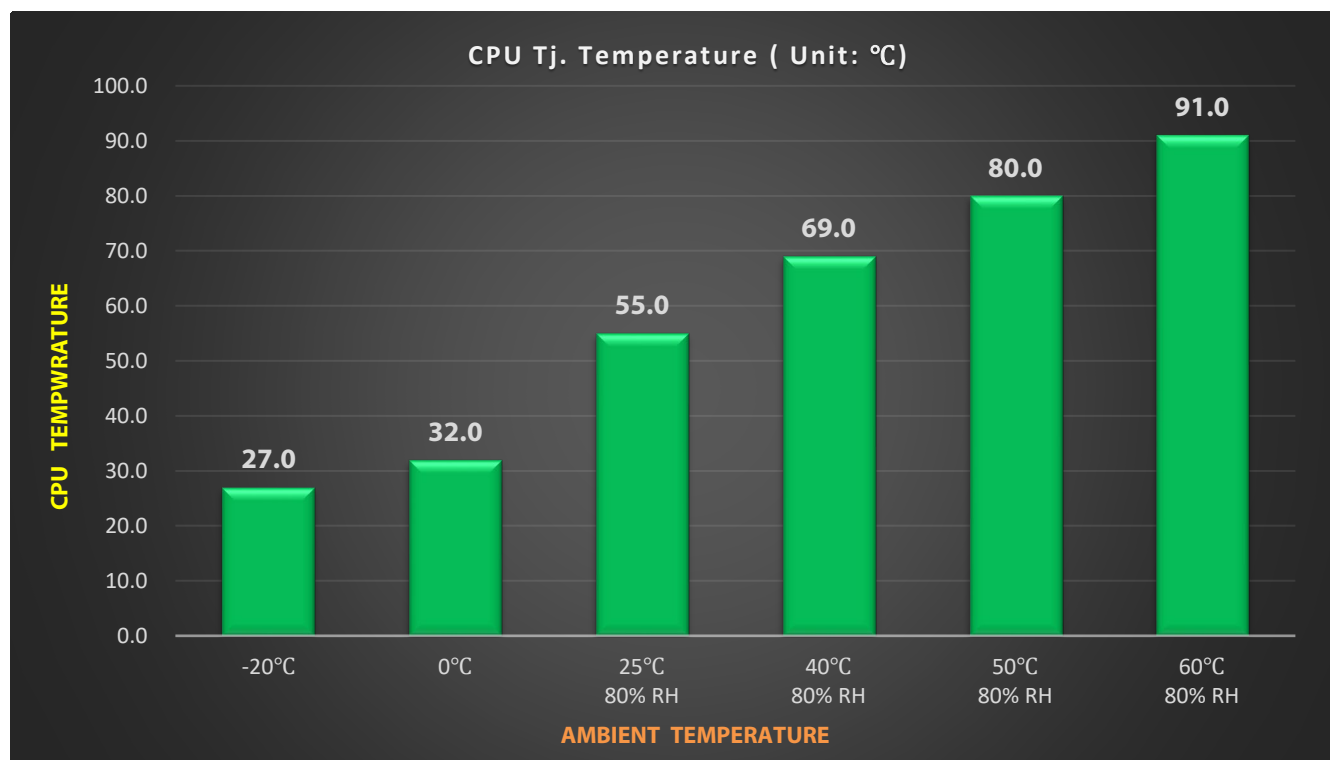
- Chamber in 60°C



4. THERMAL TEST RESULT(-20°C ~ +60°C)

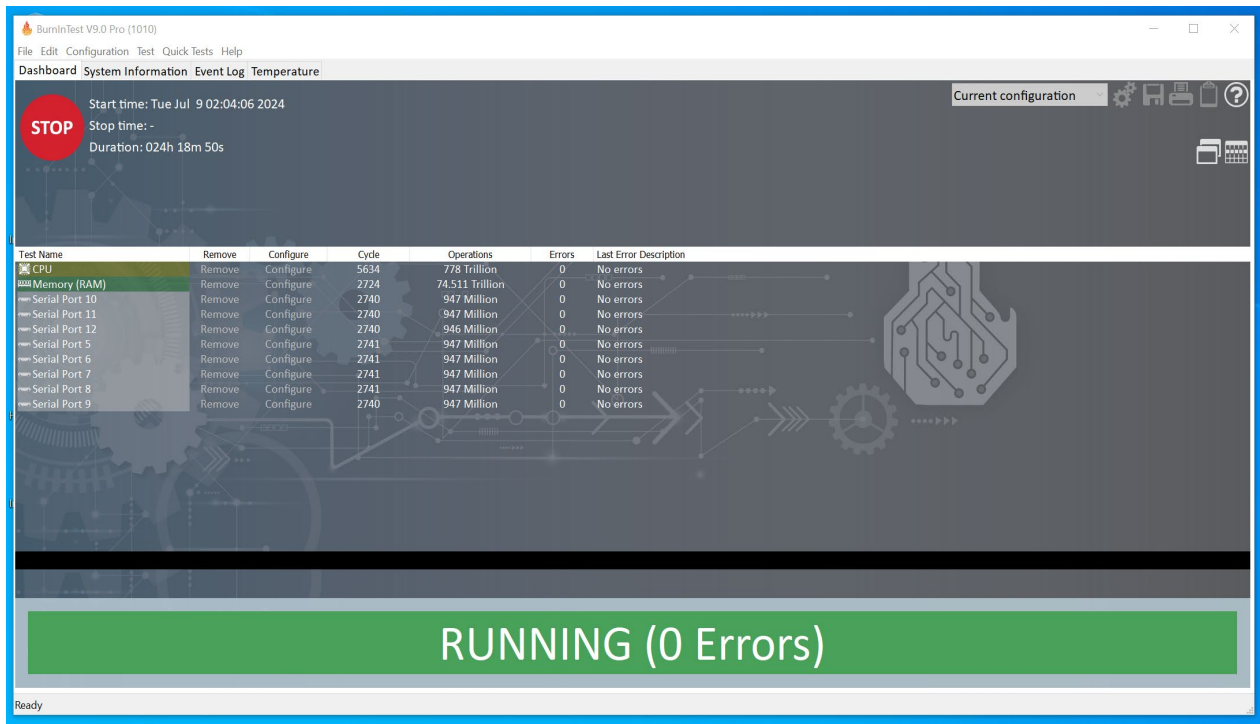
CPU Temperature and Frequency

Core Temp CPU Frequency	Ambient Temp	-20°C	0°C	25°C 80% RH	40°C 80% RH	50°C 80% RH	60°C 80% RH
CPU Tj. Temperature (Unit: °C)		27.0	32.0	55.0	69.0	80.0	91.0
CPU Frequency (Unit: GHz)		3.19	3.18	3.18	3.17	3.17	3.15



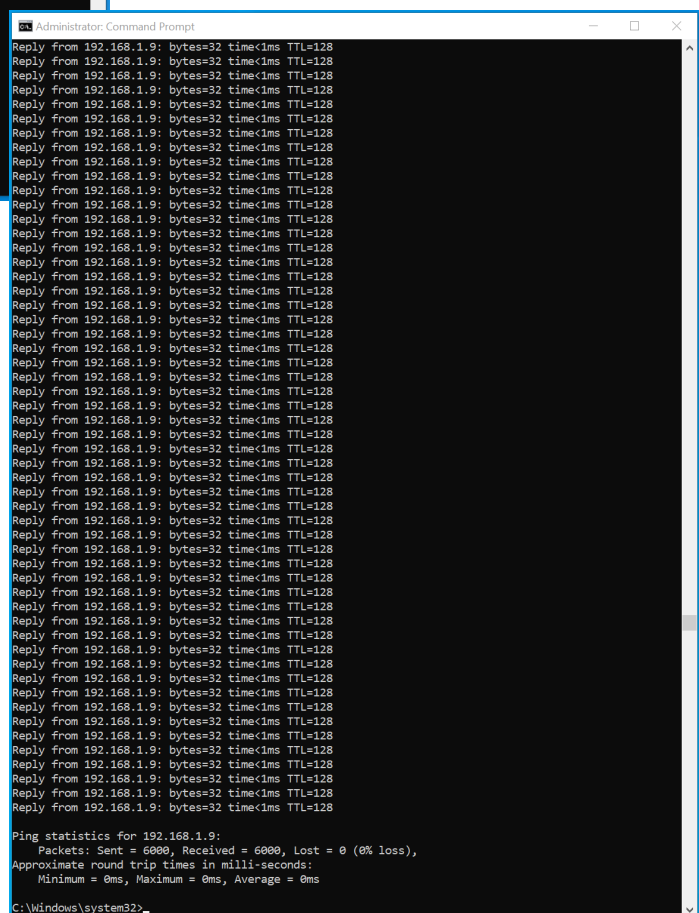
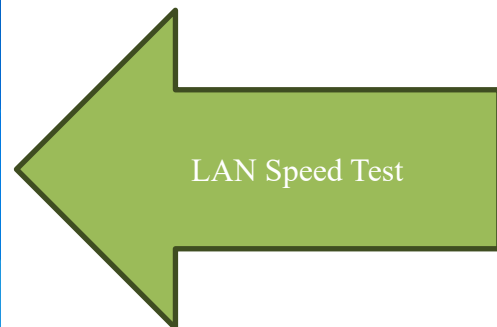
5. I/O FUNCTION TEST

5-1. Serial Port (RS232)

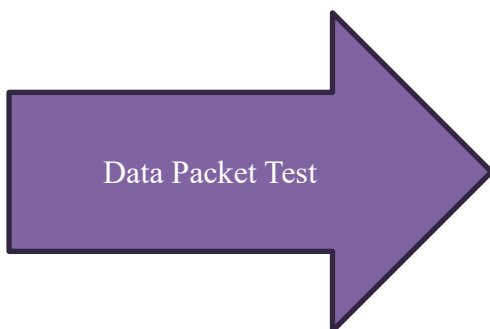
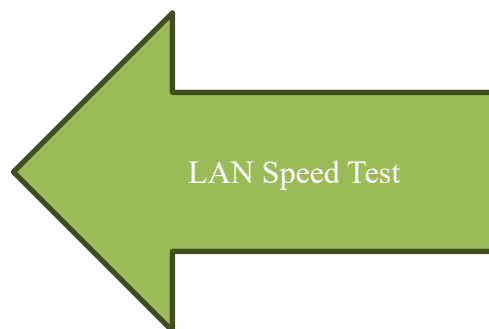


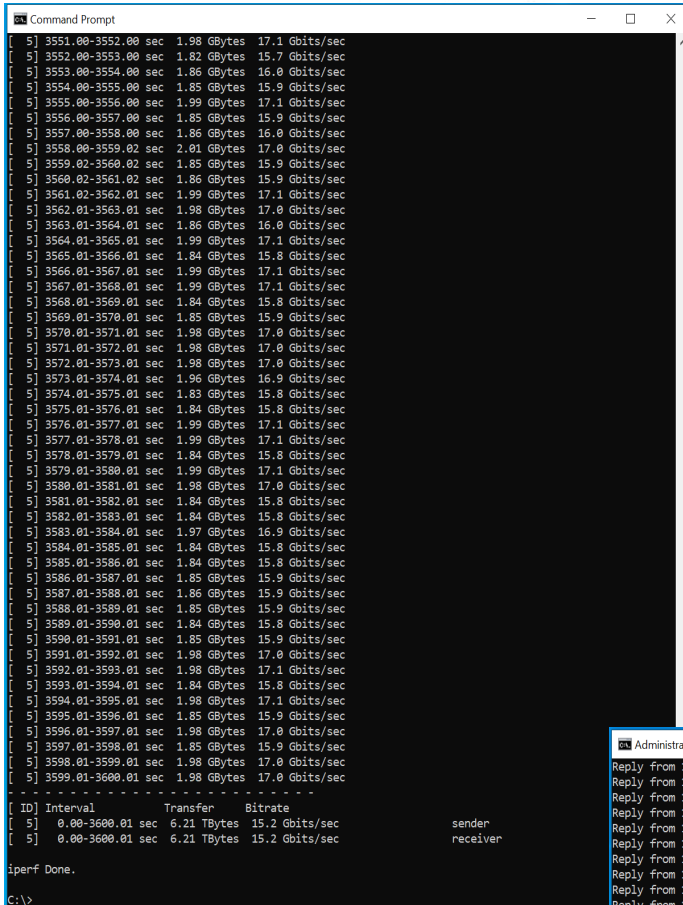
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The image shows the rear panel of a Raspberry Pi 4. The ports are labeled as follows: COM1, COM2, COM3, COM4, Line-out, Mic-in, COM5, LAN1 (highlighted with a red box), USB3.1, USB3.1, LAN2, DP1, DP2, HDMI, COM6, COM7, COM8, GND, HDD, PWR, and DC-IN 12V5. The LAN1 port is a standard RJ45 Ethernet port.



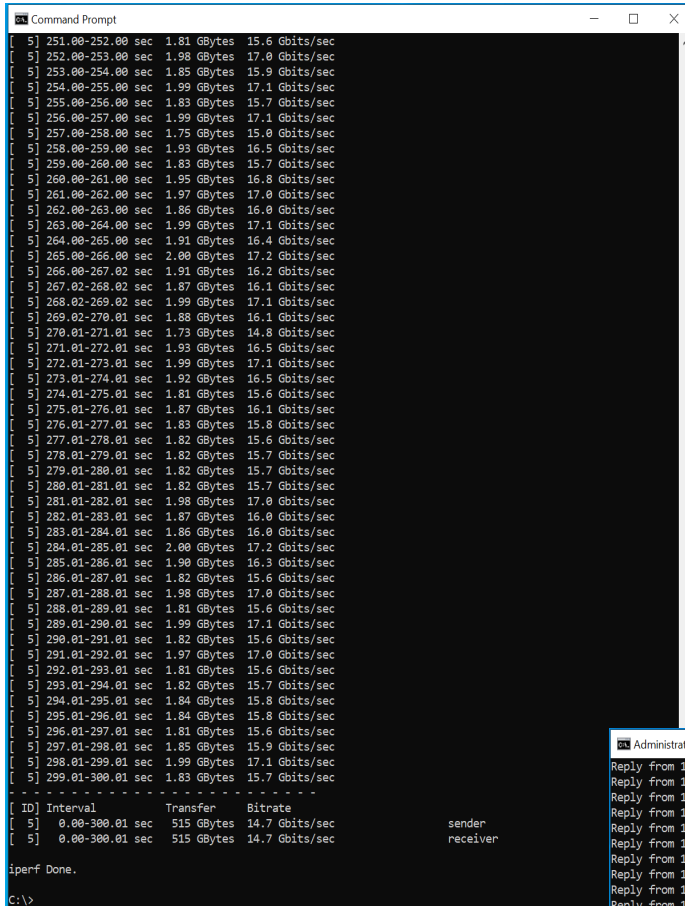
The rear panel of the Intel NUC10PAHQ2 features a variety of ports for connectivity. On the left, there are four COM ports (COM1, COM2, COM3, COM4) and two audio jacks (Line Out and Mic-in). Next to these are LAN1 and LAN2 ports, with LAN2 highlighted by a red box. Following the LAN ports are two USB3.1 ports, a DisplayPort (DP), and an HDMI port. On the right side, there are two more COM ports (COM5, COM6) and two more (COM7, COM8). At the far right, there is a DC-IN port, a power button (PWR), and two green SATA ports.



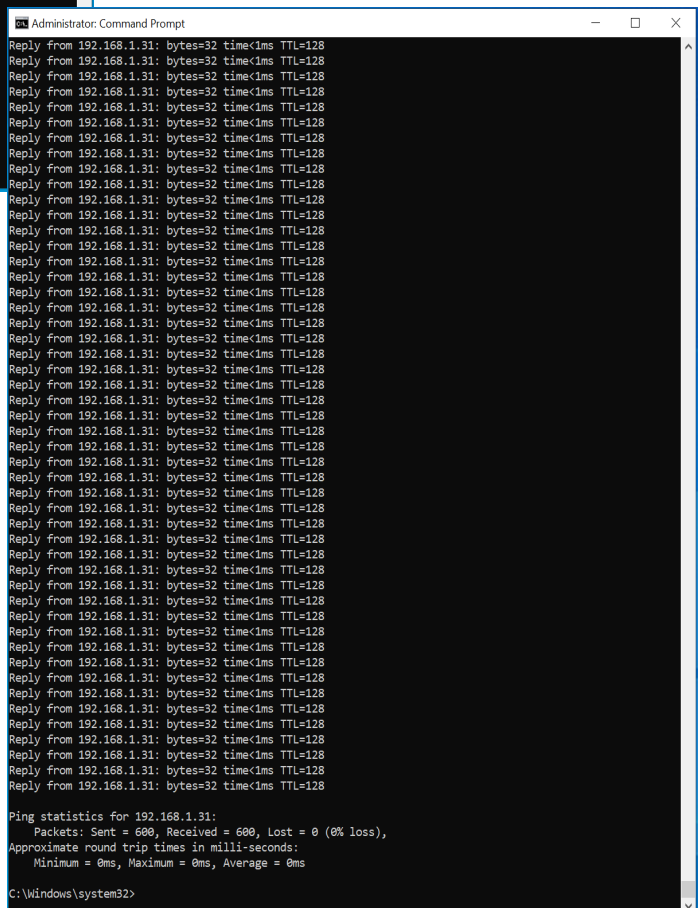


Data Packet Test

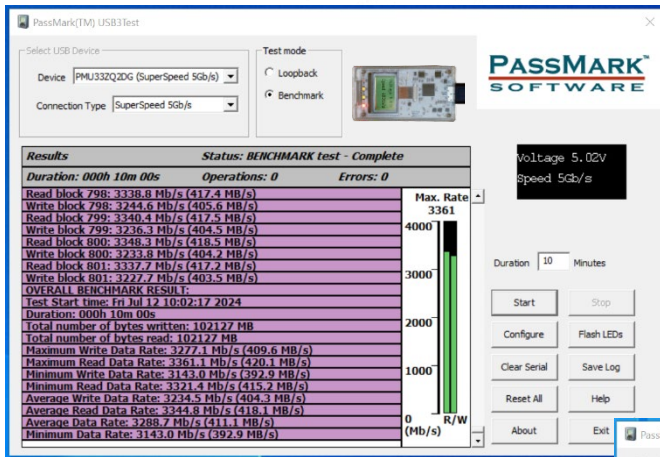
```
Administrator: Command Prompt
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
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Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Reply from 192.168.1.31: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.1.31:
    Packets: Sent = 360, Received = 360, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```



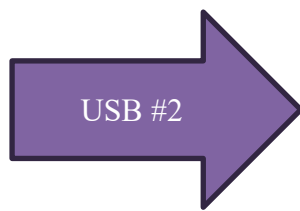
Data Packet Test



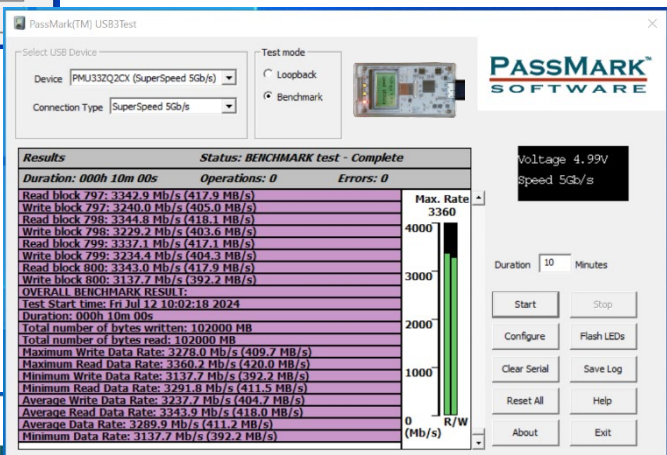
5-6. USB 3.0



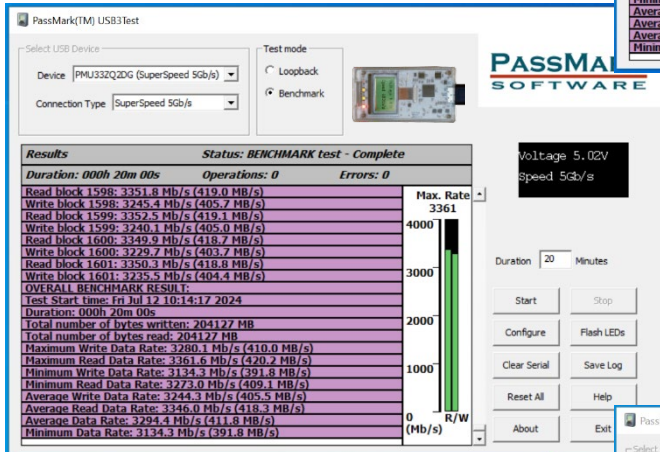
USB #1



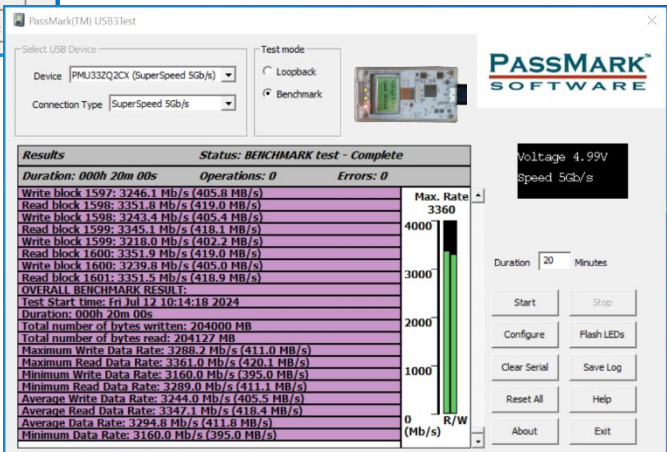
USB #2



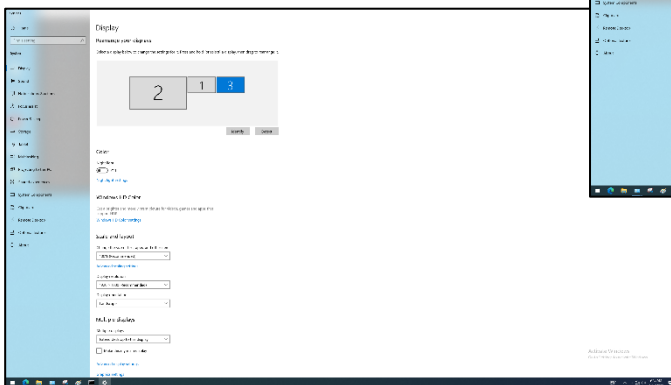
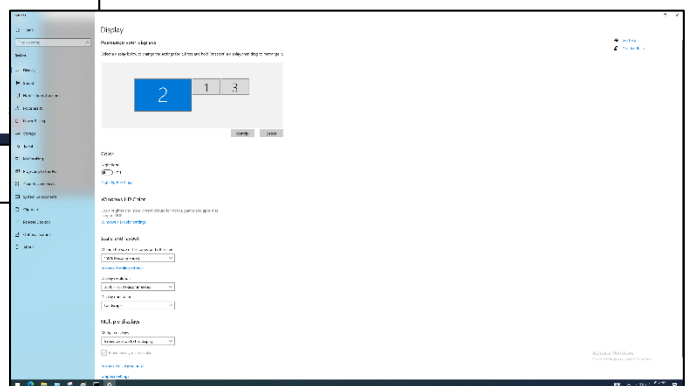
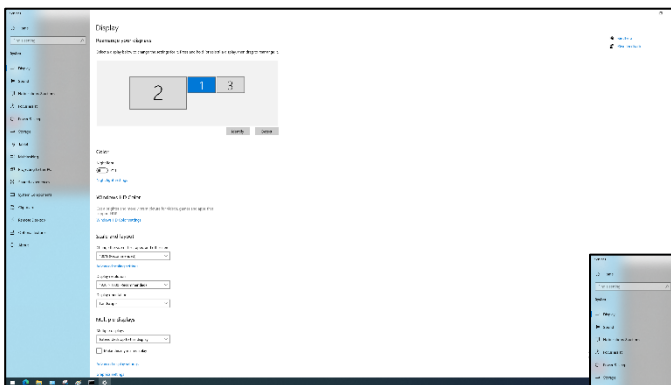
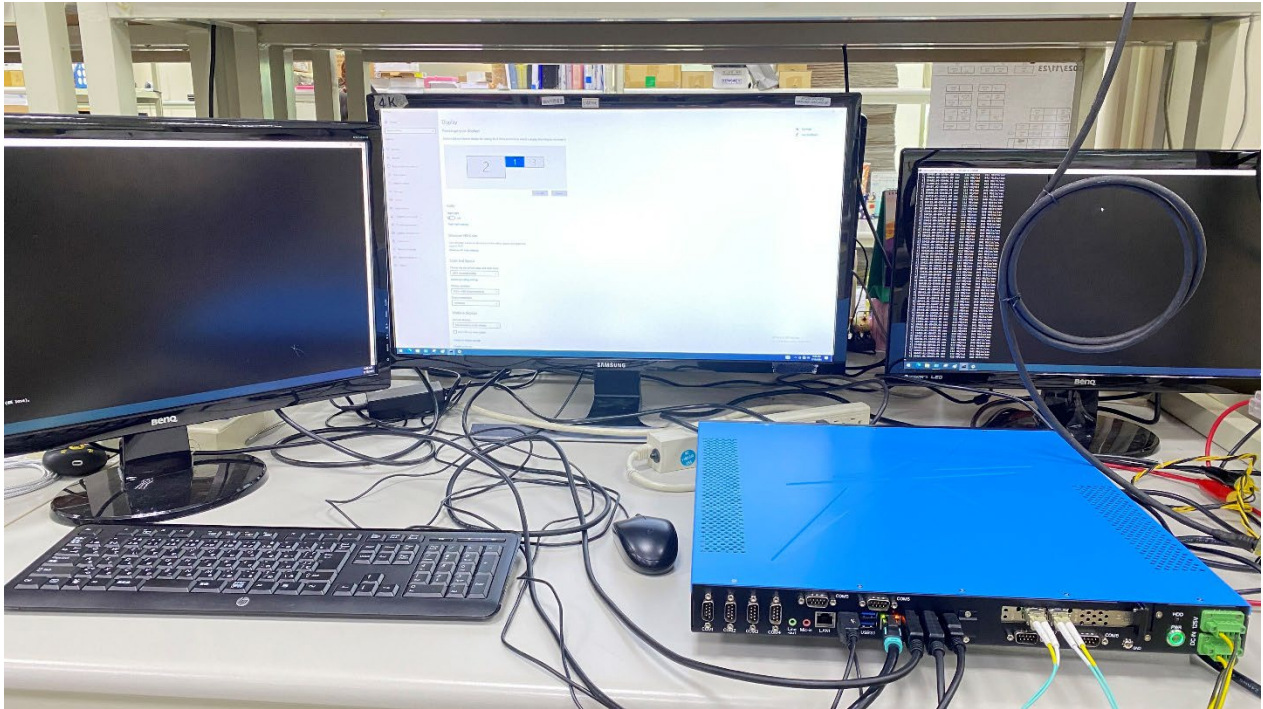
USB #3



USB #4



5-7. Multiple Displays (DP & HDMI)



6. COSMETIC INSPECTION

No.	Result			Inspection items	Remark
	OK	NG	NA		
1	✓			Whether there are Scratch mark on the appearance?	
2	✓			Whether the cutting edge is oxidized in appearance?	
3	✓			Whether there are impact scars on the appearance?	
4	✓			Whether there is any burr on the exterior?	
5	✓			Whether there is a deformation in the appearance?	
6	✓			Is there any dirt or glue residue on the outside?	
7	✓			Is the baking paint peeling or spilled on the appearance?	
8	✓			Is the version of the nameplate correct and not skewed or warped?	
9	✓			Is the serial number version sticker affixed and is the version correct?	
10	✓			HDD CAGE/TRAY trial installation and actual configuration to confirm whether there is interference?	

Cosmetic Inspection Photo	
FRONT SIDE	BACK SIDE
	
FRONT LEFT CORNER	FRONT RIGHT CORNER
	
TOP SIDE	BOTTOM SIDE
