



PRODUCT OUTGOING QUALITY INSPECTION REPORT



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Date: March 21, 2025

Outgoing Quality Inspection

AV400-T4



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1. SPECIFICATION

1-1. SYSTEM CONFIGURATION

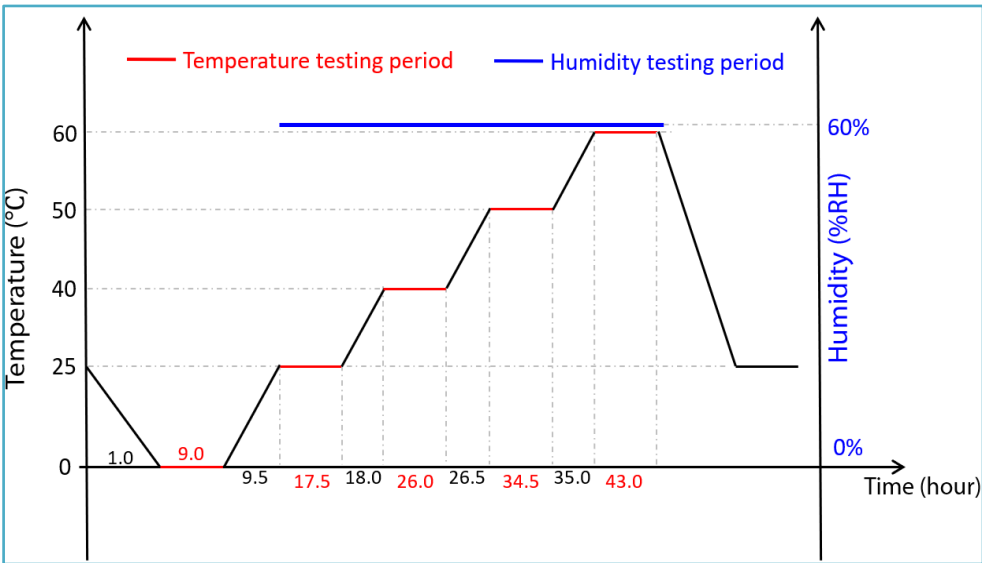
Motherboard	Deep Micro-ATX (9.6" x 10.5") BIOS Version: 5.15 UEFI Version: 1.10 BMC Version: 1.06.00 CPLD_MB Version: 0.03
CPU	Ampere Altra M96-28 Processor Total Cores: 96 Total Threads: 96 Max Turbo Frequency: 2800 MHz TDP: 132 W
Memory	SAMSUNG M393A4K40EB3-CWEBY DDR4 32GB *4pcs (TOTAL:128GB)
Storage	7Starlake 7SLES0256GBTLEW NVMe M.2 SSD 256GB 7Starlake 7SLSSB02TBTLEW-SD2-4 SATA SSD 2TB
GPU	NVIDIA RTX™ 4000 SFF Ada Generation GPU Memory: 20GB GDDR6 with error-correction code (ECC) Max Power Consumption: 70W BIOS Version: Driver Version: CUDA Parallel-Processing Cores: 2560 CUDA® cores GPU Base/Boost Clock: 607 MHz / 1117 MHz
ADD on Card	PCAN-M.2 CAN interface for the M.2 slot (uses PCIe lane) Extended operating temperature range from -40 to +85 °C
	PCIe to SATA

1-2. PRODUCT INTERIOR PHOTOS



2. TEST PLAN

2-1. THERMAL MEASUREMENT PROCESS

Test Purpose	<p>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.</p> <p>As the system cools down, the mode will change with stack selection, temperature/heat. Mapping can help develop the best tracking arrangements.</p>																																							
Test Equipment	1. KSON THS-B4T-150 Chamber.																																							
Quantity Tested	Minimum 1 Set																																							
Test Software	<p>CPU Stress: Stress-ng GPU Stress: glmark2 LAN Speed Test: iPerf3</p>																																							
Test Procedure	<ol style="list-style-type: none"> 1. Thermal pre-scan measurement: <ul style="list-style-type: none"> Temperature: 0°C~60°C Humidity: 60%RH (Temperature above 25°C) 2. Actual thermal measurement: <ol style="list-style-type: none"> 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 Ubuntu 24.04.2 LTS ARM 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	<p>Environment defines for 43 hours.</p>  <table border="1"> <caption>Test Diagram Data Points</caption> <thead> <tr> <th>Time (hour)</th> <th>Temperature (°C)</th> <th>Humidity (%RH)</th> </tr> </thead> <tbody> <tr><td>0.0</td><td>25</td><td>0</td></tr> <tr><td>1.0</td><td>0</td><td>0</td></tr> <tr><td>9.5</td><td>25</td><td>0</td></tr> <tr><td>17.5</td><td>25</td><td>60</td></tr> <tr><td>18.0</td><td>40</td><td>60</td></tr> <tr><td>26.0</td><td>40</td><td>60</td></tr> <tr><td>26.5</td><td>50</td><td>60</td></tr> <tr><td>34.5</td><td>50</td><td>60</td></tr> <tr><td>35.0</td><td>60</td><td>60</td></tr> <tr><td>43.0</td><td>60</td><td>60</td></tr> <tr><td>43.0</td><td>25</td><td>60</td></tr> <tr><td>43.0</td><td>25</td><td>0</td></tr> </tbody> </table>	Time (hour)	Temperature (°C)	Humidity (%RH)	0.0	25	0	1.0	0	0	9.5	25	0	17.5	25	60	18.0	40	60	26.0	40	60	26.5	50	60	34.5	50	60	35.0	60	60	43.0	60	60	43.0	25	60	43.0	25	0
Time (hour)	Temperature (°C)	Humidity (%RH)																																						
0.0	25	0																																						
1.0	0	0																																						
9.5	25	0																																						
17.5	25	60																																						
18.0	40	60																																						
26.0	40	60																																						
26.5	50	60																																						
34.5	50	60																																						
35.0	60	60																																						
43.0	60	60																																						
43.0	25	60																																						
43.0	25	0																																						

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
0°C	PASS
25°C / 60%RH	PASS
40°C / 60%RH	PASS
50°C / 60%RH	PASS
60°C / 60%RH	PASS

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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)	Connection LAN SWITCH/HUB transfer data test, it can work normally.	PASS
LAN Port (25Gbps)	Connection LAN SWITCH/HUB transfer data test, it can work normally.	PASS
LAN Port (25Gbps)	Connection LAN 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
USB3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
USB3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
USB3.0	Connect a PassMark USB 3.0 Loopback Plugs for testing, it can work normally.	PASS
IPMI Port	Check work well.	PASS
VGA Port	Check work well.	PASS
Mini DP	Check work well.	PASS
Mini DP	Check work well.	PASS
Mini DP	Check work well.	PASS
Mini DP	Check work well.	PASS

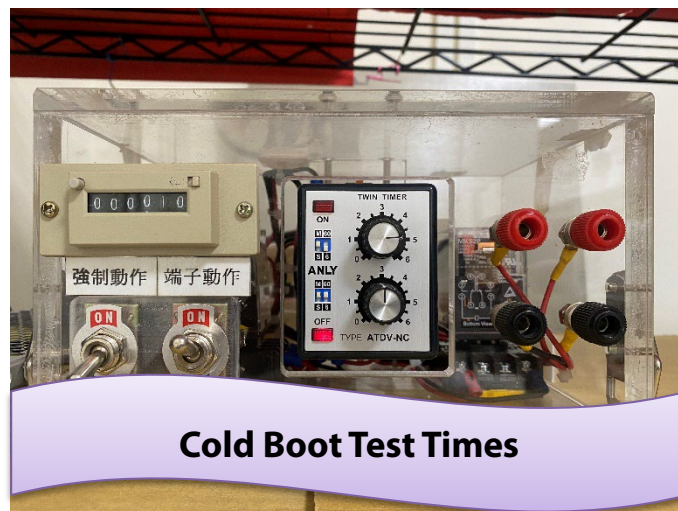
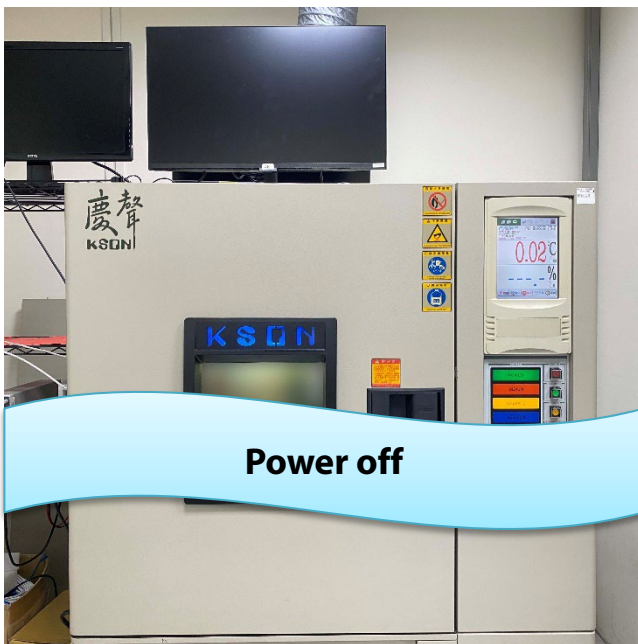
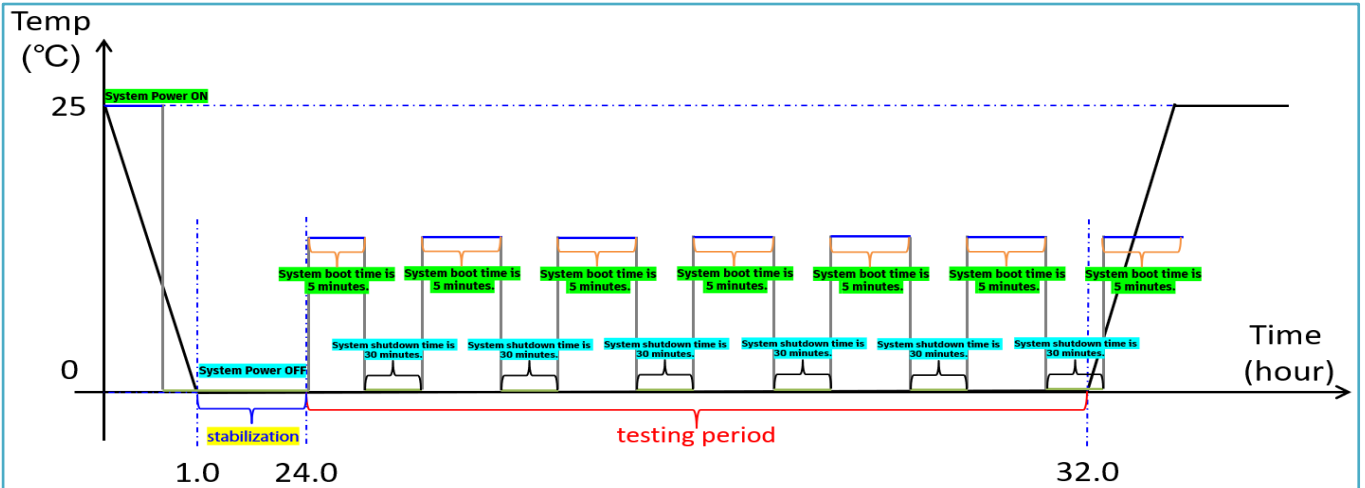
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2-2-3. Low-temperature & Boot-up

#Power supply under 0°C and ensure that the system boot up properly

Ambient Temp.	Cold Boot Test Times	Test Result
0°C	10 times	PASS



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2-3. POWER CONSUMPTION

Voltage	Current	Wattage
24.0V	15.08A	362W



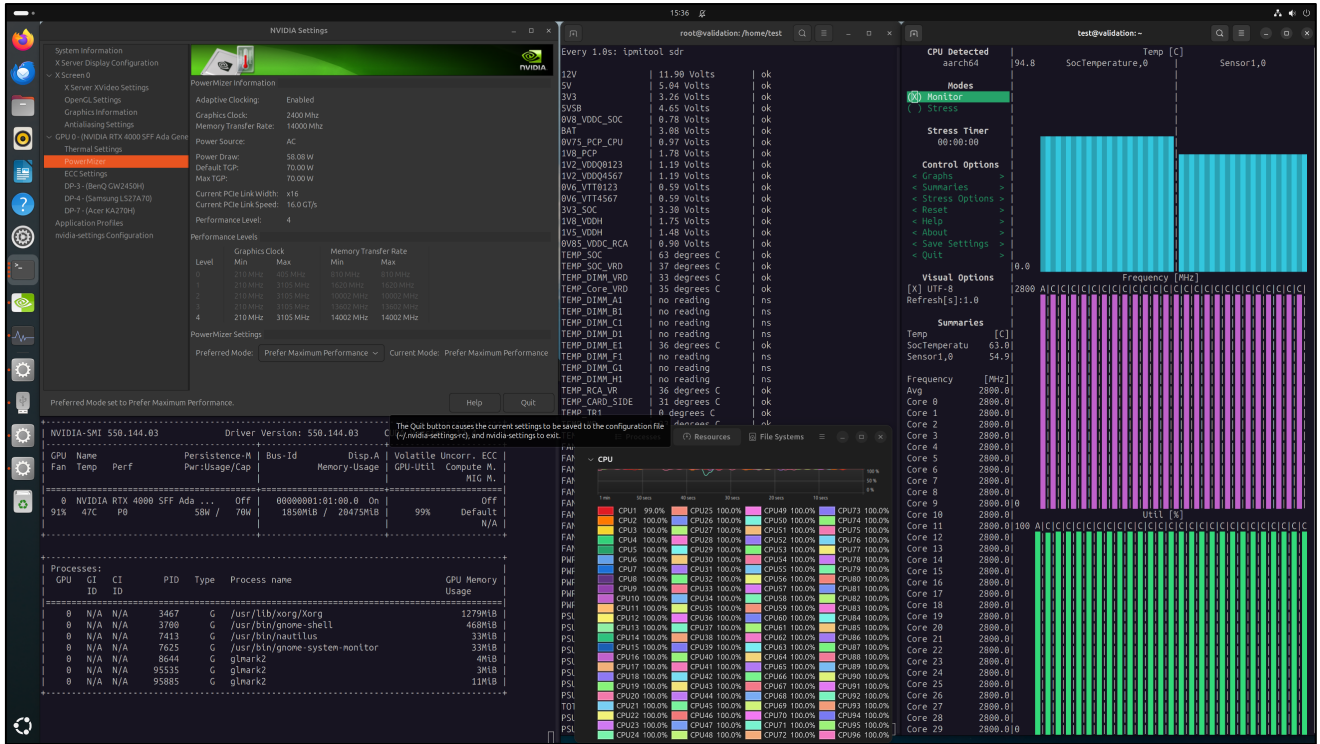
3. TEST PHOTO IN LAB

- Chamber in 0°C

The screenshot displays a Linux desktop environment with several monitoring windows. On the left, the NVIDIA Settings application is open, showing system information and power management options. The central terminal window shows the output of the 'sdr' command, listing various voltage and temperature readings for different components like the GPU, CPU, and memory. On the right, a 'test/validation' window shows a 'CPU Detected' section with 'aarcnic4' and a 'Temp (C)' section showing '94.8' for 'Sensor1_0'. Below these, there are visualizations for 'Stress Timer' and 'Visual Options' showing a frequency graph and a summary table of core temperatures and frequencies.



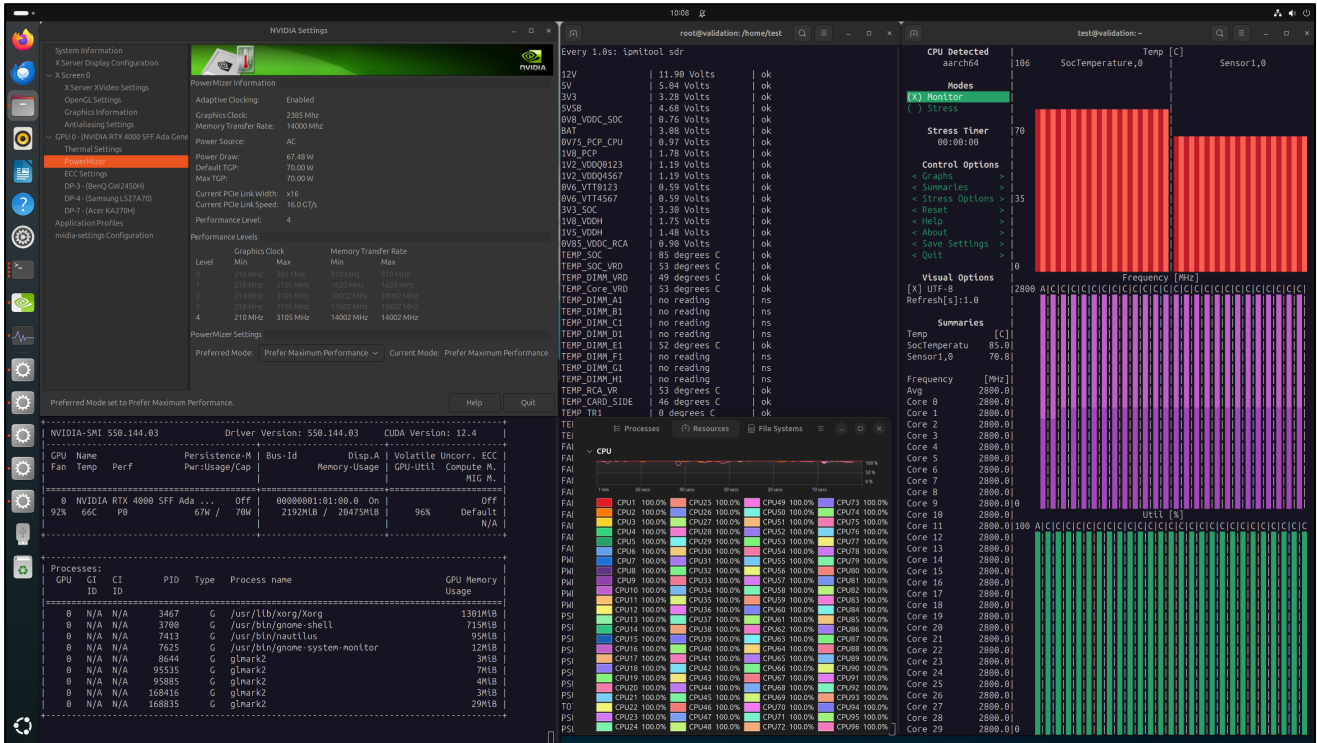
- Chamber in 25°C



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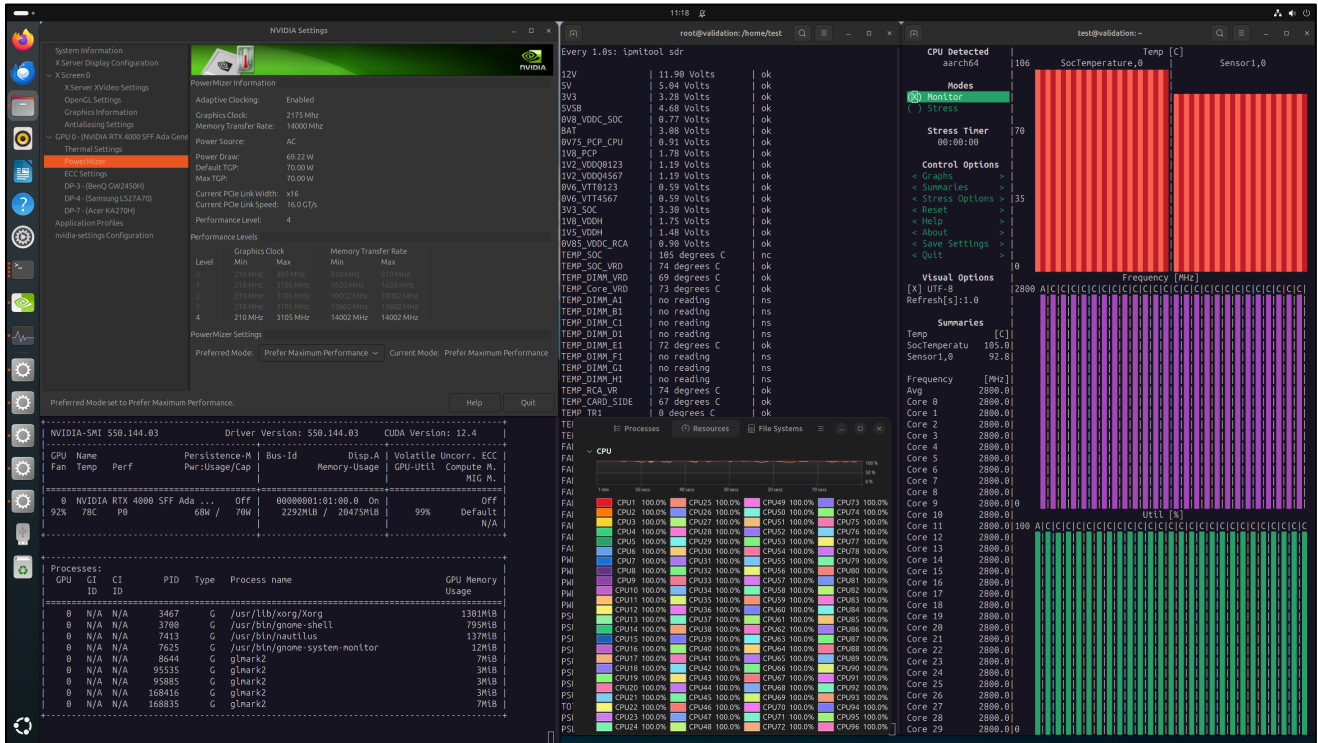
- Chamber in 40°C



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- Chamber in 50°C



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- Chamber in 60°C

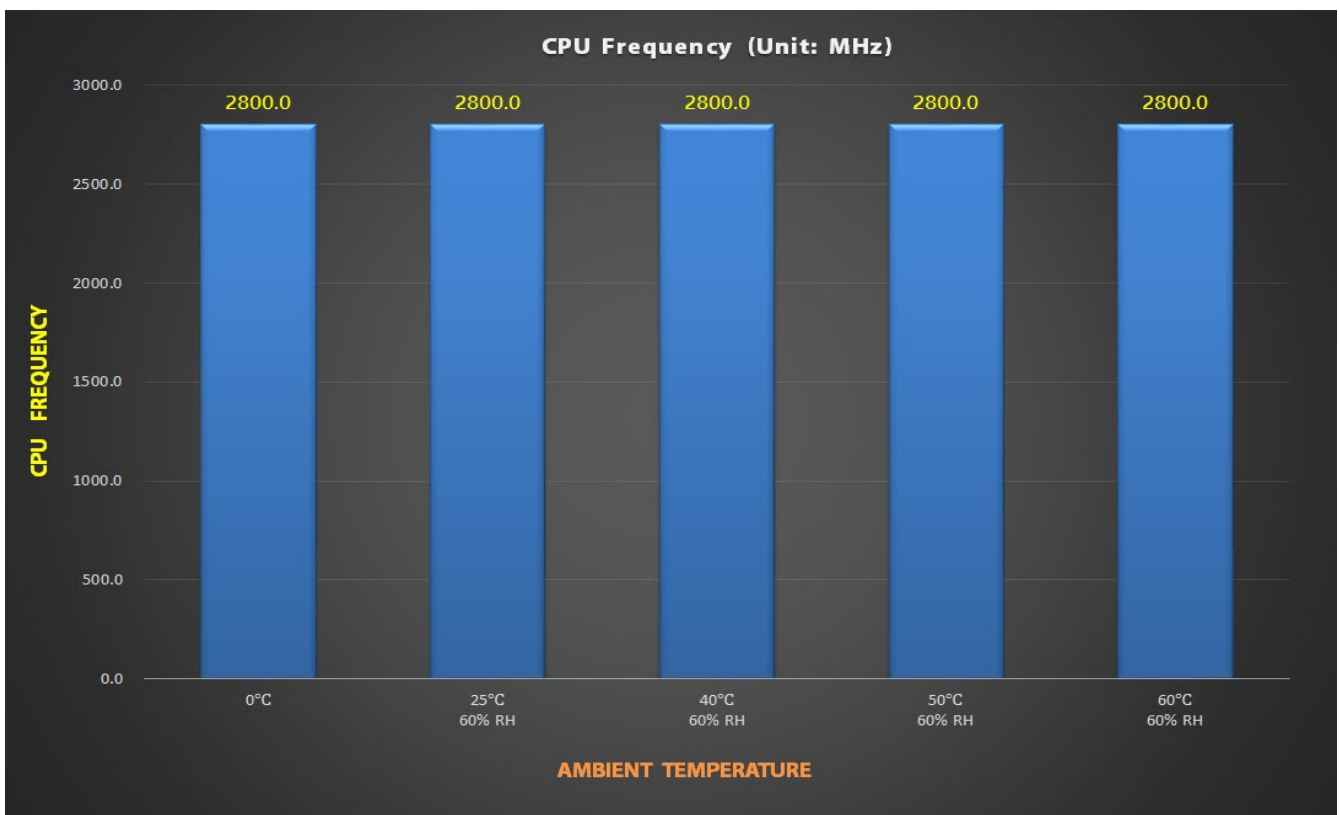
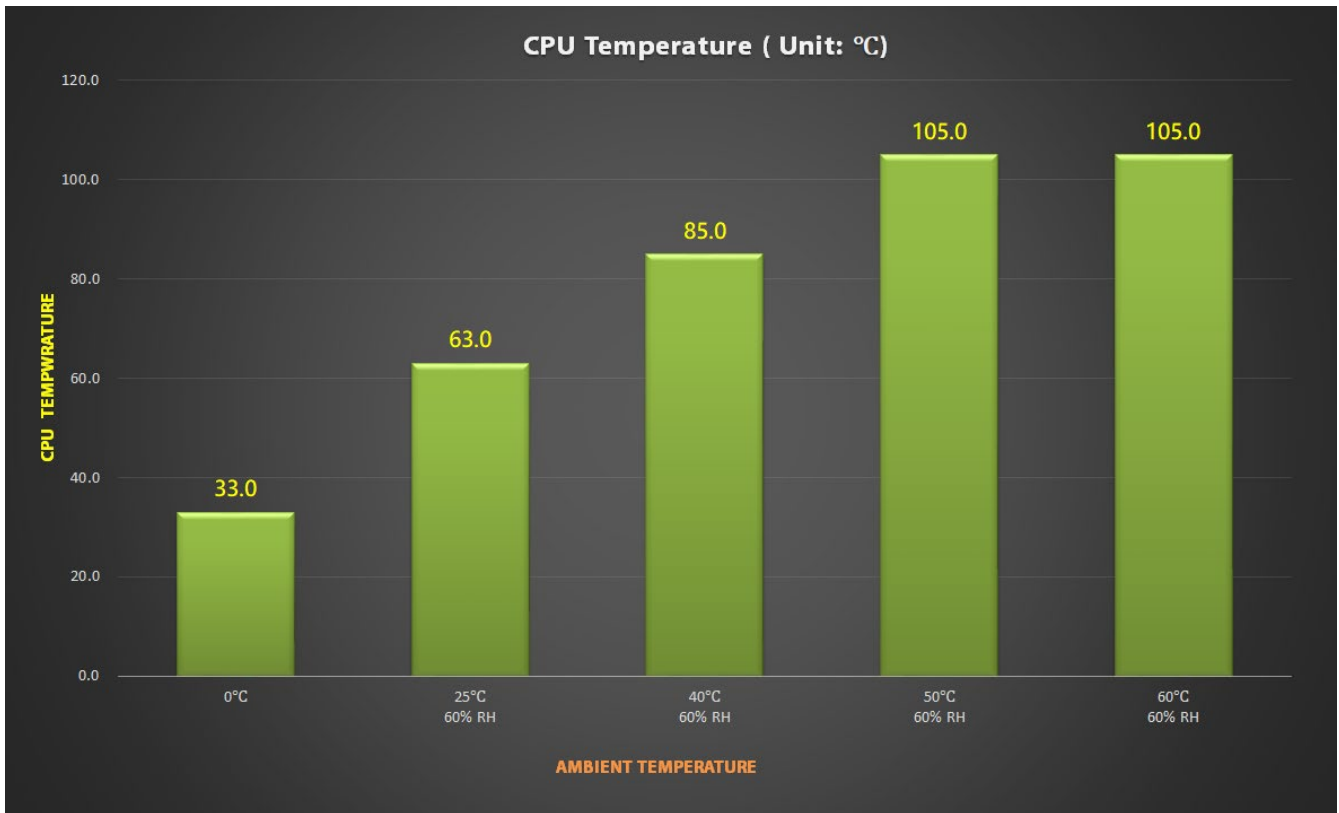
The screenshot displays a Linux desktop environment with several windows open for system monitoring and testing. On the left, the NVIDIA Settings application is visible, showing power and performance configurations. The central window shows system information and a terminal running a stress test command: `Every 1.8s: ipmitool sdr`. The right window shows a stress testing interface with a 'Monitor' mode selected, a stress timer at 00:00:00, and a control panel. Below the stress test window, a table lists various system sensors and their current values.

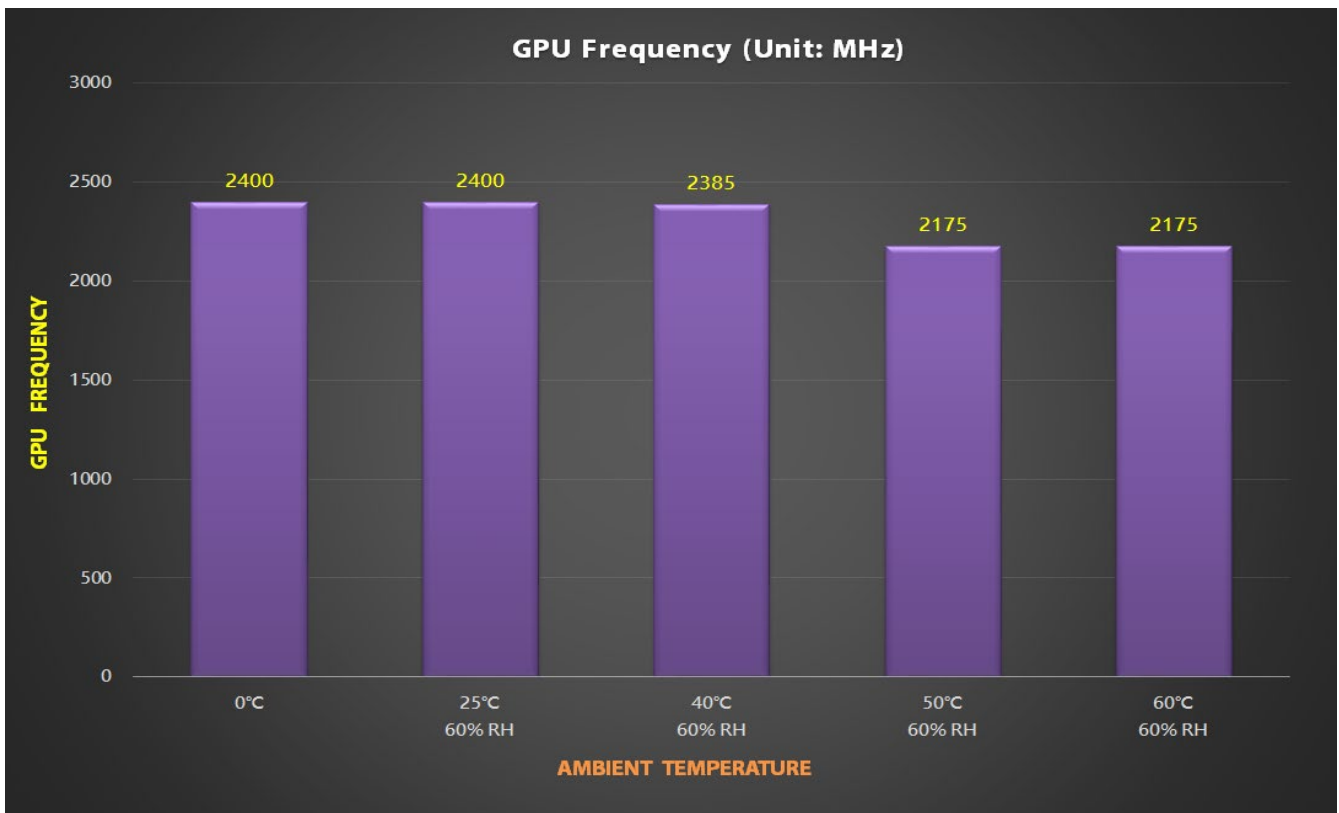
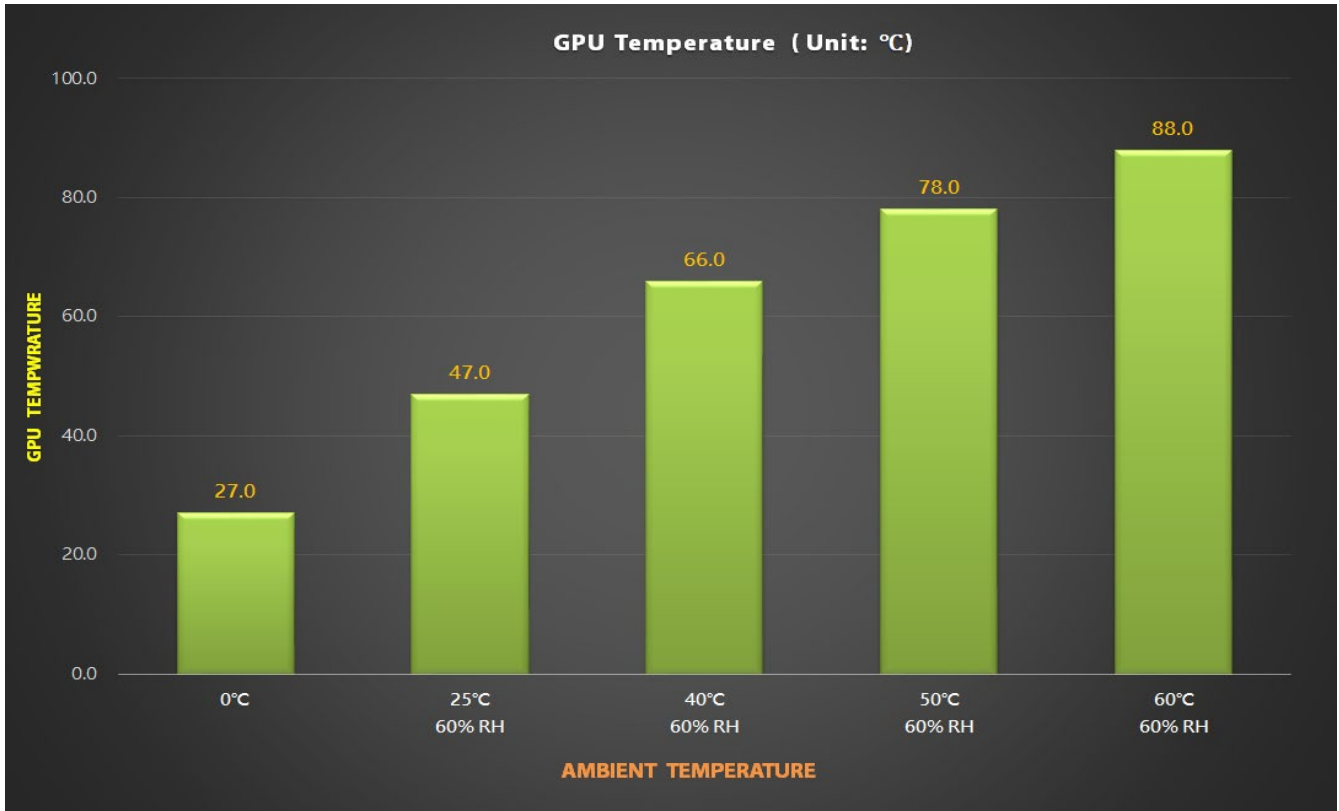
Sensor	Value	Unit	Status
12V	11.90	Volts	ok
5V	5.04	Volts	ok
5V3	3.25	Volts	ok
5V5B	4.68	Volts	ok
6V8_VDDC_S0C	0.77	Volts	ok
BAT	3.68	Volts	ok
6V75_PCP_CPU	0.91	Volts	ok
1V8_PCP	1.78	Volts	ok
1V2_VDDQ0123	1.19	Volts	ok
1V2_VDDQ4567	1.19	Volts	ok
6V6_VTT0123	0.59	Volts	ok
6V6_VTT4567	0.59	Volts	ok
5V3_S0C	3.30	Volts	ok
1V8_VDDH	1.75	Volts	ok
1V5_VDDH	1.48	Volts	ok
6V83_VDDC_RCA	0.98	Volts	ok
TEMP_S0C	105	degrees C	nc
TEMP_S0C_VRD	74	degrees C	ok
TEMP_DIMM_VRD	69	degrees C	ok
TEMP_Core_VRD	73	degrees C	ok
TEMP_DIMM_A1	no reading	ns	ns
TEMP_DIMM_B1	no reading	ns	ns
TEMP_DIMM_C1	no reading	ns	ns
TEMP_DIMM_D1	no reading	ns	ns
TEMP_DIMM_E1	72	degrees C	ok
TEMP_DIMM_F1	no reading	ns	ns
TEMP_DIMM_G1	no reading	ns	ns
TEMP_DIMM_H1	no reading	ns	ns
TEMP_DIMM_I1	no reading	ns	ns
TEMP_DIMM_J1	no reading	ns	ns
TEMP_DIMM_K1	no reading	ns	ns
TEMP_DIMM_L1	no reading	ns	ns
TEMP_DIMM_M1	no reading	ns	ns
TEMP_DIMM_N1	no reading	ns	ns
TEMP_DIMM_O1	no reading	ns	ns
TEMP_DIMM_P1	no reading	ns	ns
TEMP_DIMM_Q1	no reading	ns	ns
TEMP_DIMM_R1	no reading	ns	ns
TEMP_DIMM_S1	no reading	ns	ns
TEMP_DIMM_T1	no reading	ns	ns
TEMP_DIMM_U1	no reading	ns	ns
TEMP_DIMM_V1	no reading	ns	ns
TEMP_DIMM_W1	no reading	ns	ns
TEMP_DIMM_X1	no reading	ns	ns
TEMP_DIMM_Y1	no reading	ns	ns
TEMP_DIMM_Z1	no reading	ns	ns
TEMP_CARD_SIDE	67	degrees C	ok
TEMP_TR1	0	degrees C	ok



4. THERMAL TEST RESULT(0°C ~ +60°C)

Temperature Frequency	Ambient Temp.	0°C	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
CPU Cores Max Temperature (Unit: °C)		33.0	63.0	85.0	105.0	105.0
CPU Cores Frequency (Unit: MHz)		2800.0	2800.0	2800.0	2800.0	2800.0
Temperature Frequency	Ambient Temp.	0°C	25°C 60% RH	40°C 60% RH	50°C 60% RH	60°C 60% RH
GPU Temperature (Unit: °C)		27.0	47.0	66.0	78.0	88.0
GPU Frequency (Unit: MHz)		2400.0	2400.0	2385.0	2175.0	2175.0





5. I/O FUNCTION TEST

5-1. LAN(25Gbps)

25GbE



LAN SPEED

LAN Data-Packet

LAN 1

```
root@test:/home/test [ 5] 494.00-495.00 sec 702 MBytes 5.89 Gbits/sec 0 3.27 MBytes
[ 7] 494.00-495.00 sec 1.37 GBytes 11.8 Gbits/sec 0 4.26 MBytes
[ 9] 494.00-495.00 sec 702 MBytes 5.89 Gbits/sec 0 3.45 MBytes
[SUM] 494.00-495.00 sec 2.74 GBytes 23.5 Gbits/sec 0

[ 5] 495.00-496.00 sec 702 MBytes 5.89 Gbits/sec 0 3.27 MBytes
[ 7] 495.00-496.00 sec 1.37 GBytes 11.8 Gbits/sec 0 4.26 MBytes
[ 9] 495.00-496.00 sec 702 MBytes 5.89 Gbits/sec 0 3.45 MBytes
[SUM] 495.00-496.00 sec 2.74 GBytes 23.5 Gbits/sec 0

[ 5] 496.00-497.00 sec 701 MBytes 5.88 Gbits/sec 0 3.27 MBytes
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[ 5] 497.00-498.00 sec 702 MBytes 5.89 Gbits/sec 0 3.27 MBytes
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[ 9] 498.00-499.00 sec 702 MBytes 5.88 Gbits/sec 0 3.45 MBytes
[SUM] 498.00-499.00 sec 2.74 GBytes 23.5 Gbits/sec 0

[ 5] 499.00-500.00 sec 702 MBytes 5.89 Gbits/sec 0 3.27 MBytes
[ 7] 499.00-500.00 sec 1.37 GBytes 11.8 Gbits/sec 0 4.26 MBytes
[ 9] 499.00-500.00 sec 701 MBytes 5.88 Gbits/sec 0 3.45 MBytes
[SUM] 499.00-500.00 sec 2.74 GBytes 23.5 Gbits/sec 0

[ ID] Interval Transfer Bitrate Retr
[ 5] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0
[ 5] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0
[ 7] 0.00-500.00 sec 685 GBytes 11.8 Gbits/sec 0
[ 7] 0.00-500.00 sec 685 GBytes 11.8 Gbits/sec 0
[ 9] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0
[ 9] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0
[SUM] 0.00-500.00 sec 1.34 TBytes 23.5 Gbits/sec 0
[SUM] 0.00-500.00 sec 1.34 TBytes 23.5 Gbits/sec 0

iperf Done.
root@test:/home/test#
```

```
root@test:/home/test 64 bytes from 192.168.1.104: icmp_seq=464 ttl=64 time=0.128 ms
64 bytes from 192.168.1.104: icmp_seq=465 ttl=64 time=0.120 ms
64 bytes from 192.168.1.104: icmp_seq=466 ttl=64 time=0.104 ms
64 bytes from 192.168.1.104: icmp_seq=467 ttl=64 time=0.113 ms
64 bytes from 192.168.1.104: icmp_seq=468 ttl=64 time=0.102 ms
64 bytes from 192.168.1.104: icmp_seq=469 ttl=64 time=0.130 ms
64 bytes from 192.168.1.104: icmp_seq=470 ttl=64 time=0.097 ms
64 bytes from 192.168.1.104: icmp_seq=471 ttl=64 time=0.117 ms
64 bytes from 192.168.1.104: icmp_seq=472 ttl=64 time=0.092 ms
64 bytes from 192.168.1.104: icmp_seq=473 ttl=64 time=0.086 ms
64 bytes from 192.168.1.104: icmp_seq=474 ttl=64 time=0.109 ms
64 bytes from 192.168.1.104: icmp_seq=475 ttl=64 time=0.104 ms
64 bytes from 192.168.1.104: icmp_seq=476 ttl=64 time=0.085 ms
64 bytes from 192.168.1.104: icmp_seq=477 ttl=64 time=0.098 ms
64 bytes from 192.168.1.104: icmp_seq=478 ttl=64 time=0.082 ms
64 bytes from 192.168.1.104: icmp_seq=479 ttl=64 time=0.106 ms
64 bytes from 192.168.1.104: icmp_seq=480 ttl=64 time=0.097 ms
64 bytes from 192.168.1.104: icmp_seq=481 ttl=64 time=0.148 ms
64 bytes from 192.168.1.104: icmp_seq=482 ttl=64 time=0.110 ms
64 bytes from 192.168.1.104: icmp_seq=483 ttl=64 time=0.101 ms
64 bytes from 192.168.1.104: icmp_seq=484 ttl=64 time=0.110 ms
64 bytes from 192.168.1.104: icmp_seq=485 ttl=64 time=0.128 ms
64 bytes from 192.168.1.104: icmp_seq=486 ttl=64 time=0.094 ms
64 bytes from 192.168.1.104: icmp_seq=487 ttl=64 time=0.093 ms
64 bytes from 192.168.1.104: icmp_seq=488 ttl=64 time=0.106 ms
64 bytes from 192.168.1.104: icmp_seq=489 ttl=64 time=0.120 ms
64 bytes from 192.168.1.104: icmp_seq=490 ttl=64 time=0.107 ms
64 bytes from 192.168.1.104: icmp_seq=491 ttl=64 time=0.107 ms
64 bytes from 192.168.1.104: icmp_seq=492 ttl=64 time=0.118 ms
64 bytes from 192.168.1.104: icmp_seq=493 ttl=64 time=0.078 ms
64 bytes from 192.168.1.104: icmp_seq=494 ttl=64 time=0.136 ms
64 bytes from 192.168.1.104: icmp_seq=495 ttl=64 time=0.096 ms
64 bytes from 192.168.1.104: icmp_seq=496 ttl=64 time=0.133 ms
64 bytes from 192.168.1.104: icmp_seq=497 ttl=64 time=0.099 ms
64 bytes from 192.168.1.104: icmp_seq=498 ttl=64 time=0.097 ms
64 bytes from 192.168.1.104: icmp_seq=499 ttl=64 time=0.101 ms
64 bytes from 192.168.1.104: icmp_seq=500 ttl=64 time=0.078 ms

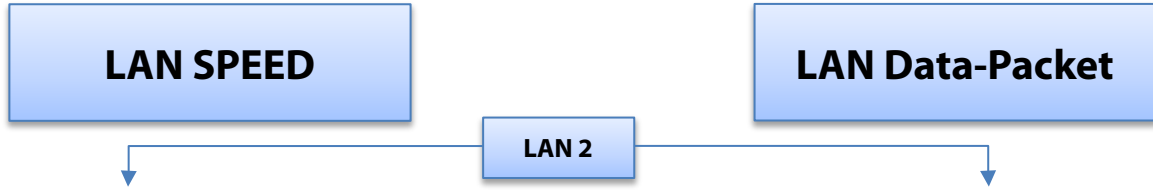
--- 192.168.1.104 ping statistics ---
500 packets transmitted, 500 received, 0% packet loss, time 510990ms
rtt min/avg/max/mdev = 0.065/0.112/0.451/0.028 ms
root@test:/home/test#
```

LAN Speed Test Result: Pass

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

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```
root@test:/home/test [ 5] 494.00-495.00 sec 700 MBytes 5.87 Gbits/sec 0 3.59 MBytes
[ 7] 494.00-495.00 sec 1.37 GBytes 11.8 Gbits/sec 0 3.59 MBytes
[ 9] 494.00-495.00 sec 701 MBytes 5.88 Gbits/sec 0 3.29 MBytes
[SUM] 494.00-495.00 sec 2.74 GBytes 23.5 Gbits/sec 0
-----
[ 5] 495.00-496.00 sec 702 MBytes 5.89 Gbits/sec 0 3.59 MBytes
[ 7] 495.00-496.00 sec 1.37 GBytes 11.8 Gbits/sec 0 3.59 MBytes
[ 9] 495.00-496.00 sec 702 MBytes 5.89 Gbits/sec 0 3.29 MBytes
[SUM] 495.00-496.00 sec 2.74 GBytes 23.5 Gbits/sec 0
-----
[ 5] 496.00-497.00 sec 701 MBytes 5.88 Gbits/sec 0 3.59 MBytes
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[ 9] 498.00-499.00 sec 701 MBytes 5.88 Gbits/sec 0 3.29 MBytes
[SUM] 498.00-499.00 sec 2.74 GBytes 23.5 Gbits/sec 0
-----
[ 5] 499.00-500.00 sec 703 MBytes 5.90 Gbits/sec 0 3.59 MBytes
[ 7] 499.00-500.00 sec 1.37 GBytes 11.7 Gbits/sec 0 3.59 MBytes
[ 9] 499.00-500.00 sec 703 MBytes 5.90 Gbits/sec 0 3.29 MBytes
[SUM] 499.00-500.00 sec 2.74 GBytes 23.5 Gbits/sec 0
-----
[ ID] Interval Transfer Bitrate Retr
[ 5] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0 sender
[ 5] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0 receiver
[ 7] 0.00-500.00 sec 685 GBytes 11.8 Gbits/sec 0 sender
[ 7] 0.00-500.00 sec 685 GBytes 11.8 Gbits/sec 0 receiver
[ 9] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0 sender
[ 9] 0.00-500.00 sec 343 GBytes 5.89 Gbits/sec 0 receiver
[SUM] 0.00-500.00 sec 1.34 TBytes 23.5 Gbits/sec 0 sender
[SUM] 0.00-500.00 sec 1.34 TBytes 23.5 Gbits/sec 0 receiver

iperf Done.
root@test:/home/test# [ 64 bytes from 192.168.1.105: icmp_seq=464 ttl=64 time=0.085 ms
64 bytes from 192.168.1.105: icmp_seq=465 ttl=64 time=0.083 ms
64 bytes from 192.168.1.105: icmp_seq=466 ttl=64 time=0.086 ms
64 bytes from 192.168.1.105: icmp_seq=467 ttl=64 time=0.154 ms
64 bytes from 192.168.1.105: icmp_seq=468 ttl=64 time=0.107 ms
64 bytes from 192.168.1.105: icmp_seq=469 ttl=64 time=0.134 ms
64 bytes from 192.168.1.105: icmp_seq=470 ttl=64 time=0.123 ms
64 bytes from 192.168.1.105: icmp_seq=471 ttl=64 time=0.134 ms
64 bytes from 192.168.1.105: icmp_seq=472 ttl=64 time=0.102 ms
64 bytes from 192.168.1.105: icmp_seq=473 ttl=64 time=0.113 ms
64 bytes from 192.168.1.105: icmp_seq=474 ttl=64 time=0.148 ms
64 bytes from 192.168.1.105: icmp_seq=475 ttl=64 time=0.133 ms
64 bytes from 192.168.1.105: icmp_seq=476 ttl=64 time=0.106 ms
64 bytes from 192.168.1.105: icmp_seq=477 ttl=64 time=0.108 ms
64 bytes from 192.168.1.105: icmp_seq=478 ttl=64 time=0.093 ms
64 bytes from 192.168.1.105: icmp_seq=479 ttl=64 time=0.106 ms
64 bytes from 192.168.1.105: icmp_seq=480 ttl=64 time=0.115 ms
64 bytes from 192.168.1.105: icmp_seq=481 ttl=64 time=0.105 ms
64 bytes from 192.168.1.105: icmp_seq=482 ttl=64 time=0.119 ms
64 bytes from 192.168.1.105: icmp_seq=483 ttl=64 time=0.130 ms
64 bytes from 192.168.1.105: icmp_seq=484 ttl=64 time=0.144 ms
64 bytes from 192.168.1.105: icmp_seq=485 ttl=64 time=0.147 ms
64 bytes from 192.168.1.105: icmp_seq=486 ttl=64 time=0.123 ms
64 bytes from 192.168.1.105: icmp_seq=487 ttl=64 time=0.099 ms
64 bytes from 192.168.1.105: icmp_seq=488 ttl=64 time=0.110 ms
64 bytes from 192.168.1.105: icmp_seq=489 ttl=64 time=0.105 ms
64 bytes from 192.168.1.105: icmp_seq=490 ttl=64 time=0.128 ms
64 bytes from 192.168.1.105: icmp_seq=491 ttl=64 time=0.121 ms
64 bytes from 192.168.1.105: icmp_seq=492 ttl=64 time=0.119 ms
64 bytes from 192.168.1.105: icmp_seq=493 ttl=64 time=0.133 ms
64 bytes from 192.168.1.105: icmp_seq=494 ttl=64 time=0.117 ms
64 bytes from 192.168.1.105: icmp_seq=495 ttl=64 time=0.094 ms
64 bytes from 192.168.1.105: icmp_seq=496 ttl=64 time=0.138 ms
64 bytes from 192.168.1.105: icmp_seq=497 ttl=64 time=0.143 ms
64 bytes from 192.168.1.105: icmp_seq=498 ttl=64 time=0.127 ms
64 bytes from 192.168.1.105: icmp_seq=499 ttl=64 time=0.112 ms
64 bytes from 192.168.1.105: icmp_seq=500 ttl=64 time=0.137 ms

--- 192.168.1.105 ping statistics ---
500 packets transmitted, 500 received, 0% packet loss, time 510976ms
rtt min/avg/max/mdev = 0.069/0.107/0.446/0.024 ms
root@test:/home/test#
```

LAN Speed Test Result: Pass

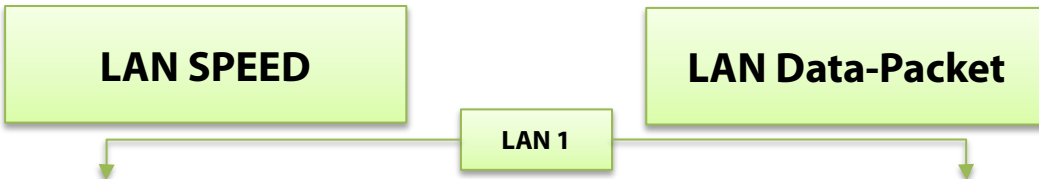
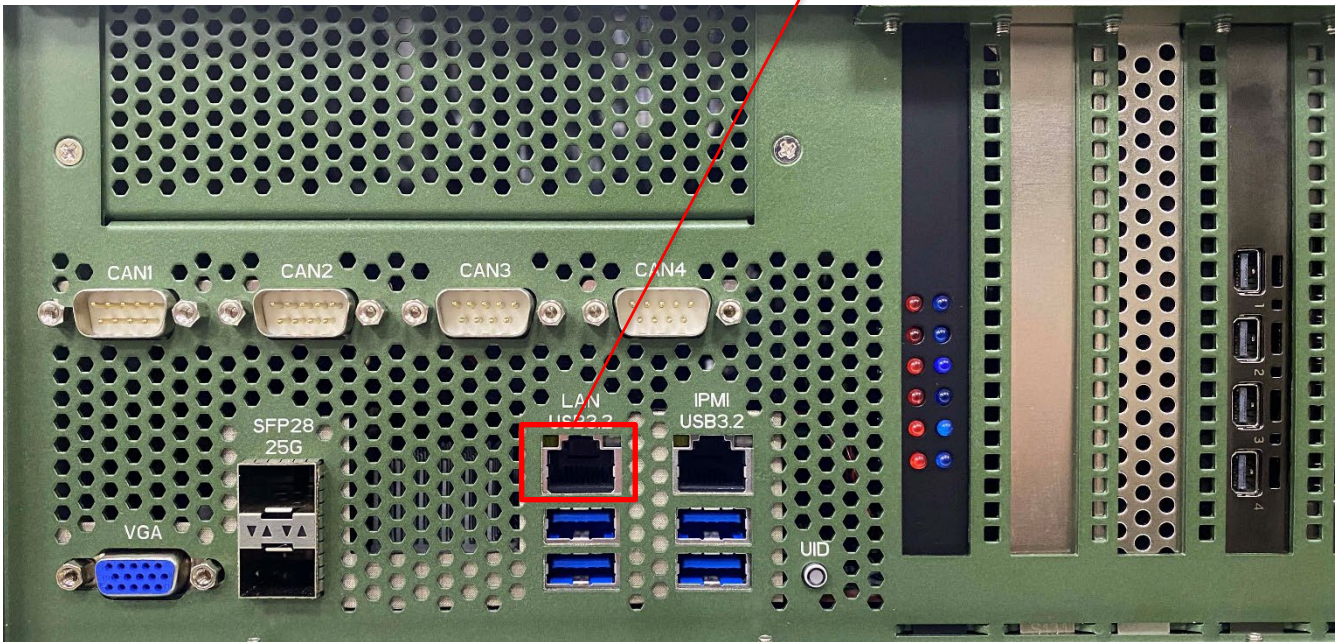
LAN Data-Packet Test Result: 0 Lost (0% loss)

Outgoing Quality Inspection

AV400-T4

5-2. LAN(1Gbps)

1GbE



```
root@test:/home/test# iperf -c 192.168.1.30 -t 500
[5] 464.00-465.00 sec 112 MBytes 944 Mbits/sec 0 789 KBytes
[5] 465.00-466.00 sec 111 MBytes 933 Mbits/sec 0 789 KBytes
[5] 466.00-467.00 sec 113 MBytes 948 Mbits/sec 0 789 KBytes
[5] 467.00-468.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 468.00-469.00 sec 112 MBytes 944 Mbits/sec 0 789 KBytes
[5] 469.00-470.00 sec 112 MBytes 935 Mbits/sec 0 789 KBytes
[5] 470.00-471.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 471.00-472.00 sec 112 MBytes 937 Mbits/sec 0 789 KBytes
[5] 472.00-473.00 sec 112 MBytes 938 Mbits/sec 0 789 KBytes
[5] 473.00-474.00 sec 112 MBytes 941 Mbits/sec 0 789 KBytes
[5] 474.00-475.00 sec 112 MBytes 942 Mbits/sec 0 789 KBytes
[5] 475.00-476.00 sec 111 MBytes 934 Mbits/sec 0 789 KBytes
[5] 476.00-477.00 sec 112 MBytes 937 Mbits/sec 0 789 KBytes
[5] 477.00-478.00 sec 113 MBytes 950 Mbits/sec 0 789 KBytes
[5] 478.00-479.00 sec 112 MBytes 941 Mbits/sec 0 789 KBytes
[5] 479.00-480.00 sec 112 MBytes 940 Mbits/sec 0 789 KBytes
[5] 480.00-481.00 sec 112 MBytes 935 Mbits/sec 0 789 KBytes
[5] 481.00-482.00 sec 113 MBytes 951 Mbits/sec 0 789 KBytes
[5] 482.00-483.00 sec 112 MBytes 942 Mbits/sec 0 789 KBytes
[5] 483.00-484.00 sec 112 MBytes 936 Mbits/sec 0 789 KBytes
[5] 484.00-485.00 sec 113 MBytes 946 Mbits/sec 0 789 KBytes
[5] 485.00-486.00 sec 112 MBytes 943 Mbits/sec 0 789 KBytes
[5] 486.00-487.00 sec 112 MBytes 935 Mbits/sec 0 789 KBytes
[5] 487.00-488.00 sec 113 MBytes 947 Mbits/sec 0 789 KBytes
[5] 488.00-489.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 489.00-490.00 sec 112 MBytes 944 Mbits/sec 0 789 KBytes
[5] 490.00-491.00 sec 112 MBytes 936 Mbits/sec 0 789 KBytes
[5] 491.00-492.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 492.00-493.00 sec 113 MBytes 951 Mbits/sec 0 789 KBytes
[5] 493.00-494.00 sec 112 MBytes 938 Mbits/sec 0 789 KBytes
[5] 494.00-495.00 sec 111 MBytes 944 Mbits/sec 0 789 KBytes
[5] 495.00-496.00 sec 112 MBytes 932 Mbits/sec 0 789 KBytes
[5] 496.00-497.00 sec 112 MBytes 938 Mbits/sec 0 789 KBytes
[5] 497.00-498.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 498.00-499.00 sec 112 MBytes 939 Mbits/sec 0 789 KBytes
[5] 499.00-500.00 sec 112 MBytes 940 Mbits/sec 0 789 KBytes

[ ID ] Interval      Transfer      Bitrate      Retr      sender
[ 5 ] 0.00-500.00 sec 54.8 GBytes  942 Mbits/sec 0         receiver
[ 5 ] 0.00-500.00 sec 54.8 GBytes  941 Mbits/sec 0

iperf Done.
root@test:/home/test#
```

```
root@test:/home/test# ping -c 500 192.168.1.30
64 bytes from 192.168.1.30: icmp_seq=463 ttl=64 time=2.74 ms
64 bytes from 192.168.1.30: icmp_seq=464 ttl=64 time=2.20 ms
64 bytes from 192.168.1.30: icmp_seq=465 ttl=64 time=1.89 ms
64 bytes from 192.168.1.30: icmp_seq=466 ttl=64 time=2.77 ms
64 bytes from 192.168.1.30: icmp_seq=467 ttl=64 time=2.29 ms
64 bytes from 192.168.1.30: icmp_seq=468 ttl=64 time=2.05 ms
64 bytes from 192.168.1.30: icmp_seq=469 ttl=64 time=2.87 ms
64 bytes from 192.168.1.30: icmp_seq=470 ttl=64 time=2.49 ms
64 bytes from 192.168.1.30: icmp_seq=471 ttl=64 time=1.92 ms
64 bytes from 192.168.1.30: icmp_seq=472 ttl=64 time=1.39 ms
64 bytes from 192.168.1.30: icmp_seq=473 ttl=64 time=2.38 ms
64 bytes from 192.168.1.30: icmp_seq=474 ttl=64 time=2.18 ms
64 bytes from 192.168.1.30: icmp_seq=475 ttl=64 time=1.80 ms
64 bytes from 192.168.1.30: icmp_seq=476 ttl=64 time=2.72 ms
64 bytes from 192.168.1.30: icmp_seq=477 ttl=64 time=1.35 ms
64 bytes from 192.168.1.30: icmp_seq=478 ttl=64 time=1.90 ms
64 bytes from 192.168.1.30: icmp_seq=479 ttl=64 time=2.03 ms
64 bytes from 192.168.1.30: icmp_seq=480 ttl=64 time=1.99 ms
64 bytes from 192.168.1.30: icmp_seq=481 ttl=64 time=1.86 ms
64 bytes from 192.168.1.30: icmp_seq=482 ttl=64 time=1.86 ms
64 bytes from 192.168.1.30: icmp_seq=483 ttl=64 time=1.95 ms
64 bytes from 192.168.1.30: icmp_seq=484 ttl=64 time=1.96 ms
64 bytes from 192.168.1.30: icmp_seq=485 ttl=64 time=1.95 ms
64 bytes from 192.168.1.30: icmp_seq=486 ttl=64 time=2.45 ms
64 bytes from 192.168.1.30: icmp_seq=487 ttl=64 time=2.20 ms
64 bytes from 192.168.1.30: icmp_seq=488 ttl=64 time=1.95 ms
64 bytes from 192.168.1.30: icmp_seq=489 ttl=64 time=2.37 ms
64 bytes from 192.168.1.30: icmp_seq=490 ttl=64 time=1.90 ms
64 bytes from 192.168.1.30: icmp_seq=491 ttl=64 time=2.07 ms
64 bytes from 192.168.1.30: icmp_seq=492 ttl=64 time=1.92 ms
64 bytes from 192.168.1.30: icmp_seq=493 ttl=64 time=1.88 ms
64 bytes from 192.168.1.30: icmp_seq=494 ttl=64 time=2.71 ms
64 bytes from 192.168.1.30: icmp_seq=495 ttl=64 time=1.94 ms
64 bytes from 192.168.1.30: icmp_seq=496 ttl=64 time=2.56 ms
64 bytes from 192.168.1.30: icmp_seq=497 ttl=64 time=2.33 ms
64 bytes from 192.168.1.30: icmp_seq=498 ttl=64 time=1.85 ms
64 bytes from 192.168.1.30: icmp_seq=499 ttl=64 time=2.05 ms
64 bytes from 192.168.1.30: icmp_seq=500 ttl=64 time=1.91 ms

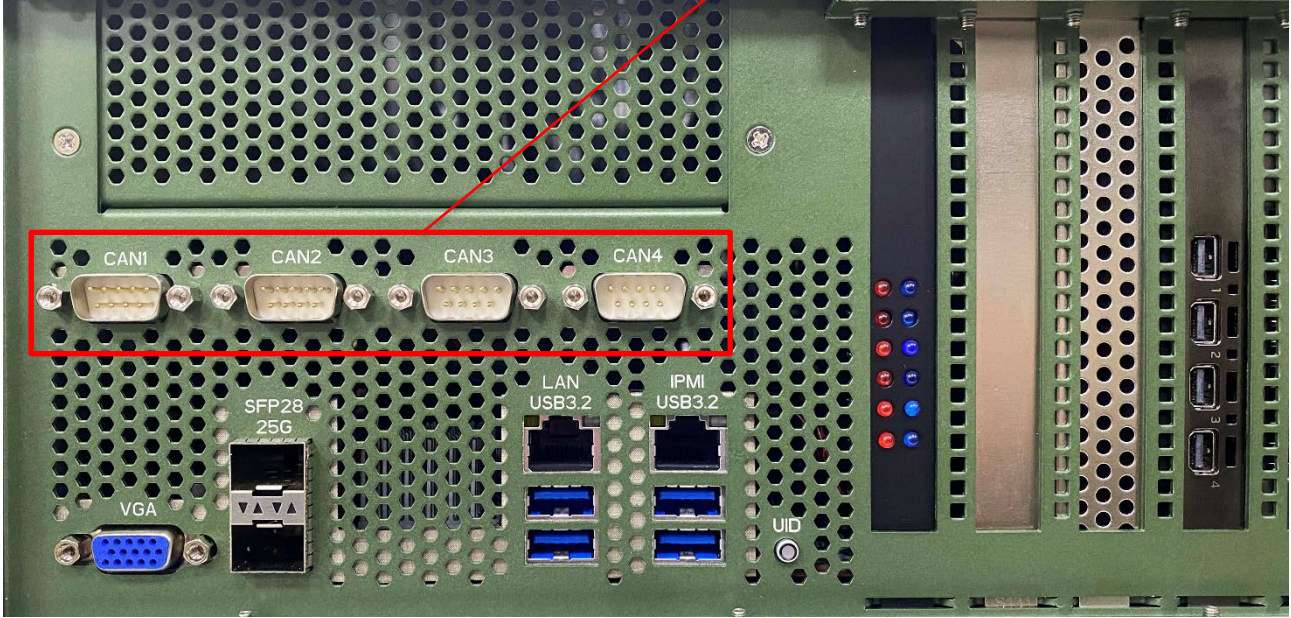
--- 192.168.1.30 ping statistics ---
500 packets transmitted, 500 received, 0% packet loss, time 49993ms
rtt min/avg/max/ndev = 0.148/2.179/3.454/0.422 ms
root@test:/home/test#
```

LAN Speed Test Result: Pass

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

5-3. CANBus

CANBus



```
Every 1.0s: ip -details -statistics link show... test: Tue Mar 18 09:06:18 2025
6: can0: <NOARP,UP,LOWER_UP,ECHO> mtu 16 qdisc pfifo_fast state UP mode DEFAULT
group default qlen 10
link/can promiscuity 0 allmulti 0 minmtu 0 maxmtu 0
can state ERROR-ACTIVE (berr-counter tx 0 rx 0) restart-ms 0
bitrate 100000 sample-point 0.875
tq 50 prop-seg 87 phase-seg1 87 phase-seg2 25 sjw 12 brp 4
peak_canfd: tseg1 1..256 tseg2 1..128 sjw 1..128 brp 1..1024 brp_inc 1
peak_canfd: dtseg1 1..32 dtseg2 1..16 dsjw 1..16 dbrp 1..1024 dbrp_inc 1
1
clock 80000000
re-started bus-errors arbit-lost error-warn error-pass bus-off
0 0 0 0 0 0
numtx
queues 1 numrxqueues 1 gso_max_size 65536 gso_max_segs 65535 tso_max_size 65536
tso_max_segs 65535 gro_max_size 65536 parentbus pci parentdev 0004:01:00.0
RX: bytes packets errors dropped missed mcast
80800000 10100000 0 0 0 0
TX: bytes packets errors dropped carrier collsns
25737584 3217198 0 0 0 0
```

CAN1

```
Every 1.0s: ip -details -statistics link show... test: Tue Mar 18 09:06:18 2025
7: can1: <NOARP,UP,LOWER_UP,ECHO> mtu 16 qdisc pfifo_fast state UP mode DEFAULT
group default qlen 10
link/can promiscuity 0 allmulti 0 minmtu 0 maxmtu 0
can state ERROR-ACTIVE (berr-counter tx 0 rx 0) restart-ms 0
bitrate 100000 sample-point 0.875
tq 50 prop-seg 87 phase-seg1 87 phase-seg2 25 sjw 12 brp 4
peak_canfd: tseg1 1..256 tseg2 1..128 sjw 1..128 brp 1..1024 brp_inc 1
peak_canfd: dtseg1 1..32 dtseg2 1..16 dsjw 1..16 dbrp 1..1024 dbrp_inc 1
1
clock 80000000
re-started bus-errors arbit-lost error-warn error-pass bus-off
0 0 0 0 0 0
numtx
queues 1 numrxqueues 1 gso_max_size 65536 gso_max_segs 65535 tso_max_size 65536
tso_max_segs 65535 gro_max_size 65536 parentbus pci parentdev 0004:01:00.0
RX: bytes packets errors dropped missed mcast
80800000 10100000 0 0 0 0
TX: bytes packets errors dropped carrier collsns
25777336 3222167 0 0 0 0
```

CAN2

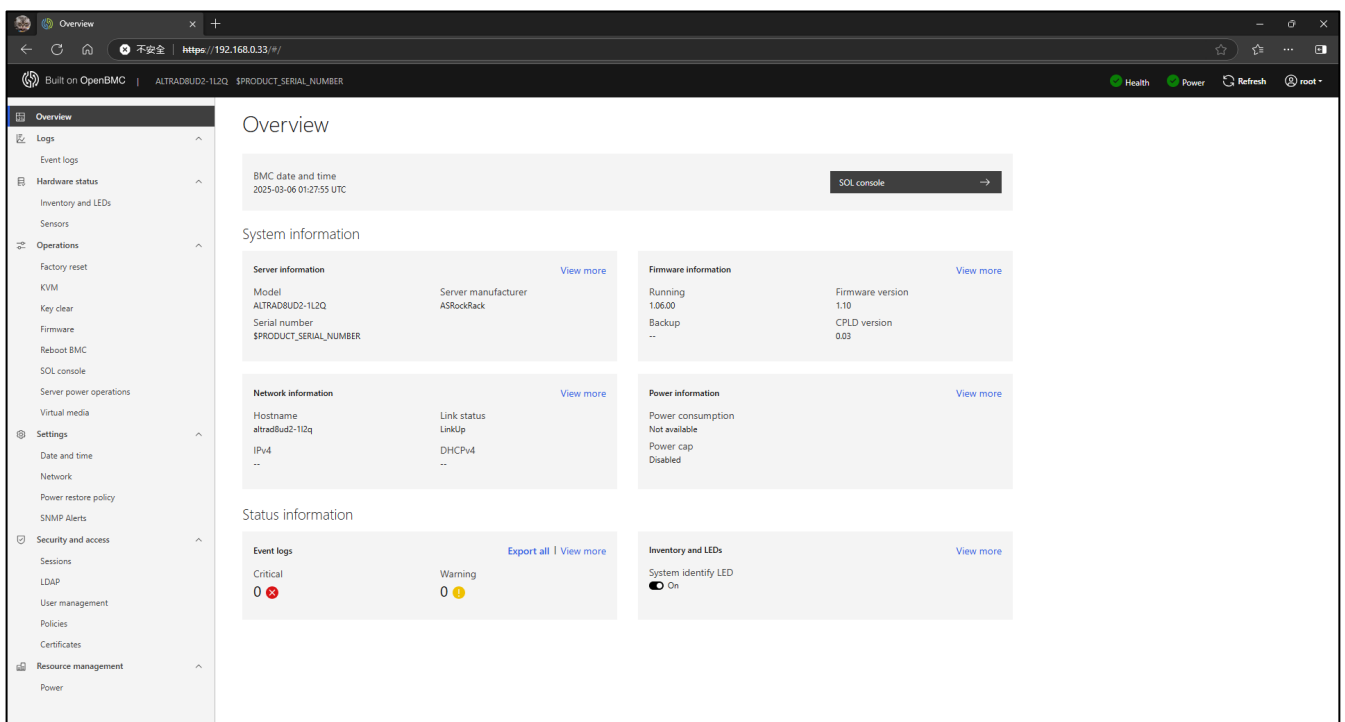
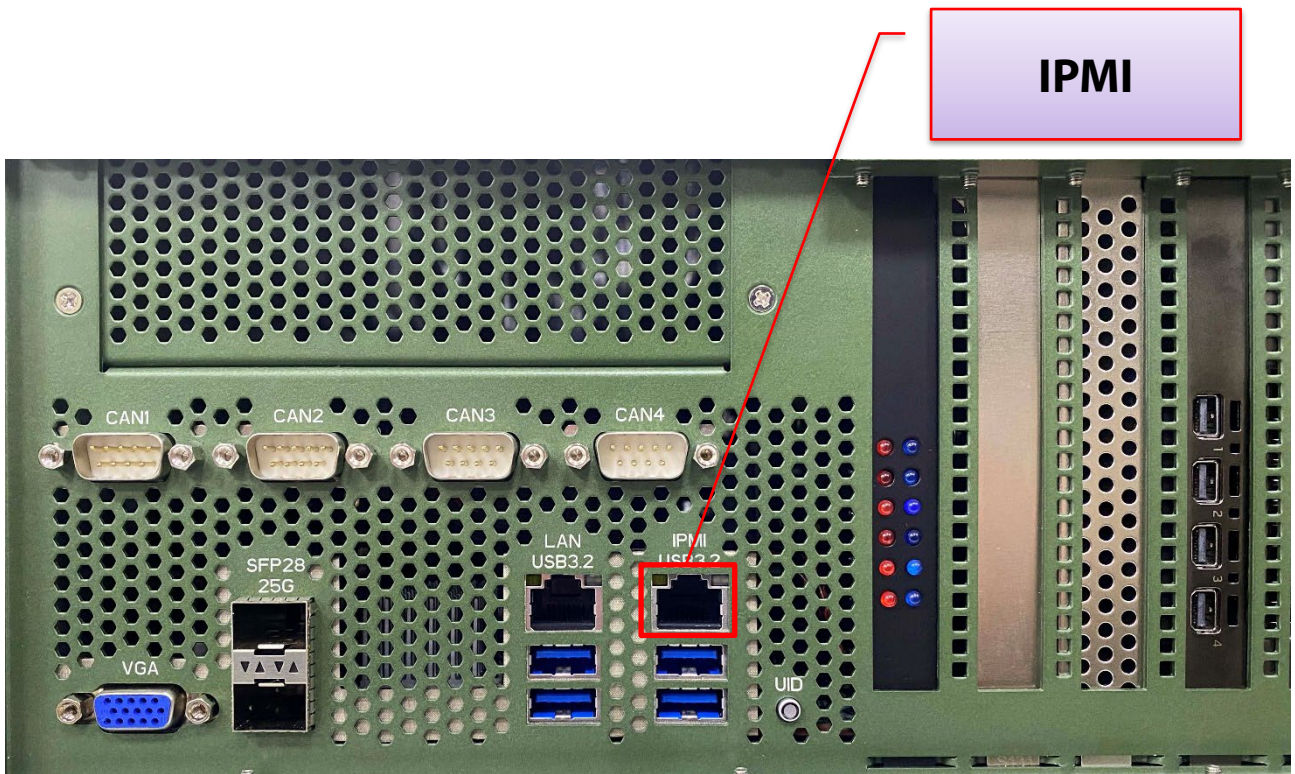
```
Every 1.0s: ip -details -statistics link show... test: Tue Mar 18 09:06:18 2025
8: can2: <NOARP,UP,LOWER_UP,ECHO> mtu 16 qdisc pfifo_fast state UP mode DEFAULT
group default qlen 10
link/can promiscuity 0 allmulti 0 minmtu 0 maxmtu 0
can state ERROR-ACTIVE (berr-counter tx 0 rx 0) restart-ms 0
bitrate 100000 sample-point 0.875
tq 50 prop-seg 87 phase-seg1 87 phase-seg2 25 sjw 12 brp 4
peak_canfd: tseg1 1..256 tseg2 1..128 sjw 1..128 brp 1..1024 brp_inc 1
peak_canfd: dtseg1 1..32 dtseg2 1..16 dsjw 1..16 dbrp 1..1024 dbrp_inc 1
1
clock 80000000
re-started bus-errors arbit-lost error-warn error-pass bus-off
0 0 0 0 0 0
numtx
queues 1 numrxqueues 1 gso_max_size 65536 gso_max_segs 65535 tso_max_size 65536
tso_max_segs 65535 gro_max_size 65536 parentbus pci parentdev 0004:01:00.0
RX: bytes packets errors dropped missed mcast
80800000 10100000 0 0 0 0
TX: bytes packets errors dropped carrier collsns
25808192 3226024 0 0 0 0
```

CAN3

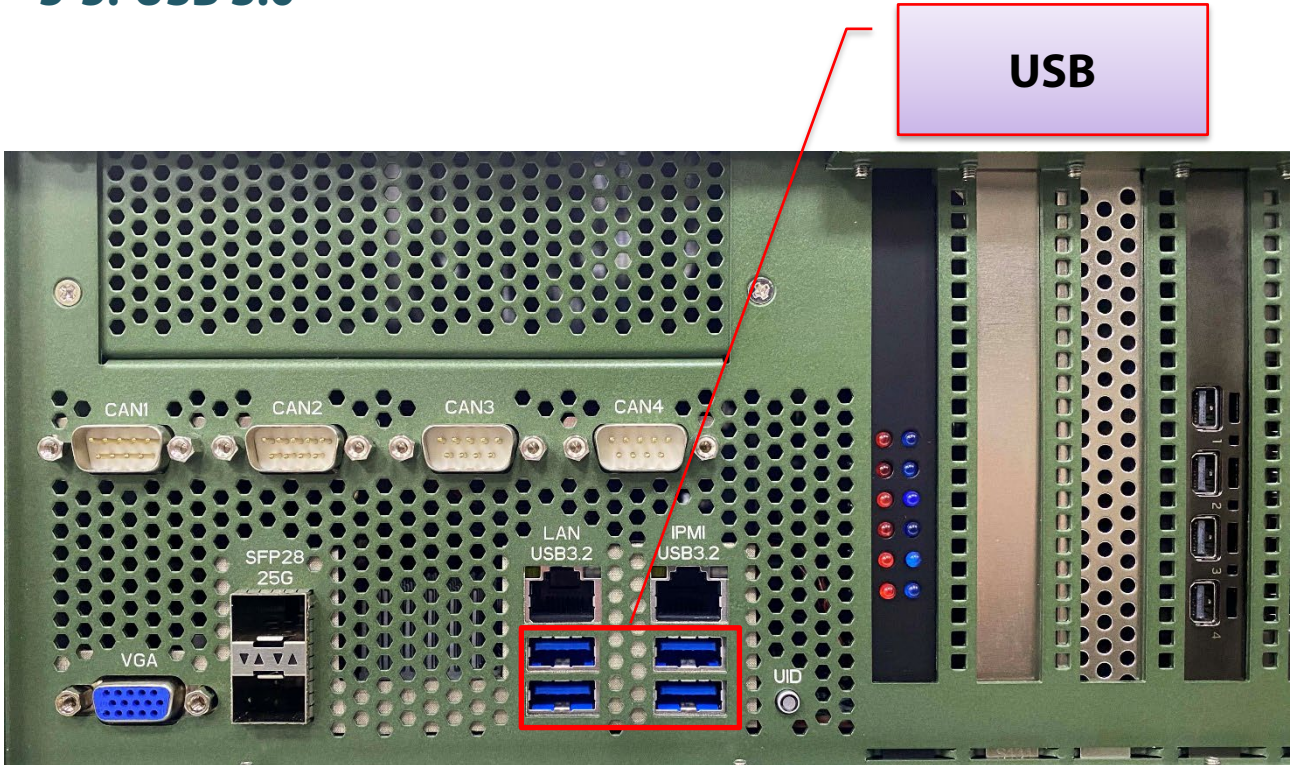
```
Every 1.0s: ip -details -statistics link show... test: Tue Mar 18 09:06:18 2025
9: can3: <NOARP,UP,LOWER_UP,ECHO> mtu 16 qdisc pfifo_fast state UP mode DEFAULT
group default qlen 10
link/can promiscuity 0 allmulti 0 minmtu 0 maxmtu 0
can state ERROR-ACTIVE (berr-counter tx 0 rx 0) restart-ms 0
bitrate 100000 sample-point 0.875
tq 50 prop-seg 87 phase-seg1 87 phase-seg2 25 sjw 12 brp 4
peak_canfd: tseg1 1..256 tseg2 1..128 sjw 1..128 brp 1..1024 brp_inc 1
peak_canfd: dtseg1 1..32 dtseg2 1..16 dsjw 1..16 dbrp 1..1024 dbrp_inc 1
1
clock 80000000
re-started bus-errors arbit-lost error-warn error-pass bus-off
0 0 0 0 0 0
numtx
queues 1 numrxqueues 1 gso_max_size 65536 gso_max_segs 65535 tso_max_size 65536
tso_max_segs 65535 gro_max_size 65536 parentbus pci parentdev 0004:01:00.0
RX: bytes packets errors dropped missed mcast
80800000 10100000 0 0 0 0
TX: bytes packets errors dropped carrier collsns
25803296 3225412 0 0 0 0
```

CAN4

5-4. IPMI Port



5-5. USB 3.0



```
root@test: /home/test

ID 174c:2074 ASMedia Technology Inc. ASM1074 High-Speed hub
|__ Port 003: Dev 004, If 0, Class=Hub, Driver=hub/4p, 480M
   ID 05e3:0610 Genesys Logic, Inc. Hub
   |__ Port 001: Dev 010, If 0, Class=Human Interface Device, Driver=usbhid, 1.5M
       ID 046d:c05a Logitech, Inc. M90/M100 Optical Mouse
   |__ Port 002: Dev 011, If 0, Class=Human Interface Device, Driver=usbhid, 1.5M
       ID 04d9:1702 Holtek Semiconductor, Inc. Keyboard LKS02
   |__ Port 002: Dev 011, If 1, Class=Human Interface Device, Driver=usbhid, 1.5M
       ID 04d9:1702 Holtek Semiconductor, Inc. Keyboard LKS02
|__ Port 002: Dev 003, If 0, Class=Hub, Driver=hub/4p, 480M
   ID 174c:2074 ASMedia Technology Inc. ASM1074 High-Speed hub
   |__ Port 003: Dev 005, If 0, Class=Hub, Driver=hub/5p, 480M
       ID 1d6b:0107 Linux Foundation
       |__ Port 001: Dev 007, If 0, Class=Communications, Driver=cdc_ether, 480M
           ID 26ce:00a0
       |__ Port 001: Dev 007, If 1, Class=CDC Data, Driver=cdc_ether, 480M
           ID 26ce:00a0
/: Bus 002.Port 001: Dev 001, Class=root_hub, Driver=xhci_hcd/2p, 10000M
   ID 1d6b:0003 Linux Foundation 3.0 root hub
   |__ Port 001: Dev 002, If 0, Class=Hub, Driver=hub/4p, 5000M
       ID 174c:3074 ASMedia Technology Inc. ASM1074 SuperSpeed hub
       |__ Port 001: Dev 005, If 0, Class=Mass Storage, Driver=uas, 5000M
           ID 0bda:a03a Realtek Semiconductor Corp.
       |__ Port 003: Dev 004, If 0, Class=Hub, Driver=hub/4p, 5000M
           ID 05e3:0626 Genesys Logic, Inc. Hub
   |__ Port 002: Dev 003, If 0, Class=Hub, Driver=hub/4p, 5000M
       ID 174c:3074 ASMedia Technology Inc. ASM1074 SuperSpeed hub
root@test:/home/test#
```


Outgoing Quality Inspection

AV400-T4

```
root@test: /home/test/Desktop
root@test:/home/test/Desktop# ./usbport_test.sh

USB Port Write Test
1024+0 records in
1024+0 records out
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 0.763639 s, 1.4 GB/s

USB Port Read Test
1024+0 records in
1024+0 records out
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 0.136791 s, 7.8 GB/s
root@test:/home/test/Desktop#
```

USB 1 Read/Write Speed Check

```
root@test: /home/test/Desktop
root@test:/home/test/Desktop# ./usbport_test.sh

USB Port Write Test
1024+0 records in
1024+0 records out
536870912 bytes (537 MB, 512 MiB) copied, 0.382679 s, 1.4 GB/s

USB Port Read Test
512+0 records in
512+0 records out
536870912 bytes (537 MB, 512 MiB) copied, 0.0744548 s, 7.2 GB/s

```

USB 2 Read/Write Speed Check

```
root@test: /home/test/Desktop
root@test: /home/test/Desktop# ./usbport_test.sh

USB Port Write Test
1024+0 records in
1024+0 records out
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 0.765705 s, 1.4 GB/s

USB Port Read Test
1024+0 records in
1024+0 records out
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 0.13632 s, 7.9 GB/s

```

USB 3 Read/Write Speed Check

```
root@test: /home/test/Desktop
root@test: /home/test/Desktop# ./usbport_test.sh

USB Port Write Test
1024+0 records in
1024+0 records out
536870912 bytes (537 MB, 512 MiB) copied, 0.387604 s, 1.4 GB/s

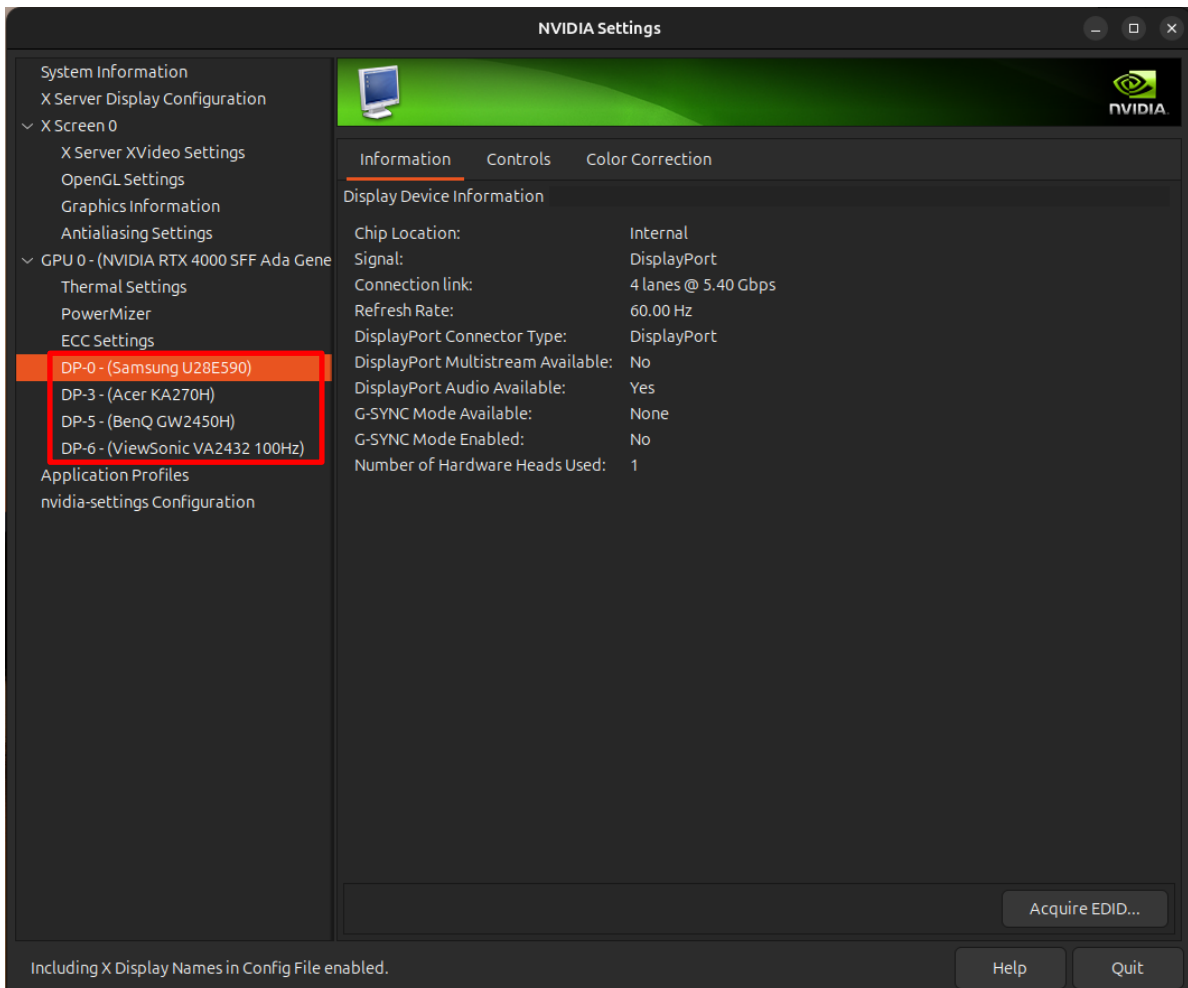
USB Port Read Test
512+0 records in
512+0 records out
536870912 bytes (537 MB, 512 MiB) copied, 0.0752443 s, 7.1 GB/s
root@test: /home/test/Desktop#

```

USB 4 Read/Write Speed Check

5-6. Mini DP

Mini DP

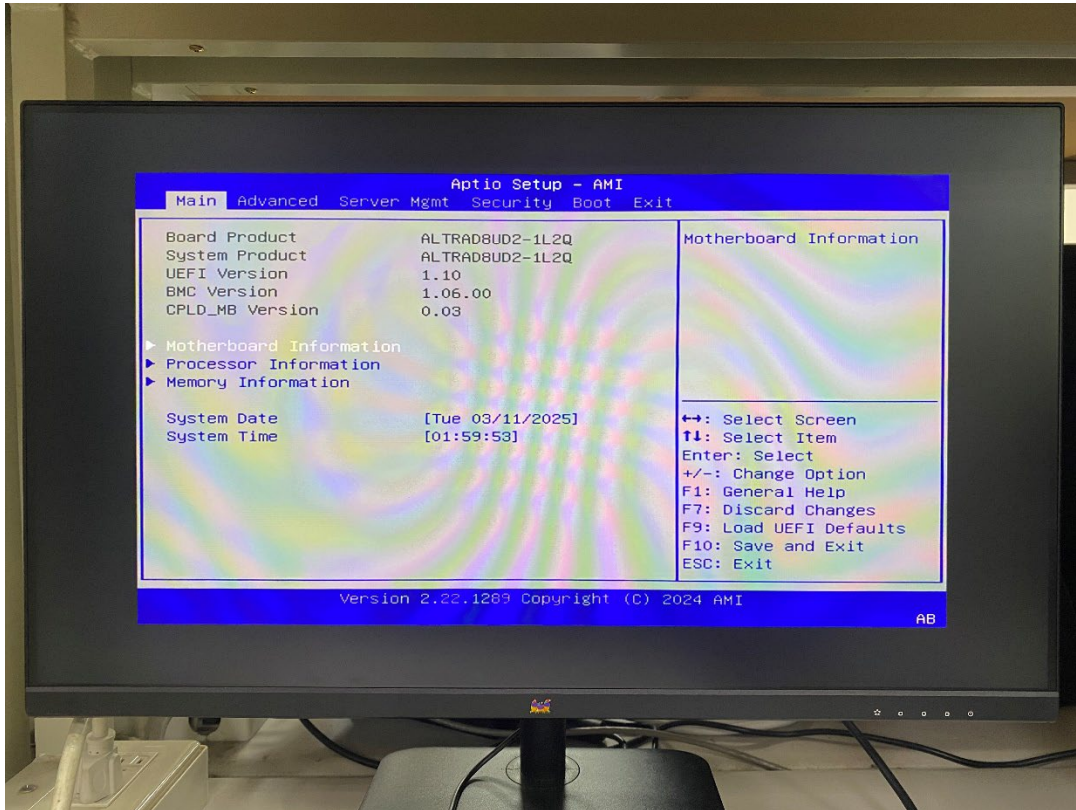


Outgoing Quality Inspection

AV400-T4

5-7. VGA

VGA



-----END-----