



thermaltake

CAPO X Thermal Testing Report

20260522

Configuration

Top system: AMD

Bottom system: Intel

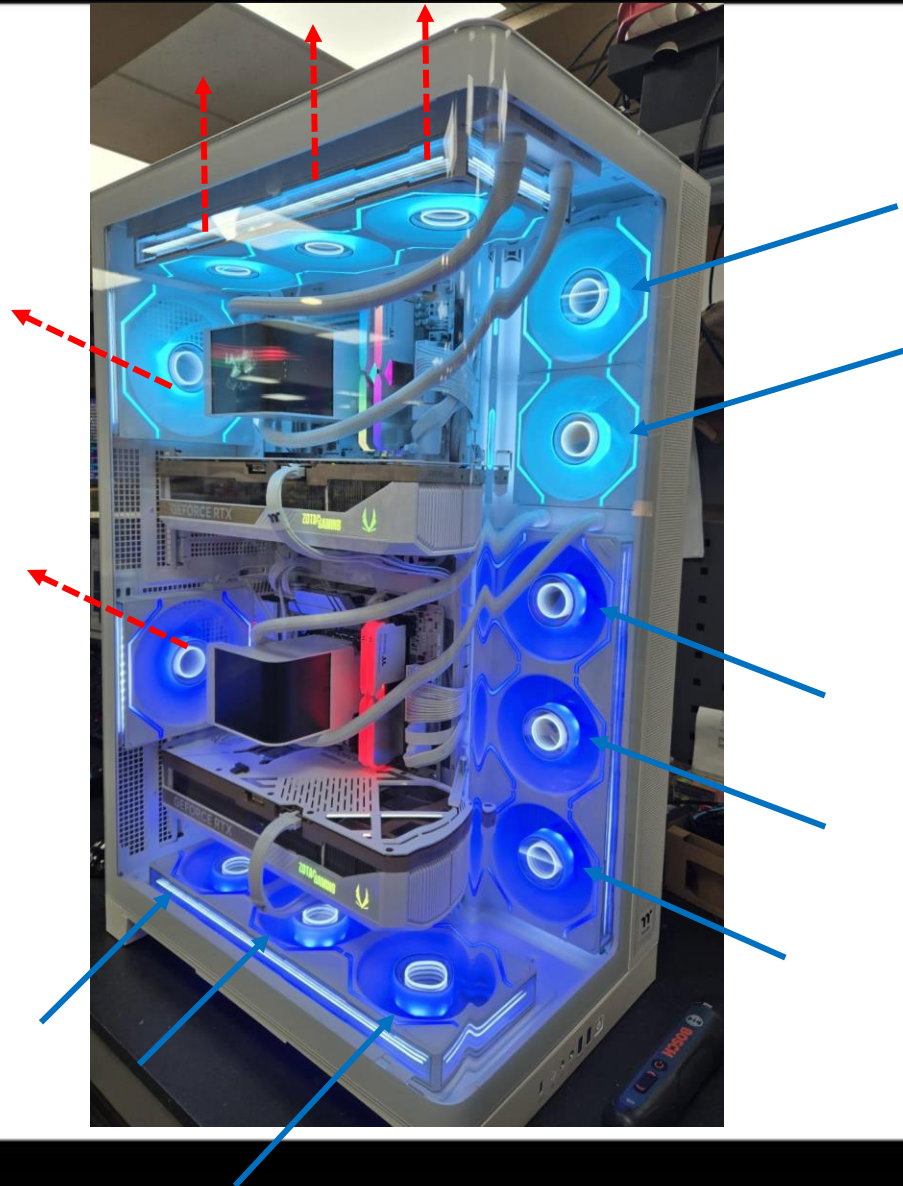
Chassis	CAPO X Snow
Motherboard	ROG Strix B850-G Gaming WiFi
CPU	AMD Ryzen™ 9 7950X
GPU	ZOTAC GAMING GeForce RTX 5080 SOLID OC White Edition
Memory	TOUGHRAM XG RGB D5
HDD	LEXAR NQ7A1 2280 PCIe Gen4x4 NVMe SSD
Power Supply	TOUGHPower GT Snow 1200W
Fan	SWAFAN 120/140 EX INFINITY ARGB Sync PC Cooling Fan - Snow
CPU Cooler	MAGCurve 360 Ultra ARGB Sync AIO Liquid Cooler - Snow Edition

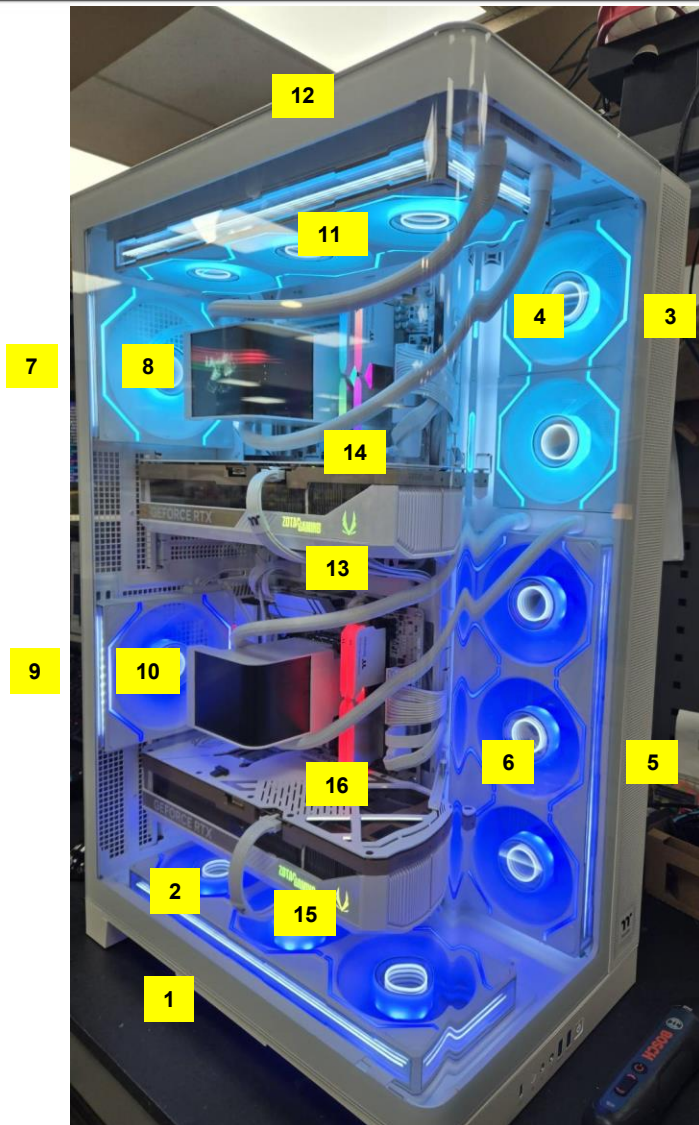
Chassis	CAPO X Snow
Motherboard	ROG Strix B860-G Gaming WiFi
CPU	Intel® Core™ Ultra 9 Processor 285
GPU	ZOTAC GAMING GeForce RTX 5080 SOLID OC White Edition
Memory	TOUGHRAM XG RGB D5
HDD	LEXAR NQ7A1 2280 PCIe Gen4x4 NVMe SSD
Power Supply	TOUGHPower GT Snow 1200W
Fan	SWAFAN 120/140 EX INFINITY ARGB Sync PC Cooling Fan - Snow
CPU Cooler	MAGCurve 360 Ultra ARGB Sync AIO Liquid Cooler - Snow Edition

Cool Air
Intake

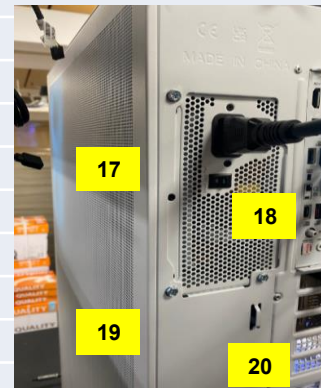


Hot Air
Exhaust





Point	Description	Airflow	Thermocouple Number
1	Chassis Bottom (outside)	Intake	101
2	Chassis Bottom (inside)	Intake	102
3	Chassis Right (up, outside)	Intake	103
4	Chassis Right (up, inside)	Intake	104
5	Chassis Right (down, outside)	Intake	105
6	Chassis Right (down, inside)	Intake	106
7	Chassis Rear (up, outside)	Exhaust	107
8	Chassis Rear (up, inside)	Exhaust	108
9	Chassis Rear (down, outside)	Exhaust	109
10	Chassis Rear (down, inside)	Exhaust	110
11	Chassis UP (outside)	Exhaust	111
12	Chassis UP (inside)	Exhaust	112
13	GPU 1 inside	Intake	113
14	GPU 1 outside	Exhaust	114
15	GPU 2 inside	Intake	115
16	GPU 2 outside	Exhaust	116
17	PSU 1 inside	Intake	117
18	PSU 1 outside	Exhaust	118
19	PSU 2 inside	Intake	119
20	PSU 2 outside	Exhaust	120



Test

區域 儀器名稱	環境測試區 步入式恆溫恆濕測試機
	1. 適用於模擬環境條件之測試，如高溫、高濕之儲存環境，低溫、低濕或超低溫之異常儲存環境測試。 2. 機台可設定範圍達-40℃~100℃ / 5%RH~95%RH，以滿足各項儲存條件之需求。 3. 可程式，以符合特殊之規範及要求。
	1. 內部空間： 200 長 x 220 寬 x 210 高(cm) 2. 出線孔： 3x 10cm (op 線材至少 1m 以上)

Test Conditions:
Temperature: 25°C
Humidity: 50%



Zone	Environmental Testing Area
Equipment Name	Walk-in Type Constant Temperature & Humidity Testing Machine
Application Areas	1. Suitable for testing under simulated environmental conditions, such as high temperature, high humidity storage environments, low temperature, low humidity, or abnormal ultra-low temperature storage environment testing. 2. The machine's settable range covers -40°C to 100°C / 5%RH~95%RH, to meet the needs of various storage conditions. 3. Programmable, to comply with special specifications and requirements.
Machine Specifications	1. Interior space: 200 (L) × 220 (W) × 210 (H) cm 2. Cable entry holes: 3 × 10 cm (op cable material at least 1m or more)



Intel Test Date

GPU1 Clock	2812 MHz
GPU1 Utilization	100%
Motherboard	36°C
CPU	64°C
CPU Package	75°C
GPU1	68°C
CPU	1831 RPM
Chassis #2	1982 RPM
GPU1	1787 RPM
CPU Core	1.359 V
GPU1	1.025 V
CPU Package	200.04 W
GPU1	360.91 W

AMD Test Data

GPU1 Clock	2775 MHz
GPU1 Utilization	100%
GPU1	70°C
GPU1	1912 RPM
CPU Core	0.294 V
GPU1	1.030 V
CPU Package	178.83 W
GPU1	361.28 W
GPU1 TDP%	100%
CPU Diode	85°C

System	Core	TDP Performance (W)	Temperature Performance (°C)
Intel	CPU	200.04	75
	GPU	360.91	68
AMD	CPU	178.83	85
	GPU	361.28	70

Notes:

Under the factory default TDP settings, with Intel defaulted to 200W and AMD defaulted to 175W, a burn-in test was conducted to observe temperature and power consumption performance.

Temperature and power consumption performance are normal. No black screens or system crashes occurred during the 30-minute stress test, leading to an OK judgment.

Intel Test Data

GPU1 Clock	2820 MHz
GPU1 Utilization	100%
Motherboard	36%C
CPU	76%C
CPU Package	88%C
GPU1	69%C
CPU	1831 RPM
Chassis #2	2000 RPM
GPU1	1819 RPM
CPU Core	1.501 V
GPU1	1.030 V
CPU Package	249.85 W
GPU1	360.53 W

AMD Test Data

GPU1 Clock	2790 MHz
GPU1 Utilization	100%
GPU1	71%C
GPU1	1922 RPM
CPU Core	0.294 V
GPU1	1.035 V
CPU Package	202.93 W
GPU1	359.84 W
GPU1 TDP%	100%
CPU Diode	95%C

System	Core	TDP Performance (W)	Temperature Performance (°C)
Intel	CPU	249.85	88
	GPU	360.53	69
AMD	CPU	202.93	95
	GPU	359.84	71

Notes:

Under the factory-recommended overclocked TDP settings, with Intel set to 250W and AMD set to 210W, a burn-in test was conducted to observe temperature and power consumption performance.

Temperature and power consumption performance are normal. Even with AMD holding out at its 95°C thermal threshold, no black screens or system crashes occurred during the 30-minute stress test, leading to an OK judgment.

Intel Test Data- Default

Intel Test Data_Overclocked

AMD Test Data

Date	5/20/2026
Time (HH:MM)	4:48 PM
UpTime (HH:MM)	02:20
CPU Clock	5087 MHz
Memory Clock	2394 MHz
Motherboard Name	Asus ROG Strix B860-G Gaming WiFi
BIOS Version	1801
CPU Utilization	100%
Memory Utilization	24%
Free Memory	24383 MB
GPU1 Clock	2812 MHz
GPU1 Utilization	100%
Motherboard	36%C
CPU	64%C
CPU Package	75%C
GPU1	68%C
CPU	1831 RPM
Chassis #2	1982 RPM
GPU1	1787 RPM
CPU Core	1.359 V
GPU1	1.025 V
CPU Package	200.04 W
GPU1	360.91 W
GPU1 TDP%	100%

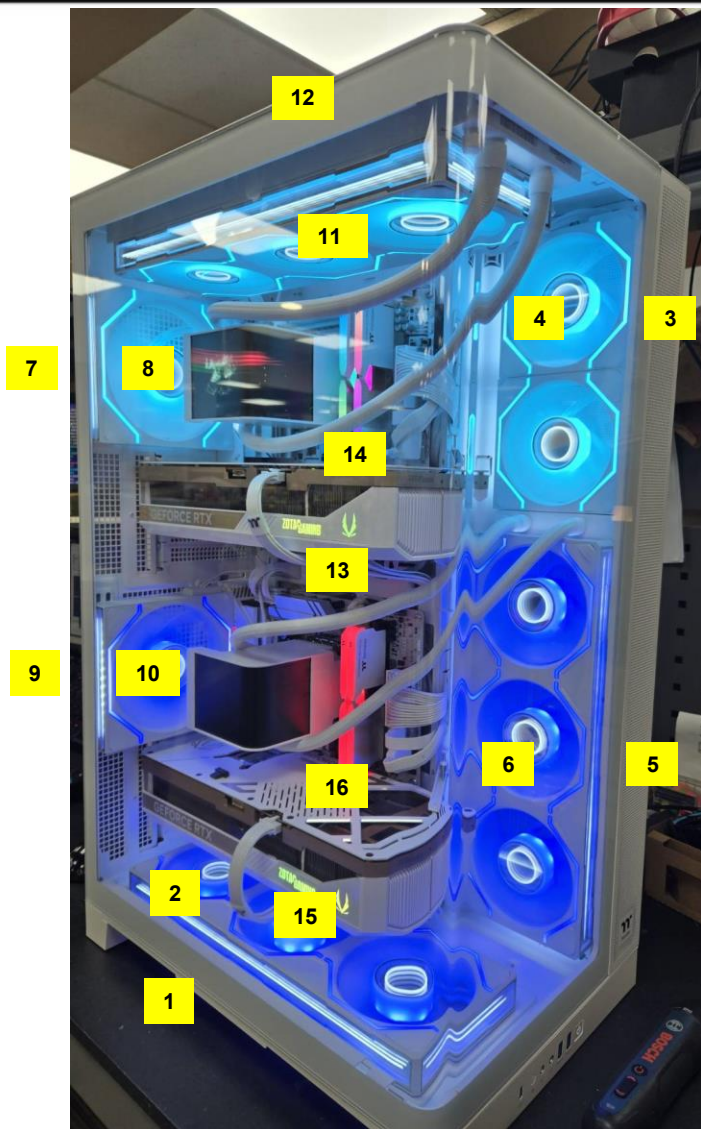
Date	5/20/2026
Time (HH:MM)	5:41 PM
UpTime (HH:MM)	00:35
CPU Clock	5087 MHz
Memory Clock	2394 MHz
Motherboard Name	Asus ROG Strix B860-G Gaming WiFi
BIOS Version	1801
CPU Utilization	100%
Memory Utilization	24%
Free Memory	24450 MB
GPU1 Clock	2820 MHz
GPU1 Utilization	100%
Motherboard	36%C
CPU	76%C
CPU Package	88%C
GPU1	69%C
CPU	1831 RPM
Chassis #2	2000 RPM
GPU1	1819 RPM
CPU Core	1.501 V
GPU1	1.030 V
CPU Package	249.85 W
GPU1	360.53 W
GPU1 TDP%	100%

Date	2026/5/20
Time (HH:MM)	下午 04:49
UpTime (HH:MM)	02:13
CPU Clock	4625 MHz
Memory Clock	2400 MHz
Motherboard Name	ASUSTeK COMPUTER INC. ROG STRIX B850-G GAMING WIFI
BIOS Version	1654
CPU Utilization	100%
Memory Utilization	21%
Free Memory	25165 MB
GPU1 Clock	2775 MHz
GPU1 Utilization	100%
GPU1	70%C
GPU1	1912 RPM
CPU Core	0.294 V
GPU1	1.030 V
CPU Package	178.83 W
GPU1	361.28 W
GPU1 TDP%	100%
CPU Diode	85%C

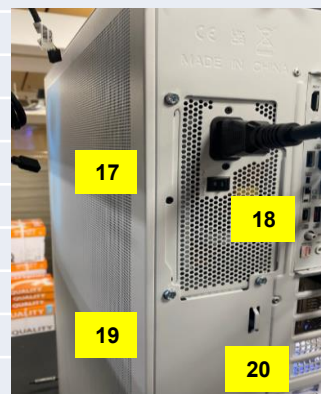
AMD Test Data_Overclocked

Date	2026/5/20
Time (HH:MM)	下午 05:42
UpTime (HH:MM)	00:42
CPU Clock	4711 MHz
Memory Clock	2393 MHz
Motherboard Name	ASUSTeK COMPUTER INC. ROG STRIX B850-G GAMING WIFI
BIOS Version	1654
CPU Utilization	100%
Memory Utilization	21%
Free Memory	25281 MB
GPU1 Clock	2790 MHz
GPU1 Utilization	100%
GPU1	71%C
GPU1	1922 RPM
CPU Core	0.294 V
GPU1	1.035 V
CPU Package	202.93 W
GPU1	359.84 W
GPU1 TDP%	100%
CPU Diode	95%C

Data Grid					
	Channel	Reading	Time	Min	Max
1	101 (°C)	2.697E+001 °C	04:56:18.670 下午	26.6856391	27.247105
2	102 (°C)	2.738E+001 °C	04:56:18.705 下午	26.6762075	30.7709659
3	103 (°C)	2.678E+001 °C	04:56:18.739 下午	26.4154645	30.1369678
4	104 (°C)	3.256E+001 °C	04:56:18.774 下午	28.9009952	49.1393636
5	105 (°C)	2.697E+001 °C	04:56:18.809 下午	26.3951886	30.0945775
6	106 (°C)	2.873E+001 °C	04:56:18.844 下午	27.8254033	35.8712219
7	107 (°C)	2.801E+001 °C	04:56:18.878 下午	26.9355314	34.1432191
8	108 (°C)	2.984E+001 °C	04:56:18.913 下午	28.0464577	35.3577275
9	109 (°C)	2.909E+001 °C	04:56:18.948 下午	27.6994752	40.0228157
10	110 (°C)	2.885E+001 °C	04:56:18.982 下午	27.4630386	38.4368018
11	111 (°C)	2.853E+001 °C	04:56:19.017 下午	27.4433702	34.3709034
12	112 (°C)	2.966E+001 °C	04:56:19.052 下午	28.2508796	38.5012782
13	113 (°C)	2.954E+001 °C	04:56:19.087 下午	27.6574239	35.3350119
14	114 (°C)	2.935E+001 °C	04:56:19.121 下午	27.5335142	51.3752938
15	115 (°C)	2.766E+001 °C	04:56:19.156 下午	26.8811725	32.2473869
16	116 (°C)	3.052E+001 °C	04:56:19.191 下午	28.3772093	45.685726
17	117 (°C)	2.750E+001 °C	04:56:19.226 下午	26.7061569	32.1199817
18	118 (°C)	3.062E+001 °C	04:56:19.260 下午	28.1697635	34.2205249
19	119 (°C)	2.719E+001 °C	04:56:19.295 下午	26.512669	31.8610238
20	120 (°C)	2.964E+001 °C	04:56:19.330 下午	27.4670202	35.4237548



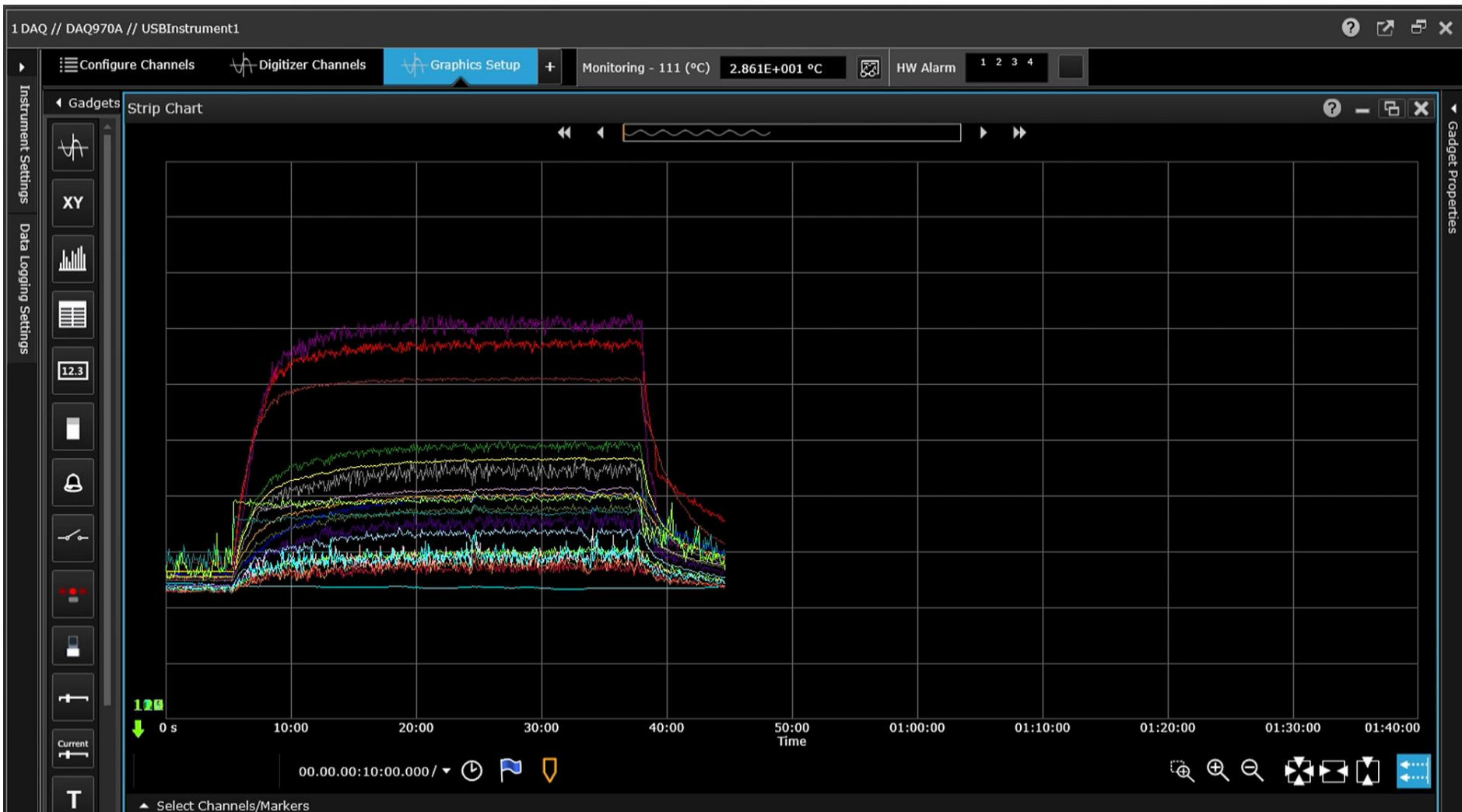
Point	Description	Temp (Initial)	Temp (Stress Test)
1	Chassis Bottom (outside)	26.68	27.24
2	Chassis Bottom (inside)	26.67	30.77
3	Chassis Right (up, outside)	26.41	30.13
4	Chassis Right (up, inside)	28.90	49.13
5	Chassis Right (down, outside)	26.39	30.09
6	Chassis Right (down, inside)	27.82	35.87
7	Chassis Rear (up, outside)	26.93	34.14
8	Chassis Rear (up, inside)	28.04	35.35
9	Chassis Rear (down, outside)	27.69	40.02
10	Chassis Rear (down, inside)	27.46	38.43
11	Chassis UP (outside)	27.44	34.37
12	Chassis UP (inside)	28.25	38.05
13	GPU 1 inside	27.65	35.33
14	GPU 1 outside	27.53	51.37
15	GPU 2 inside	26.88	32.24
16	GPU 2 outside	28.37	45.68
17	PSU 1 inside	26.70	32.11
18	PSU 1 outside	28.16	34.22
19	PSU 2 inside	26.51	31.86
20	PSU 2 outside	27.46	35.42



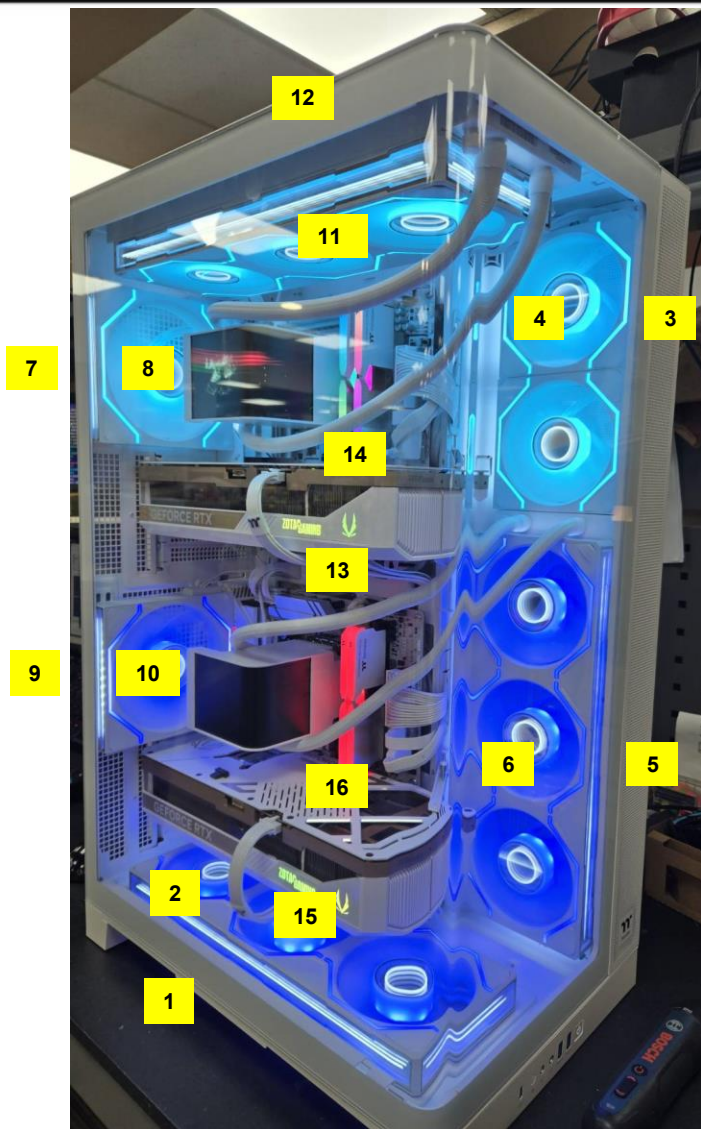
Notes:

Recording the initial and burn-in temperature performance across 20 different points, it can be observed that after the burn-in test, the internal temperature at the air inlets and outlets increased slightly, with temperatures landing between 30 to 35 degrees. However, the temperature at the graphics card's air exhaust side increased to 45 and 51 degrees; it is judged that this was caused by the upper graphics card absorbing the hot air coming from downwind.

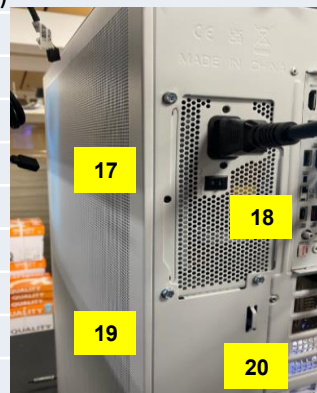
Overall system performance is normal.



	Channel	Reading	Time	Min	Max
1	101 (°C)	2.693E+001 °C	05:44:32.187 下午	26.6114807	27.0584212
2	102 (°C)	2.835E+001 °C	05:44:32.221 下午	26.9488633	30.7271633
3	103 (°C)	3.012E+001 °C	05:44:32.256 下午	26.7883038	30.4364896
4	104 (°C)	3.226E+001 °C	05:44:32.291 下午	27.7089923	32.6023028
5	105 (°C)	2.715E+001 °C	05:44:32.326 下午	26.8881665	30.1847369
6	106 (°C)	3.124E+001 °C	05:44:32.360 下午	29.8034153	37.5823109
7	107 (°C)	3.223E+001 °C	05:44:32.395 下午	30.4982256	41.567648
8	108 (°C)	3.355E+001 °C	05:44:32.430 下午	30.6390487	44.4150637
9	109 (°C)	2.972E+001 °C	05:44:32.465 下午	29.7168667	40.4865719
10	110 (°C)	3.258E+001 °C	05:44:32.499 下午	29.0843575	38.8811244
11	111 (°C)	3.402E+001 °C	05:44:32.534 下午	28.5175676	34.6219644
12	112 (°C)	3.333E+001 °C	05:44:32.569 下午	30.8594978	39.5664768
13	113 (°C)	3.439E+001 °C	05:44:32.603 下午	29.076898	36.122591
14	114 (°C)	3.841E+001 °C	05:44:32.638 下午	35.2958603	52.6907334
15	115 (°C)	2.833E+001 °C	05:44:32.673 下午	27.8074259	32.7445111
16	116 (°C)	3.491E+001 °C	05:44:32.708 下午	33.0461238	45.9185325
17	117 (°C)	2.970E+001 °C	05:44:32.742 下午	27.2995324	32.251514
18	118 (°C)	3.097E+001 °C	05:44:32.777 下午	30.9733809	35.4358989
19	119 (°C)	2.733E+001 °C	05:44:32.812 下午	27.1142459	32.76723
20	120 (°C)	3.014E+001 °C	05:44:32.847 下午	30.1422986	36.3279822



Point	Description	Temp (Initial)	Temp (Stress Test)
1	Chassis Bottom (outside)	26.61	27.05
2	Chassis Bottom (inside)	26.94	30.72
3	Chassis Right (up, outside)	26.78	30.43
4	Chassis Right (up, inside)	27.70	32.06
5	Chassis Right (down, outside)	26.88	30.18
6	Chassis Right (down, inside)	29.80	37.58
7	Chassis Rear (up, outside)	30.49	41.56
8	Chassis Rear (up, inside)	30.63	44.41
9	Chassis Rear (down, outside)	29.71	40.48
10	Chassis Rear (down, inside)	29.08	38.88
11	Chassis UP (outside)	28.51	34.62
12	Chassis UP (inside)	30.85	39.56
13	GPU 1 inside	29.07	36.12
14	GPU 1 outside	35.29	52.69
15	GPU 2 inside	27.80	32.74
16	GPU 2 outside	33.04	45.91
17	PSU 1 inside	27.29	32.25
18	PSU 1 outside	30.97	35.43
19	PSU 2 inside	27.11	32.76
20	PSU 2 outside	30.14	36.32



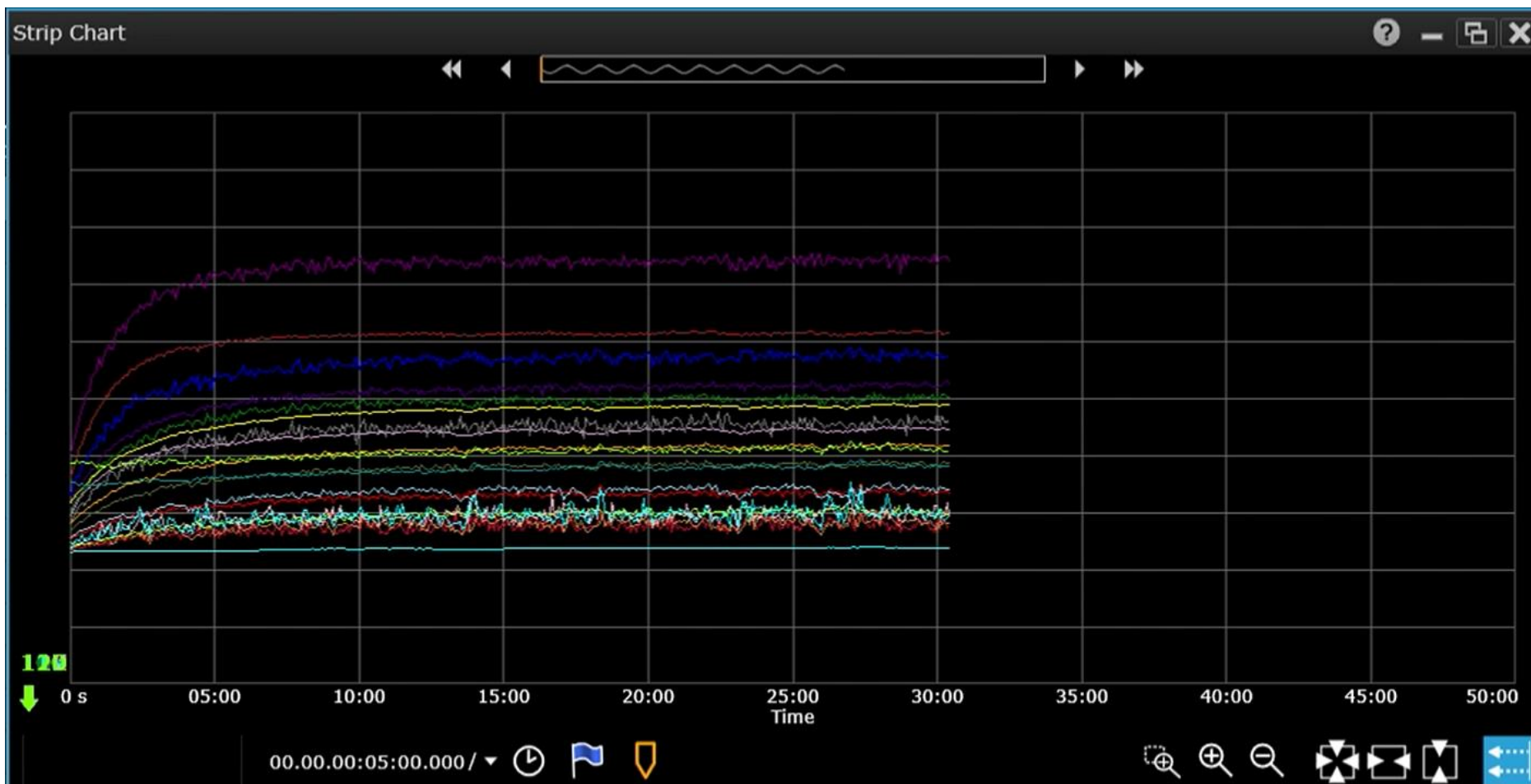
Note:

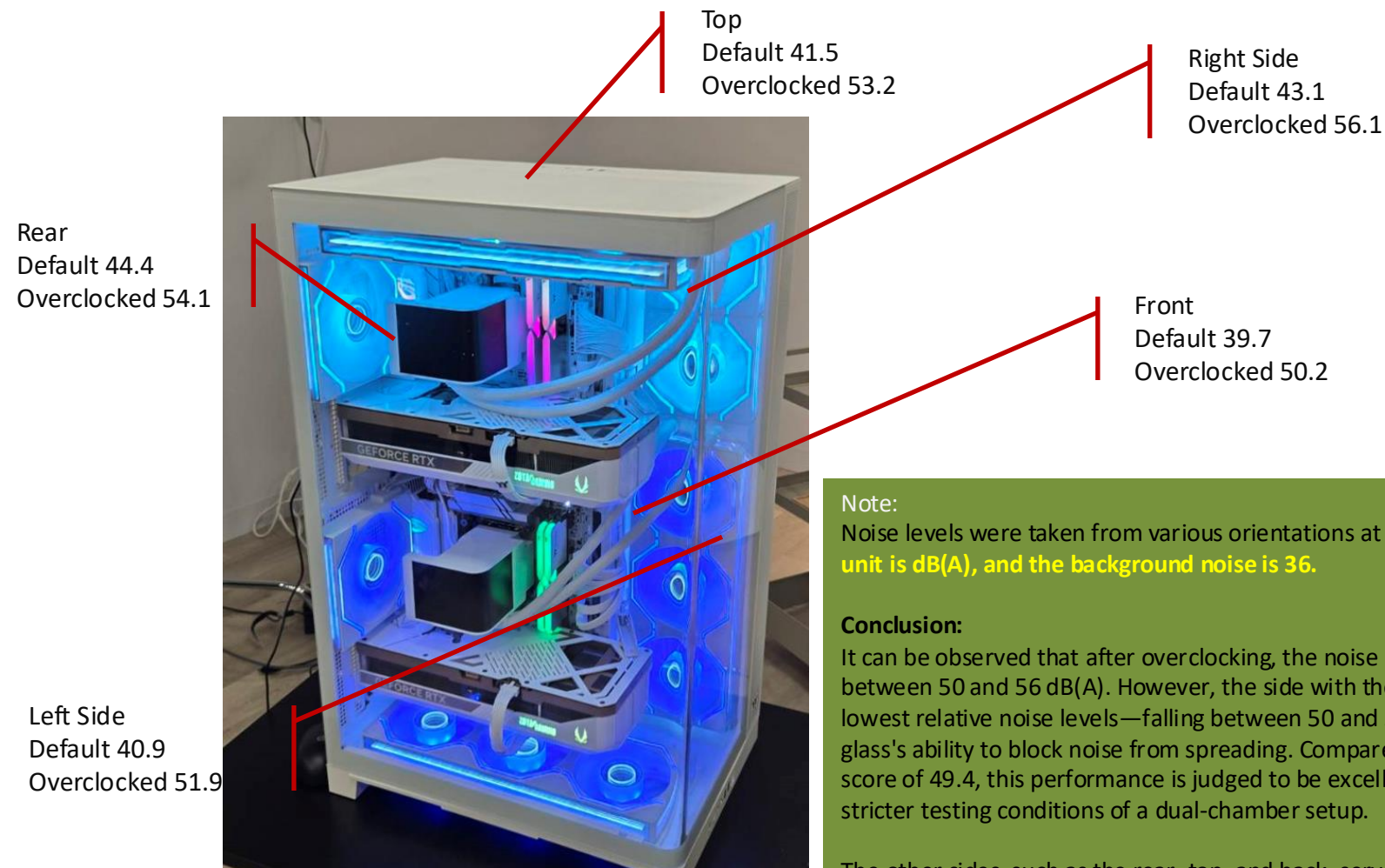
After overclocking, a noticeable increase can be observed at points 6, 7, and 8.

→ It is judged that the temperature rise at point 6 is due to the liquid cooling radiator.

→ The temperature rise at points 7 and 8 is due to an increase in overall internal temperature, with the hot air being exhausted by the top fans. The hot air did not exit through points 9 and 10, which still maintain their original temperature performance.

The graphics card maintains the same level of performance.





Note:

Noise levels were taken from various orientations at a distance of 50 cm. **The unit is dB(A), and the background noise is 36.**

Conclusion:

It can be observed that after overclocking, the noise levels increased to between 50 and 56 dB(A). However, the side with the glass panel showed the lowest relative noise levels—falling between 50 and 51 dB(A)—due to the glass's ability to block noise from spreading. Compared to the View 390's score of 49.4, this performance is judged to be excellent considering the stricter testing conditions of a dual-chamber setup.

The other sides, such as the rear, top, and back, serve as outlets for internal noise and fan sounds. Consequently, actual measurements there reached between 53 and 56 dB(A), though slightly higher than the glass side, is considered normal.

Conclusion

AI Conclusion

CAPO X Chassis Thermal and Noise Evaluation Conclusion**1. Good System Stability and Thermal Performance**

Under laboratory conditions (25°C, 50% humidity), the CAPO X was configured with high-end hardware (such as Intel Core Ultra 9 285, AMD Ryzen 9 7950X, and dual RTX 5080 graphics cards) for stress testing, demonstrating excellent stability.

- Default TDP Performance:** The Intel system (200W) CPU temperature maintained at 75°C, and the AMD system (178.83W) was at 85°C. No black screens or crashes occurred during the 30-minute burn-in test, showing normal performance.

- Overclocked TDP Performance:** Under higher power consumption (Intel 250W / AMD 210W), even though the AMD system hit the 95°C thermal wall, it still stably passed the 30-minute stress test. This proves the chassis possesses excellent support for extreme heat dissipation.

2. Internal Air Duct and Temperature Distribution Analysis Monitored via 20 temperature sensing points, the CAPO X's airflow configuration (bottom intake, top and rear exhaust) effectively controlled the internal ambient temperature.

- Overall Temperature Control:** After the burn-in test, the temperature at the internal air inlets and outlets mostly maintained between 30–35°C.

- Graphics Card Interference Observation:** Actual testing revealed that the temperature on the air exhaust side of the graphics cards was higher (45–51°C). This is mainly because the upper graphics card absorbs the hot air exhausted by the lower graphics card. However, under the dual-card configuration, the overall system performance remains within the normal range.

- Heat Exhaust Mechanism:** When overclocked, the hot air is mainly exhausted effectively by the top fans, while the rear exhaust outlet maintains its original temperature level. This indicates that the top liquid cooling radiator and fan configuration serve as the core pathway for heat dissipation.

3. Excellent Noise Suppression Capability The CAPO X demonstrated structural advantages in noise testing.

- Glass Panel Blockage:** Tested at a distance of 50 cm, the noise level on the glass side was the lowest (50–51 dB(A)), showing that the glass panel has a good noise-blocking function.

- Dual-Chamber Structural Advantage:** Compared to the View chassis (49.4 dB(A)), the CAPO X's noise performance under dual-chamber testing conditions was rated as excellent.

- Noise Distribution:** Under normal operation, the noise from various sides was around 40–44 dB(A), while under overclocked loads, it rose to 50–56 dB(A). The sound is mainly concentrated at the cooling exhausts (top, rear, and back).

Summary and Recommendations: The CAPO X chassis achieves a good balance between extreme heat dissipation and quiet performance. Its spacious internal room and airflow design ensure long-term stable system operation even when dual graphics cards and high-performance processors are installed. The glass panel not only provides aesthetic appeal but also significantly reduces the user's perceived noise, making it an ideal choice for high-end enthusiasts building high-performance systems.



thermaltake

Thank You!