System Thermal Test Report

Model: **View 600 TG**

Version: **20250818A**

NO: RS202508180001

Table of Contents

A. Introduction

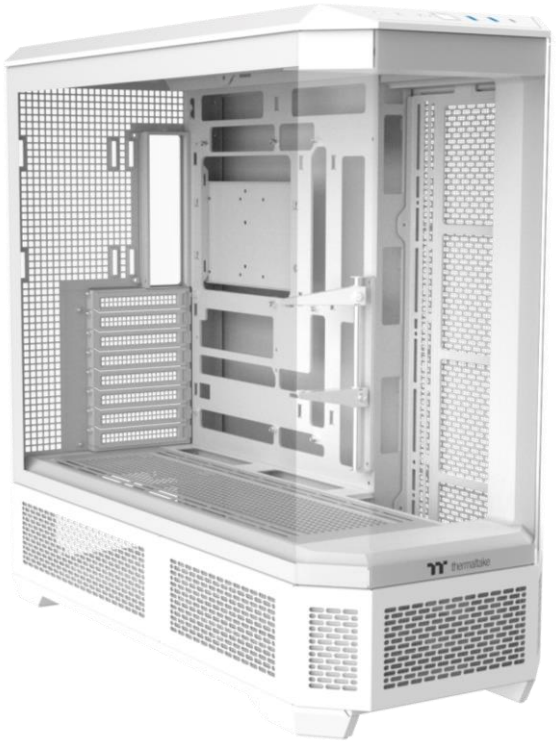
B. Test Configuration

C. Conclusion

A. Introduction

1. Objective
2. Equipment
3. Procedure

1. Objective



Our objective is to find out if the **View 600 TG** can efficiently extract the heat generated by the latest components, so we built a system with an Intel Core Ultra 9 285K and a ASUS ROG Strix GeForce RTX® 5090 OC and put it to the test. The passing criteria we set was to keep the internal temperature under **47˚C** while the system is running at full load, with **ten** installed fans and a AIO **420** installed.

2. Equipment

The equipment we used in the thermal testing includes:

1. Temperature & Humidity Chamber
2. Data Acquisition Device
3. Thermocouple

The Temp. & Humidity Chamber ensures consistency in the testing environment, particularly temperature and humidity. The **temperature** was set at **25˚C** and the **humidity** at **50%** in the chamber.

The Data Acquisition Device helps us to directly collect the data through **thermocouples**, which is the most important equipment for our testing. We set up the thermocouple inside the case at various points to measure the temperature.

We used **AIDA64 Extreme** and **FurMark ROG Edition** to push 100% load on the CPU and GPU and tested for 30 minutes.

3. Procedure

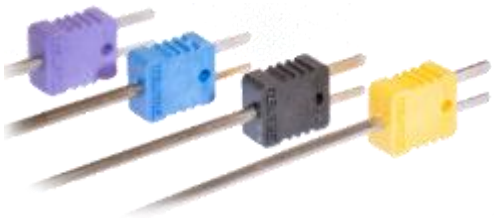
Testing steps:

1. Ready the systems
2. Place the chassis into the Temp. & Humidity Chamber
3. Set the thermocouple at the specified places
4. Set up the Temp. & Humidity Chamber - temperature at 25 ˚C and the humidity at 50%
5. Turn on the Temp. & Humidity Chamber and start testing (for 30 minutes)
6. Check the data acquired from the Data Acquisition device
7. End testing

B. Test Configuration

1. Laboratory Equipment
2. Chassis Hardware List
3. Chassis Fan Allocation
4. Chassis Thermal Airflow
5. Chassis Measured Points
6. Thermal Stress Test
7. AIDA64 & FurMark Test
8. Graphics Performance Testing
9. Acoustic Test

1. Laboratory Equipment



Thermocouple

Sound Level Meter

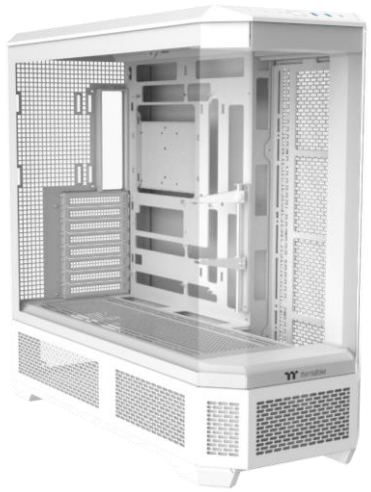
Thermal Imaging Camera

Temperature Data Acquisition

Temperature & Humidity Chamber

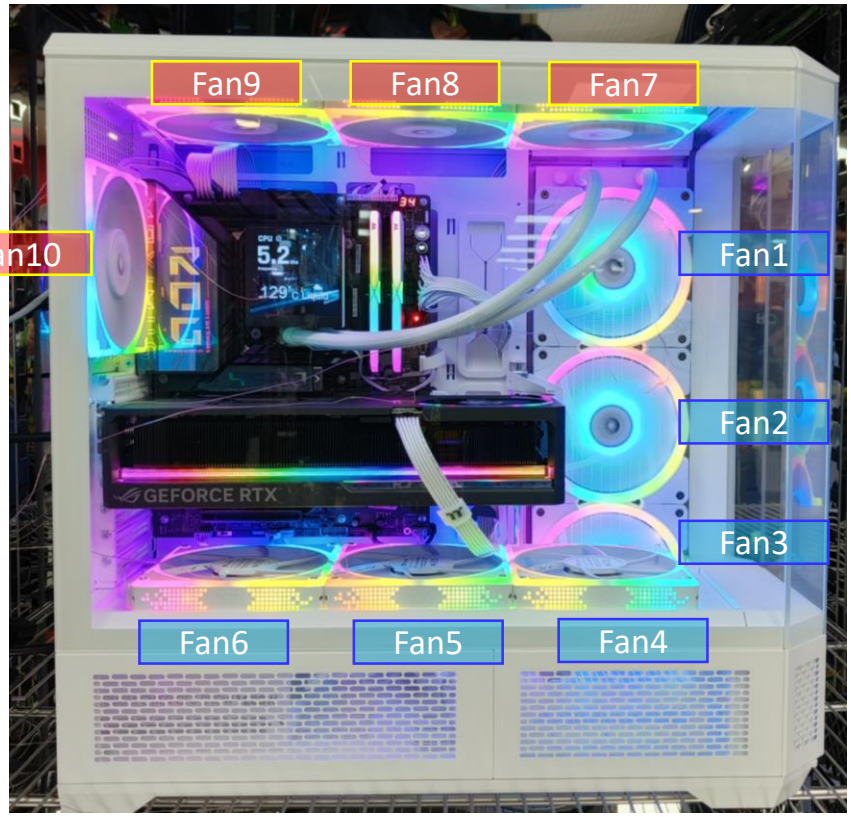
2. Chassis Hardware List

Component	Model
Chassis	View 600 TG Snow
Motherboard	ASUS ROG Maximus Z890 Hero
CPU	Intel® Core™ Ultra9-285K Processor (TDP 250W)
GPU	ASUS ROG Strix GeForce RTX® 5090 OC 32GB GDDR7
RAM	TOUGHRAM XG RGB D5(16G x 2)
SSD	Seagate SSD 120G
PSU	Toughpower GF3 Snow 1200W
CPU Cooler	MAGFloe 420 Ultra ARGB Sync Snow Edition
Fans	AIO: SWAFAN EX14 ARGB x 3 (2000 rpm) Chassis: TOUGHFAN EX 140 ARGB x 7 (2000 rpm) (Top x 3 , Rear x 1, Power Cover x 3)
Software	1. AIDA64 Extreme 2. FurMark ROG Edition V0.9.3.0 3. CPU-Z Ver.2.015 x64 4. Core Temp V1.18.1
Full load	30 minutes
Camera	Testo 885-2 Thermal Imaging Camera



NO: RS202508180001

3. Chassis Fan Allocation

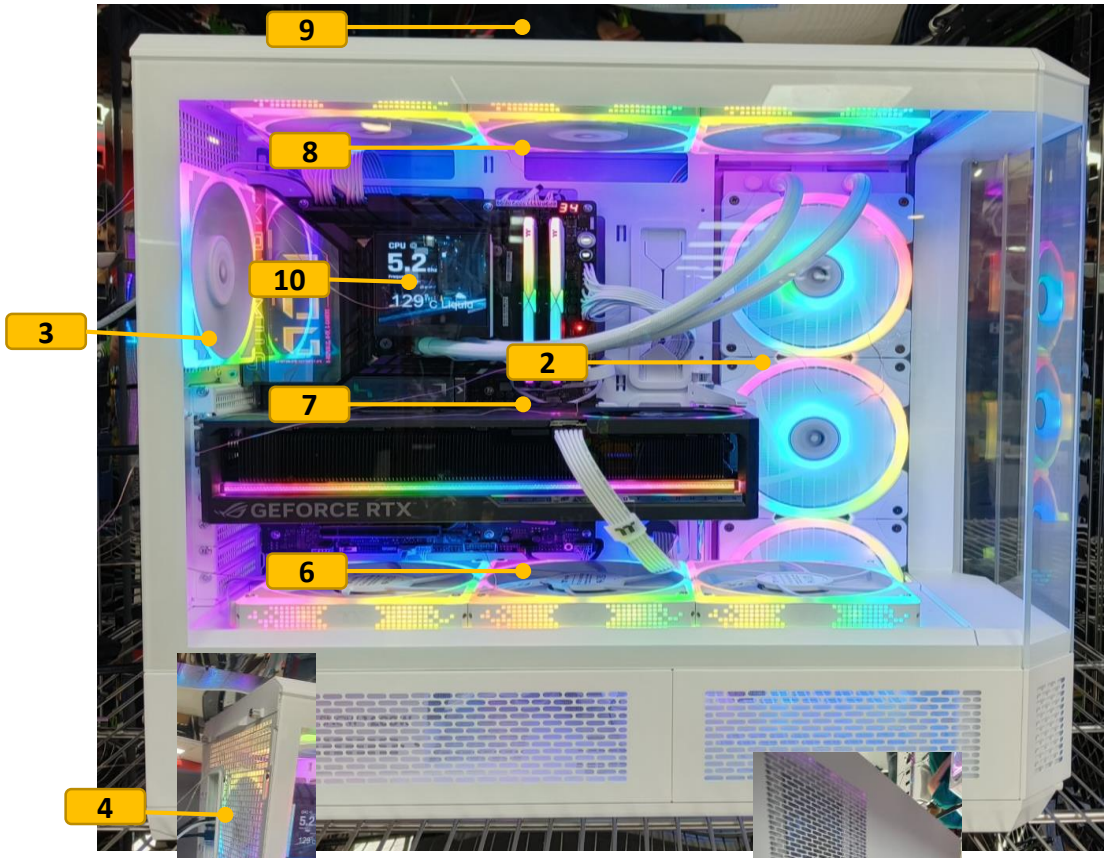


4. Chassis Thermal Airflow

Cool Airflow Inlets (Active)

Hot Airflow Exhausts

5. Chassis Measured Points



Measure Point	Description	Airflow	Thermocouple Number
1	Chassis Right Internal	Intake	101
2	Chassis Right Exhaust	Intake	102
3	Chassis Rear Internal	Exhaust	103
4	Chassis Rear Exhaust	Exhaust	104
5	Chassis Bottom Exhaust	Intake	105
6	Chassis Bottom Internal	Intake	106
7	GPU Right Fan	Exhaust	107
8	Chassis Top Internal	Exhaust	108
9	Chassis Top Exhaust	Exhaust	109
10	AIO Top Cover	Nature	110
11	PSU Bottom	Intake	111
12	PSU Rear	Exhaust	112

NO: RS202508180001

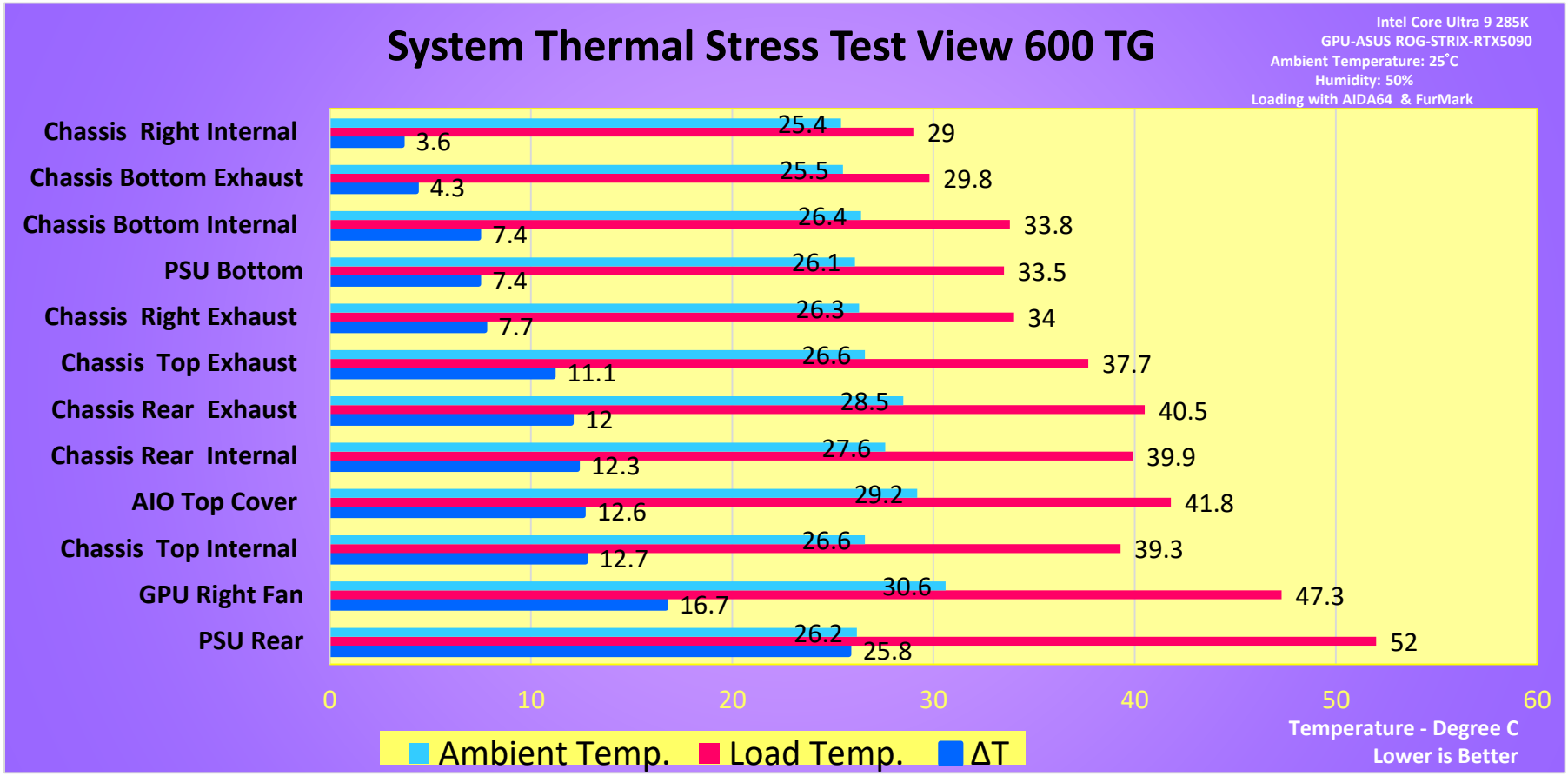
6. Thermal Stress Test

- Setting up the chamber temperature and humidity
- Temperature: 25°C
- Humidity: 50%
- Recording Data

6. Thermal Stress Test

Temperature Data Recoding

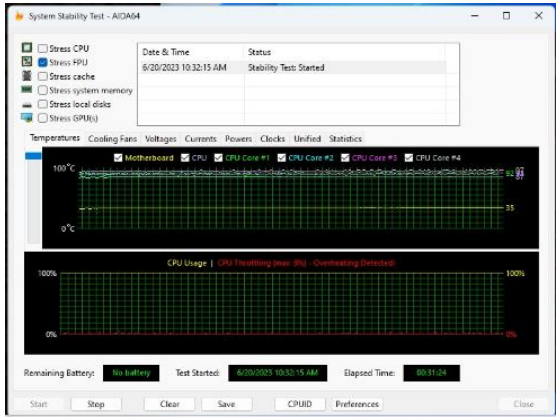
6. Thermal Stress Test



We expected to see higher temperature at the exhaust points and relatively lower temperature at the intake positions. The highest temperature was found at the AIO exhaust, which is reasonable given the CPU was running at full load. Most of the intake positions recorded a temperature lower than **47˚C** since they were drawing air from environment. Two critical positions we were looking at are **NO. 107 GPU Right Fan** and **NO. 110 AIO Cover**, which were drawing internal air to cool two of the most important components.

7. AIDA64 & FurMark Test

We used **AIDA64 Extreme** (stress FPU) and **FurMark ROG Edition (resolution: 3840 x 2160) to push 100% load** on the CPU and GPU for 30 minutes.



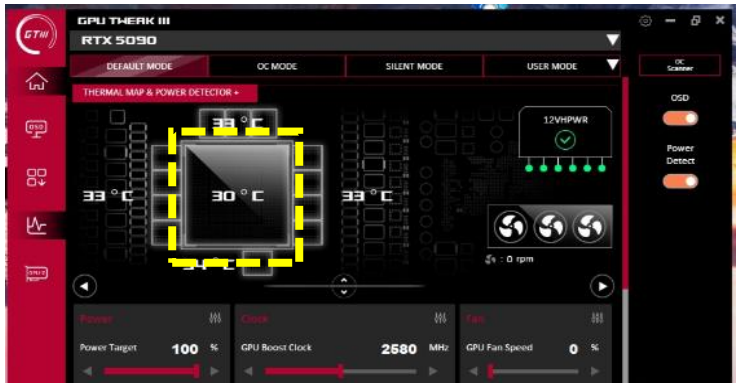
AIDA64 Extreme

FurMark

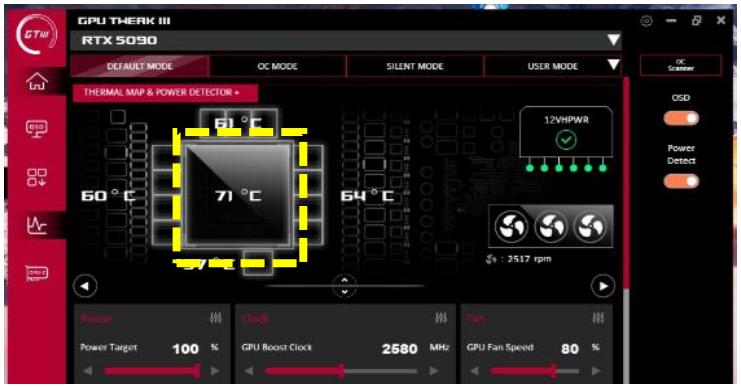
	Idle	Full load
Date	8/15/2025	8/15/2025
Time (HH:MM)	1:56 PM	2:27 PM
CPU Clock	800 MHz	5301 MHz
Memory Clock	2401 MHz	2401 MHz
Motherboard Name	Asus ROG Maximus Z890 Hero	Asus ROG Maximus Z890 Hero
BIOS Version	1101	1101
Free Memory	23086 MB	23361 MB
GPU1 Clock	577 MHz	2797 MHz
Motherboard	28°C	39°C
CPU	31°C	82°C
CPU Package	41°C	93°C
GPU1	30°C	71°C
CPU	2033 RPM	1979 RPM
CPU OPT	1903 RPM	1869 RPM
Chassis #1	3183 RPM	3117 RPM
AIO Pump	1985 RPM	2011 RPM
GPU1	0 RPM	2515 RPM
CPU Core	1.385 V	1.439 V
GPU1	0.840 V	1.030 V
CPU Package	30.07 W	250.31 W
GPU1	30.17 W	617.64 W
GPU1 TDP%	5%	103%

7. AIDA64 & FurMark Test

We used **AIDA64 Extreme** (stress FPU) and **FurMark ROG Edition** (**resolution: 3840 x 2160) to push 100% load** on the CPU and GPU for 30 minutes.

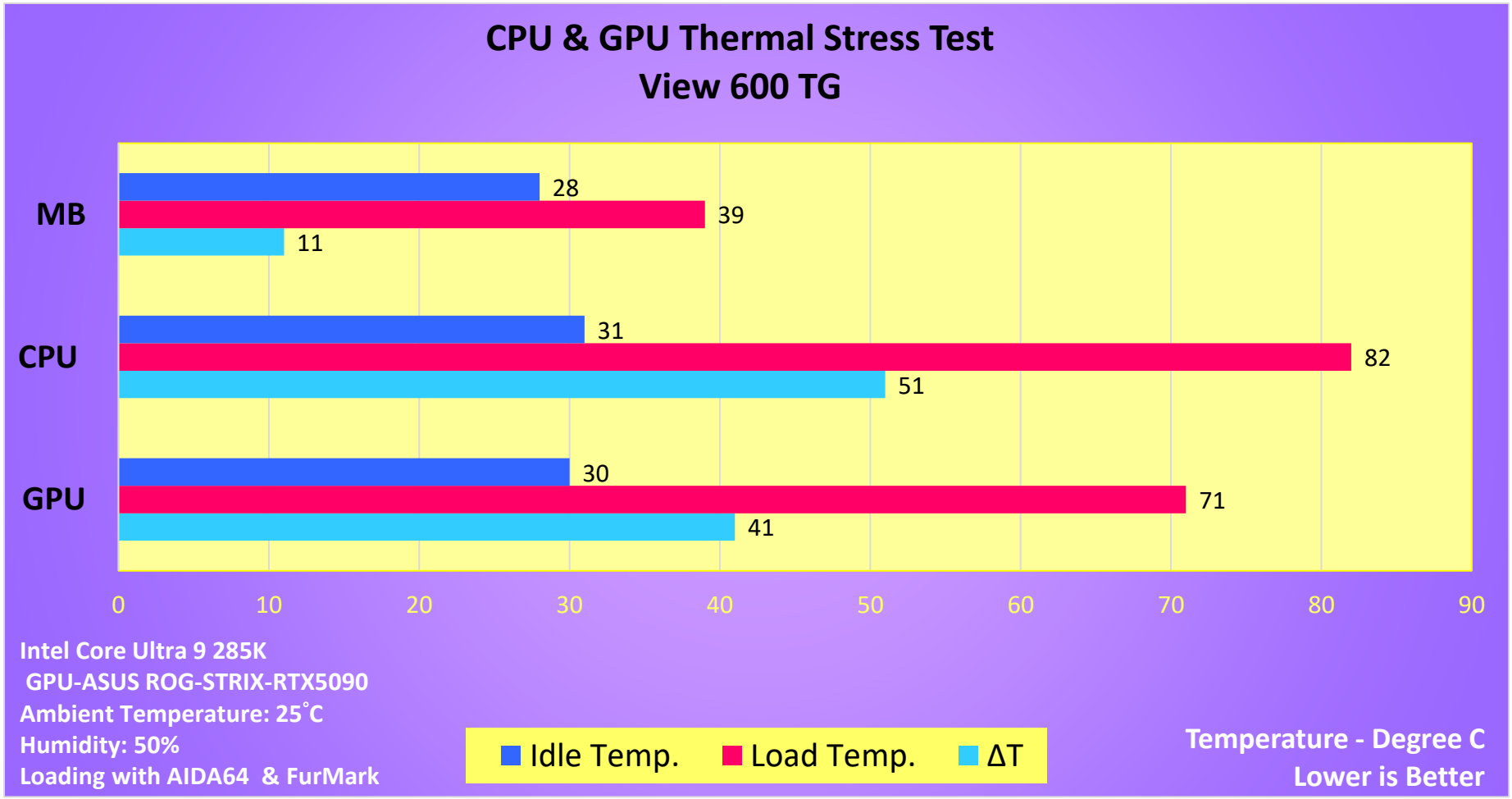


Idle

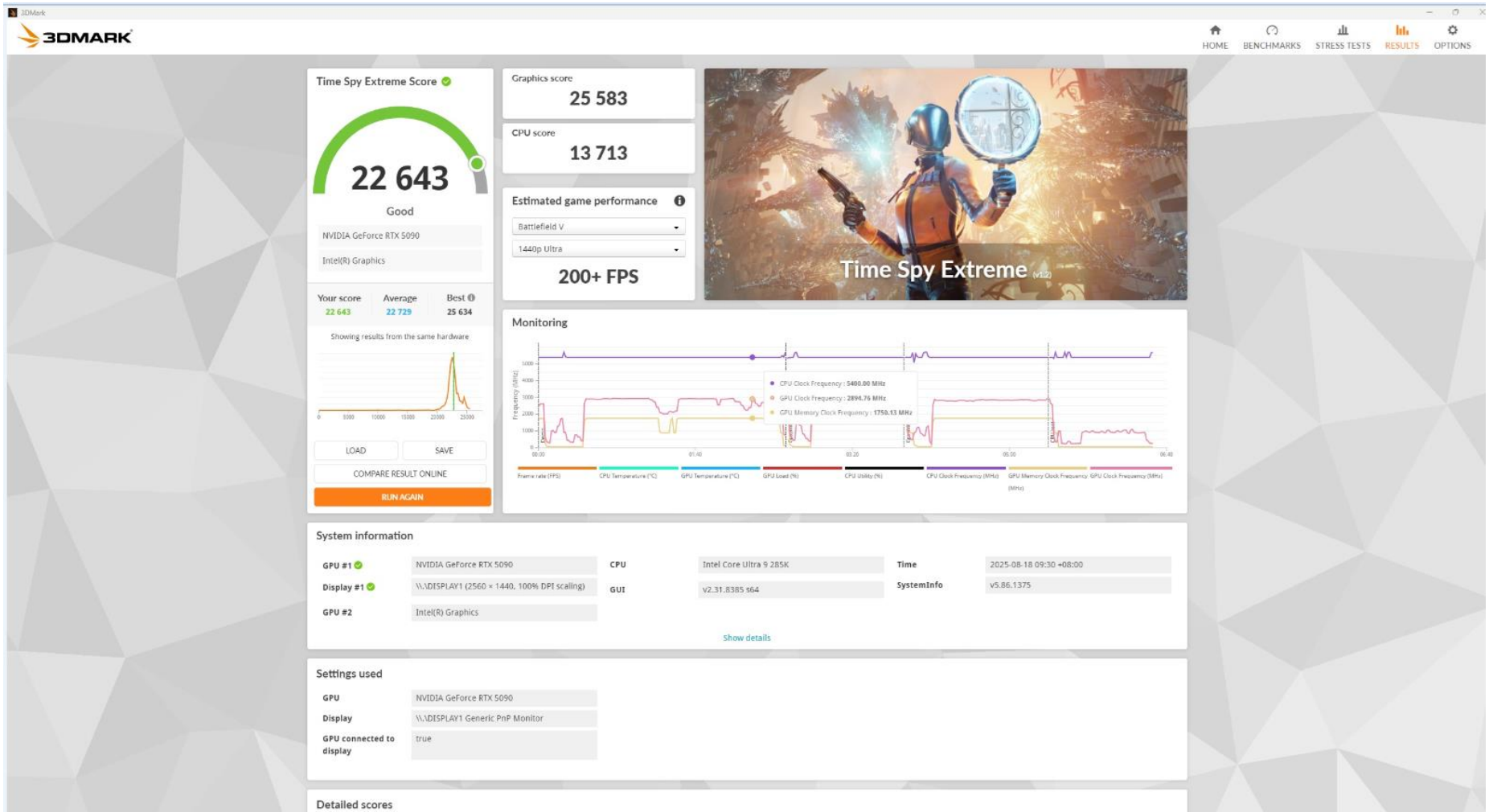


Full load

7. AIDA64 & FurMark Test

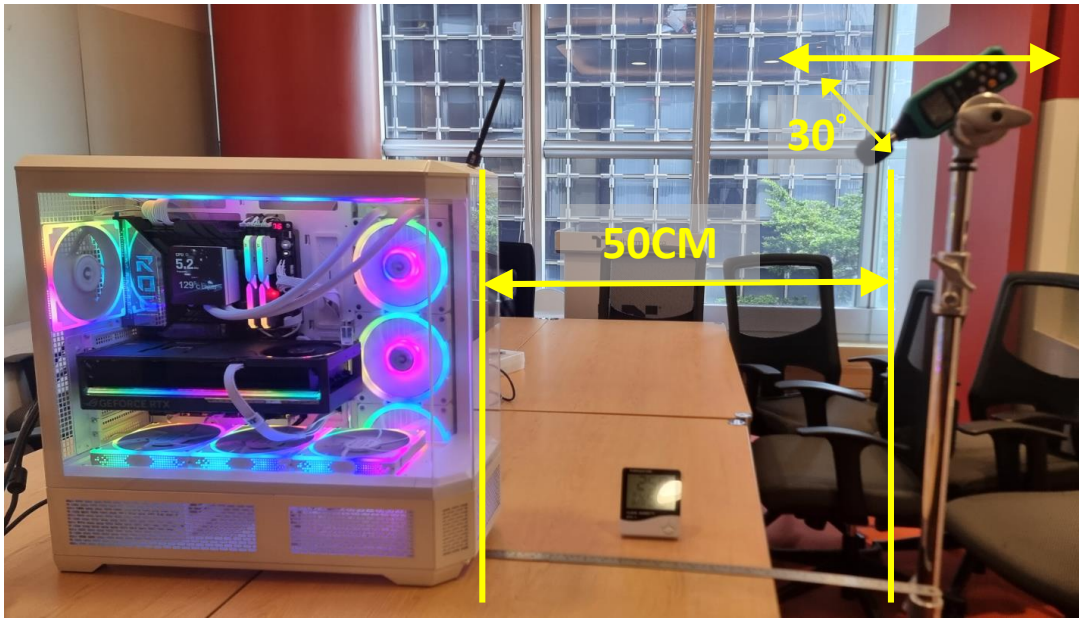


8. Graphics Performance Testing



9. Acoustic Sound Pressure Level Test

Test Environment：**Thermaltake Taipei Office**
Test Model: View 600 TG
Test Ambience: **25 ℃ (Temperature) / 59% R.H.(Relative Humidity)**
Microphone position: **50 cm / in front of PC system**
Background Noise：**35.1 dBA.**



Microphone position

Test Ambience

9. Acoustic Sound Pressure Level Test

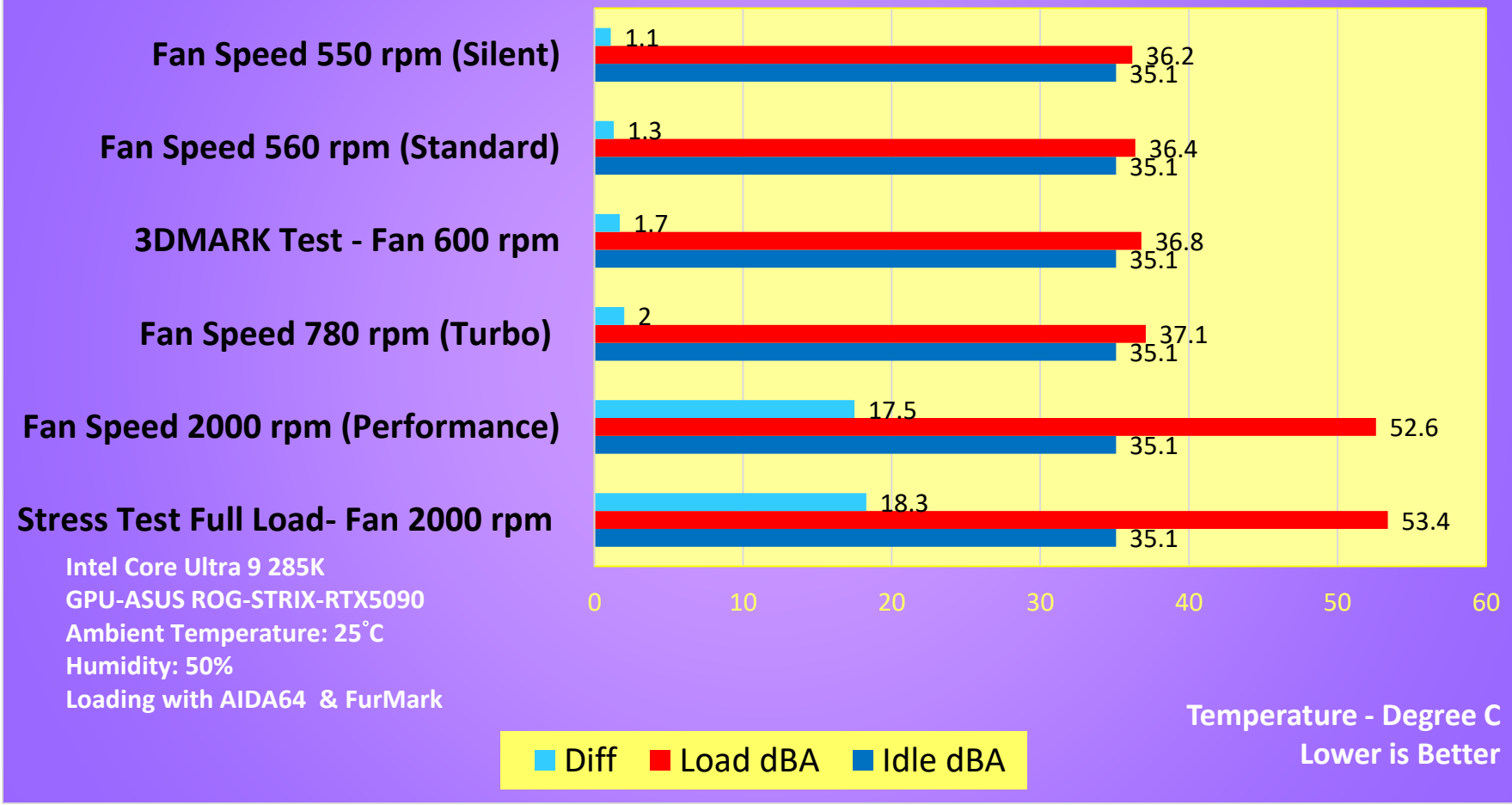
Fan Speed 550rpm – **36.2dBA**	Fan Speed 560rpm – **36.4dBA**	Fan Speed 780rpm – **37.1dBA**	Fan Speed 2000rpm – **52.6dBA**

Date 8/18/2025	Date 8/18/2025	Date 8/18/2025	Date 8/18/2025
Time (HH:MM) 10:20 AM	Time (HH:MM) 10:22 AM	Time (HH:MM) 10:24 AM	Time (HH:MM) 2:30 PM
CPU Clock 5401 MHz	CPU Clock 4901 MHz	CPU Clock 4900 MHz	CPU Clock 5401 MHz
Memory Clock 2401 MHz	Memory Clock 2400 MHz	Memory Clock 2400 MHz	Memory Clock 2401 MHz
Motherboard Name Asus ROG Maximus Z890 Hero	Motherboard Name Asus ROG Maximus Z890 Hero	Motherboard Name Asus ROG Maximus Z890 Hero	Motherboard Name Asus ROG Maximus Z890 Hero
BIOS Version 1101	BIOS Version 1101	BIOS Version 1101	BIOS Version 1101
Free Memory 24278 MB	Free Memory 24262 MB	Free Memory 24219 MB	Free Memory 24806 MB
GPU1 Clock 405 MHz	GPU1 Clock 225 MHz	GPU1 Clock 397 MHz	GPU1 Clock 225 MHz
Motherboard 30°C	Motherboard 30°C	Motherboard 30°C	Motherboard 27°C
CPU 31°C	CPU 32°C	CPU 31°C	CPU 28°C
CPU Package 39°C	CPU Package 38°C	CPU Package 37°C	CPU Package 33°C
GPU1 33°C	GPU1 34°C	GPU1 34°C	GPU1 32°C
CPU 551 RPM	CPU 562 RPM	CPU 786 RPM	CPU 2039 RPM
CPU OPT 582 RPM	CPU OPT 575 RPM	CPU OPT 755 RPM	CPU OPT 1899 RPM
Chassis #1 1157 RPM	Chassis #1 1323 RPM	Chassis #1 1708 RPM	Chassis #1 3333 RPM
AIO Pump 1616 RPM	AIO Pump 1638 RPM	AIO Pump 1732 RPM	AIO Pump 1985 RPM
GPU1 0 RPM	GPU1 0 RPM	GPU1 0 RPM	GPU1 0 RPM
CPU Core 1.412 V	CPU Core 1.412 V	CPU Core 1.385 V	CPU Core 1.225 V
GPU1 0.820 V	GPU1 0.800 V	GPU1 0.810 V	GPU1 0.800 V
CPU Package 20.64 W	CPU Package 20.24 W	CPU Package 18.35 W	CPU Package 16.90 W
GPU1 25.00 W	GPU1 27.63 W	GPU1 19.33 W	GPU1 13.28 W
GPU1 TDP% 4%	GPU1 TDP% 2%	GPU1 TDP% 3%	GPU1 TDP% 2%

NO: RS202508180001

9. Acoustic Sound Pressure Level Test

Acoustic Sound Pressure Level Test - View 600 TG



Intel Core Ultra 9 285K
GPU-ASUS ROG-STRIX-RTX5090
Ambient Temperature: 25˚C
Humidity: 50%
Loading with AIDA64 & FurMark

Temperature - Degree C
Lower is Better

NO: RS202508180001

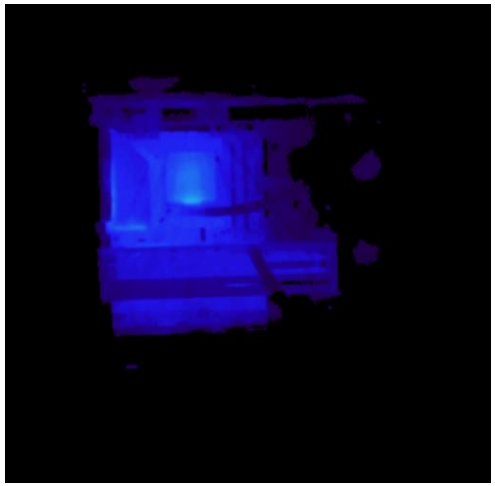
C. Conclusion

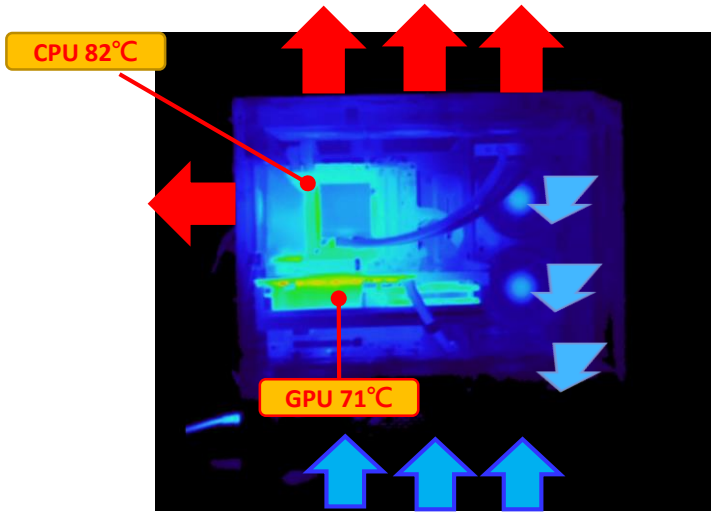
Conclusion

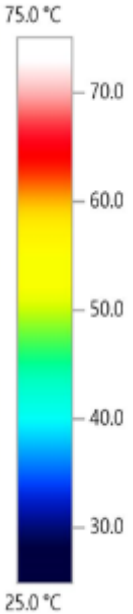
Idle

Left View

Full Load







AIDA64 Extreme (stress FPU) and **FurMark ROG Edition** (**resolution: 3840 x 2160) to push 100% load** on the CPU and GPU for 30 minutes**.**

-Intel Core Ultra 9 285K / CPU Temp. (Max)：82℃ (TDP 250W)

-ASUS ROG Strix GeForce RTX® 5090 OC / GPU Temp. (Max)：71℃

Through the thermal image, we found that the internal heat was effectively directed to designated exhaustion vents, keeping the system operating at a cooler temperature. This finding validates how efficient The View 600 TG is regarding cooling performance.

thermaltake

Thank you!