

SK2060

GeForce RTX2060S MXM Module

Test Report

Rev 1.0

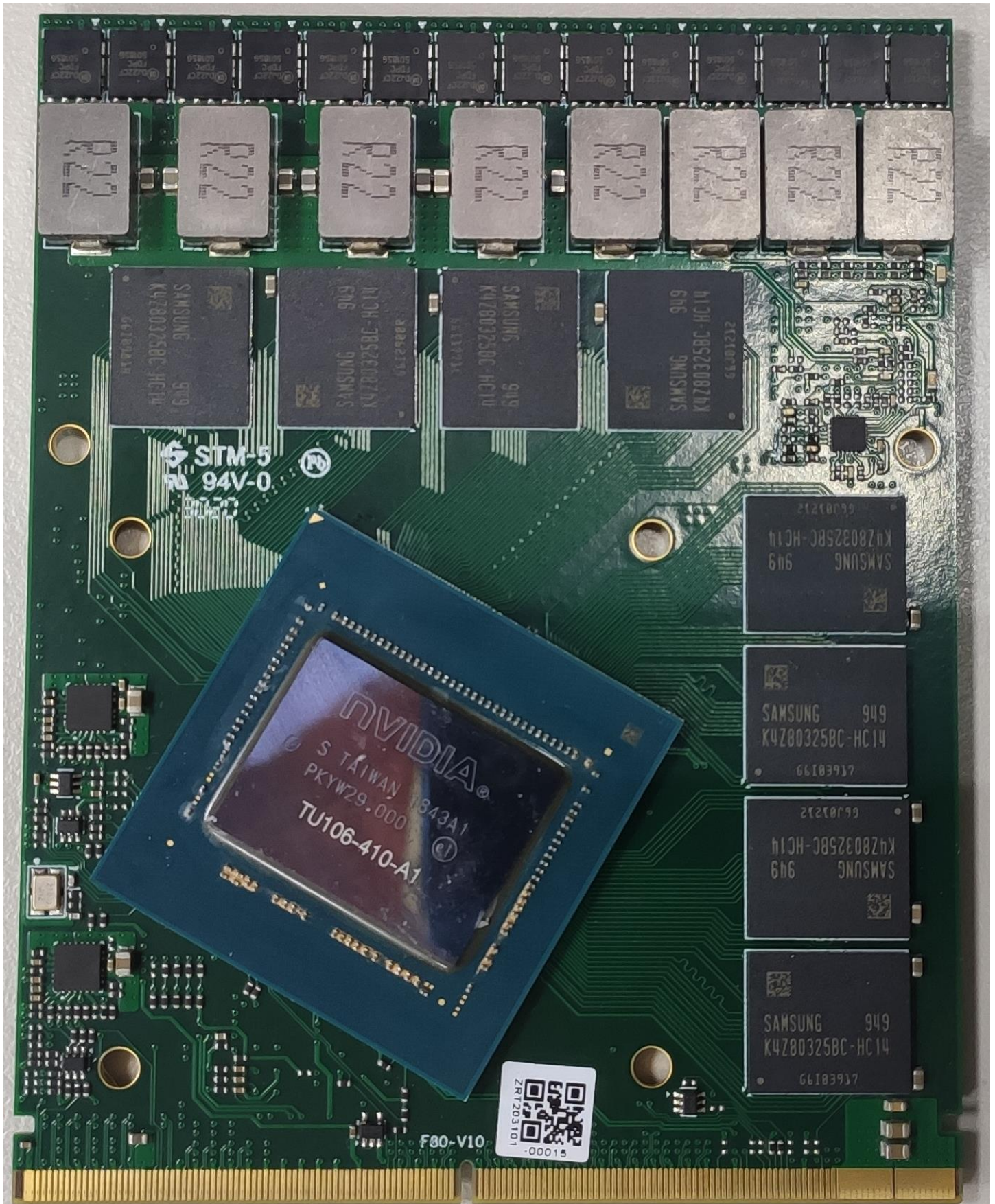
10/15/2020

Team Member

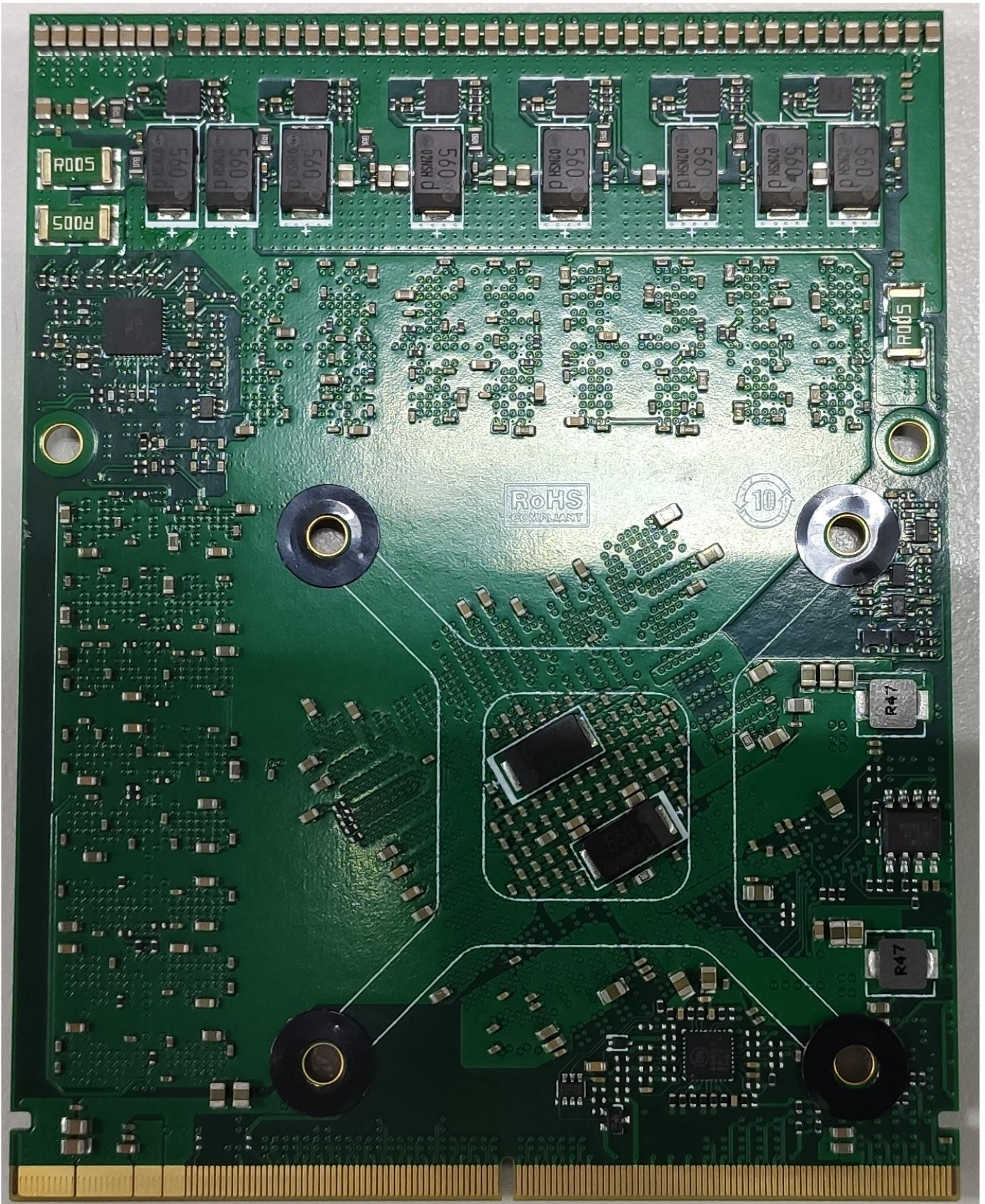
Product Manager	H/W Leader	H/W Engineer	Testing Engineer
Stanley Lo	Jason Liu	PeanYing Chiang	Marc Liu

Document Revision Change History

Top Side



Button Side



Project Name		RTX2060 SUPER	Document No.	V1.0
Revision		Date	Release Notes	
PCBA	To			
	V1.0	10/15/2020	First Version	

Executive Summary : ☒ Pass ☐ Fail

Chapter 1: Hardware Function Test

- 1.1 IO Function Test
- 1.2 Display Function Test

Chapter 2: Software & O.S. Compatibility Test

- 2.1 Operation System
- 2.2 Performance

Test Results Definition

Criteria	Definition
PASS	Test result pass and function work perfectly.
Fail	Test fail or can not meet the spec requirement.
Skip	Test can not execute due to no test program, driver or test device.
N/A	Spec not support or driver not ready.
Note	Reference Data

Test Results Summary

Num.	Test Item	Result	Remark
1.1	IO Function Test	Pass	
1.2	Display Function Test	Pass	
2.1	Operation System	Pass	
2.2	Performance	Pass	

Test Configuration

Device\System	Configuration #1
	DUT#1
S/N	N/A
PCBA Revision	OXY5740 VA5
BIOS/Firmware Revision	0.07
CPU	Intel® i7-7820EQ 3.0GHz
Memory1	Apacer 8G DDR4 2133
VGA	Intel(R) HD Graphics 630
LAN1	Intel I210 LAN
LAN2	Intel I219-LM LAN
Audio	Realtek ALC887 High Definition Audio Controller
SSD	InnoDisk MSATA 256G
Riser Card	SK221
Power Supply	Thermaltake LT-400NL2NC

Graphic Card SEPC

Graphic Processing Unit	
GPU	GeForce RTX2060 Super / TU106
Process Technology	12nm
Base clock	1470MHz
Boost clock	1650MHz
Form Factor	MXM3.1 TypeB
Card Interface	PCI Express 3.0(X16)
CUDA Core	2176
Floating Point Performance	8315GFLOPs
DirextX capability	DirextX 12(Feature Level 12.1)
Open GL	OpenGL 4.6
Video Decoder	NVDEC support
Memory	
Memory Clock	1750MHz / 14 Gbps
DDR Type	GDDR6
Memory Bus	256-bits
Memory Size	8192MB
Display Interface	
Display Output	HDMI2.0bx1, Display 1.4x3
Multi-Display	Up to 4
Board spec	
External Power	N/A
Power Consumption	174W
Operation Temperature	0°C~50°C
Dimensions	82mm(L)x105mm(H)

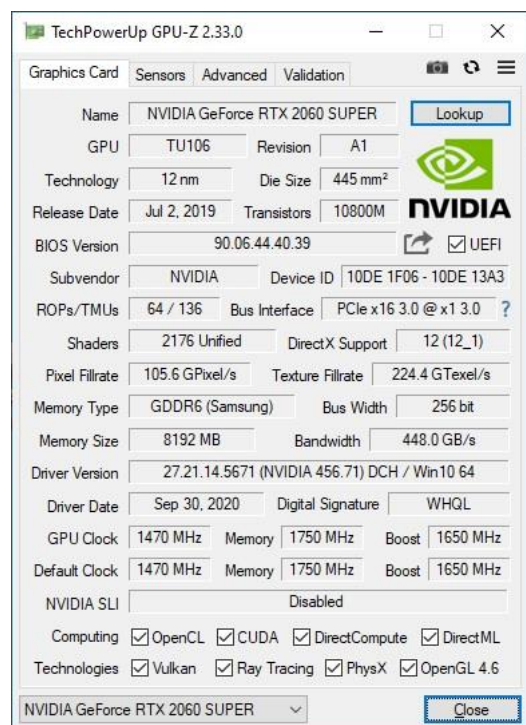
Chapter 1: Hardware Function Test

1.1 IO Function Test

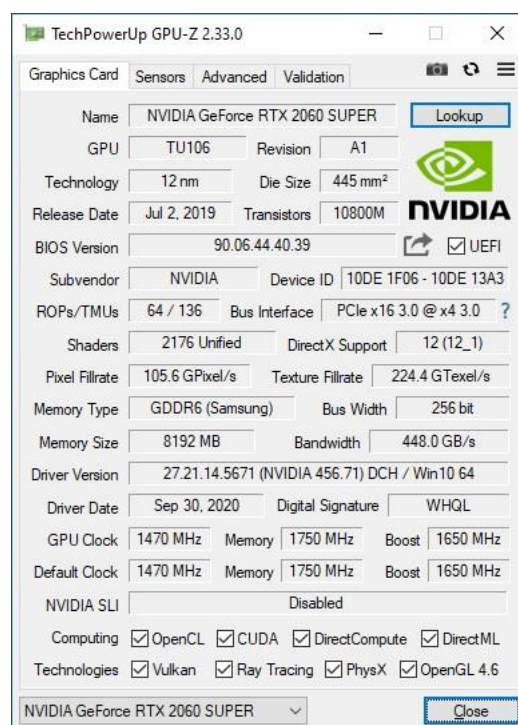
Appearance / Buttons / Indicators

Item	Criteria	DUT-1	Note
DP1	Check work well	Pass	
DP2	Check work well	Pass	
DP3	Check work well	Pass	
HDMI	Check work well	N/A	
PCIE	Criteria	DUT-1	Note
X1	Check work well	Pass	
X4	Check work well	Pass	
X8	Check work well	Pass	
X16	Check work well	Pass	

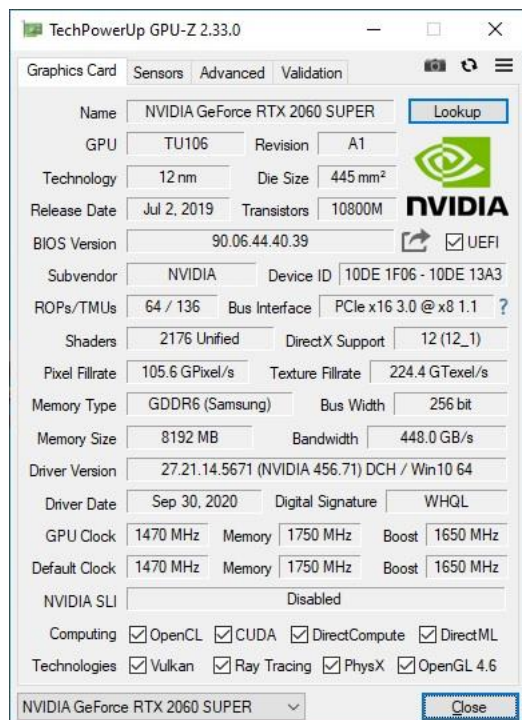
X1



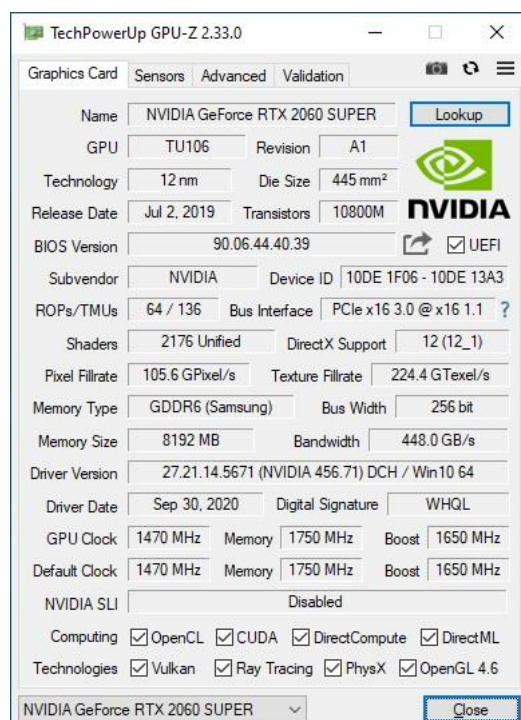
X4



X8



X16



Dual Display Function Test			Result	Note
Configuration	Extend mode	Clone mode		
DP1+DP2	Pass	Pass	Pass	
DP1+DP3	Pass	Pass	Pass	
DP1 +DP3	Pass	Pass	Pass	
DP1+DP2+DP3	Pass	Pass	Pass	

	Resolution test			
Monitor Model		SAMSUNG 28" U28E590U , Maximum resolution : 3840x2160 Dell 24" P2415Q , Maximum resolution : 3840x2160		
Resolution	DP1	DP2	DP3	HDMI
800 x 600	✓	✓	✓	N/A
1024 x 768	✓	✓	✓	
1152 x 864	✓	✓	✓	
1280 x 600	✓	✓	✓	
1280 x 720	✓	✓	✓	
1280 x 768	✓	✓	✓	
1280 x 800	✓	✓	✓	
1280 x 960	✓	✓	✓	
1280 x 1024	✓	✓	✓	
1360 x 768	✓	✓	✓	
1366 x 768	✓	✓	✓	
1400 x 1050	✓	✓	✓	
1440 x 900	✓	✓	✓	
1600 x 900	✓	✓	✓	
1600 x 1200	✓	✓	✓	
1680 x 1050	✓	✓	✓	
1729 x 1344	✓	✓	✓	
1856 x 1329	✓	✓	✓	
1920 x 1080	✓	✓	✓	
1920 x 1200	✓	✓	✓	
1920 x 1440	✓	✓	✓	
2048 x 1152	✓	✓	✓	
2560 x 1440	✓	✓	✓	
3840 x2160	✓	✓	✓	

Chapter 2: Software & O.S. Compatibility Test

2.1 Operation System

Publisher	Package & Version	DUT-1	Note
Microsoft OS	FREE DOS	Pass	
Microsoft OS	Microsoft Windows 10 Professional 64Bit	Pass	

Driver and Application software	Version / Details	DUT-1	Note
VGA	456.71	Pass	

2.2 Performance

DUT-1

Intel® i7-7820EQ Processor (3.00 GHz) #DUT-1

System Performance

Item	Comment / (unit)	Software	score
MXM Graphic Graphics Card NVIDIA RTX2060S	3DMark2011	3DMark 11	X5999
	3DMark2013	Fire Strike	12478
		SKY Diver	18035
		ICE Storm Extreme	124696
		Cloud Gate	24472
	3DMark Vantage	3DMark Vantage	P38244
	FuMARK1.21	FuMARK1.21	1369

3D Mark 2011

The screenshot shows the 3DMark 11 Advanced Edition results window. The main score displayed is **X5999**. Below the score, there is a button to 'View Result at 3DMark.com' and a checkbox for 'Automatically view results at 3DMark.com' which is checked. The window is divided into two main sections: 'Result Details' and 'Run Details'.

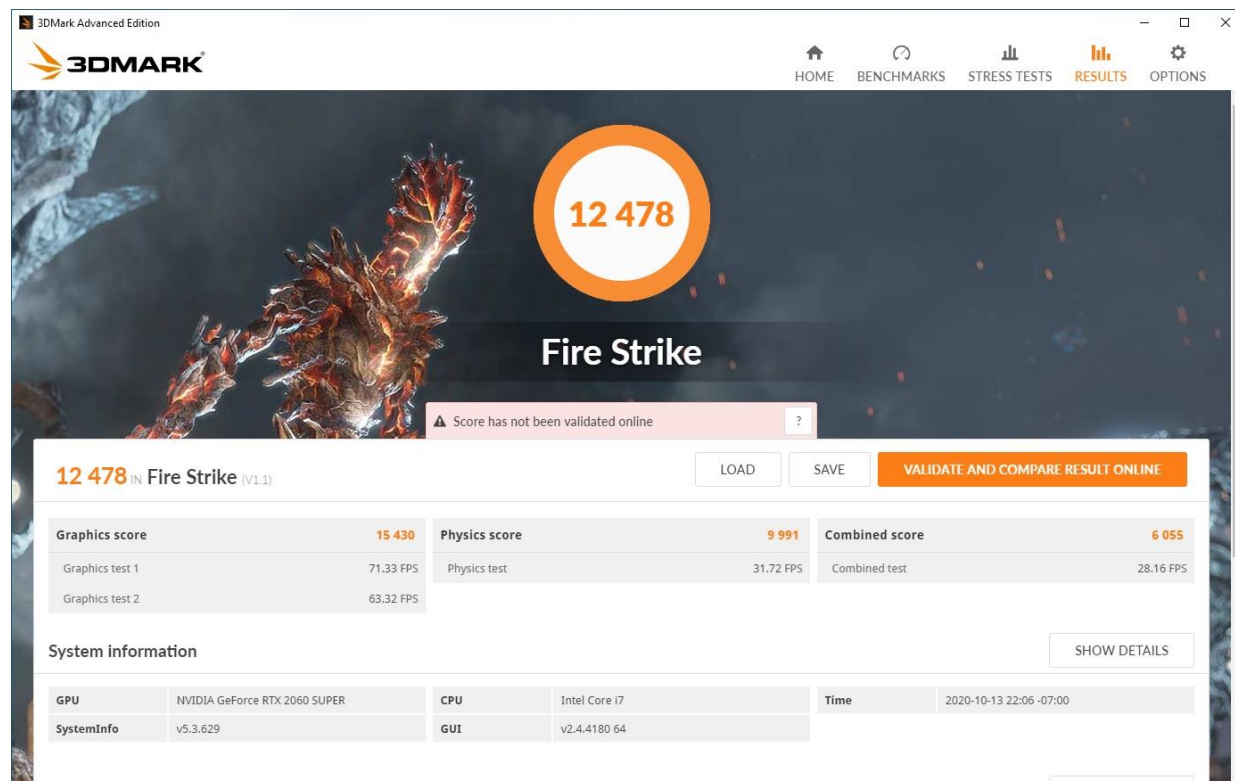
Result Details			
Graphics Score	6461	GT1	34.08
Physics Score	4797	GT2	33.36
Combined Score	4540	GT3	35.08
		GT4	18.33
		PT	15.23
		CT	21.12

Run Details	
GPU	NVIDIA GeForce RTX 2060 SUPER
CPU	Intel(R) Core(TM) i7-7820EQ CPU @ 3.00GHz
Time	10/13/2020 10:57:48 PM

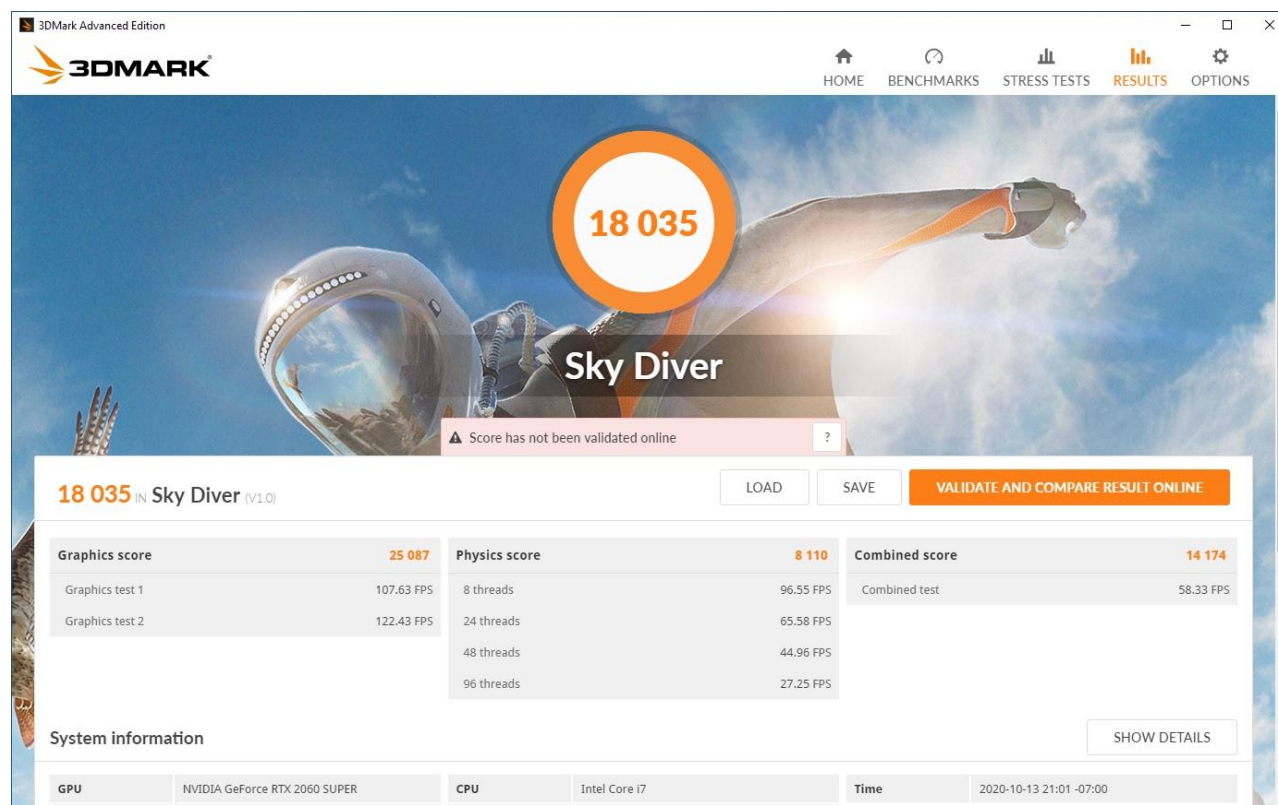
At the bottom right of the 'Run Details' section, there are two buttons: 'Load' and 'Save'.

3DMARK 13

Fire Strike



SKY Diver



Ice Storm

3DMark Advanced Edition



HOME BENCHMARKS STRESS TESTS

124 696 Ice Storm Extreme (V1.1)

Score has not been validated online

LOAD SAVE VALIDATE AND COMPARE RESULT ONLINE

Graphics score		231 781		Physics score		47 648	
Graphics test 1		981.54 FPS		Physics test		151.26 FPS	
Graphics test 2		1 035.39 FPS					

System information

GPU	NVIDIA GeForce RTX 2060 SUPER	CPU	Intel Core i7	Time	2020-10-13 22:33 -07:00
SystemInfo	v5.3.629	GUI	v2.4.4180 64		

Monitoring

Cloud Gate

3DMark Advanced Edition



HOME BENCHMARKS STRESS TESTS

24 472 Cloud Gate (V1.1)

Score has not been validated online

LOAD SAVE VALIDATE AND COMPARE RESULT ONLINE

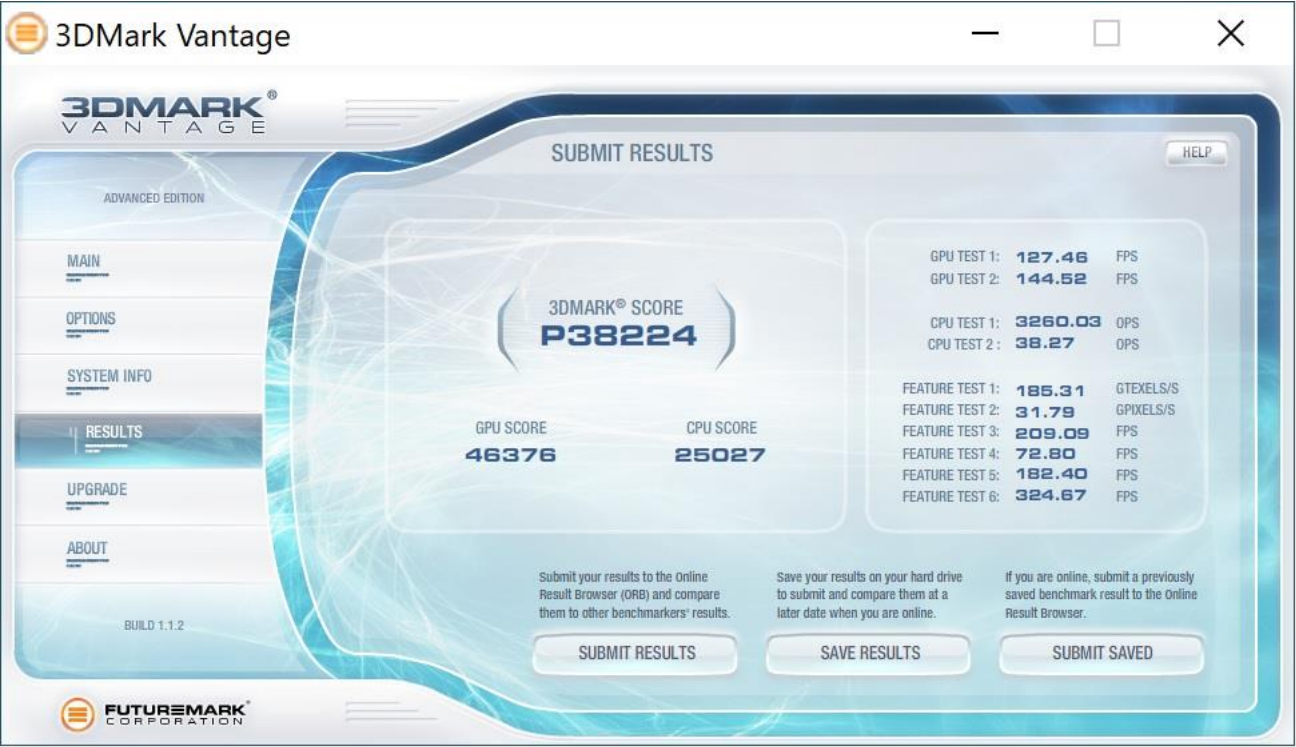
Graphics score		90 340		Physics score		6 890	
Graphics test 1		365.44 FPS		Physics test		21.88 FPS	
Graphics test 2		424.55 FPS					

System information

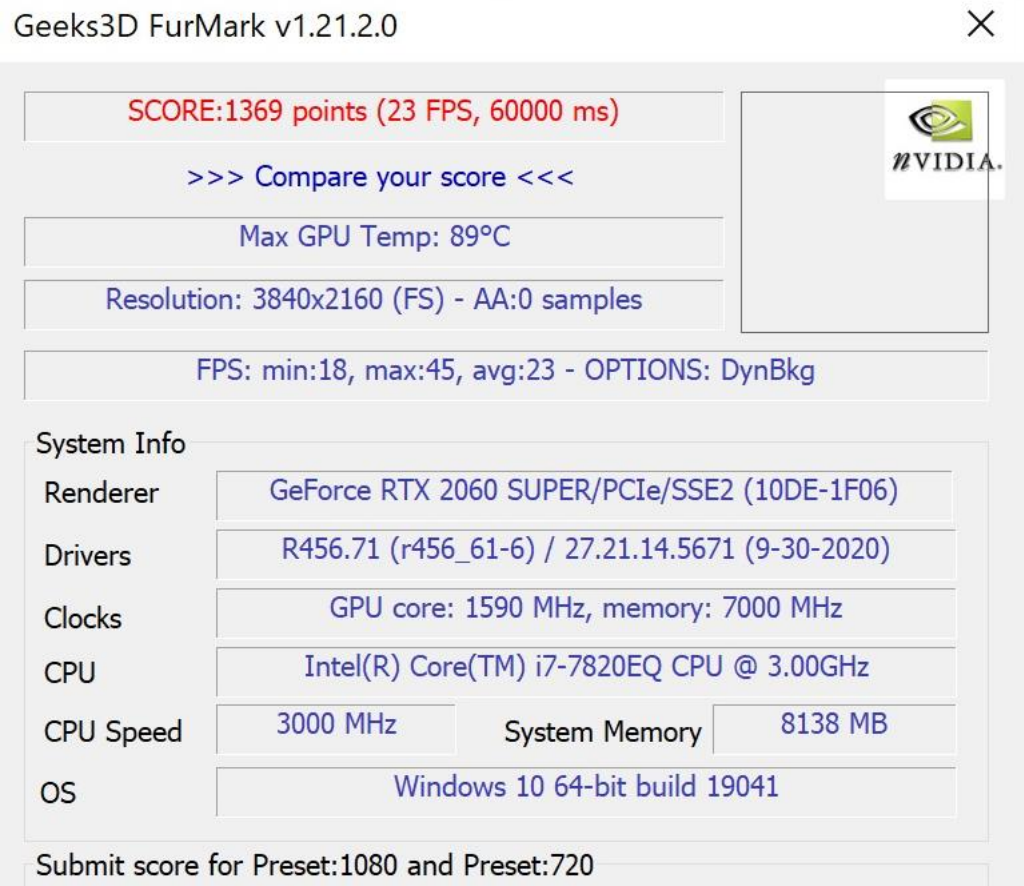
GPU	NVIDIA GeForce RTX 2060 SUPER	CPU	Intel Core i7	Time	2020-10-13 22:26 -07:00
SystemInfo	v5.3.629	GUI	v2.4.4180 64		

Monitoring

3D Mark Vantage



Fu Mark



Appendix