



VECTOR GP
SERIES



VECTOR GP66 BORN FOR PERFORMANCE

A New Start with 12th Gen



I 12th Gen Intel® Core™ i7 Processor | NVIDIA® GeForce RTX™ 3070 Ti Laptop GPU 8GB GDDR6 |
| Windows 11 Home |

VECTOR GP66 12UGS REVIEW GUIDE

TRUE GAMING

msi



VECTOR GP66

Product Story



The brand new MSI Vector GP series, as its name implies, is the basic element of dimensional space. Using the “Vector” as a starting point, forming 2nd and 3rd dimension a stereoscopic structure and extending to the unknown existence. It is also known as the “Manifold” the N-Dimension. This concept allows time and space to be defined through mathematics, becoming the broad fundamental of Einstein’s theory of relativity. Using “Vector” GP as the foundation, MSI built a “Gameverse” that spans across time and space shaping the perfect universe.

Benefited from the unparalleled thermal design, the Vector GP series breaks current CPU/GPU power architecture and redefine what full power is by unlocking the CPU and GPU power to give extra horsepower. No matter games or stress test, just enjoy the unprecedented power on Vector GP66.

Whether it is high-level engineering calculations, complex design requirements, the Vector GP series is designed for engineers who need high performance.



VECTOR GP66

Main Features

Top 5 Features

- 12th Gen. Intel® Core™ i7-12700H processor with NVIDIA GeForce® RTX 3070 Ti graphics to offer the phenomenal gaming performance. The Vector GP series performance can reach up to a total of 195W with latest Intel processor and GeForce RTX 3070 Ti via MSI OverBoost Technology.
- Dedicated thermal solutions for both the CPU and GPU with 6 heat pipes, work harmoniously by minimizing the heat and maximizing the airflow for smooth gaming performance in a compact chassis.
- **15.6" FHD 360Hz** ultra high refresh rate gaming display to experience fluid gameplay.
- Per-key RGB gaming keyboard by SteelSeries accompanies with customizable SteelSeries GG software.
- The latest Wi-Fi 6E delivers stunning speed while keeps the network smooth and stable even when sharing the network with numerous users.
- The new Smart Auto will automatically detect current situation you're in and adjust the system into different modes, resulting in the best experience for your laptop (including performance and battery durability).



VECTOR GP66

System Performance Reference (Condition & Baseline)

Test Condition

Before Test Starts:

Laptop comes with various settings that optimize the system based on scenarios. To ensure the unit is under correct condition, please help check the follows:

- Laptop is plugged-in to AC, and not set to Battery Saver in Windows.
- Windows updates are completed or paused, and not running in the background.

Sample Status:

BIOS version: E1544IMS.405

EC version: 1544EMS1.107

VGA driver version: 497.17 or newer

MSI Center version: 1.0.36.0 or newer

Benchmark & Game Performance Settings:

3DMark Time Spy Score / Time Spy Graphics

Cinebench R23: Multi cores score

Cinebench R20: Multi cores score

* Normally the CPU temperature is below 95 °C, the GPU temperature is below 87 °C.
If the CPU/GPU temperature is above the sample is over the ceiling, please contact MSI windows to verify.



VECTOR GP66

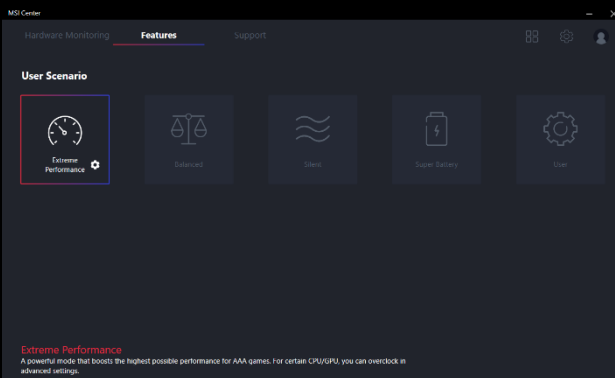
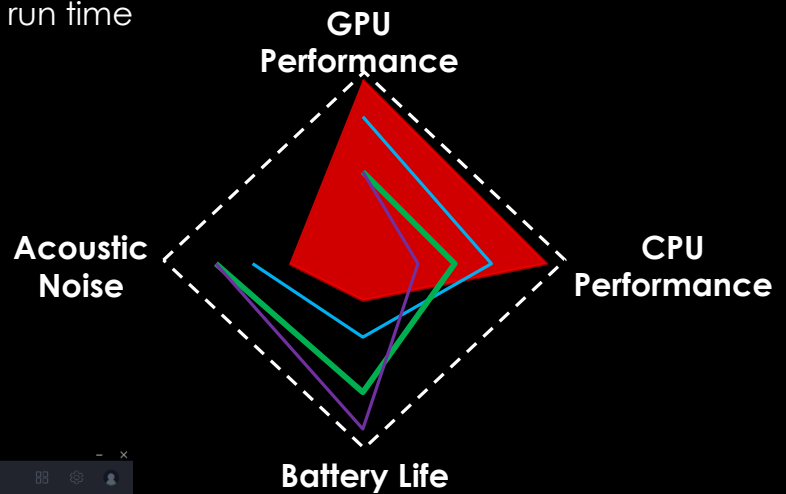
System Performance Reference (Condition & Baseline)

Recommended Settings

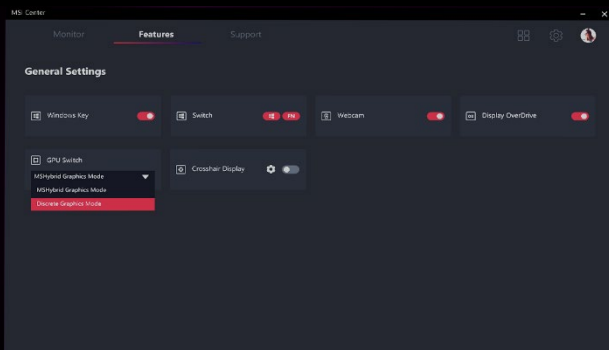
4 different settings with different preferences

Based on the preference of media , suggest to adjust settings beforehand.

- ❑ **Extreme Performance** : Best system performance , with Turbo Boost setting.
- ❑ **Balanced** : Optimized balance setting between performance , noise and battery.
- ❑ **Silent** : minimized system noise
- ❑ **Super Battery** : Longest battery run time



Check_1: Please switch to Extreme Performance Mode



Check_2: Please enable Discrete Graphics Mode

* The system performance might be elevated by enabling Cooler Boost and GPU overclock.



VECTOR GP66

System Performance Reference (Condition & Baseline)

CPU Benchmark (Cinebench R20/R23 Multi)

■ Vector GP66 12UGS
(i7-12700H + RTX 3070 Ti)

17000

R23 Multi

7000

R20 Multi

GPU Benchmark (3DMark Time Spy / Time Spy Graphics)

■ Vector GP66 12UGS
(i7-12700H + RTX 3070 Ti)

12000

Time Spy Score

11800

Time Spy Graphics

* $\pm 3\%$ performance gap compare to your test result is reasonable, if the benchmark result is significantly far from yours, please contact MSI windows to verify.



VECTOR GP66

MSI OverBoost Technology



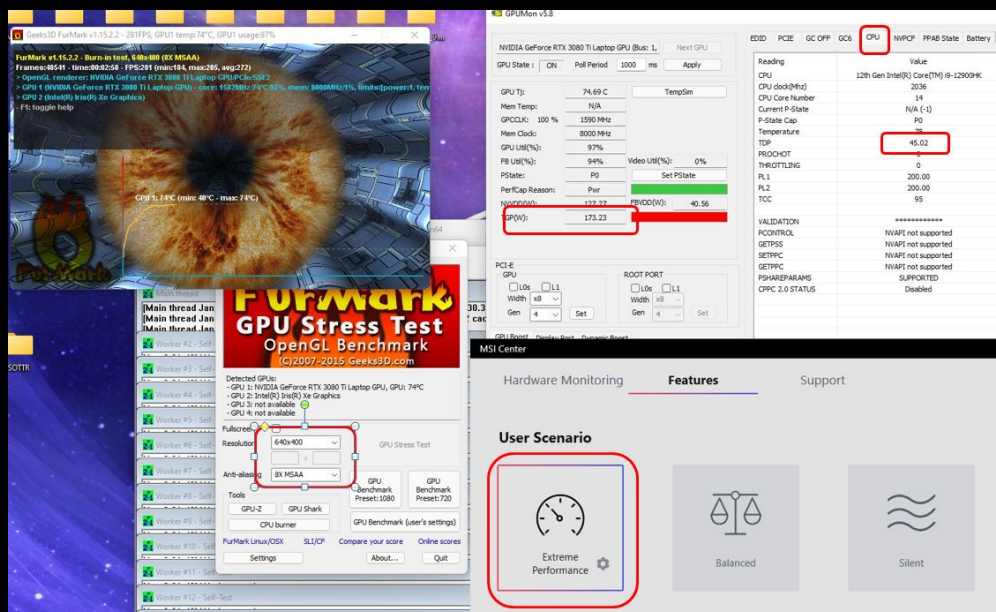
*MSI OverBoost technology: Combined full load of CPU-GPU, maximize 150W graphics power by GeForce RTX™ 3070 Ti Laptop GPU, with 45W by 12th Gen Intel® Core™ i9 / i7 Processors. Under Extreme Performance mode by MSI Center with AC power.

Test Method (Applications)

Prime95 + FurMark (CPU+GPU Burn-in Test)

Condition:

- Switch to Extreme Performance Mode in MSI Center
- FurMark settings: Resolution 640*400 & Anti-aliasing 8X MSAA



* It's the example, the test SKU is not the same as this sample.



VECTOR GP66

- Specification -

Model Name	Vector GP66 12UGS
Processor	Latest 12th Gen Intel® Core™ i7-12700H Processor
Operating System	Windows 11 Home
Chipset	Integrated SoC
Memory	DDR4-3200, 2 slots, up to 64GB
Display	15.6" QHD (2560x1440), 165 Hz Refresh Rate, 100% DCI-P3(Typical), IPS-Level panel (Optional) 15.6" Full HD (1920x1080), 240 Hz Refresh Rate, IPS-Level panel (Optional)
Graphics	Latest NVIDIA® GeForce RTX™ 3070 Ti Laptop GPU 8GB GDDR6
Storage Slots	2 x NVMe M.2 SSD by PCIe Gen4 x4
Keyboard	Per-Key RGB gaming keyboard by SteelSeries
Audio	2 x 2W Stereo Speakers 1 x Audio combo jack Nahimic 3 Audio Enhancer Hi-Res Audio ready
USB Ports	1 x USB 3.2 Gen2 Type-C / DP 3 x USB 3.2 Gen1 Type-A
Video Output	1 x USB 3.2 Gen2 Type-C / DP, 1 x Mini DisplayPort 1 x HDMI (8K@60Hz / 4K@120Hz)
Communication	Gigabit Ethernet (up to 2.5GbE) Intel® Wi-Fi 6E AX211, Bluetooth v5.2
Webcam	HD type (30fps@720p)
Battery	4-Cell, Li-Polymer, 65Whr
Power Adapter	280W
Dimension	358 (W) x 267 (D) x 23.4 (H) mm
Weight	2.38 Kg