MINERVA

DP8503 PCIe x 8 Gen 4 with ReDriver for Gen Z 1 C dual port AIC

Performance & Burn In Test Rev. 1. 0

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DP8503Rev1.0 Host Bus Adapter

1. Overview

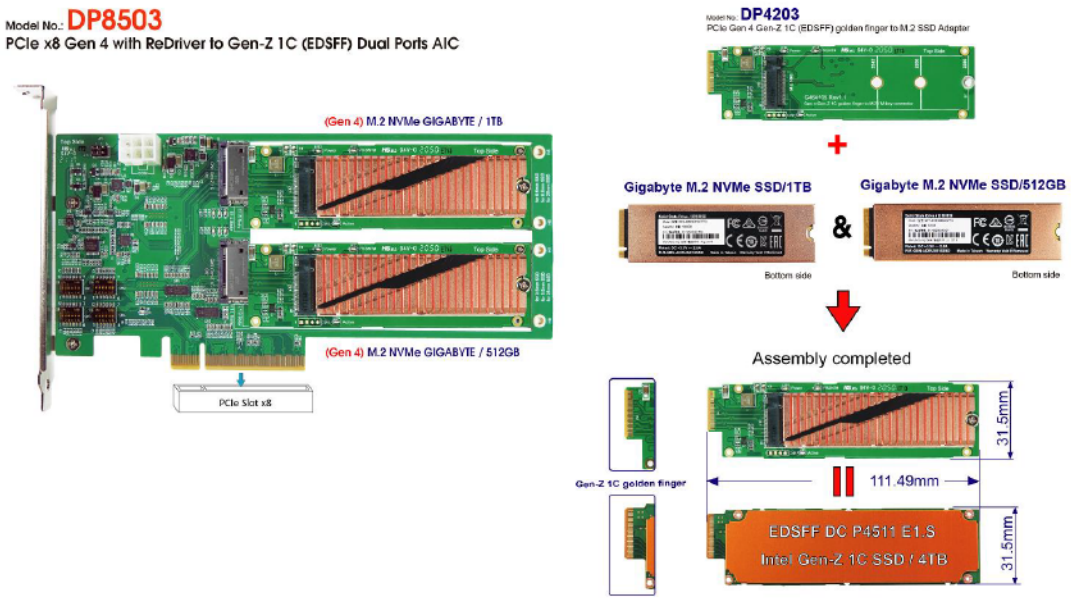
The Host Bus Adapter may provide PCIe x8 Gen4, 16GT/s high-speed signals, it can be bifurcated into two x4 for Gen-Z 1C (EDSFF) dual port.

2. Tools and Results of Performance Measurement

2.1 Test Platform:

M/B :	GIGABYTE **X570 AORUS MASTER**
CPU :	AMD **Ryzen 7, 3700X 8-Core**
Memory :	Kingston **KVR26N19D8/16,** DDR4-2666MHz, **32GB**(16GB DIMM*2)
ATX Power :	COOLER MASTER G750M, **750W ATX**, 12V V2.2 Power Supply
AIC:	DP8503 PCIe x8 Gen 4 with Redriver to Gen-Z 1C dual port ADD-in Card
Adapter:	DP4203 Gen-Z 1C to M.2 M-key
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP9504, DP4203, **Gigabyte 1TB NVMe SSD** & **512GB NVMe SSD**



2.3 Install Hardware

Inserts M.2 NVMe SSD into DP4203 adapter, and plugs DP4203 to DP8503 AIC. The DP8503 AIC plugs into GIGABYTE **X570 AORUS MASTER**

2.4 BIOS & Windows 10 OS environment setup

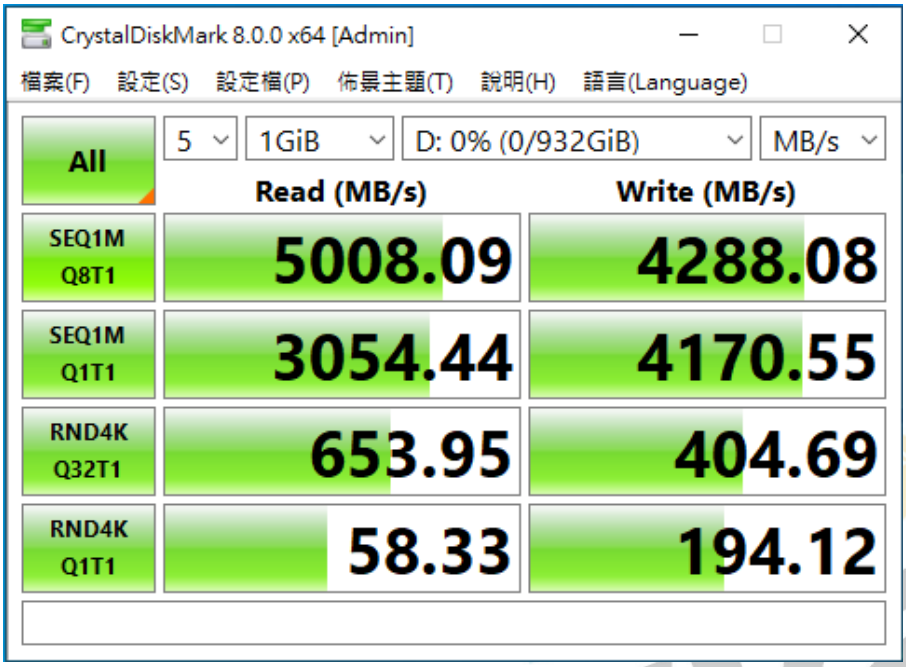
2.4.1 Primary SATA SSD installed Windows 10 OS.

2.4.2 M.2 NVMe SSD, formatted to NTFS Mode. Don’t install any program.

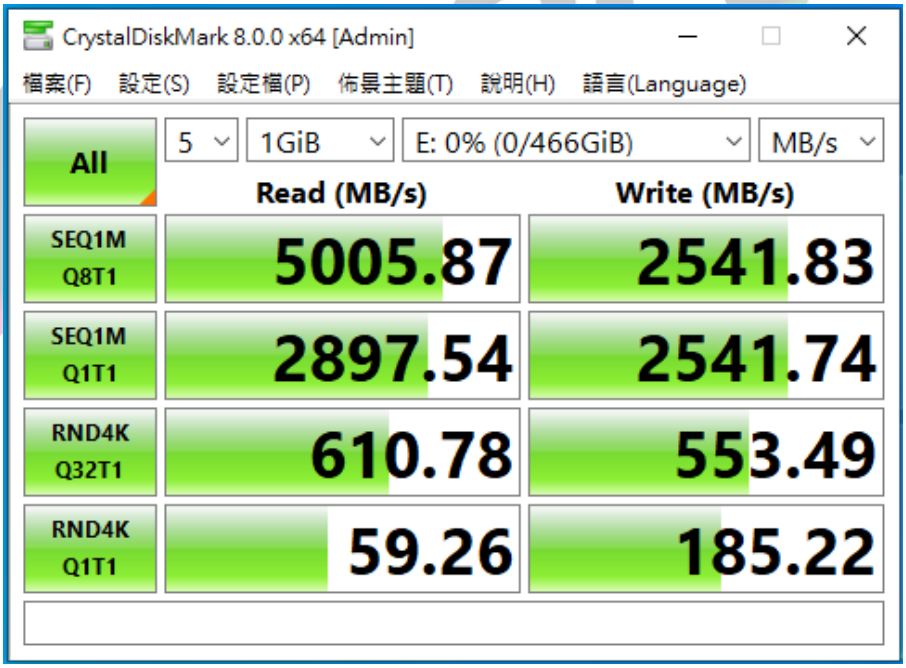
2.5 CrystalDiskMark 8.0 x64 performance test

※Benchmark (Sequential Read & Write / default = 1MB)

2.5.1 **Gigabyte M.2 NVMe SSD/ 1TB** performance as below:



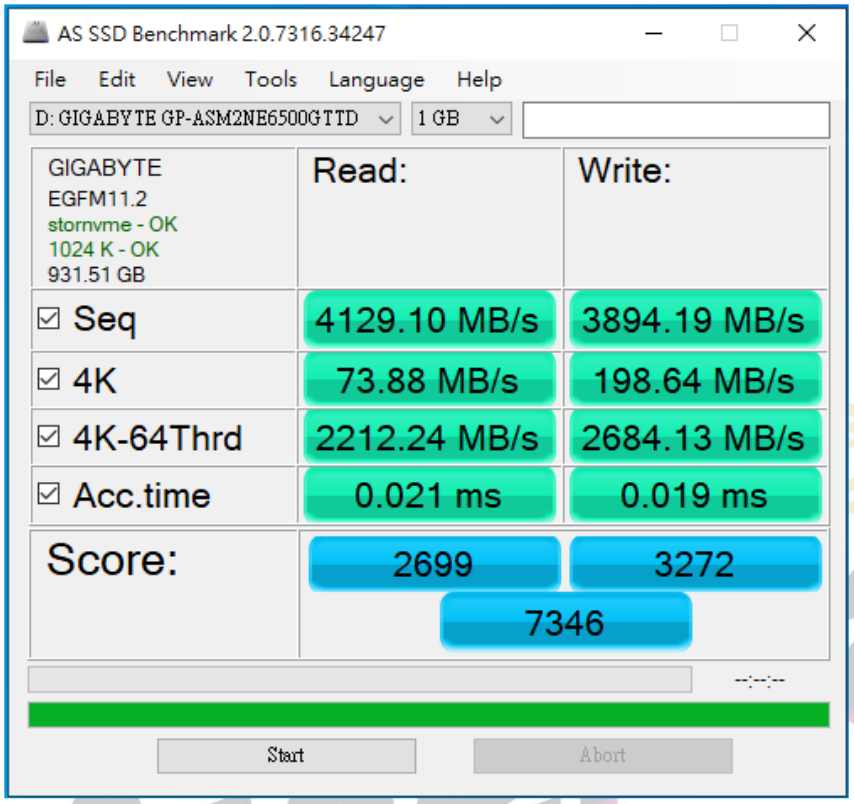
2.5.2 **Gigabyte M.2 NVMe SSD/ 512GB** performance as below:



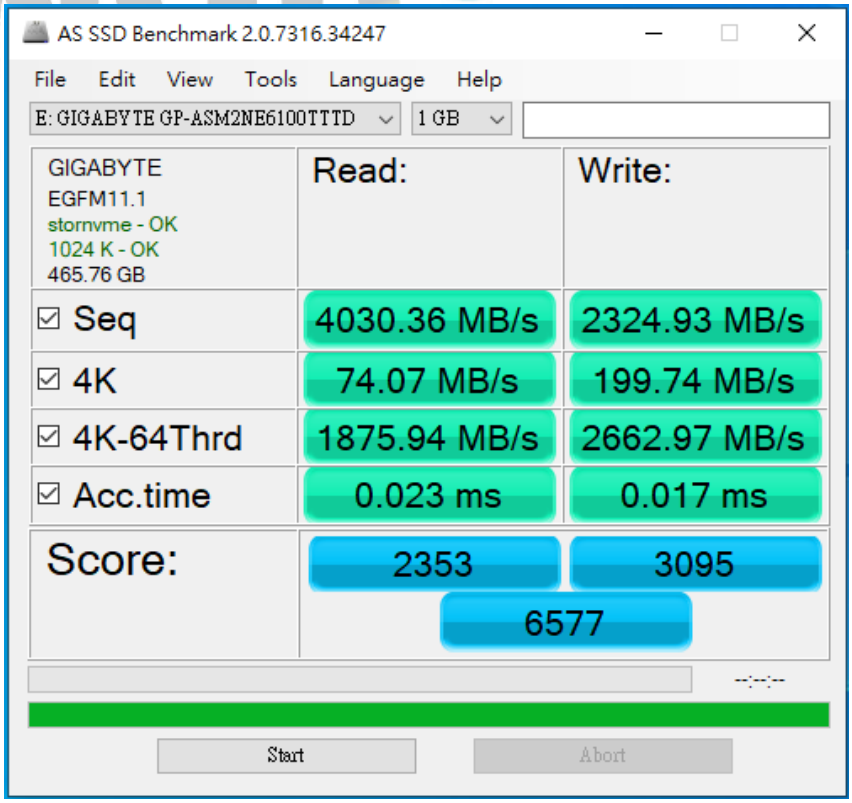
2.6 AS SSD Benchmark 2.0.7 performance test

※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 **Gigabyte M.2 NVMe SSD/ 1TB** performance as below:

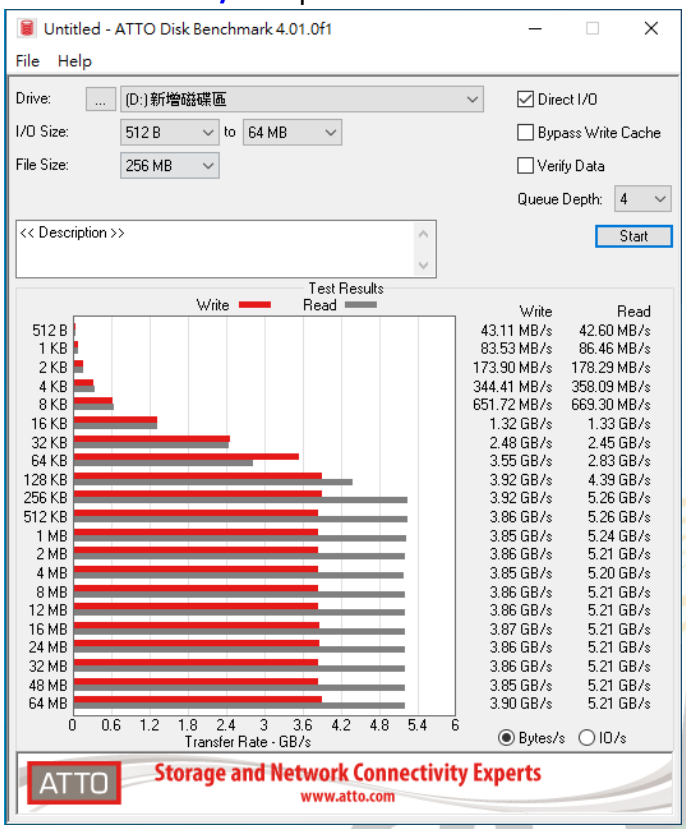


2.6.2 **Gigabyte M.2 NVMe SSD/ 512GB** performance as below:

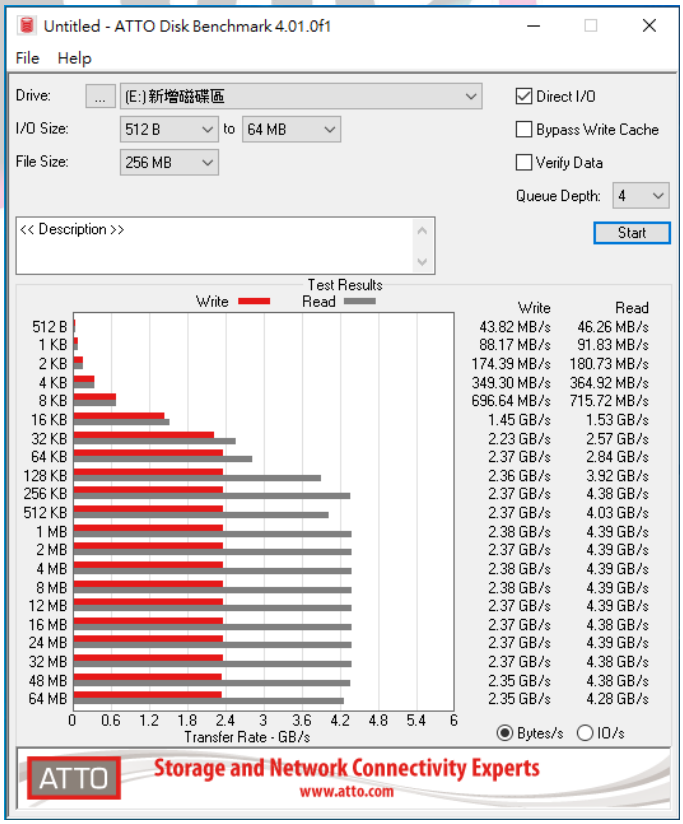


2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 Gigabyte M.2 NVMe SSD/ 1TB performance as below:



2.7.2 Gigabyte M.2 NVMe SSD/ 512GB performance as below:



2.8 AnvilBenchmark_V110_B337

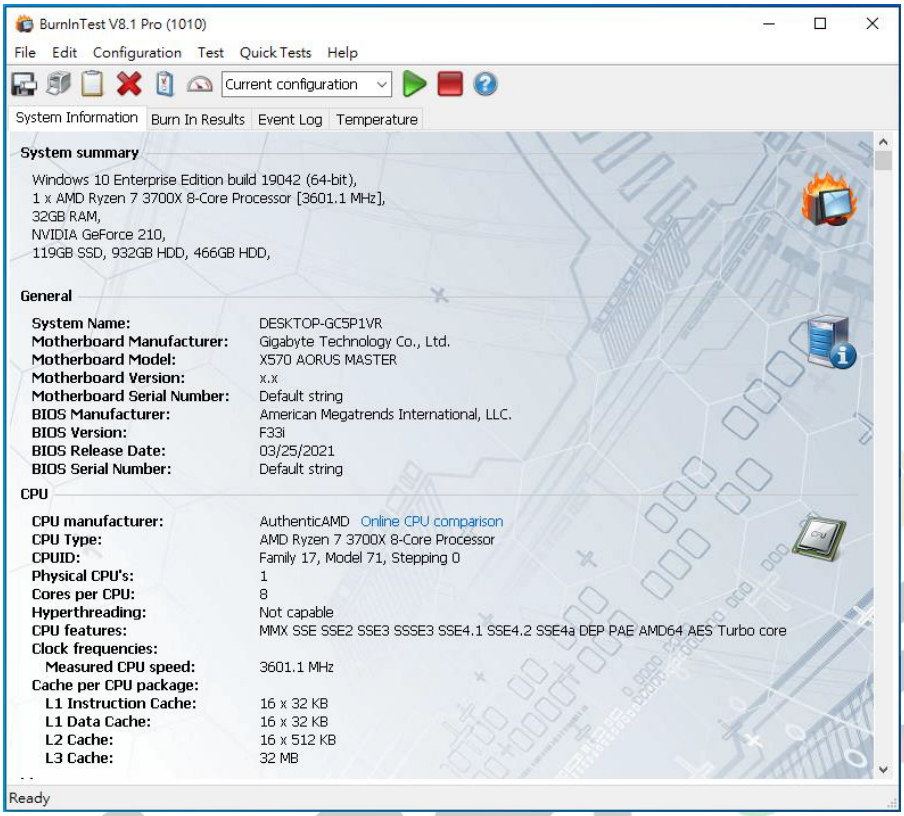
2.8.1 Gigabyte M.2 NVMe SSD/ 1TB performance as below:

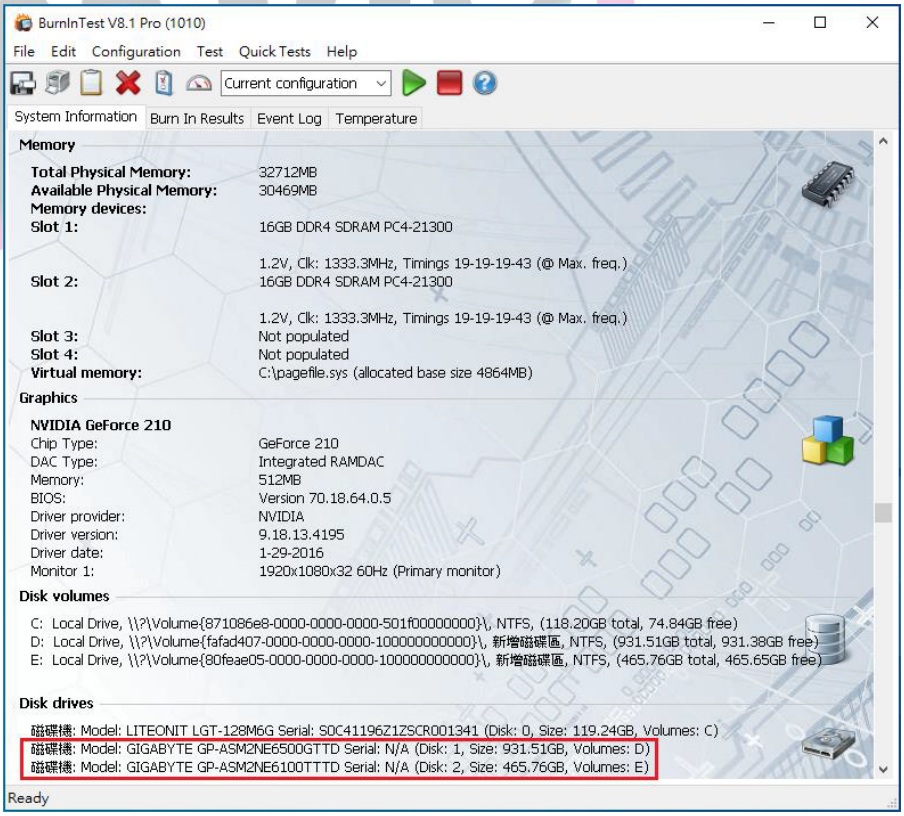
2.8.2 Gigabyte M.2 NVMe SSD/ 512GB performance as below:

3. Burn In Tests and Results

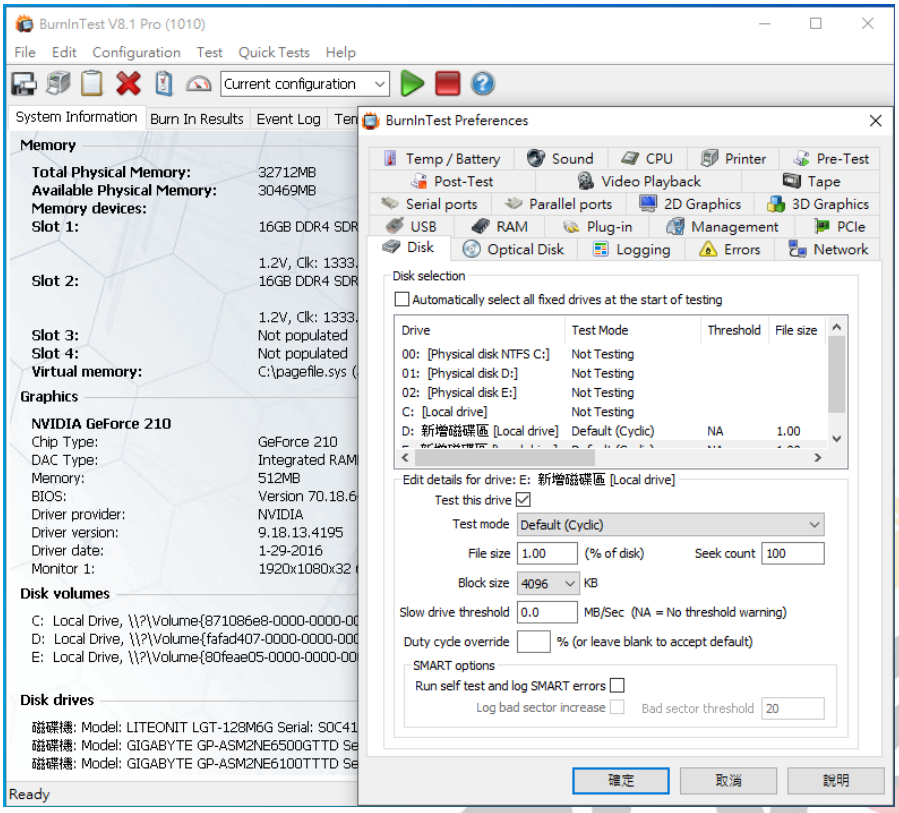
3.1 BurnInTest v8.1 Pro for Gigabyte M.2 NVMe SSD/ 1TB & 512GB

3.1.1 System Information as below:

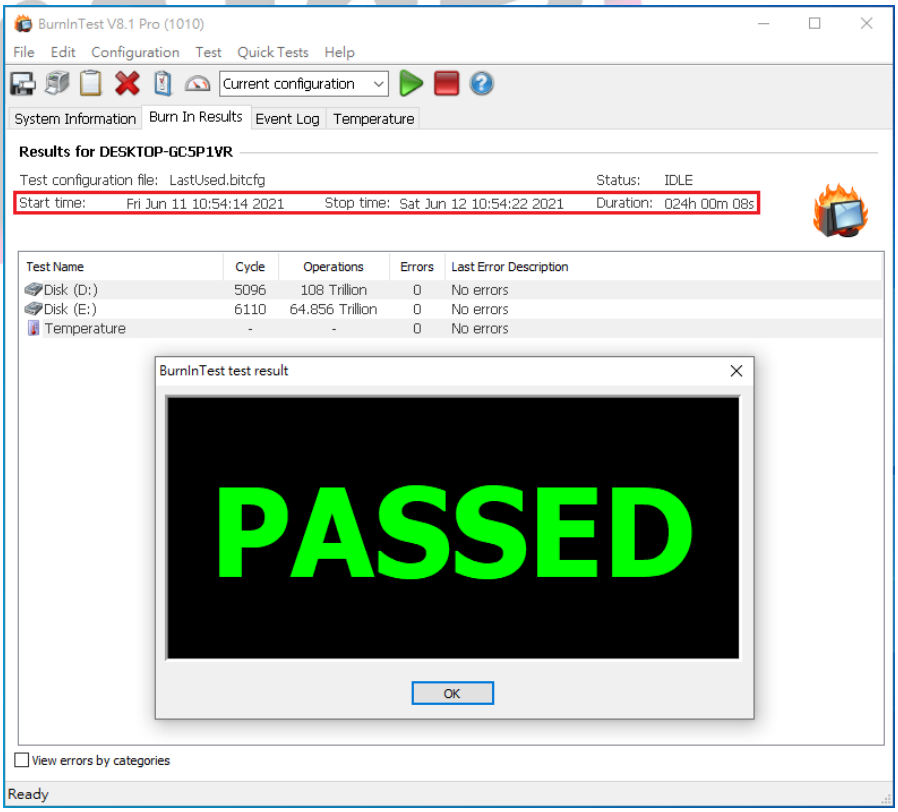




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 NVMe SSD is PCIe Gen 4, 16GT/s , 4 Lanes Interface, I/O speed, max. to 64Gbps.
4.2 DP8503 Host Bus Adapter I/O performance is based on M.2 NVMe SSD.
4.3 DP4203 Host Bus Adapter I/O performance is based on M.2 NVMe SSD.