MINERVA

GD9602A SlimSAS 8i Dual Port to EDSFF 1C Quad Port

Performance & Burn In Test Rev 1.0

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SFF-8654 8i x2 to SFF-TA-1002 x4 Adapter

1. Overview

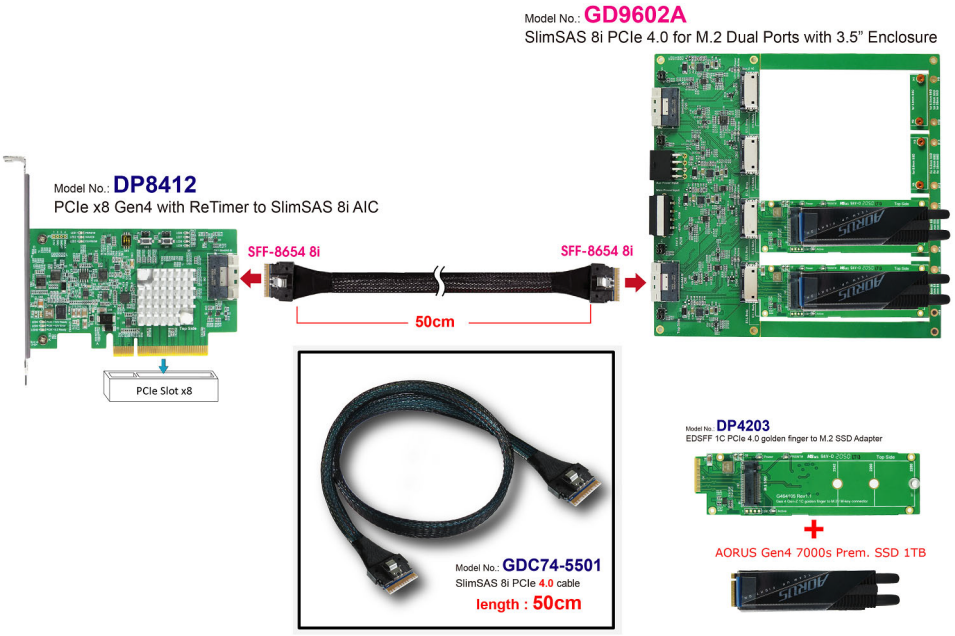
The GD9602A adapter provides four port connectors of EDSFF 1C for EDSFF 1C SSD application. Its each individual EDSFF 1C port supports Hot Plug Power protection and input port is with SlimSAS 8i(SFF-8654) dual port connector. It is designed for use by PCIe x16 bifurcation AIC to be bifurcated four x4 link width.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B :	ASUS **PRIME X570-PRO**
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
Add in Card:	DP8412 PCIe x8 Gen4 bulit-in ReTimer to SlimSAS(SFF-8654) 8i AIC
Cable:	PCIe 4.0 SlimSAS(SFF-8654) 8i Male to Male, **50cm** Cable
Adapter:	DP4203 EDSFF 1C GF to M.2 adapter
Adapter:	GD9602A SlimSAS 8i(SFF-8654) dual port to EDSFF 1C quad port adapter
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP8412, GD9602A, DP4203 with GIGABYTE M.2 1TB x2pcs



2.3 Install Hardware

First inserts the M.2 SSD into the DP4203 adapter, and then inserts DP4203 adapter into EDSFF 1C connector of GD9602A adapter. To connect the GD9602A to the DP8412 AIC card (PCIe x8 Gen 4 with ReTimer to SFF-8654 8i) using the **GDC74-5501, 50cm Cable**, and Plugs DP8412 AIC into ASUS **PRIME X570-PRO**.

2.4 BIOS & Windows 10 OS environment setup

2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

2.4.2 Two M.2 NVMe SSDs, formatted to NTFS Mode. Don't install any program.

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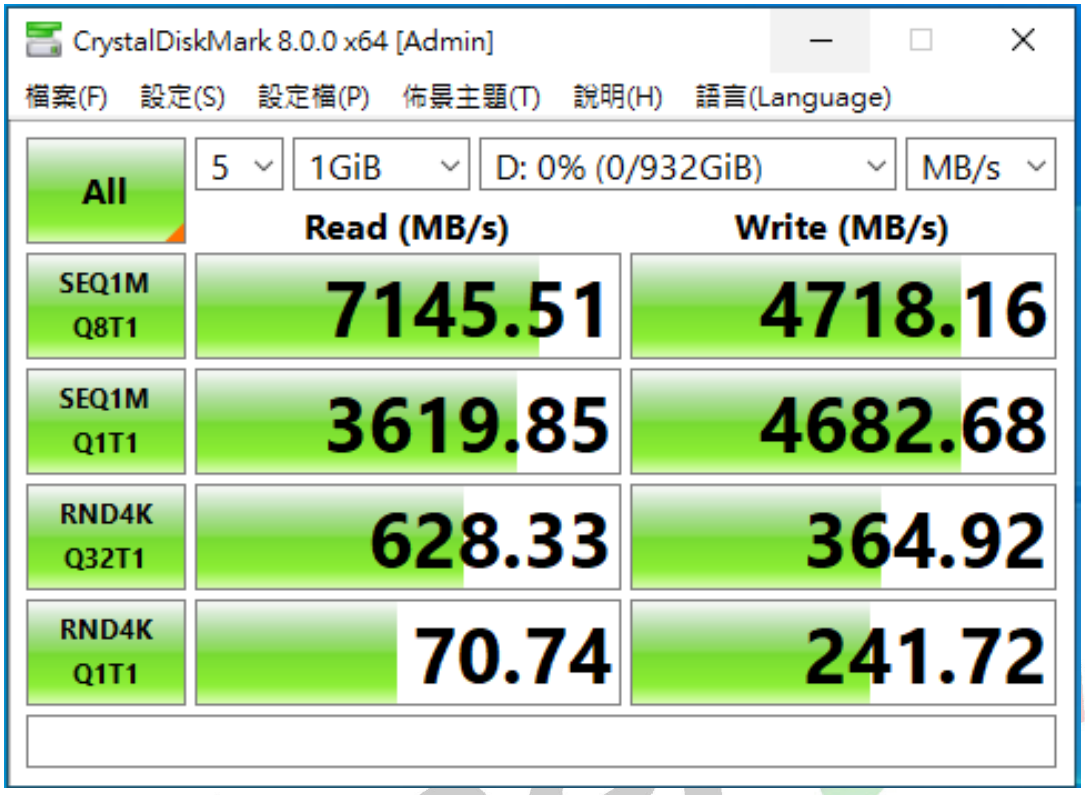
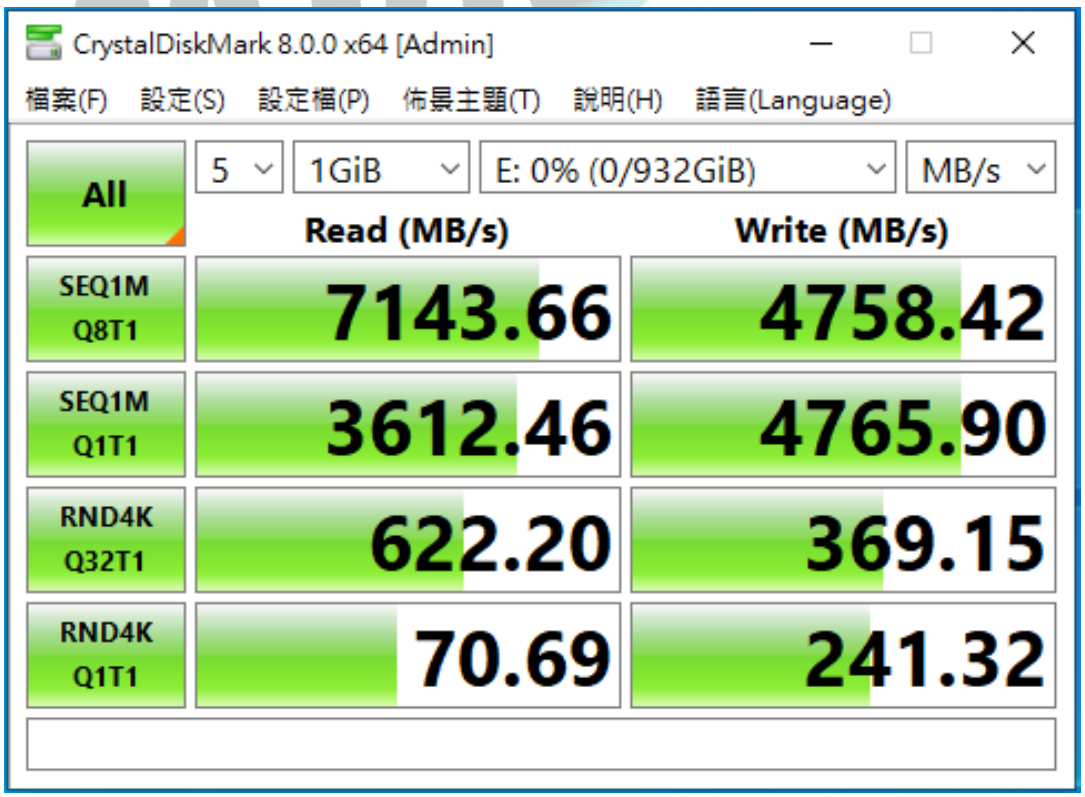
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

2.5.1 **M.2 NVMe Gigabyte** / **1TB** in **CN3 port:** performance as below:



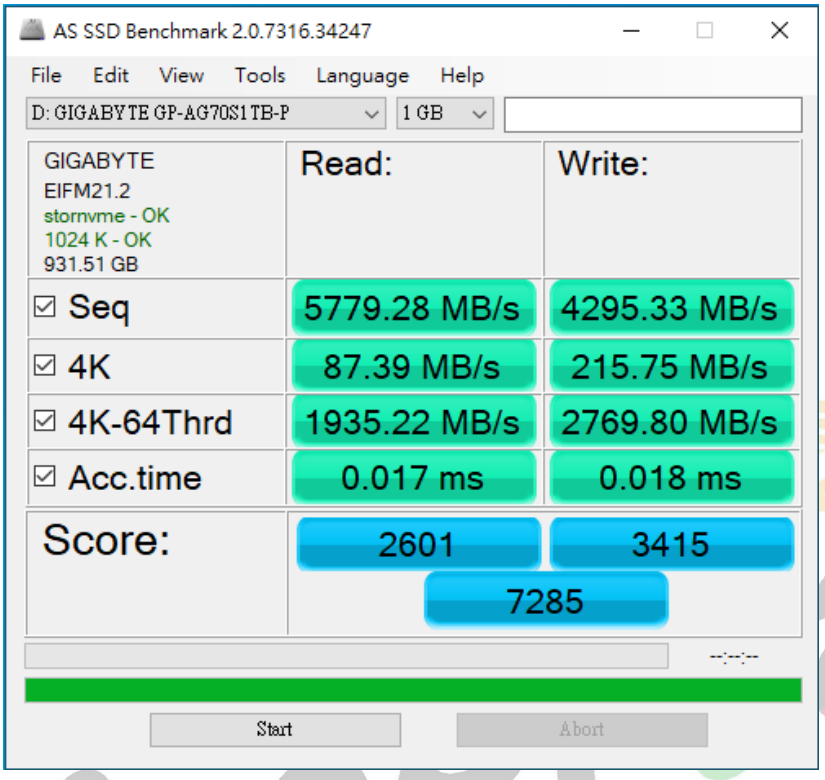
2.5.2 **M.2 NVMe Gigabyte** / **1TB** in **CN4 port:** performance as below:



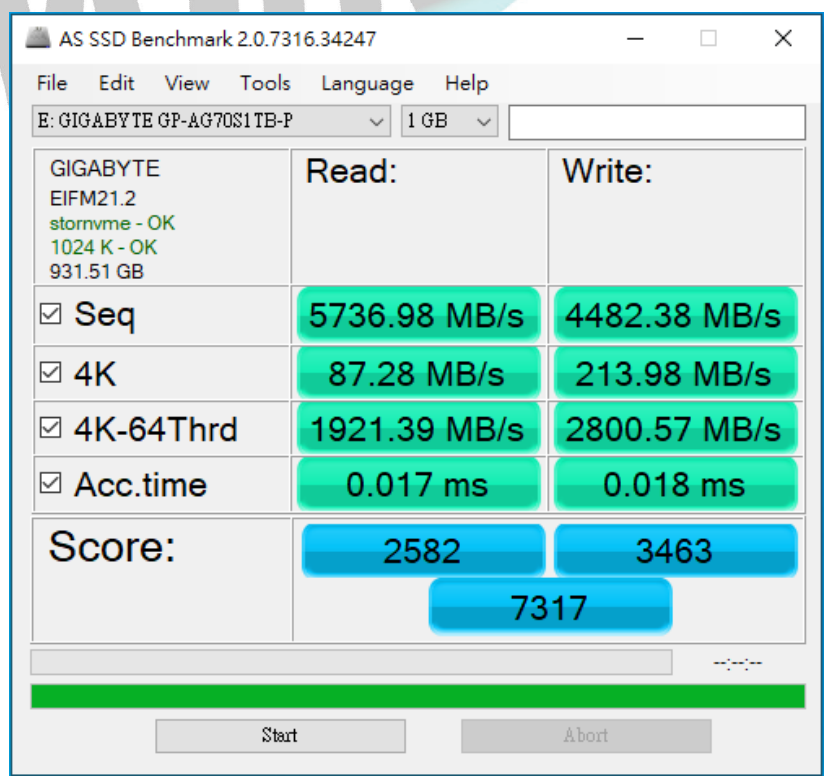
2.6 AS SSD Benchmark 2.0 performance test

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

2.6.1 M.2 NVMe Gigabyte / 1TB in CN3 port: performance as below:

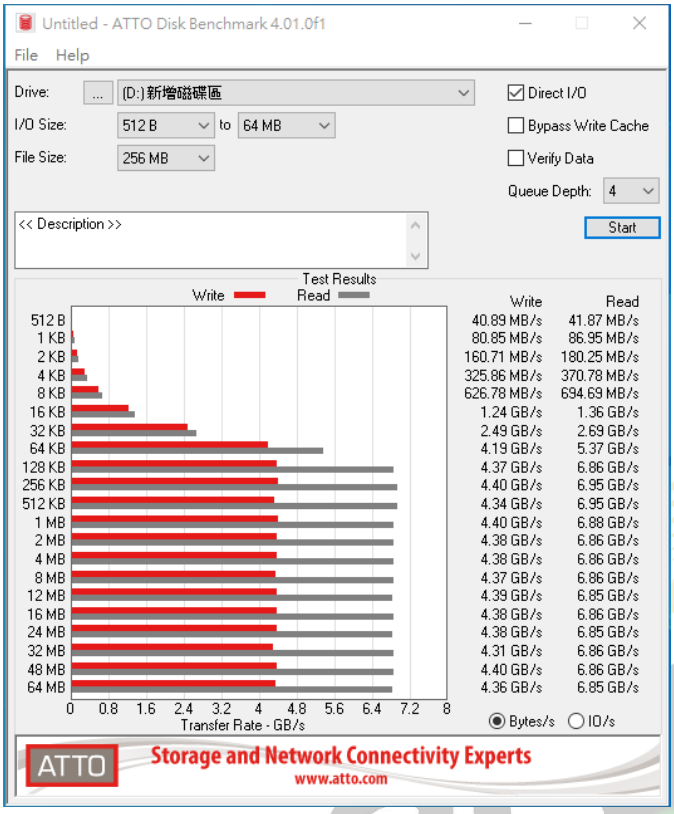


2.6.2 M.2 NVMe Gigabyte / 1TB in CN4 port: performance as below:

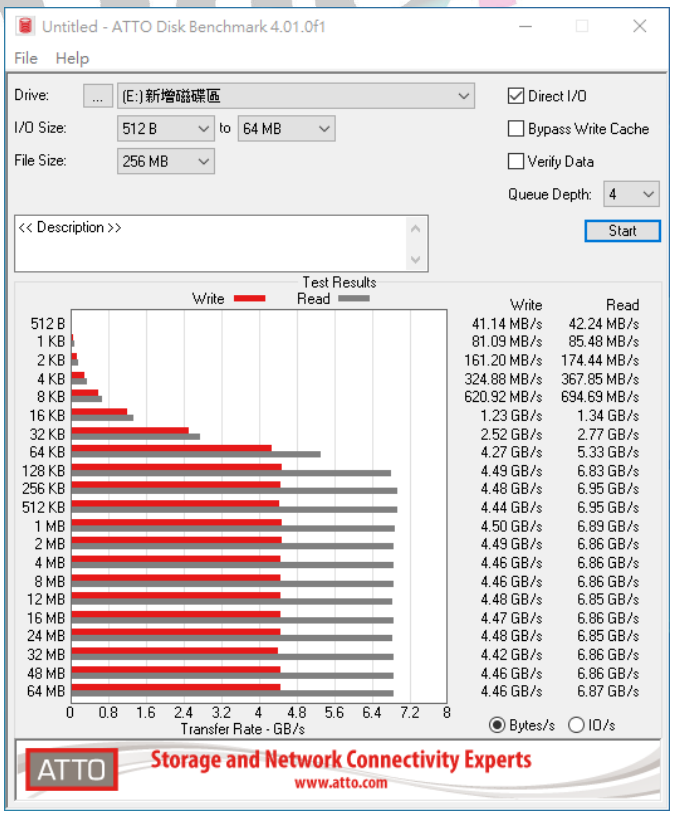


2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 **M.2 NVMe Gigabyte / 1TB in CN3 port: performance as below:**



2.7.2 **M.2 NVMe Gigabyte / 1TB in CN4 port: performance as below:**



2.8 AnvilBenchmark_V110_B337

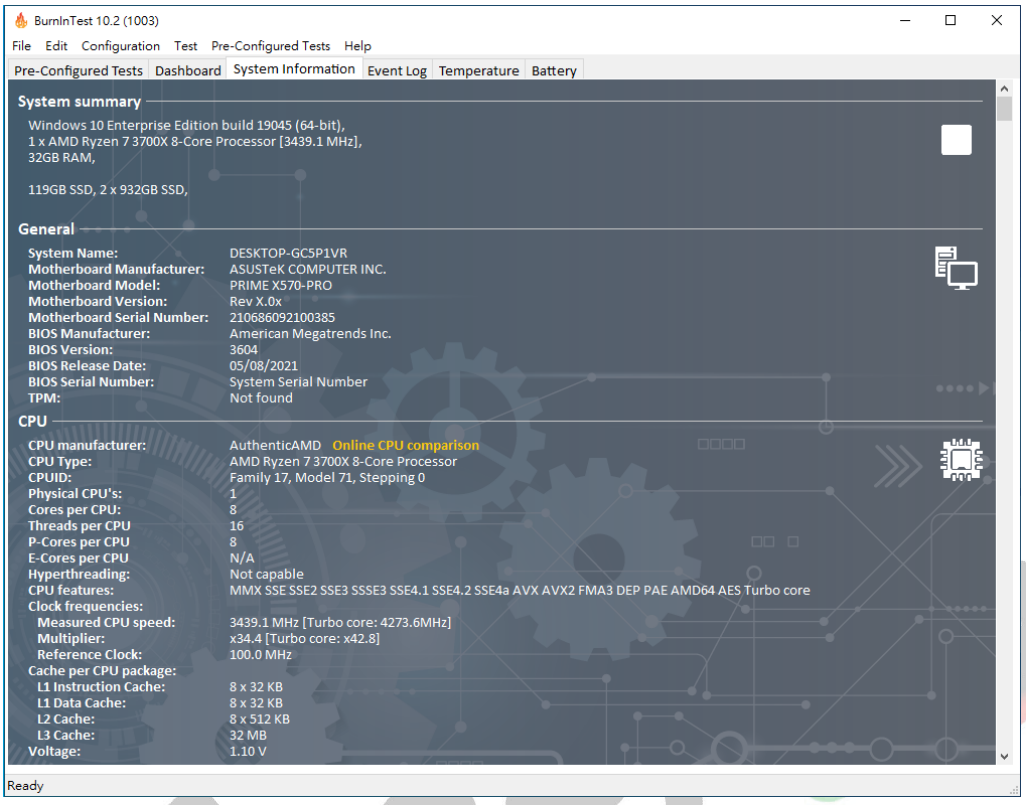
2.8.1 M.2 NVMe Gigabyte / 1TB in CN3 port: performance as below:

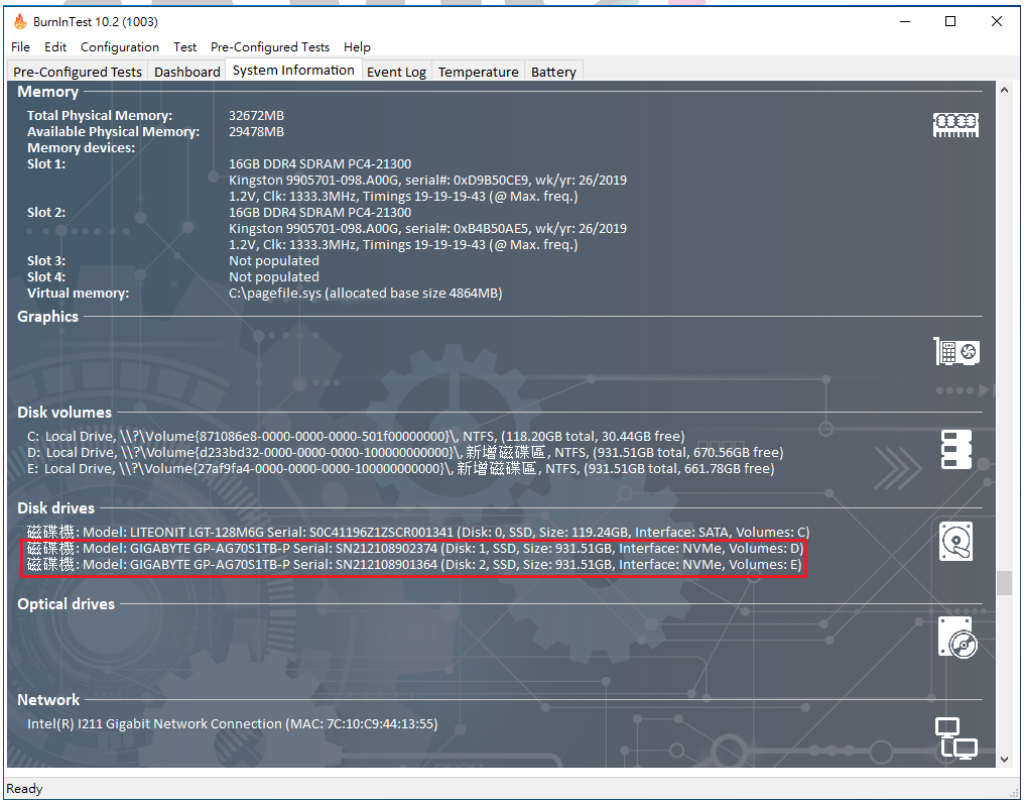
2.8.2 M.2 NVMe Gigabyte / 1TB in CN4 port: performance as below:

3. Burn In Tests and Results

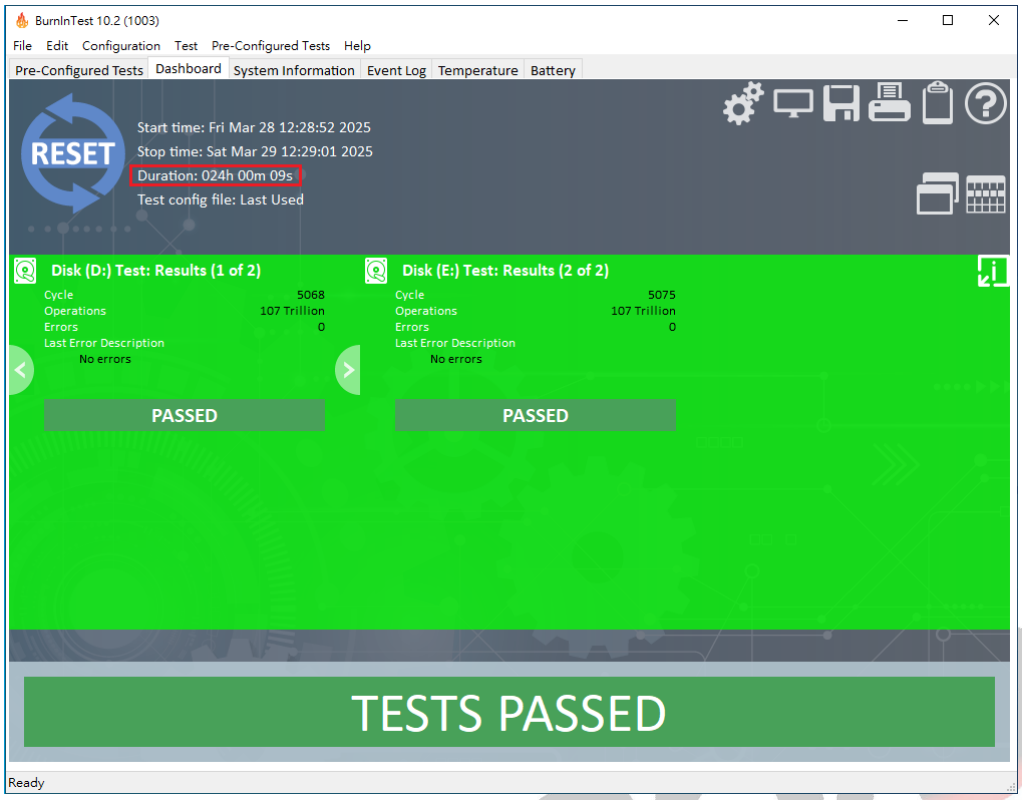
3.1 BurnInTest v10.2 Pro

3.1.1 system information as below:





3.1.2 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 NVMe SSD is PCIe Gen 4 / 4 Lane Interface, I/O speed, max. to 64Gbps.

4.2 GD9602A adapter I/O performance is based on M.2 NVMe SSD.