Performance & Burn In Test Rev 1.0

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1. Overview

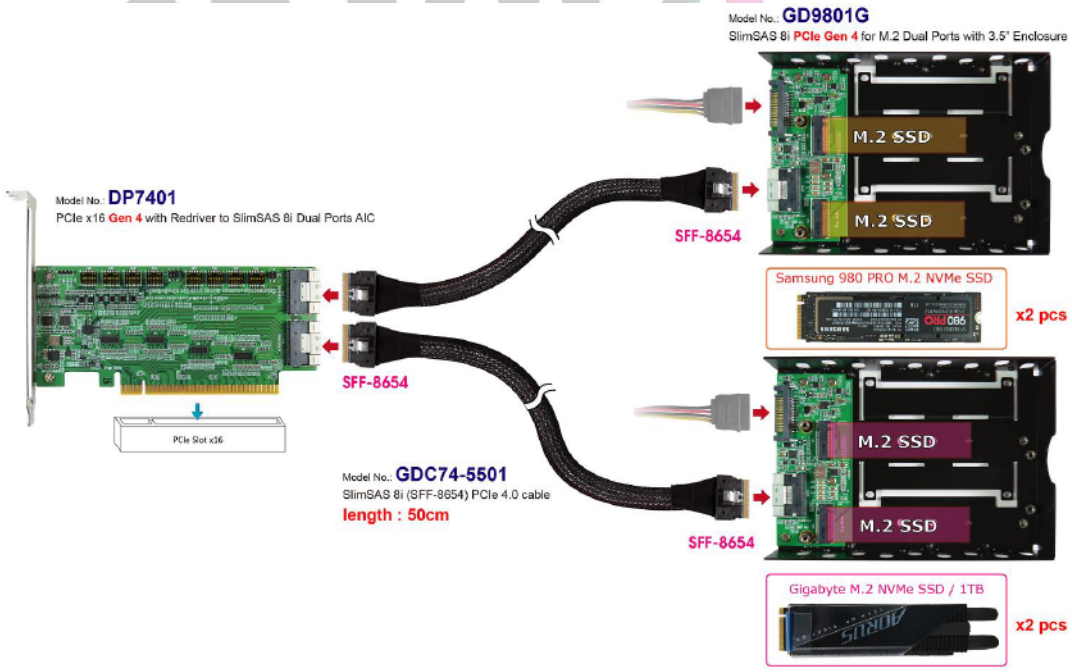
The DP7401 AIC has built-in ReDriver and is with SlimSAS 8i(SFF-8654) dual port connectors. It is designed for use by PCIe x16 to be bifurcated four x4 link width or can extend PCIe x16 signals channel reach. The PCIe 4.0 ReDriver may support CTLE boosts up to **13 dB**.

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:	DP7401 PCIe x16 to with ReDriver SlimSAS 8i(SFF-8654) dual port AIC
Cable:	PCIe 4.0 SFF-8654 8i, 50cm Cable
Adapter:	GD9801G SlimSAS 8i(SFF-8654) PCIe 4.0 to M.2 dual port adapter
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP7401, GD9801G adapter with M.2 1TB



2.3 Install Hardware

First inserts the M.2 SSD into the GD9801G M.2 connector and connects the GD9801G adapter to the DP7401 AIC card (PCIe x16 Gen 4 to SFF-8654 8i dual port), using the **GDC74-5501 Cable**, and Plugs DP7401 AIC into PCIe x16 Slot of ASUS **PRIME X570-PRO** mainboard.

2.4 BIOS & Windows 10 OS environment setup

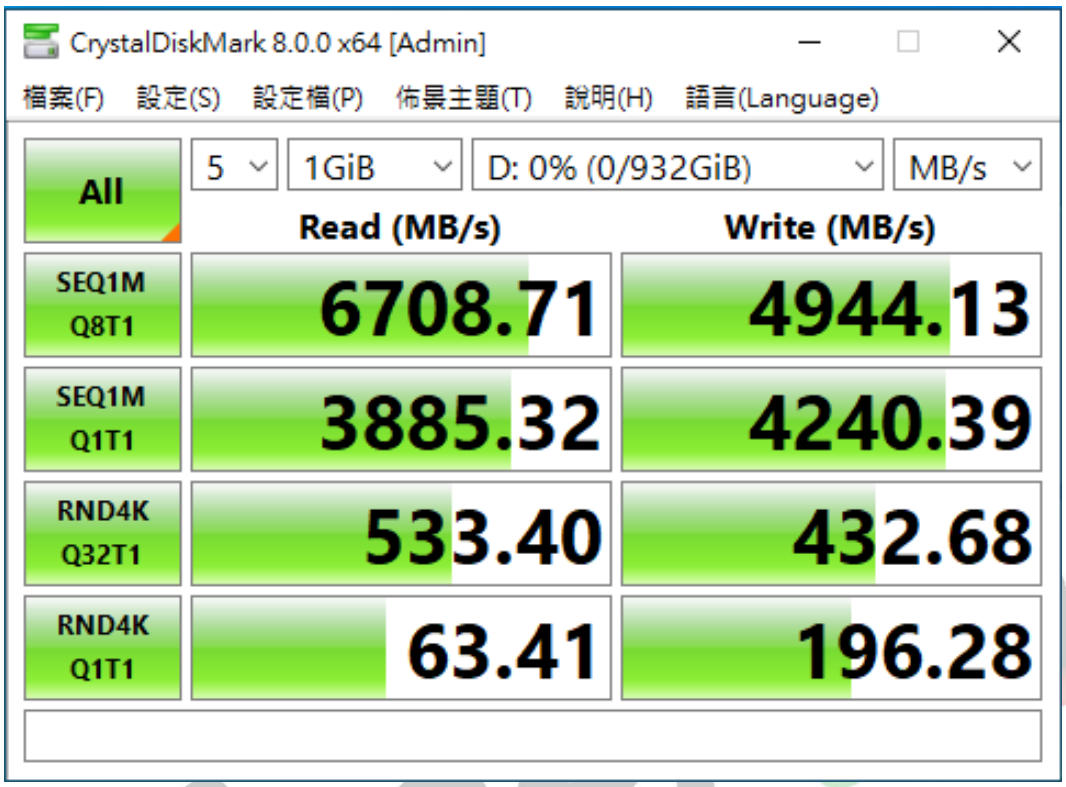
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

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

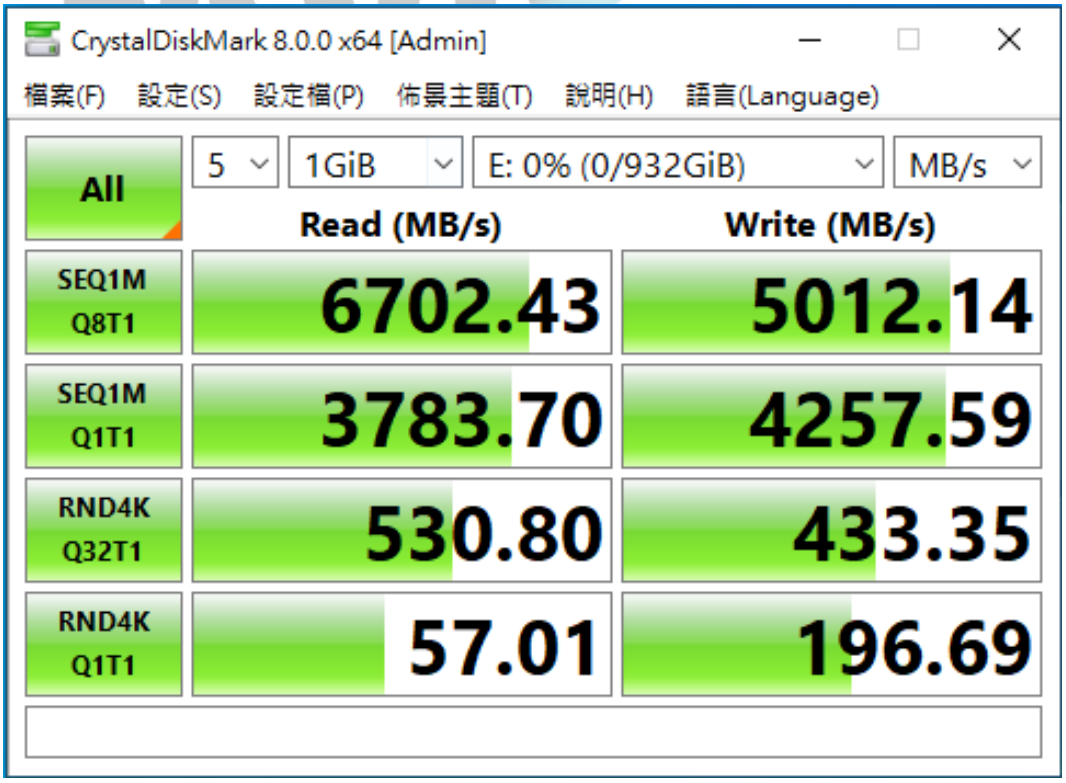
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

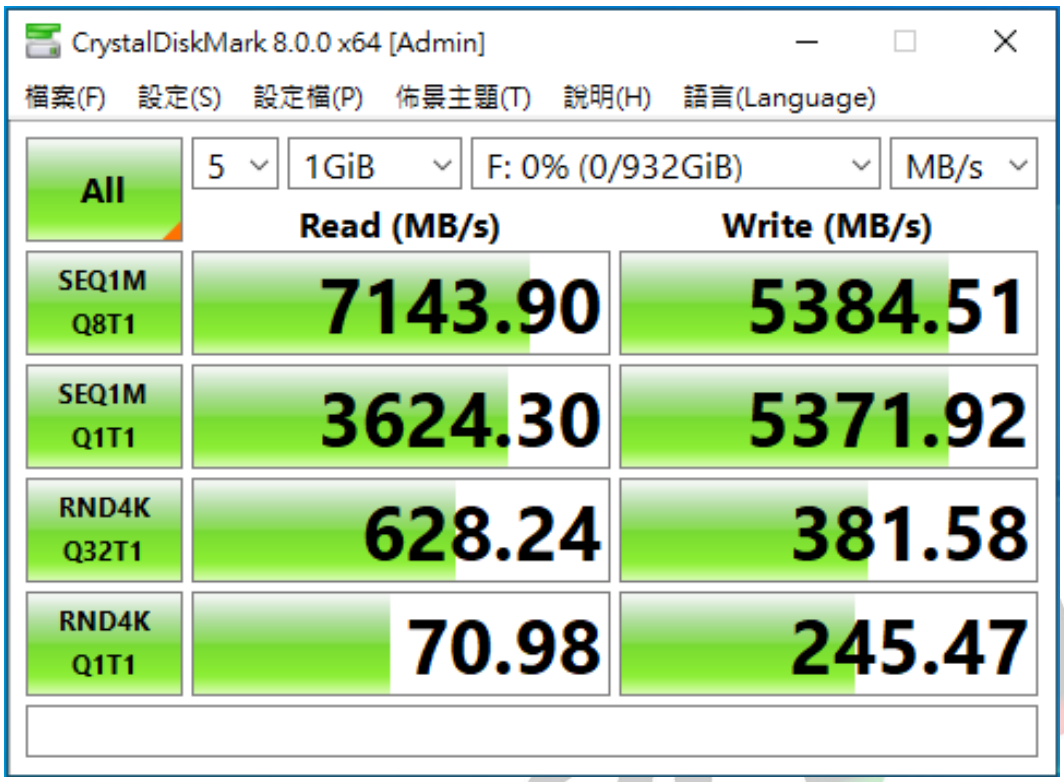
2.5.1 SAMSUNG 980 PRO M.2 / 1TB in **Drive D:** performance as below:



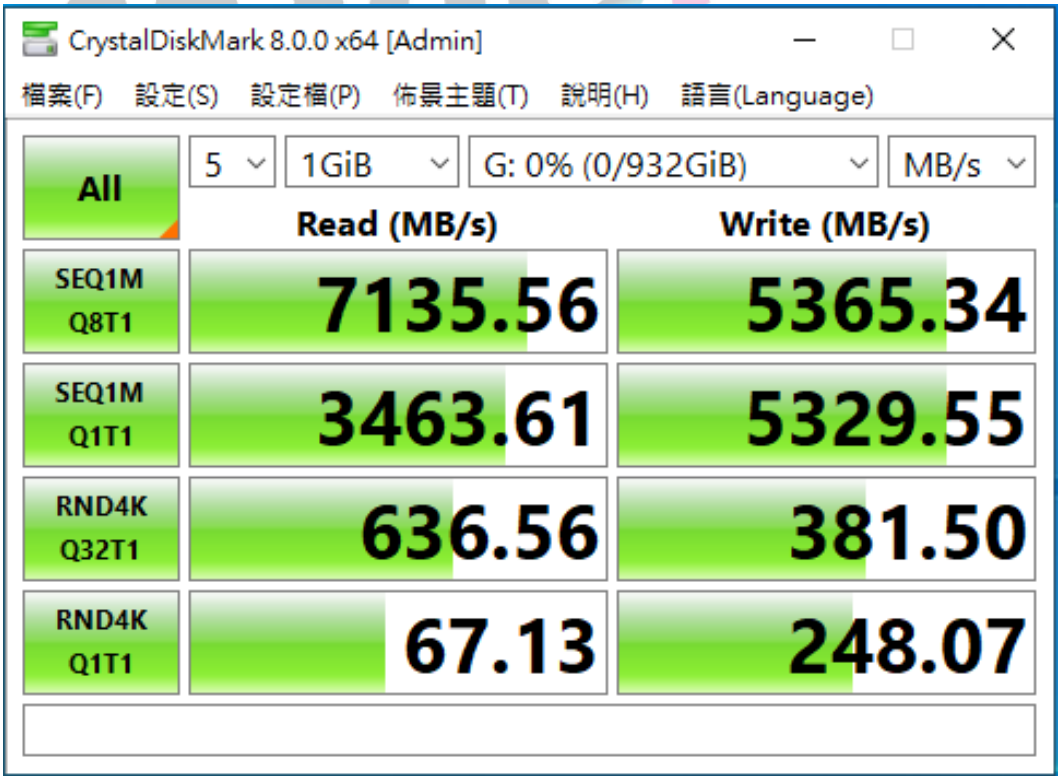
2.5.2 SAMSUNG 980 PRO M.2 / 1TB in **Drive E:** performance as below:



2.5.3 GIGABYTE M.2 / **1TB** in **Drive F:** performance as below:



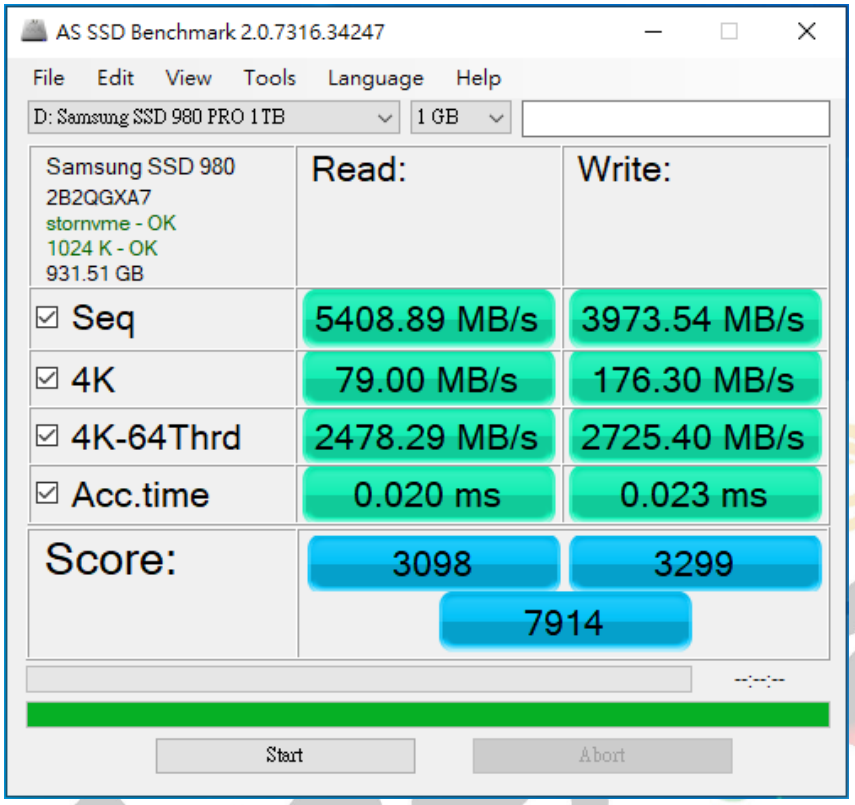
2.5.4 GIGABYTE M.2 / **1TB** in **Drive G:** performance as below:



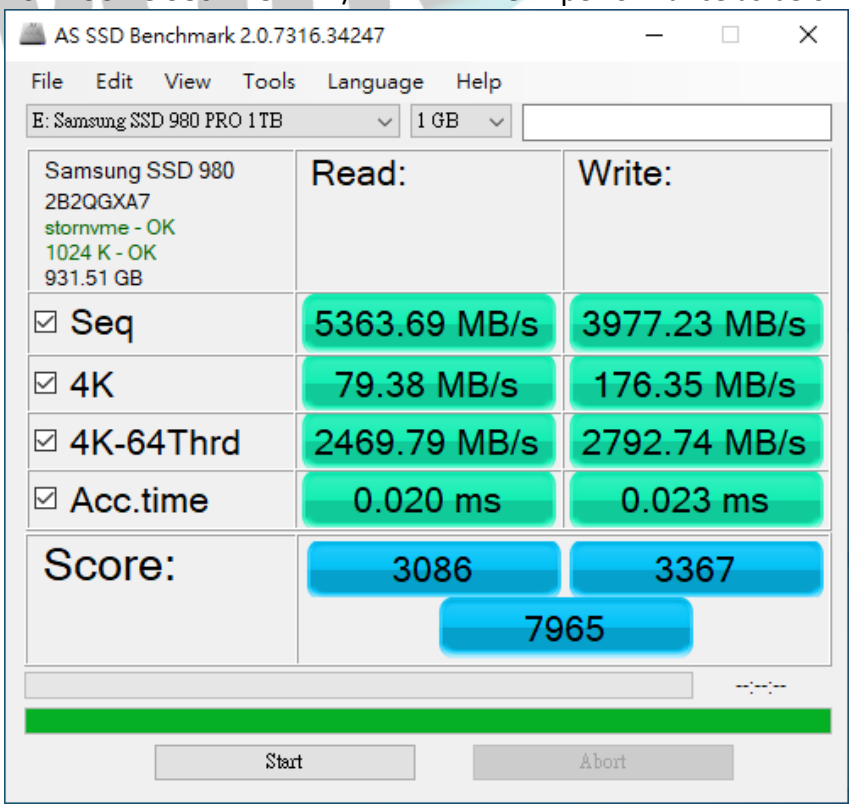
2.6 AS SSD Benchmark 2.0 performance test

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

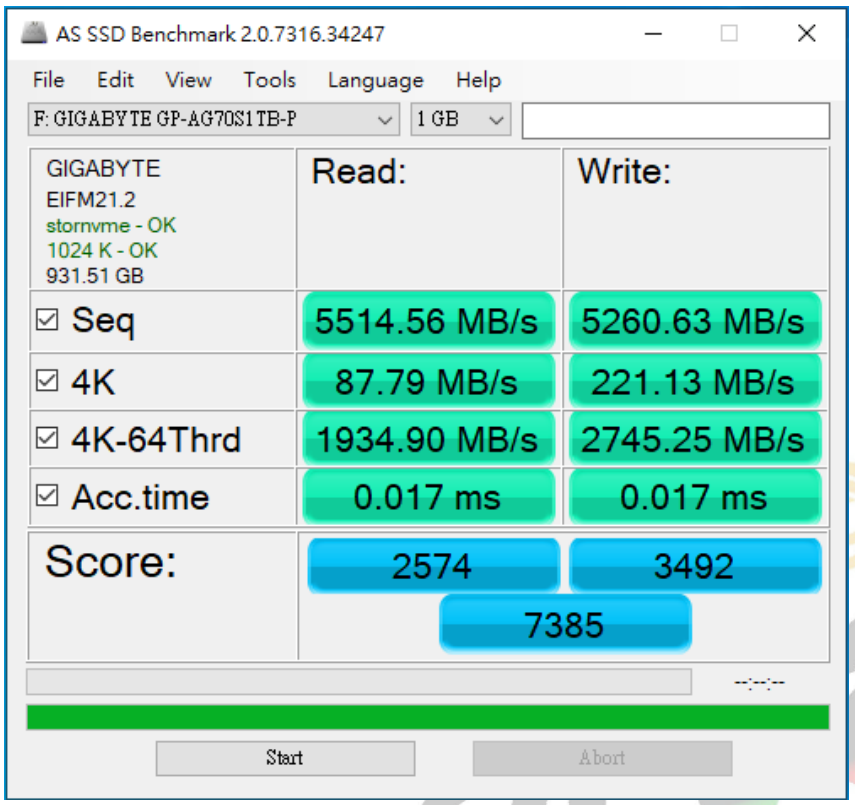
2.6.1 SAMSUNG 980 PRO M.2 / 1TB in **Drive D:** performance as below:



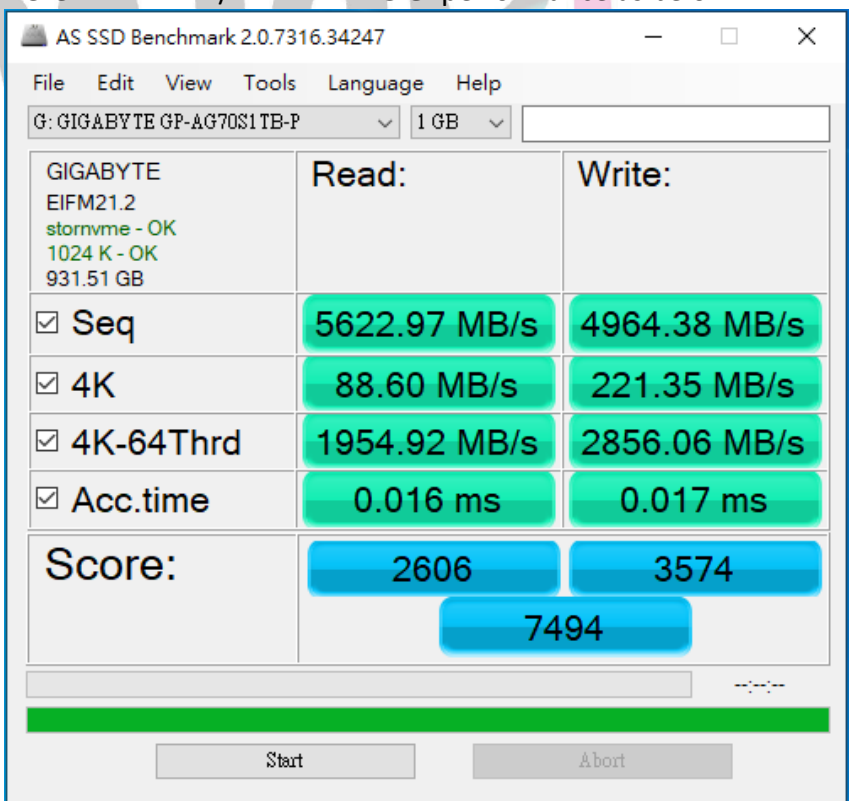
2.6.2 SAMSUNG 980 PRO M.2 / 1TB in **Drive E:** performance as below:



2.6.3 GIGABYTE M.2 / **1TB** in **Drive F:** performance as below:

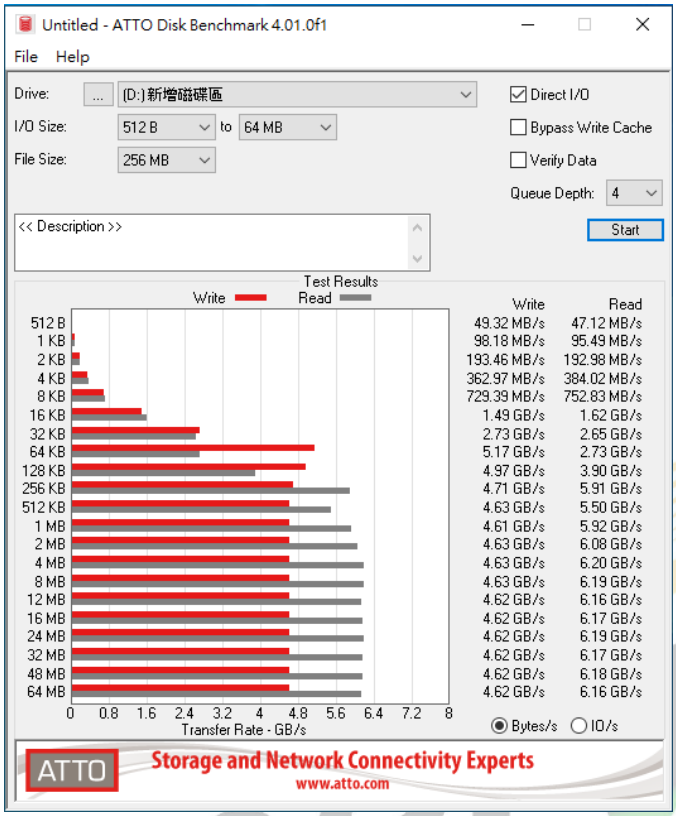


2.6.4 GIGABYTE M.2 / **1TB** in **Drive G:** performance as below:

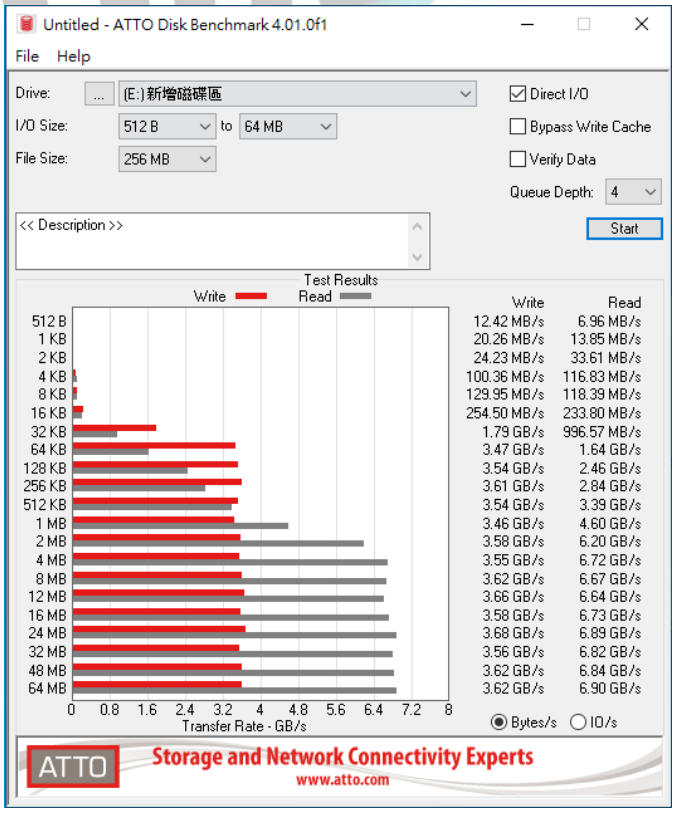


2.7 ATTO Disk Benchamrk 4.01 performance test

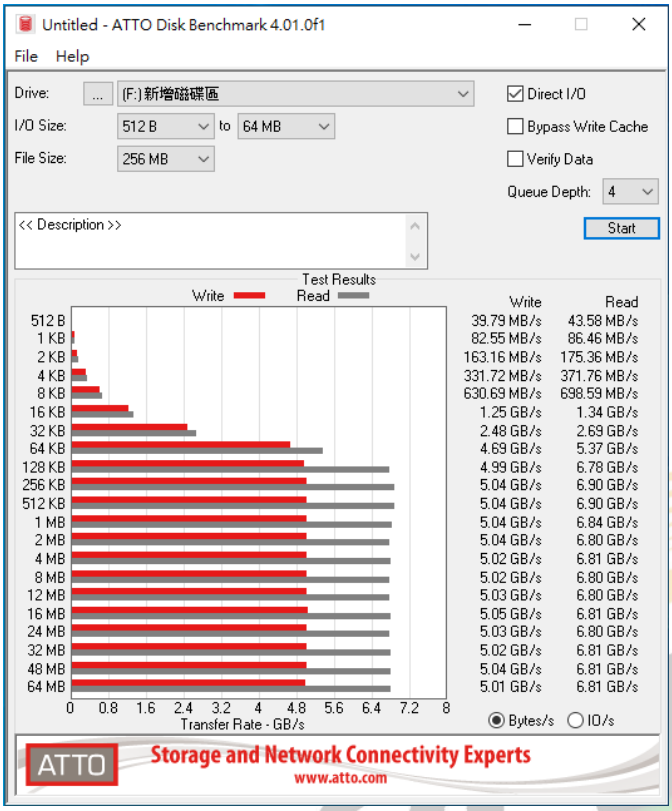
2.7.1 SAMSUNG 980 PRO M.2 / 1TB in **Drive D:** performance as below:



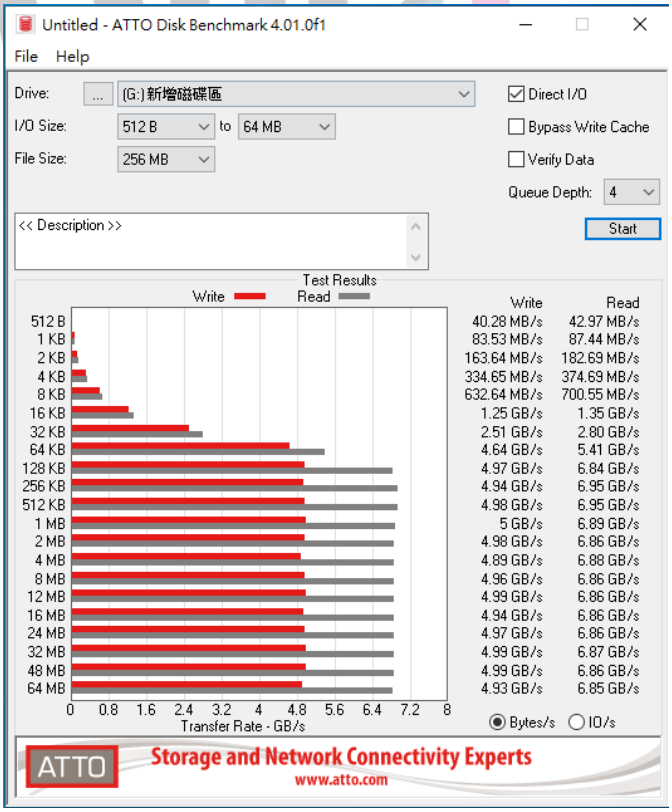
2.7.2 SAMSUNG 980 PRO M.2 / 1TB in **Drive E:** performance as below:



2.7.3 GIGABYTE M.2 / 1TB in **Drive F:** performance as below:



2.7.4 GIGABYTE M.2 / 1TB in **Drive G:** performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 SAMSUNG 980 PRO M.2 / 1TB in **Drive D:** performance as below:

2.8.2 SAMSUNG 980 PRO M.2 / 1TB in **Drive E:** performance as below:

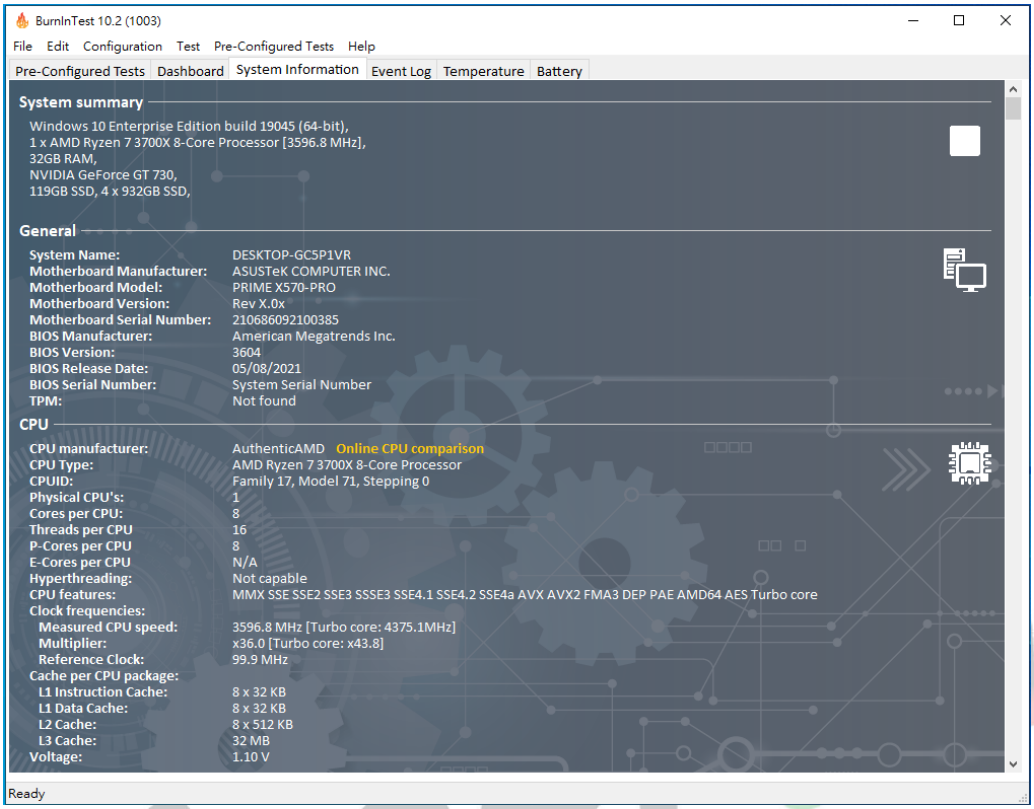
2.8.3 GIGABYTE M.2 / **1TB** in **Drive F:** performance as below:

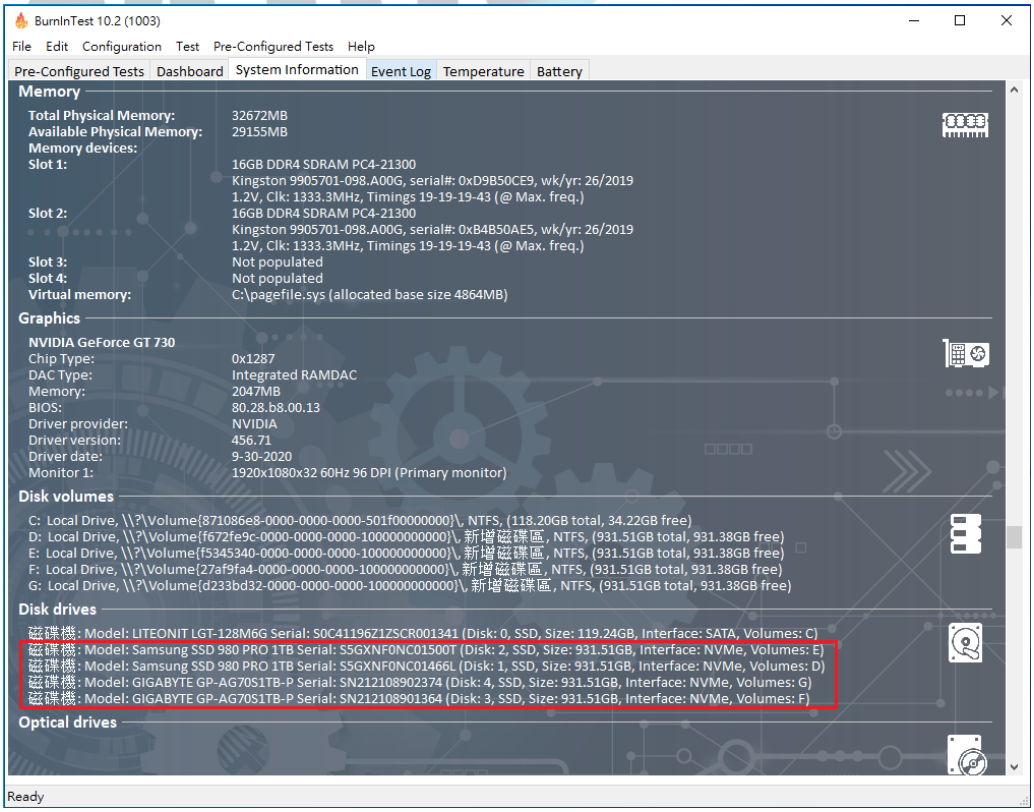
2.8.4 GIGABYTE M.2 / **1TB** in **Drive G:** performance as below:

3. Burn In Tests and Results

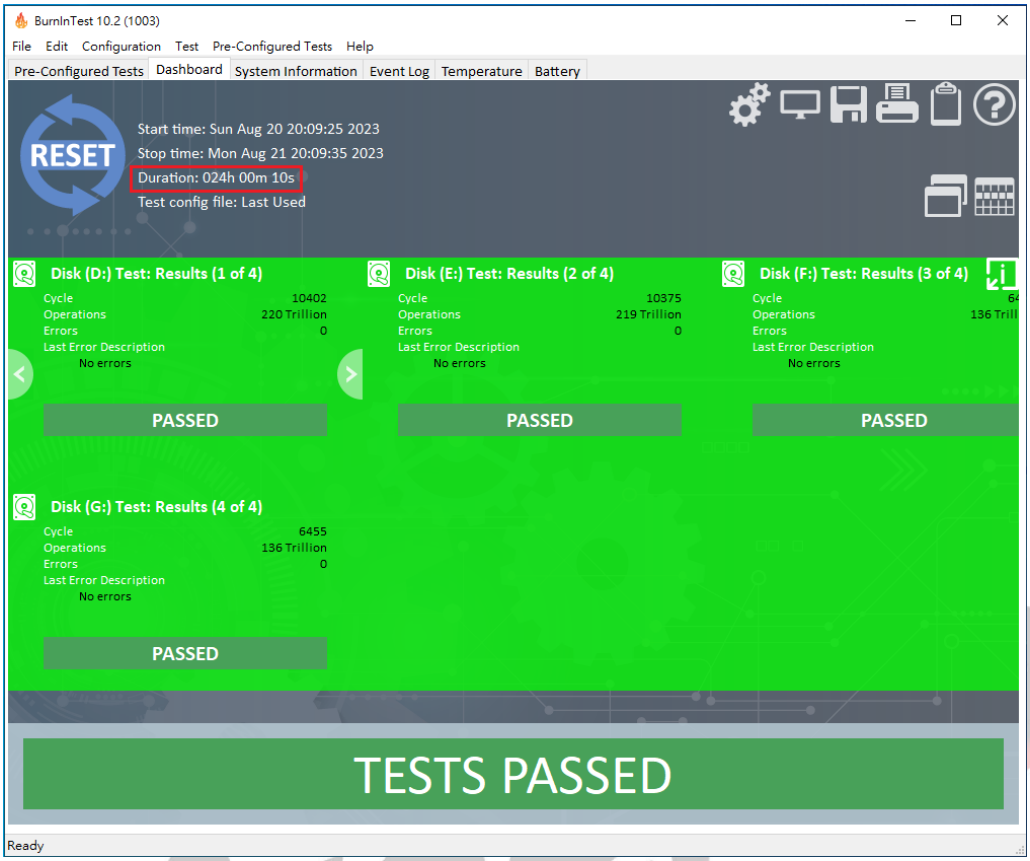
3.1 BurnInTest v10.2 Pro

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 DP7401 AIC & GD9801G Adapter I/O performance is based on M.2 NVMe SSD.