Performance & Burn In Test Rev 1.0

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1. Overview

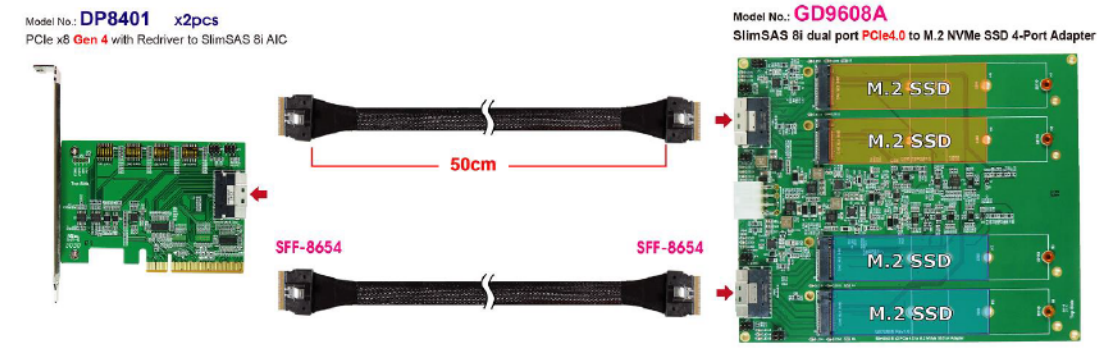
The GD9608A adapter provides four ports M.2 connector for M.2 SSD application. Its each individual M.2 port supports Hot Plug Power protection and input port is with SlimSAS 8i(SFF-8654) dual port connector. It is designed for use by PCIe x16 bifurcation AIC to be bifurcated four x4 link width.

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: DP8401 PCIe x16 to with ReDriver SlimSAS 8i(SFF-8654) AIC
Cable: PCIe 4.0 SFF-8654 8i, 50cm Cable
Adapter: GD9608A SlimSAS 8i dual port PCIe 4.0 to M.2 quad port adapter
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: DP8401, GD9608A adapter with M.2 **512GB, 1TB SSD**



2.3 Install Hardware

First inserts the M.2 SSD into the GD9608A M.2 connector and connects the GD9608A adapter to the DP8401 AIC card (PCIe x8 Gen 4 to SFF-8654 8i), using the **GDC74-5501 Cable**, and Plugs DP8401 AIC into PCIe x16 Slot of ASUS **PRIME X570-PRO** mainboard.

2.4 BIOS & Windows 10 OS environment setup

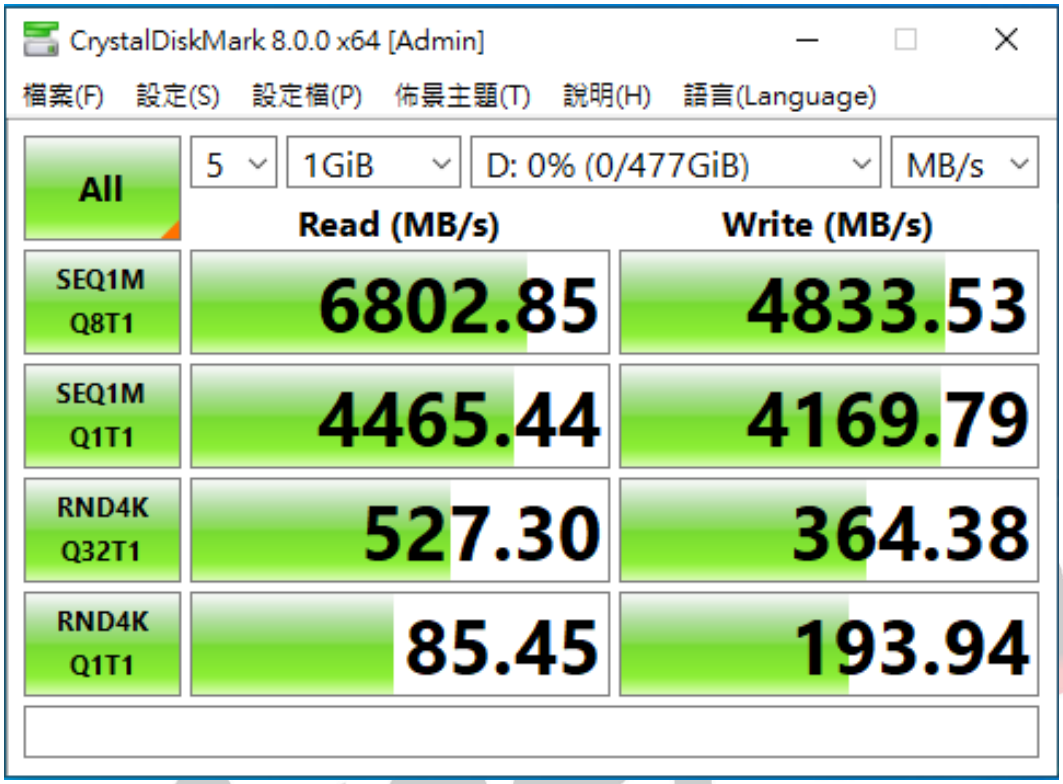
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

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

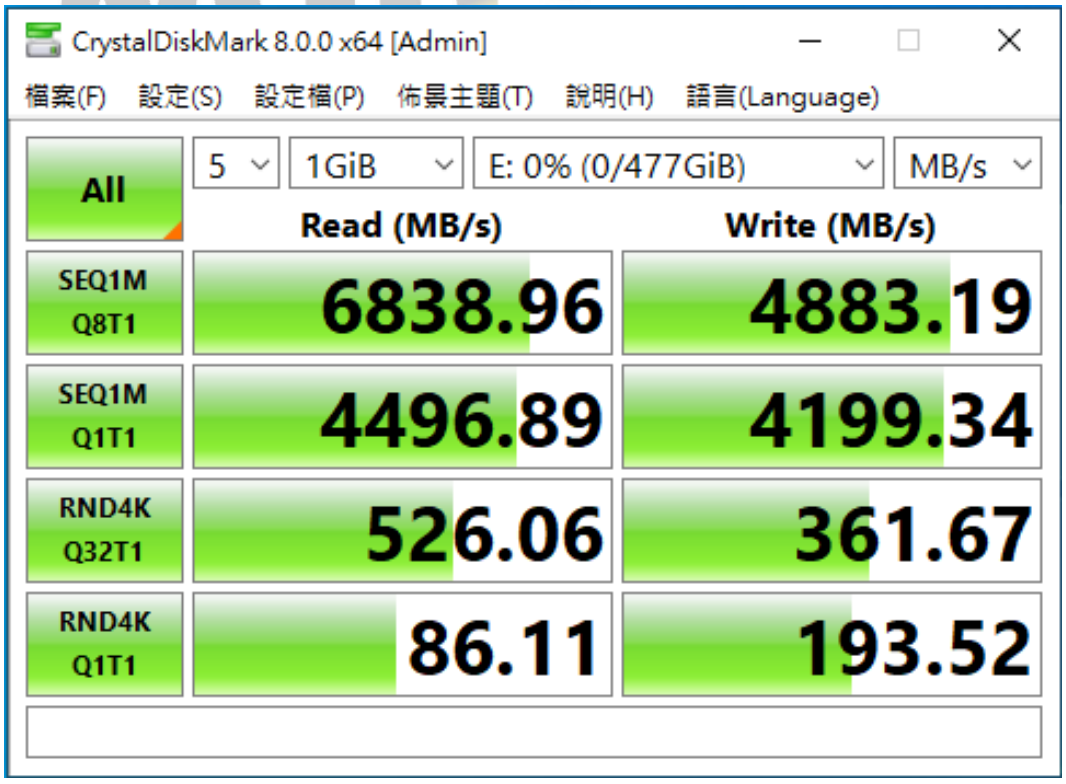
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

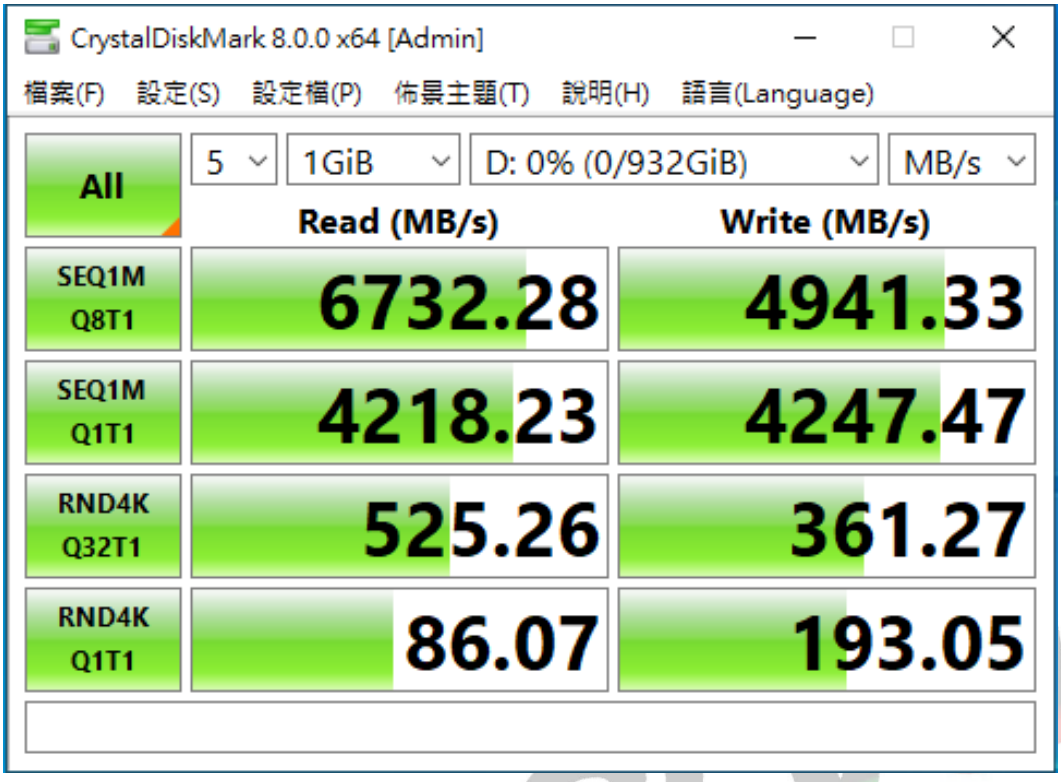
2.5.1 SAMSUNG PM9A1 M.2 / 512GB in **CN1:** performance as below:



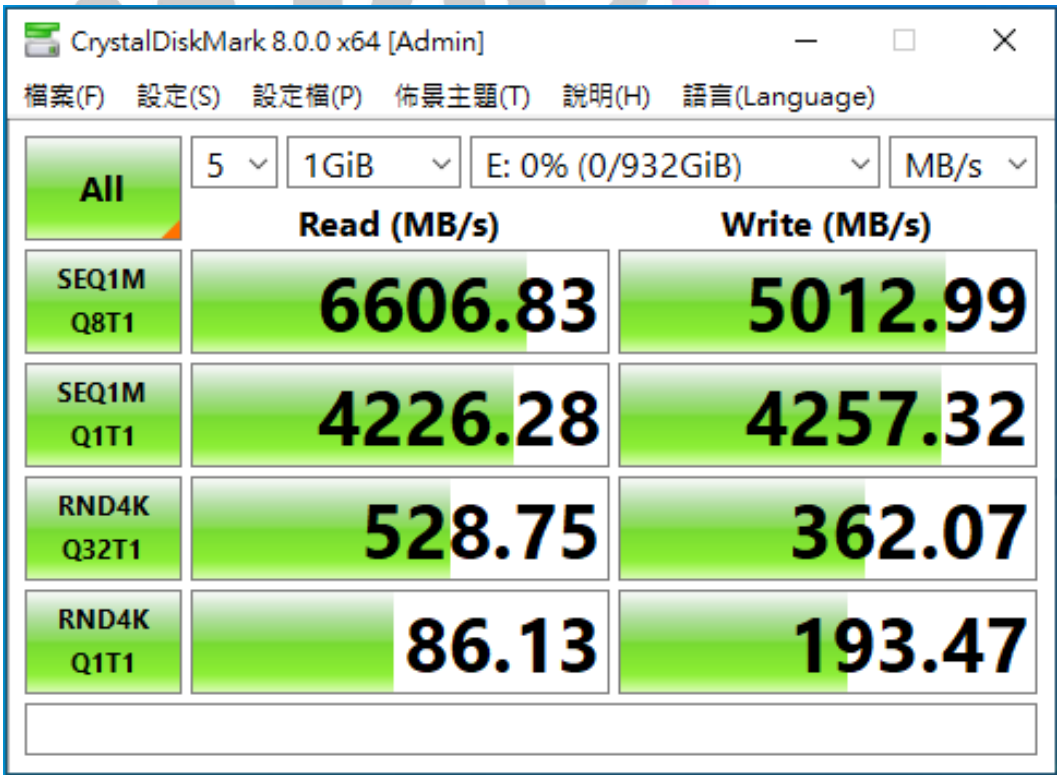
2.5.2 SAMSUNG PM9A1 M.2 / 512GB in **CN2:** performance as below:



2.5.3 SAMSUNG 980 PRO M.2 / **1TB** in **CN3:** performance as below:



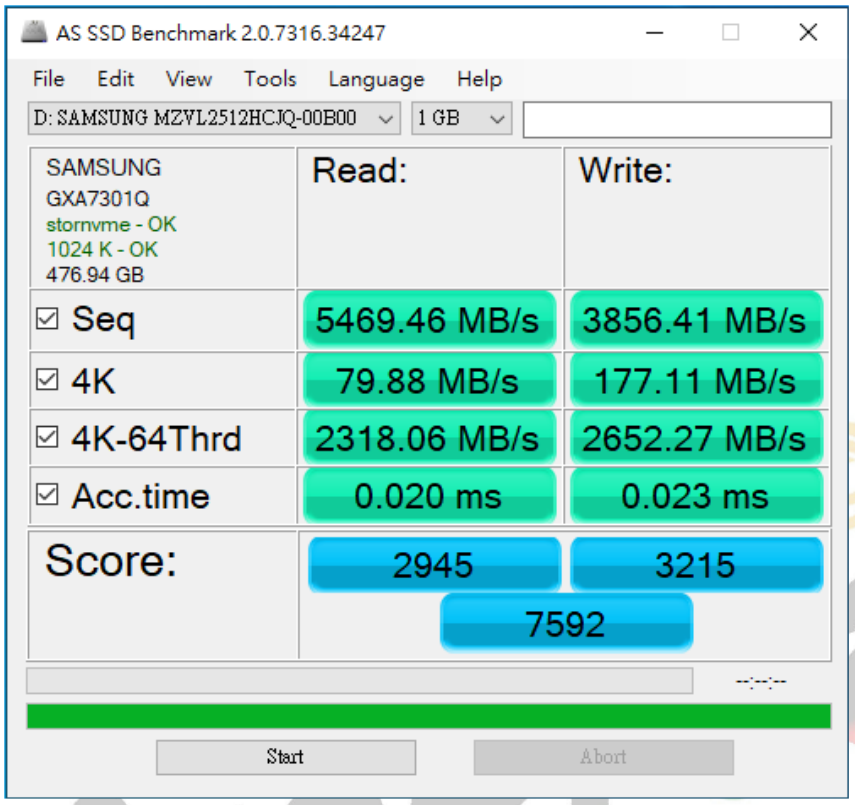
2.5.4 SAMSUNG 980 PRO M.2 / **1TB** in **CN4:** performance as below:



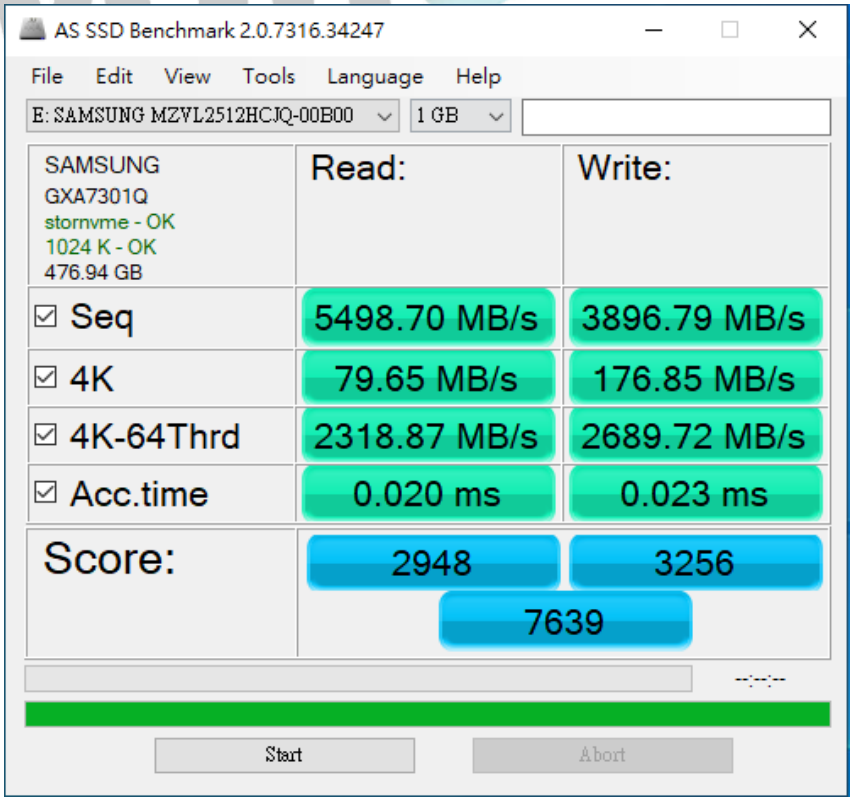
2.6 AS SSD Benchmark 2.0 performance test

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

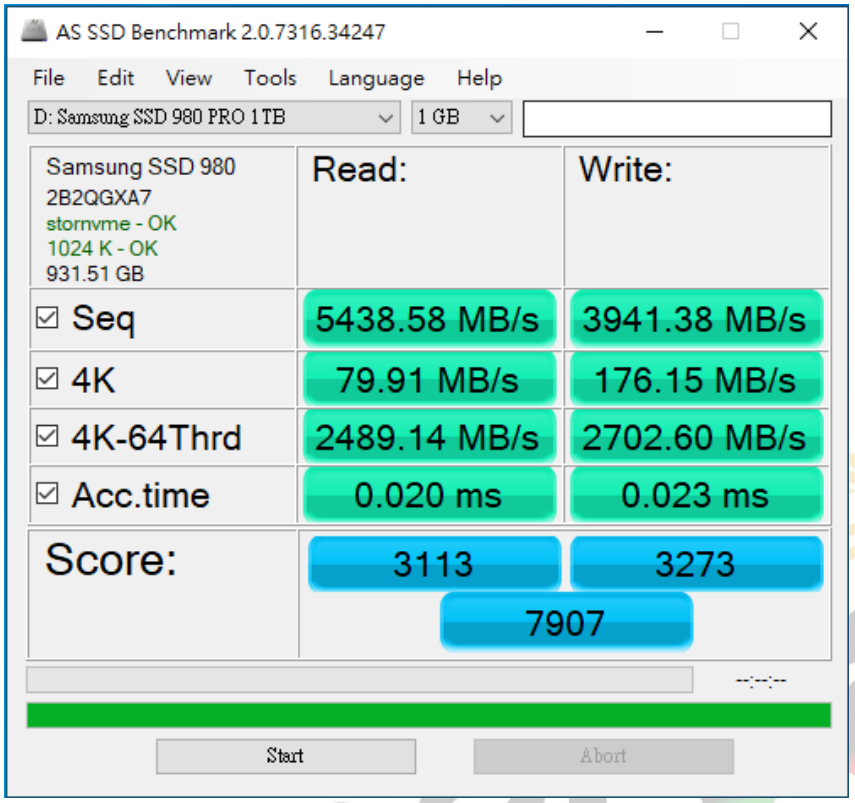
2.6.1 SAMSUNG PM9A1 M.2 / 512GB in **CN1:** performance as below:



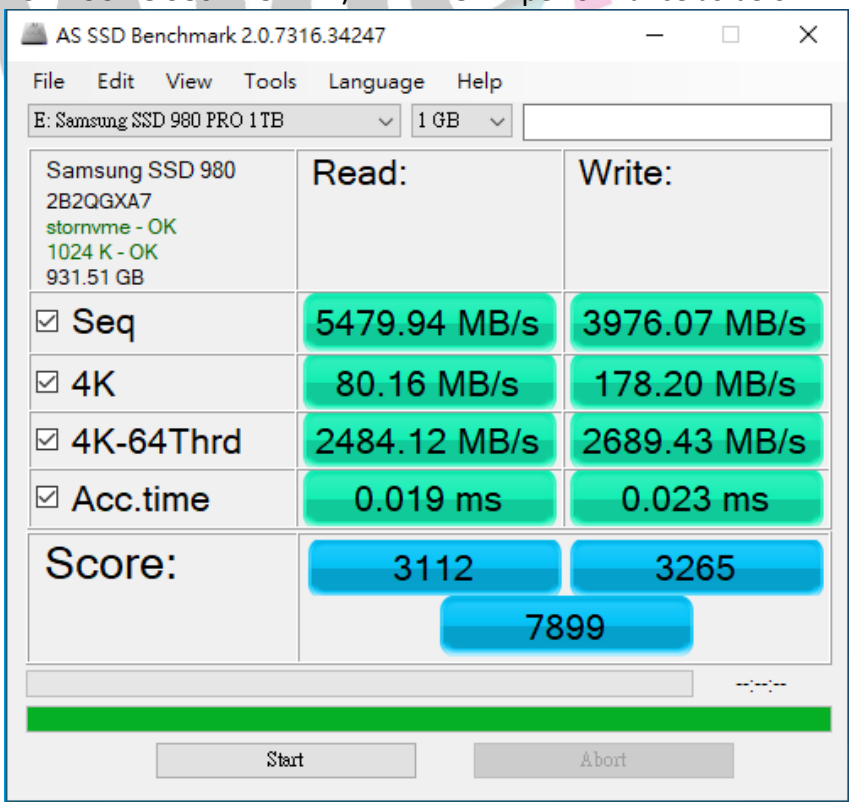
2.6.2 SAMSUNG PM9A1 M.2 / 512GB in **CN2:** performance as below:



2.6.3 SAMSUNG 980 PRO M.22 / **1TB** in **CN3:** performance as below:

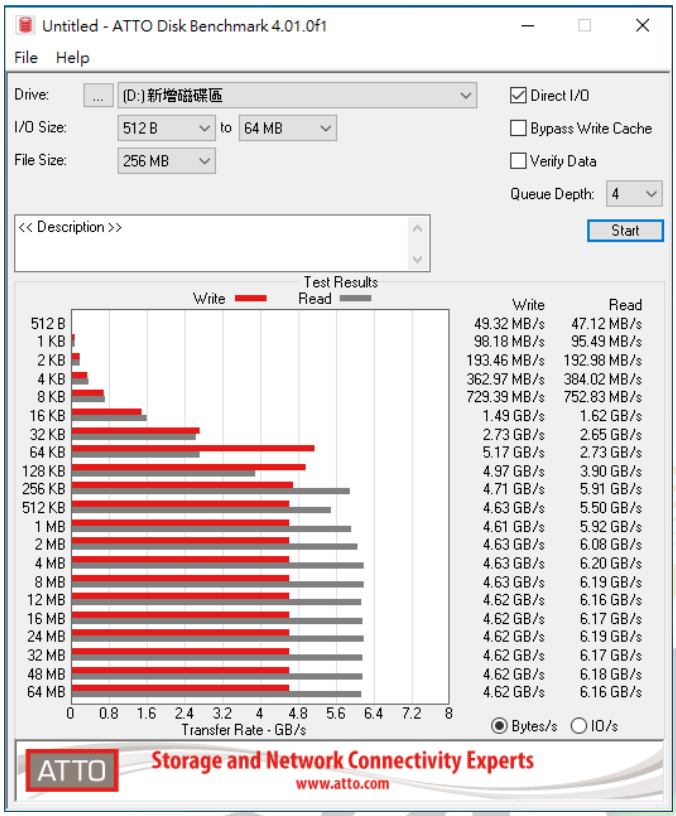


2.6.4 SAMSUNG 980 PRO M.2 / **1TB** in **CN4:** performance as below:

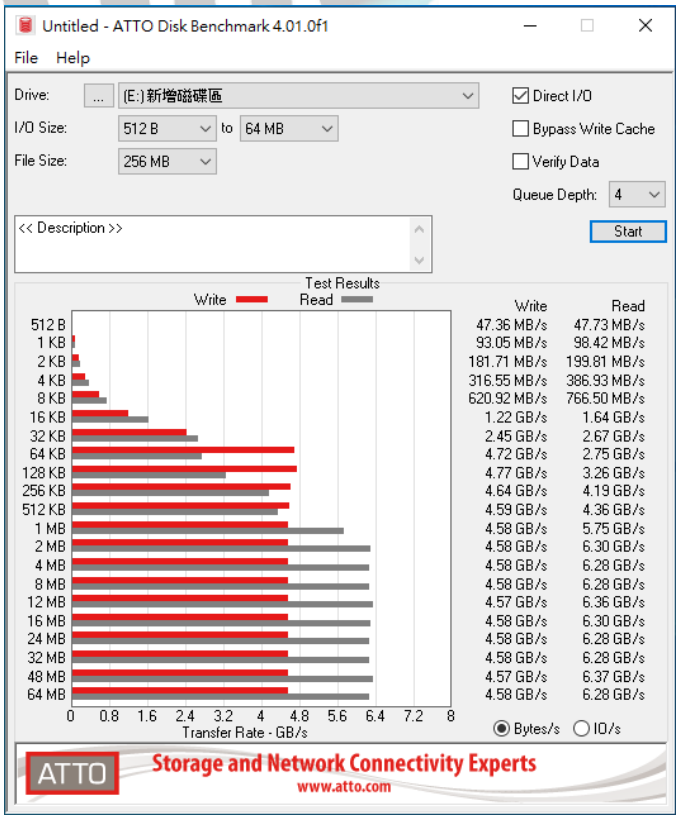


2.7 ATTO Disk Benchamrk 4.01 performance test

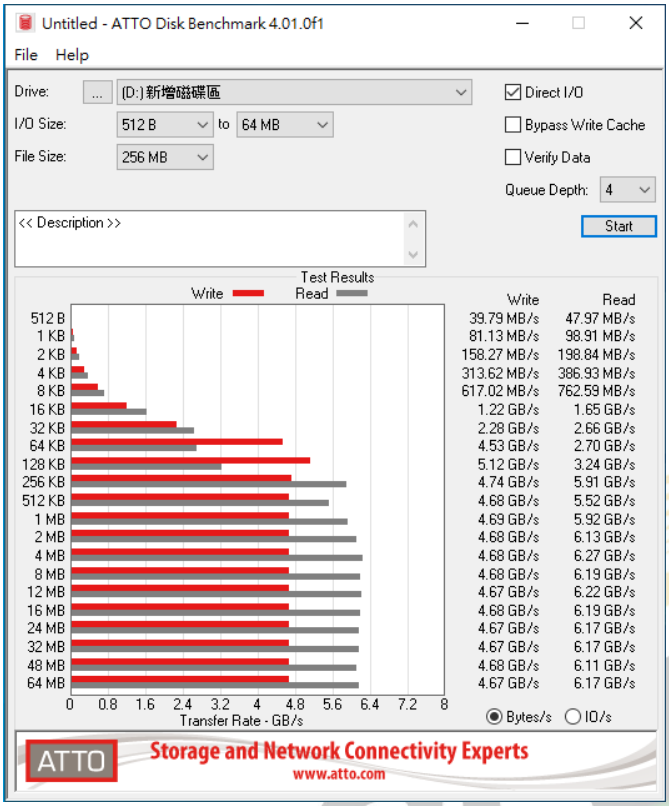
2.7.1 SAMSUNG PM9A1 M.2 / 512GB in **CN1:** performance as below:



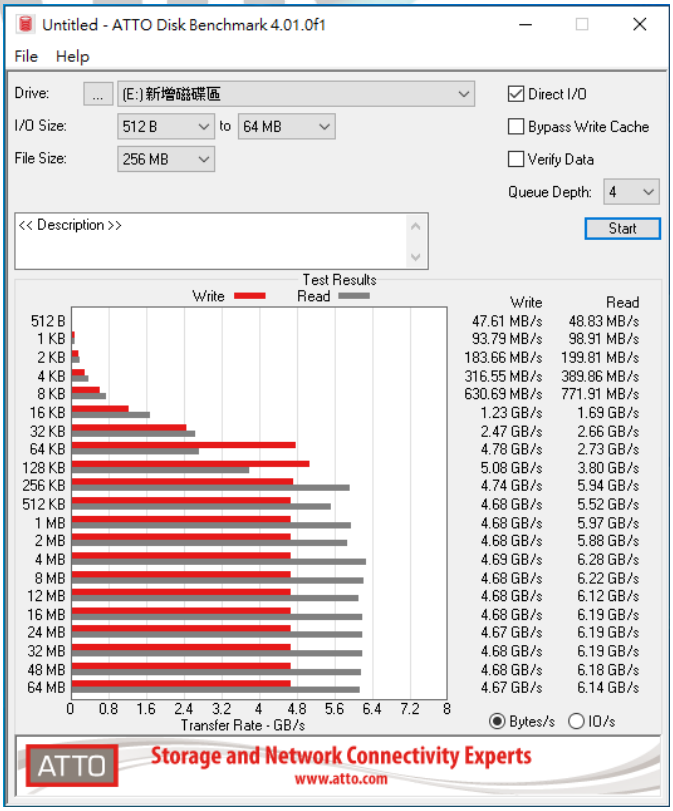
2.7.2 SAMSUNG PM9A1 M.2 / 512GB in **CN2:** performance as below:



2.7.3 SAMSUNG 980 PRO M.2 / 1TB in **CN3:** performance as below:



2.7.4 SAMSUNG 980 PRO M.2 / 1TB in **CN4:** performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 SAMSUNG PM9A1 M.2 / 512GB in **CN1:** performance as below:

2.8.2 SAMSUNG PM9A1 M.2 / 512GB in **CN2:** performance as below:

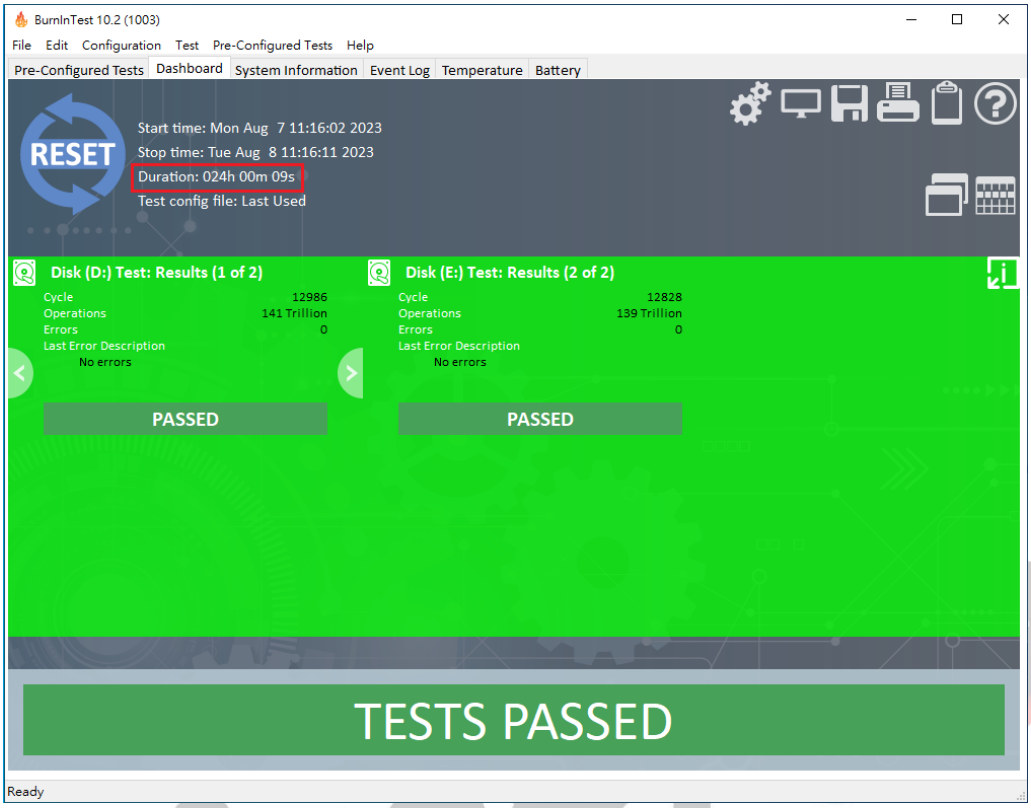
2.8.3 SAMSUNG 980 PRO M.2 / **1TB** in **CN3:** performance as below:

2.8.4 SAMSUNG 980 PRO M.2 / **1TB** in **CN4:** performance as below:

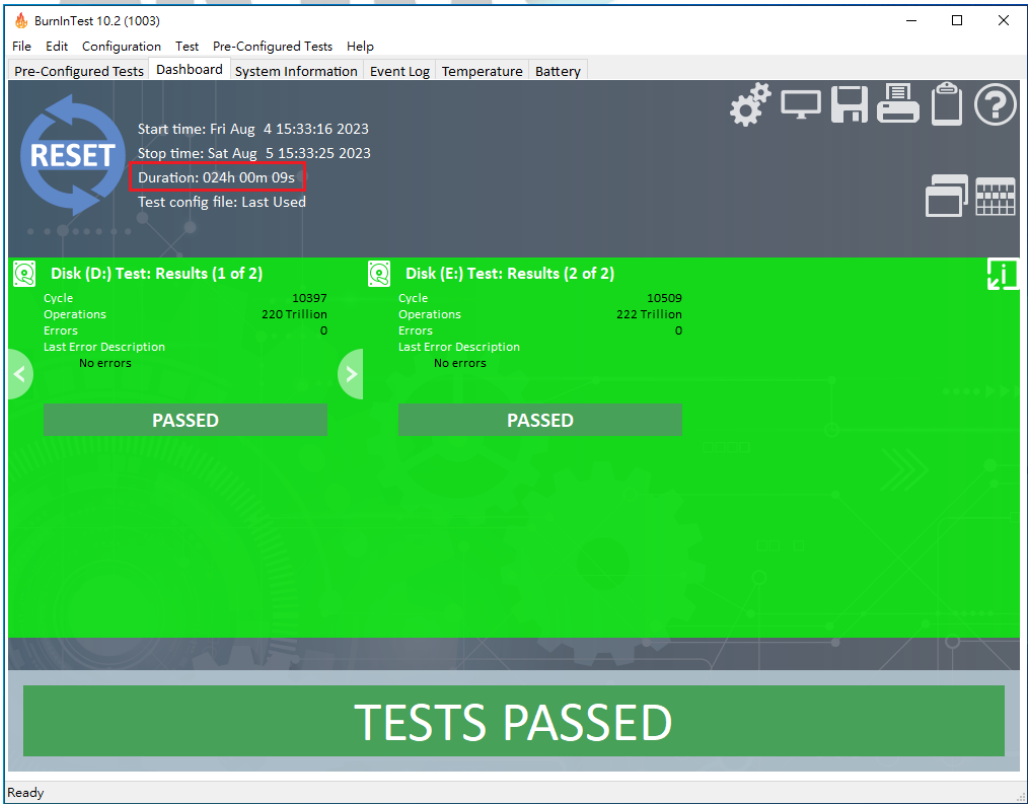
3. Burn In Tests and Results

3.1 BurnInTest v10.2 Pro

3.1.1 24-hour Burn-in test PASSED For CN1, CN2



3.1.2 24-hour Burn-in test PASSED For CN3, CN4



4. Summary

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

4.2 DP8401 AIC & GD9608A Adapter I/O performance is based on M.2 NVMe SSD.