Performance & Burn In Test Rev 1.0

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PCIe 4.0 SFF-8654 8i to 4ix2 Y-Cable

1. Overview

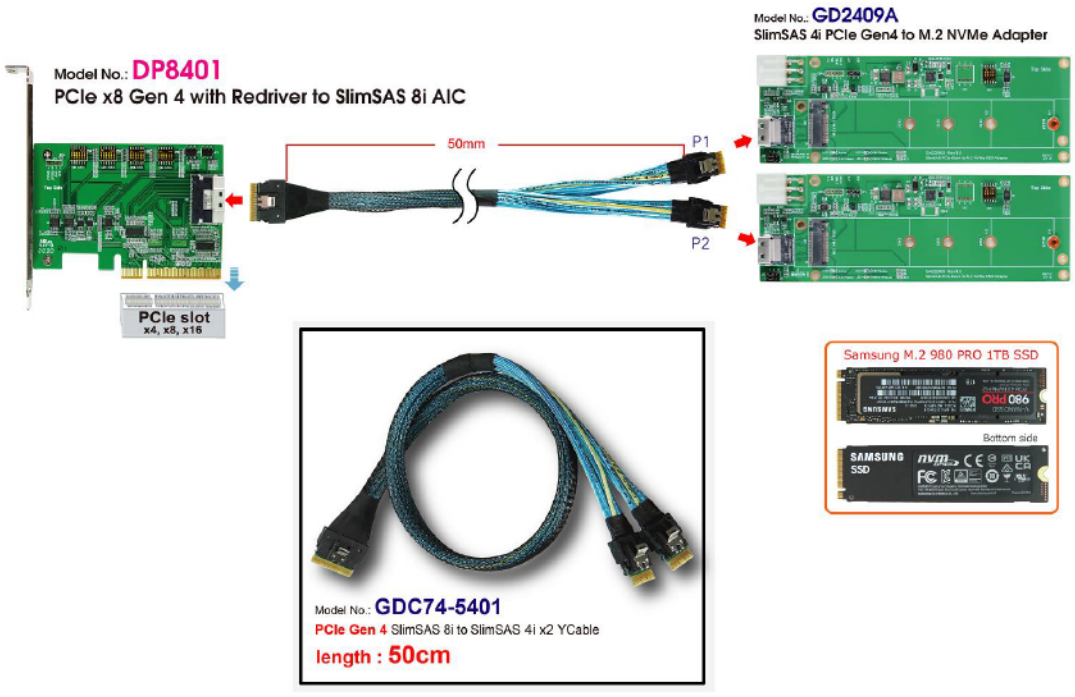
The cable can provide PCIe 4.0 speed. It connects to Host AIC. The AIC has built-in PCIe x8 Gen4 ReDriver, may support CTLE boosts up to 13 dB at 8 GHz. And it extends PCIe signals to Device adapter.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B :	GIGABYTE **X570S 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
Add in Card:	DP8401 PCIe x8 to SlimSAS(SFF-8654) 8i AIC
Cable:	PCIe Gen 4 SlimSAS(SFF-8654) 8i to 4i x2, **50cm** Y-Cable
Adapter:	GD2409A SlimSAS(SFF-8654) 4i to M.2 adapter x2
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP8401, GD2409A adapter x2 with Samsung 980 PRO M.2 1TB x2 SSD



2.3 Install Hardware

First inserts the M.2 SSD into the GD2409A M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). To connect the GD2409A adapter to the DP8401 AIC card (PCIe x8 Gen 4 to SFF-8654 8i) using the **GDC74-5401 Cable**, and Plugs DP8401 AIC into GIGABYTE **X570 AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

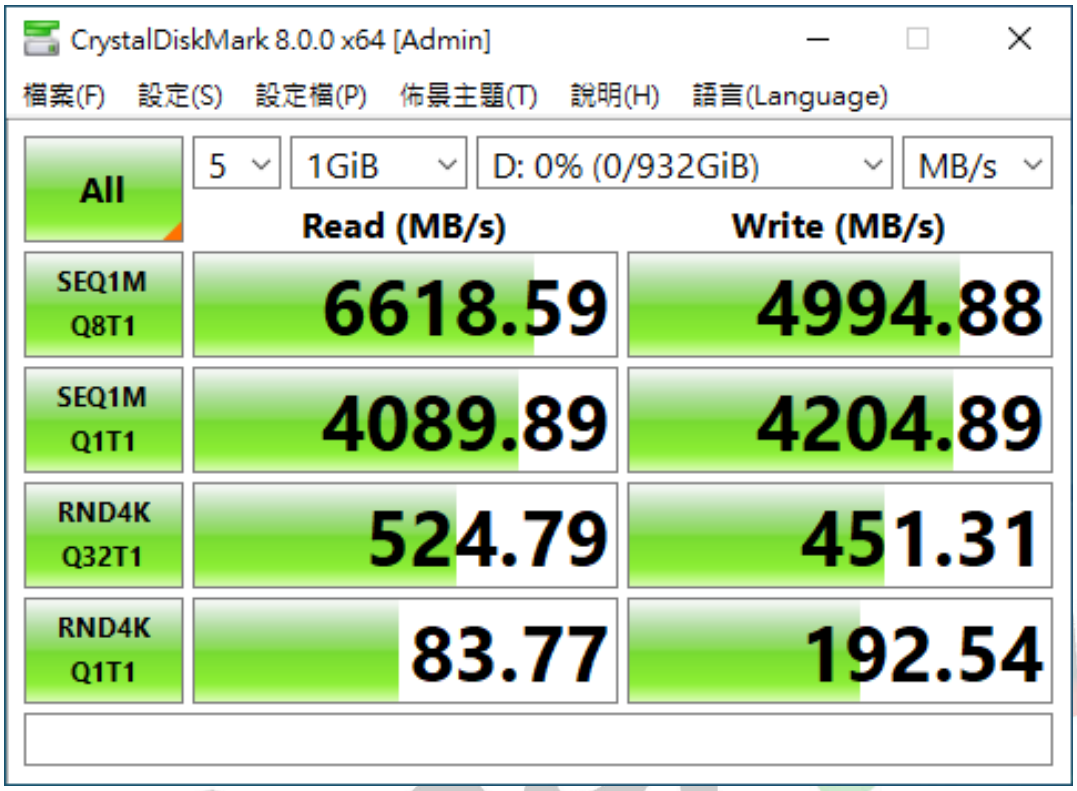
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

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

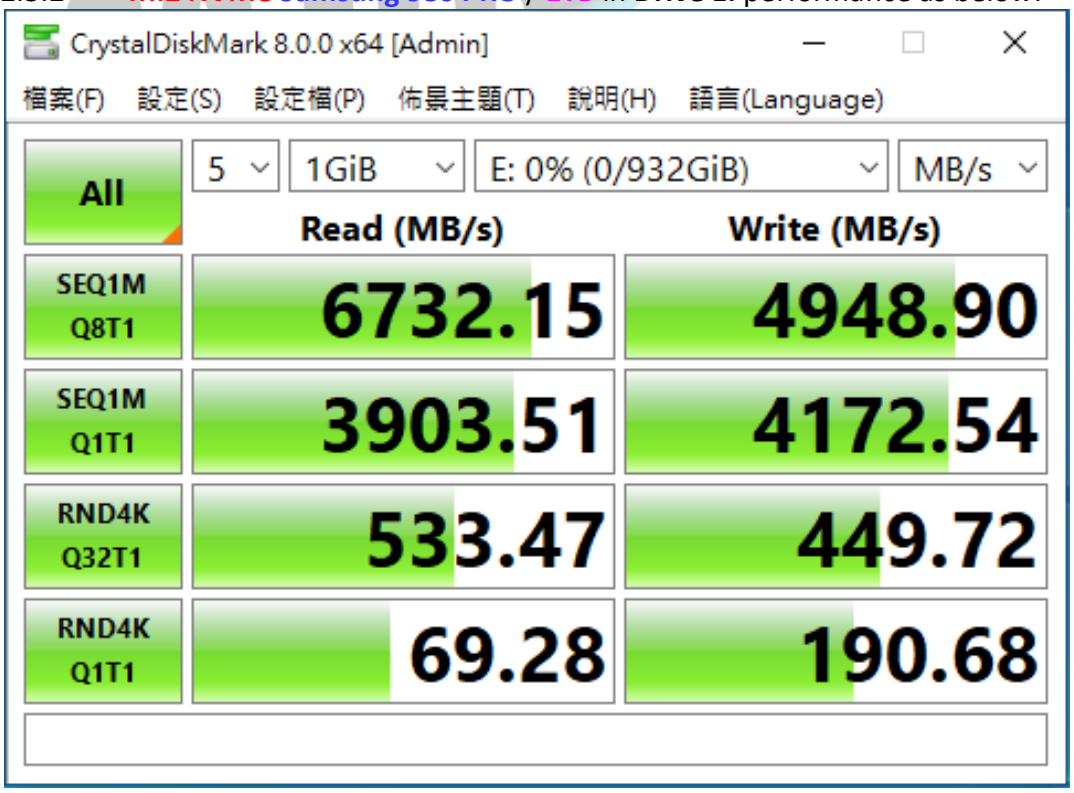
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

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



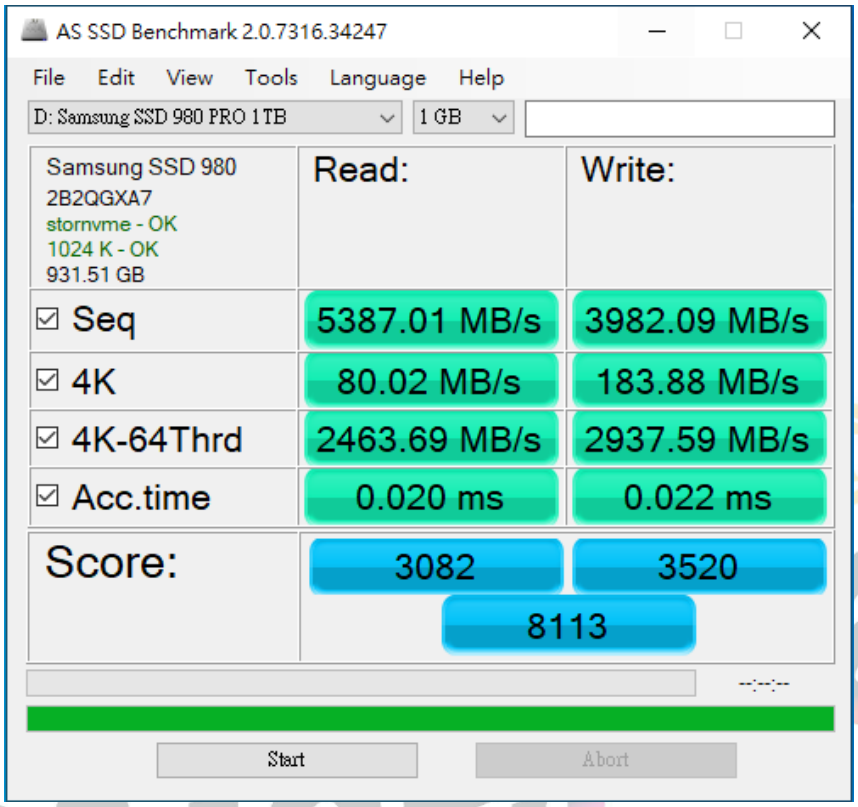
2.5.2 **M.2 NVMe Samsung 980 PRO** / **1TB** in **Drive E:** performance as below:



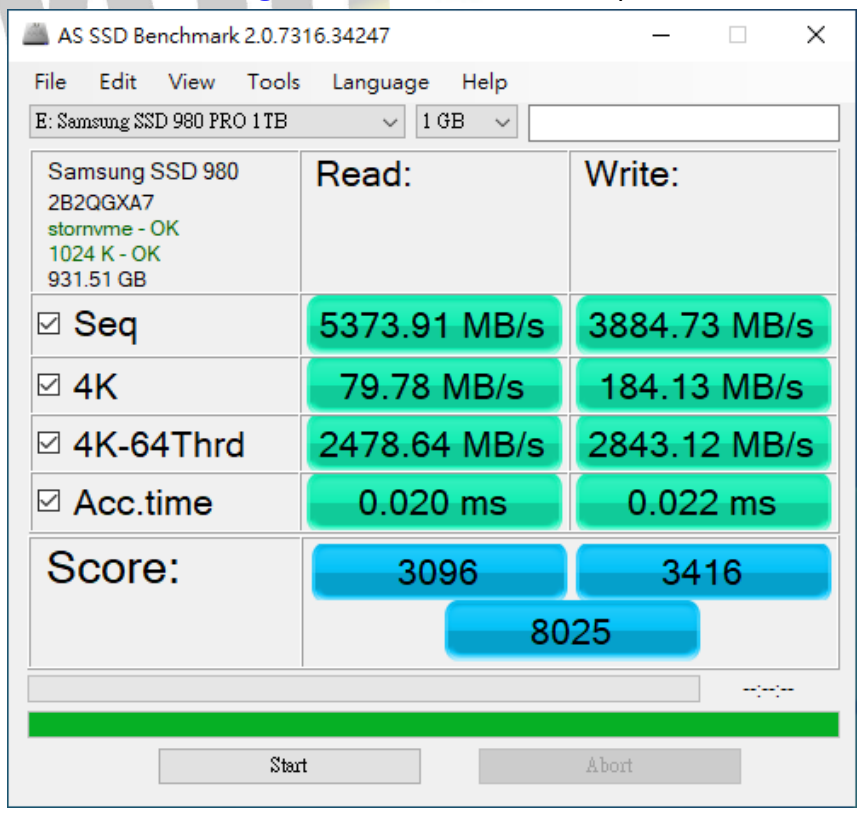
2.6 AS SSD Benchmark 2.0 performance test

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

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

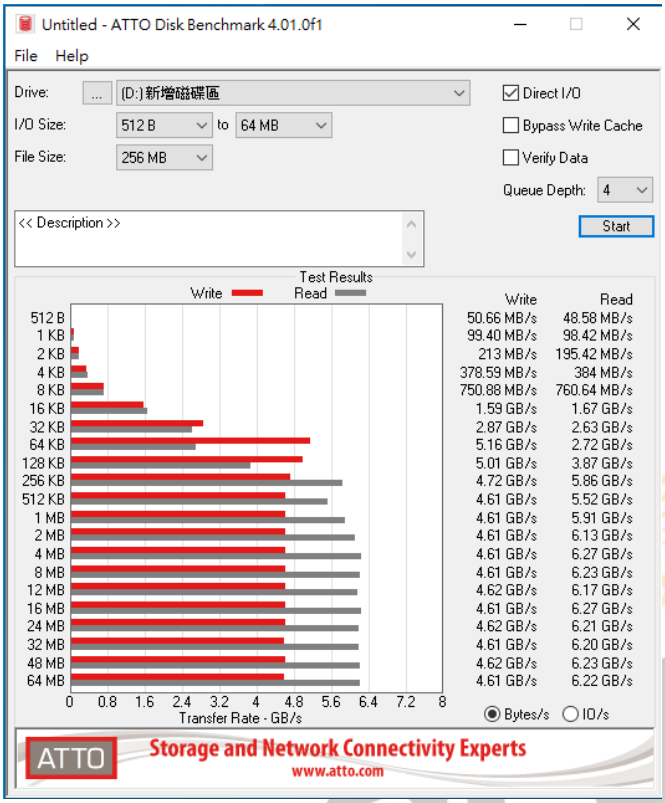


2.6.2 M.2 NVMe Samsung 980 PRO / 1TB in **Drive E:** performance as below:

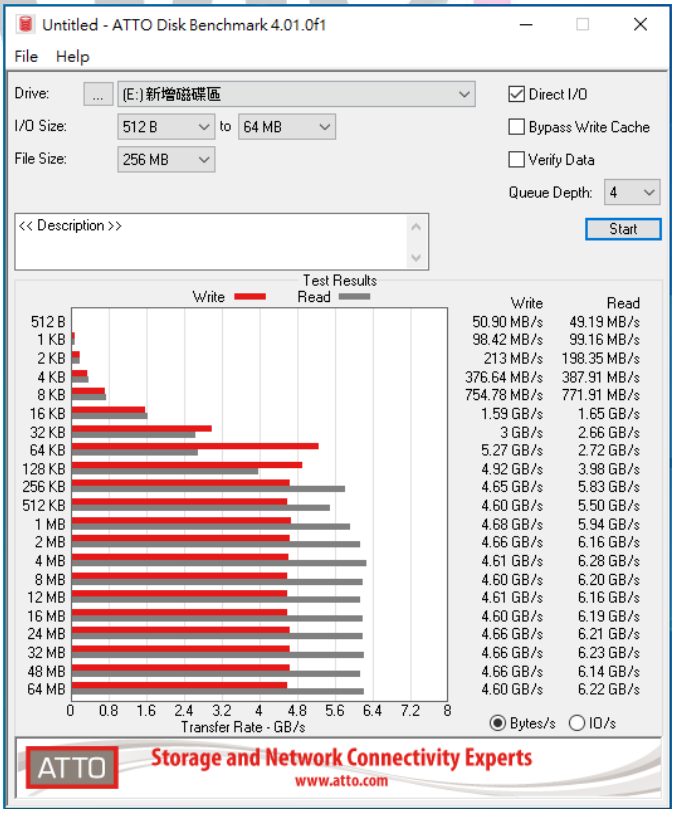


2.7 ATTO Disk Benchamrk 4.01 performance test

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



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



2.8 AnvilBenchmark_V110_B337

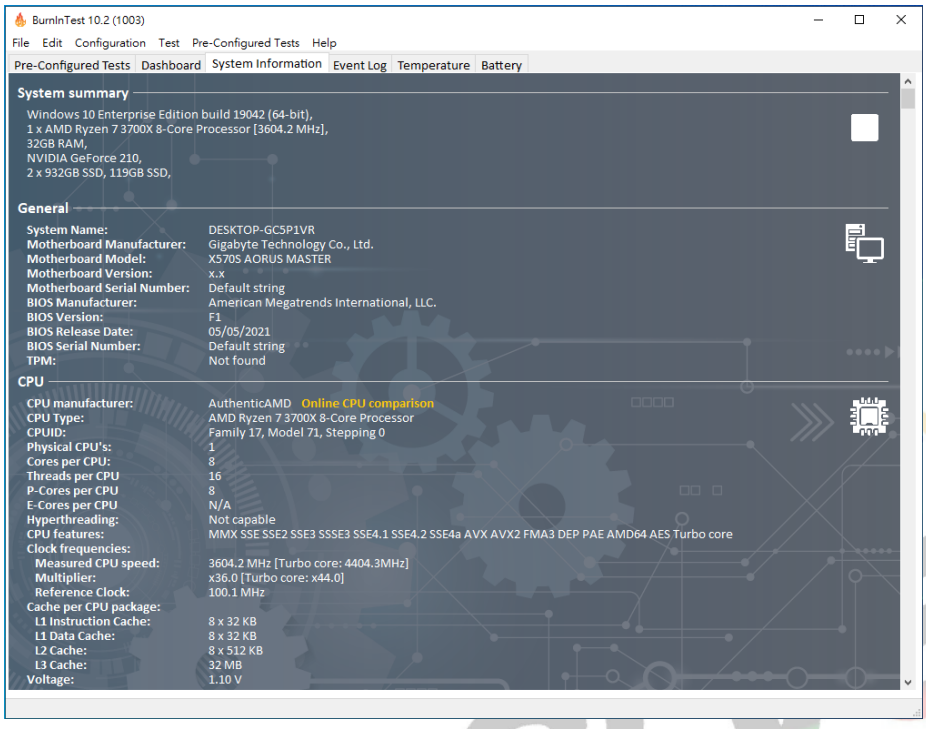
2.8.1 M.2 NVMe Samsung 980 PRO / 1TB in **Drive D:** performance as below:

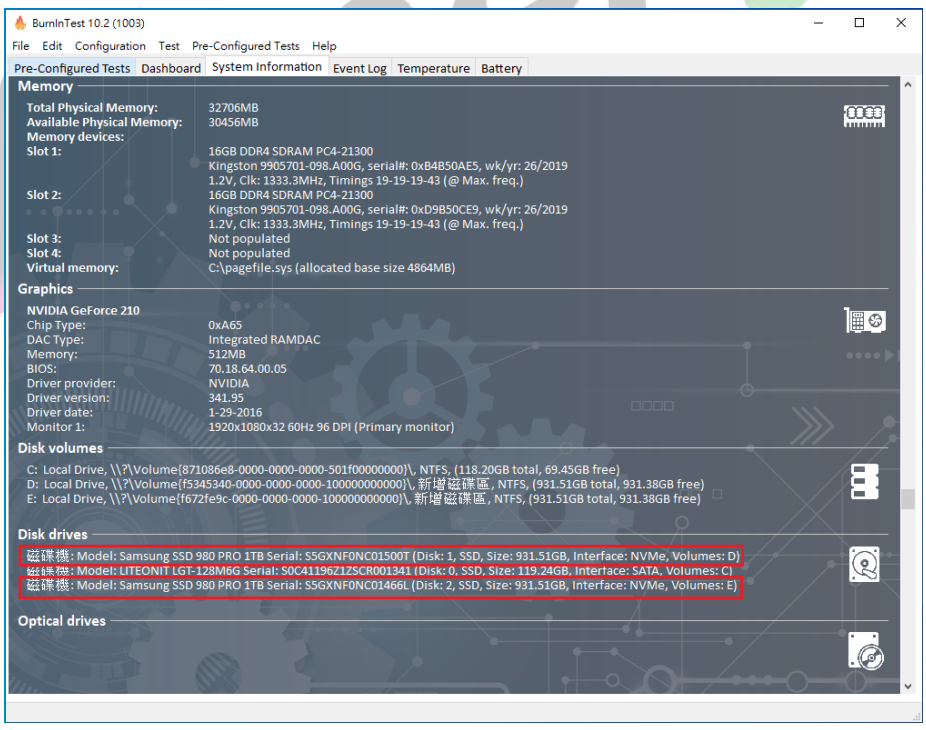
2.8.2 M.2 NVMe Samsung 980 PRO / 1TB in **Drive E:** performance as below:

3. Burn In Tests and Results

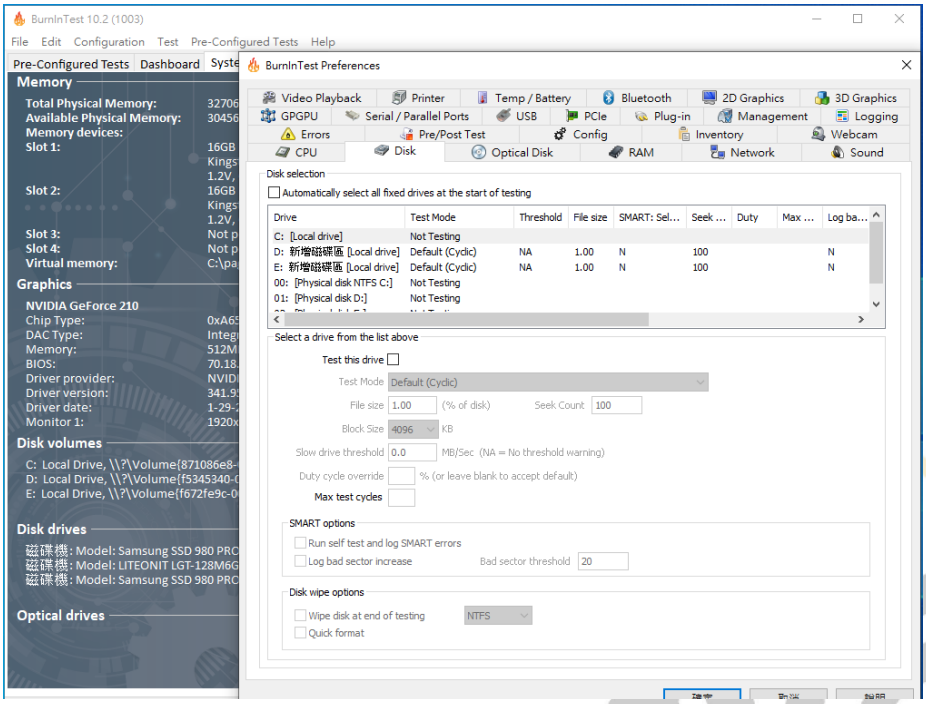
3.1 BurnInTest v10.2 Pro

3.1.1 System information as below:

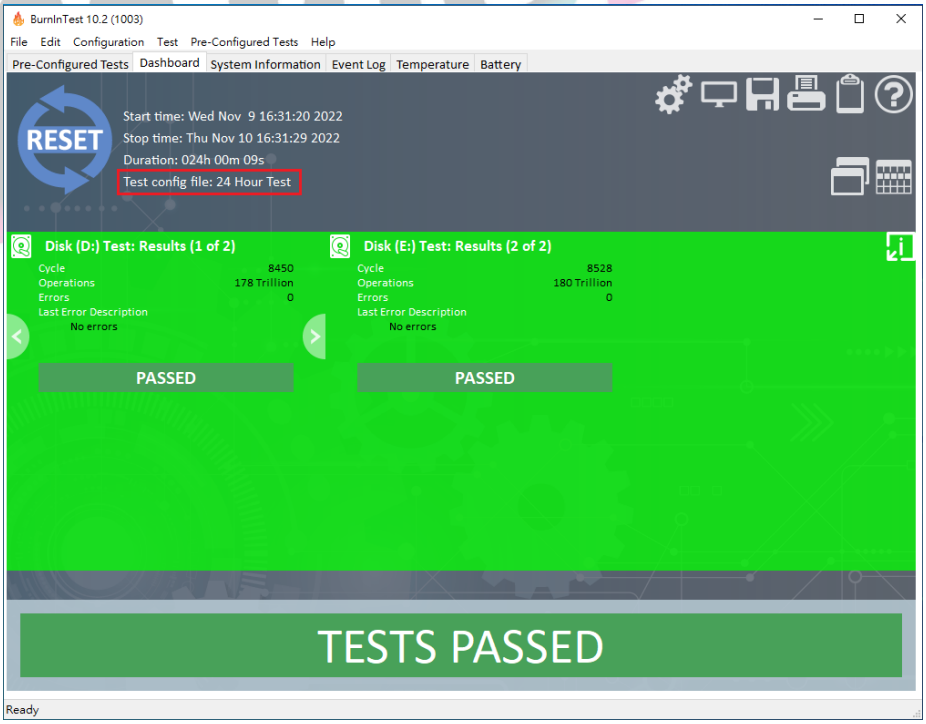




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 NVMe SSD is PCIe Gen4 / 4 Lane Interface, I/O speed, max. to 64Gbps.

4.2 GDC74-5401 cable, I/O performance is based on NVMe SSD.