MINERVA

PC895A SlimSAS 8i PCIe 4.0 to U.2 Dual port Adapter

Performance & Burn In Test Rev 1.0

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1. Overview

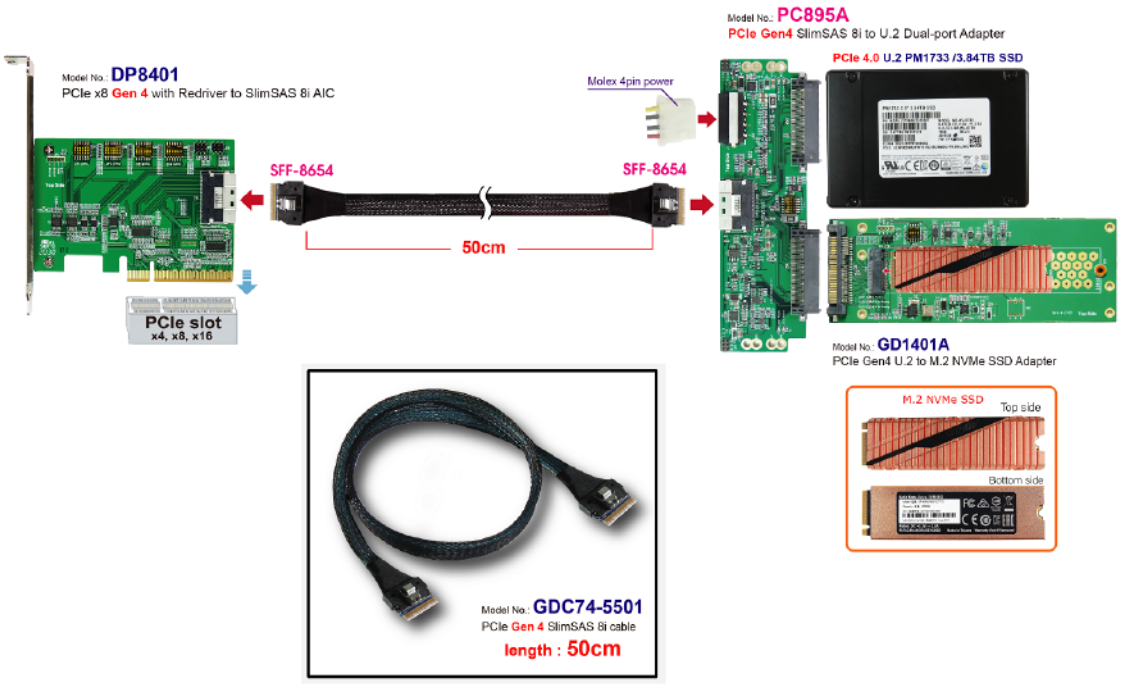
This adapter has built-in SlimSAS 8i (SFF-8654) connector and U.2 connector dual port which can be inserted into two U.2 NVMe SSDs. It is designed for use by supporting PCIe Gen4 x8, x16 bifurcation AIC and SFF-9402 pinout PCIe Switch RAID Card.

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
Add in Card: DP8401 PCIe x8 to SlimSAS(SFF-8654) 8i AIC
Cable: PCIe Gen 4 SlimSAS(SFF-8654) 8i Male to Male, 50cm Cable
Adapter: PC895A SlimSAS(SFF-8654) 8i to U.2 dual port adapter
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: PC8955A & U.2 NVMe SSD x2pcs



2.3 Install Hardware

First inserts the U.2 SSD into the PC895A U.2 connector dual port and connect to the DP8401 AIC card (PCIe x8 Gen 4 to SFF-8654 8i) using the **GDC74-5501 Cable**, and Plugs DP8401 AIC into GIGABYTE **X570 AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

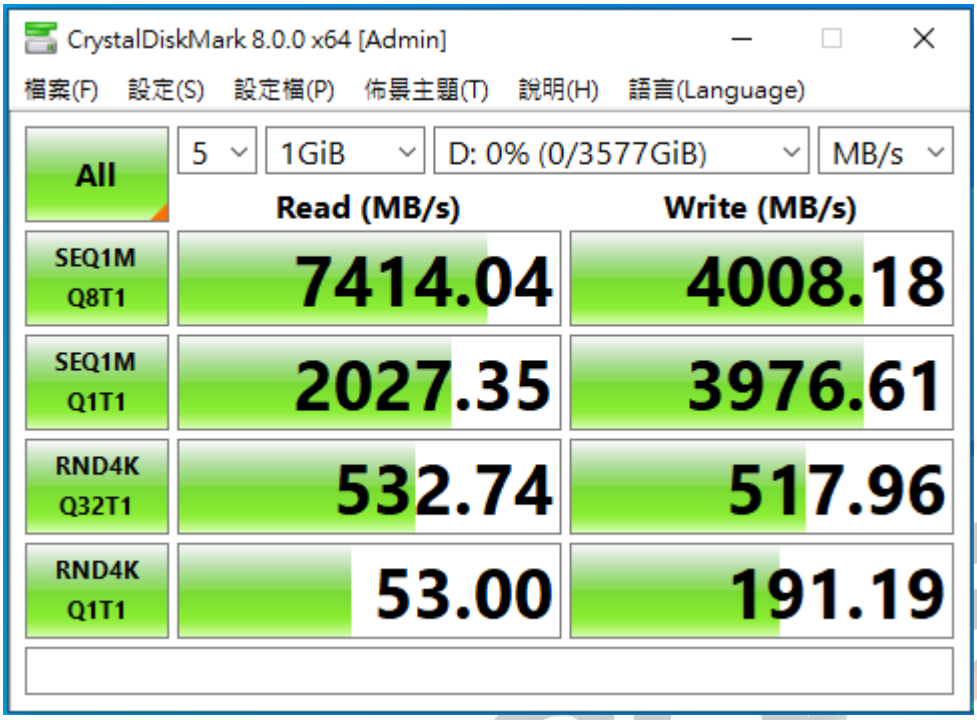
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

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

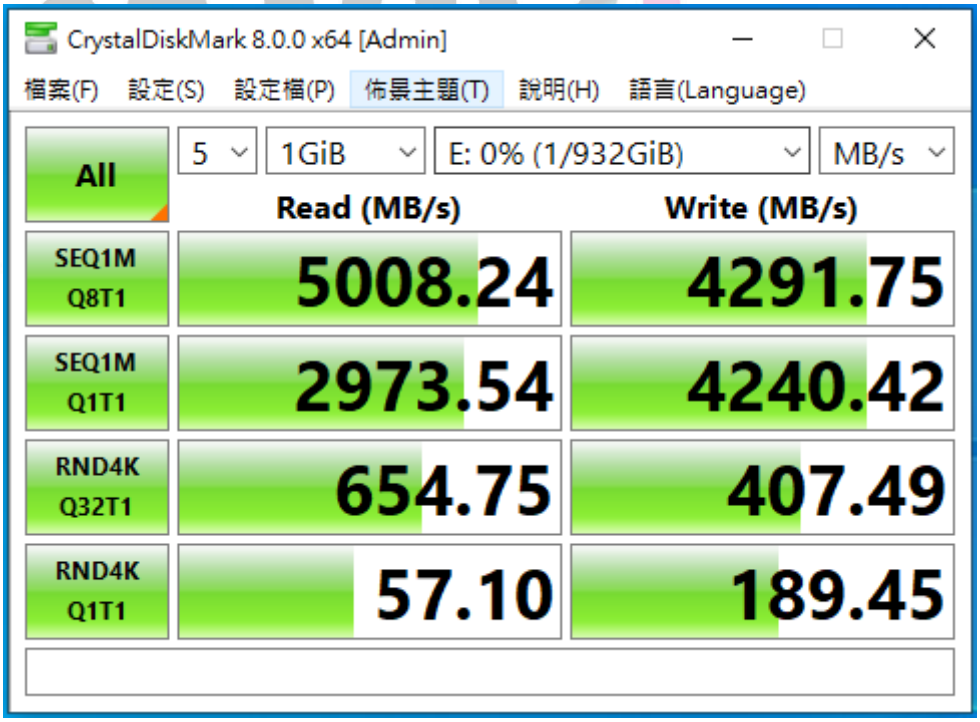
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

2.5.1 **Samsung U.2 PM1733 / 4TB NVMe SSD** performance as below:



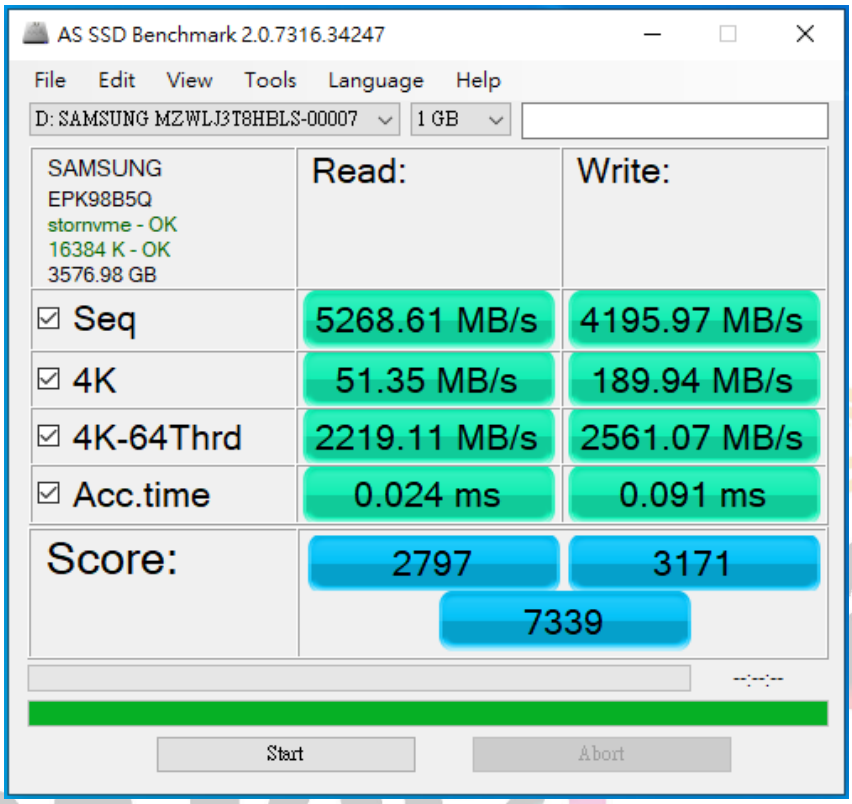
2.5.2 GD1401A Adapter & **Gigabyte 1TB NVMe SSD** performance as below:



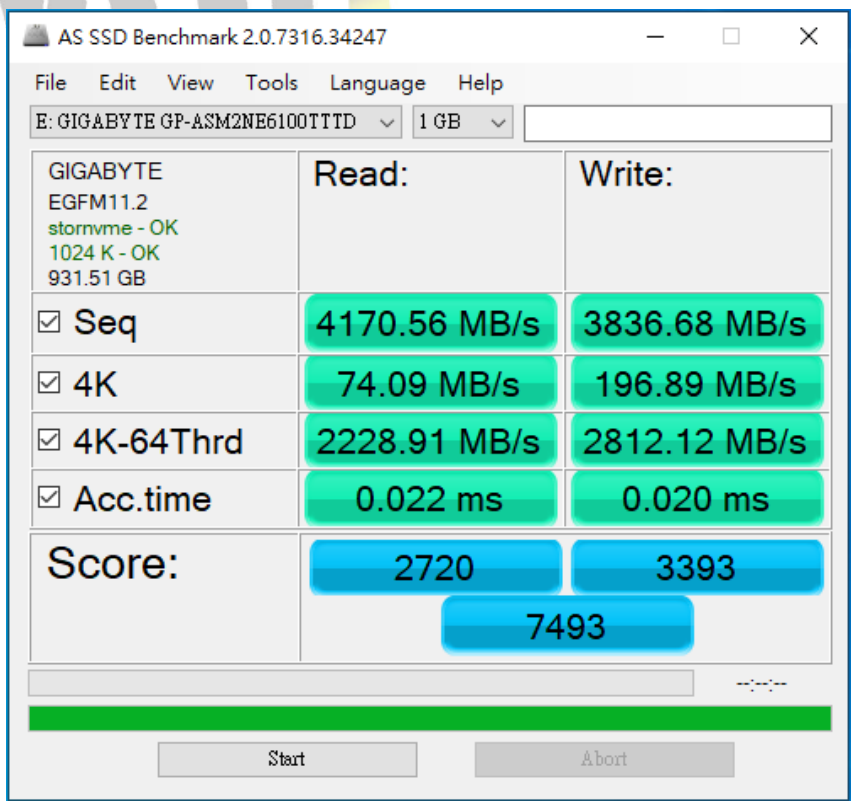
2.6 AS SSD Benchmark 2.0 performance test

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

2.6.1 Samsung U.2 PM1733 / 4TB NVMe SSD performance as below:

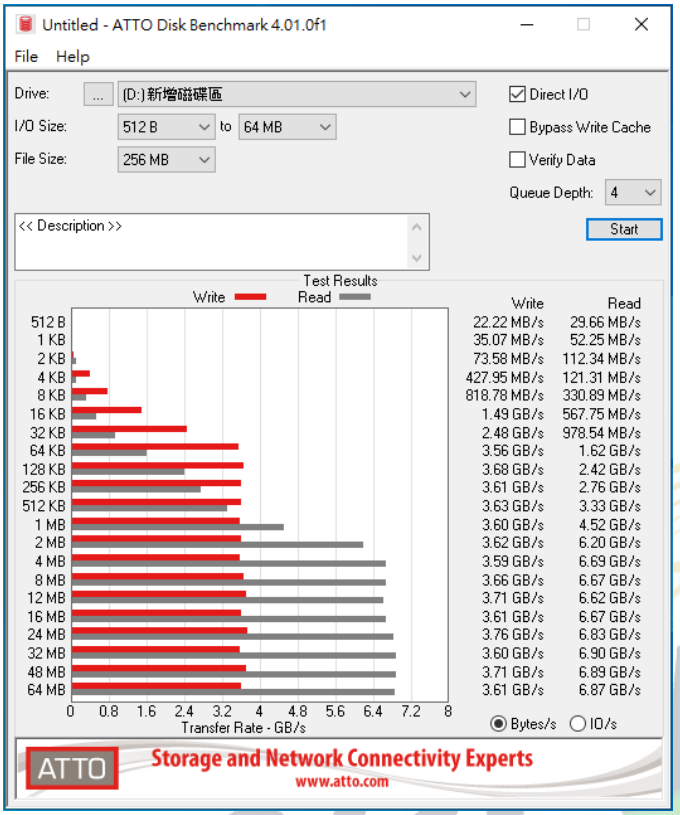


2.6.2 GD1401A Adapter & Gigabyte 1TB NVMe SSD performance as below:

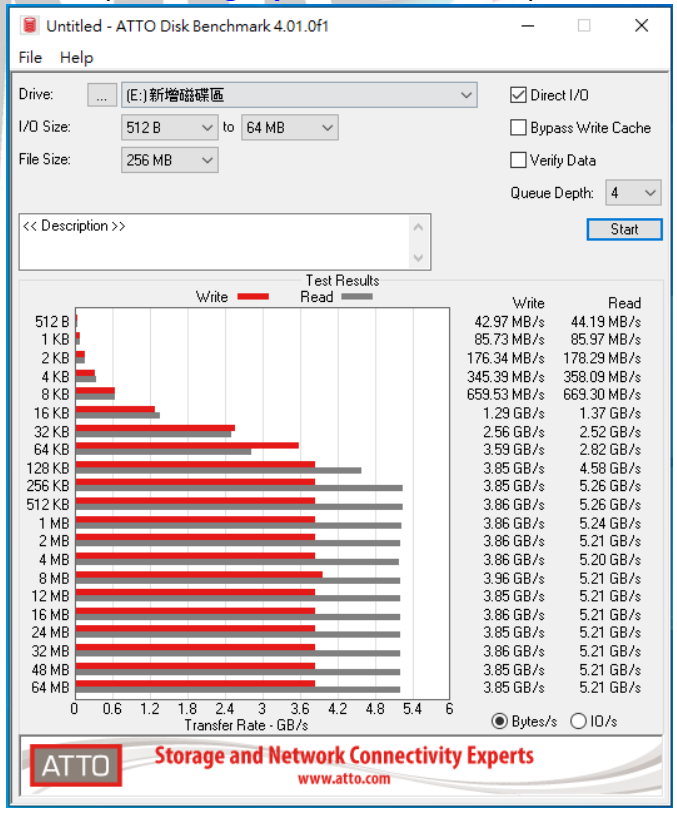


2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 **Samsung U.2 PM1733 / 4TB NVMe SSD** performance as below:



2.7.2 GD1401A Adapter & **Gigabyte 1TB NVMe SSD** performance as below:



2.8 AnvilBenchmark_V110_B337

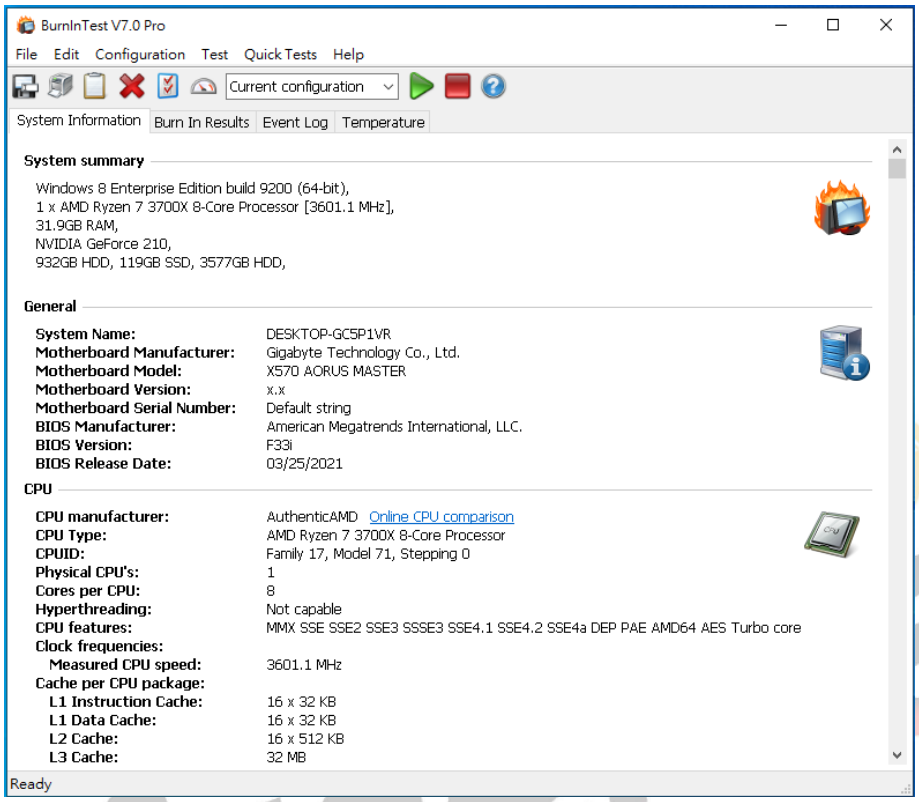
2.8.1 Samsung U.2 PM1733 / 4TB NVMe SSD performance as below:

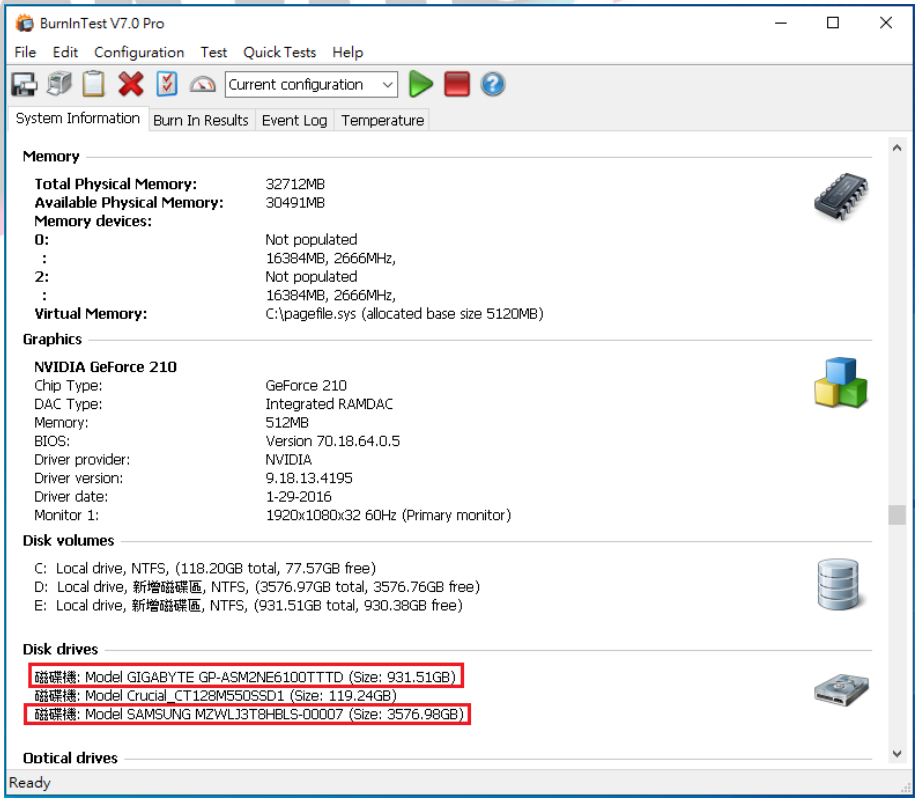
2.8.2 GD1401A Adapter & Gigabyte 1TB NVMe SSD performance as below:

3. Burn In Tests and Results

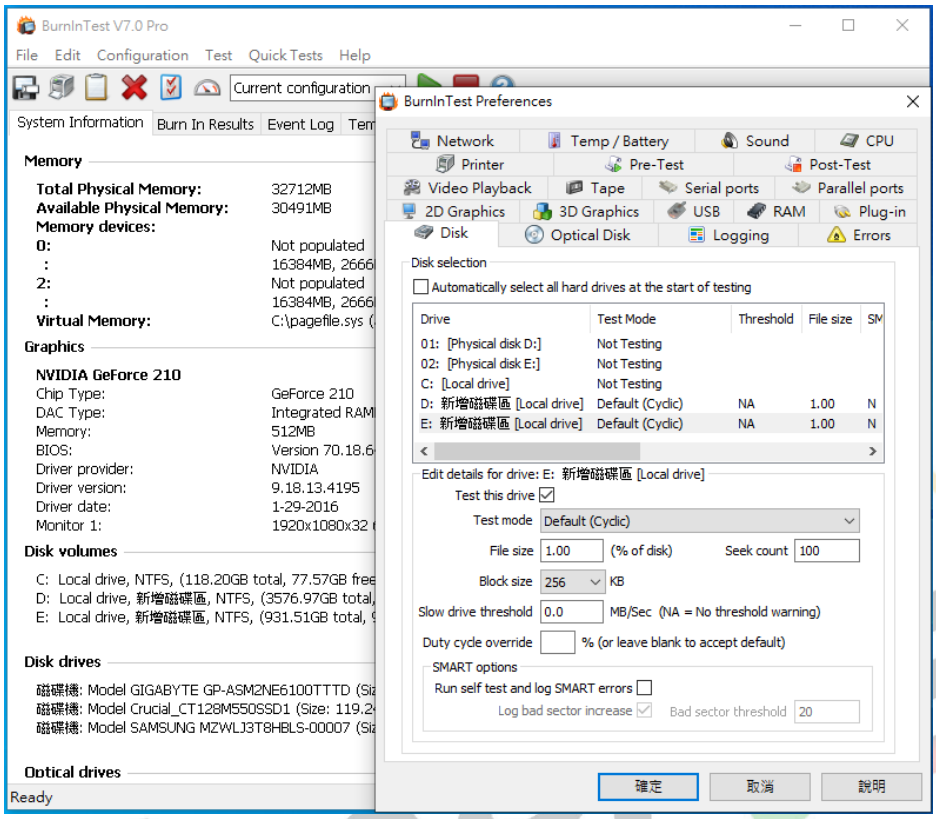
3.1 BurnInTest v8.1 Pro

3.1.1 **system information** as below:

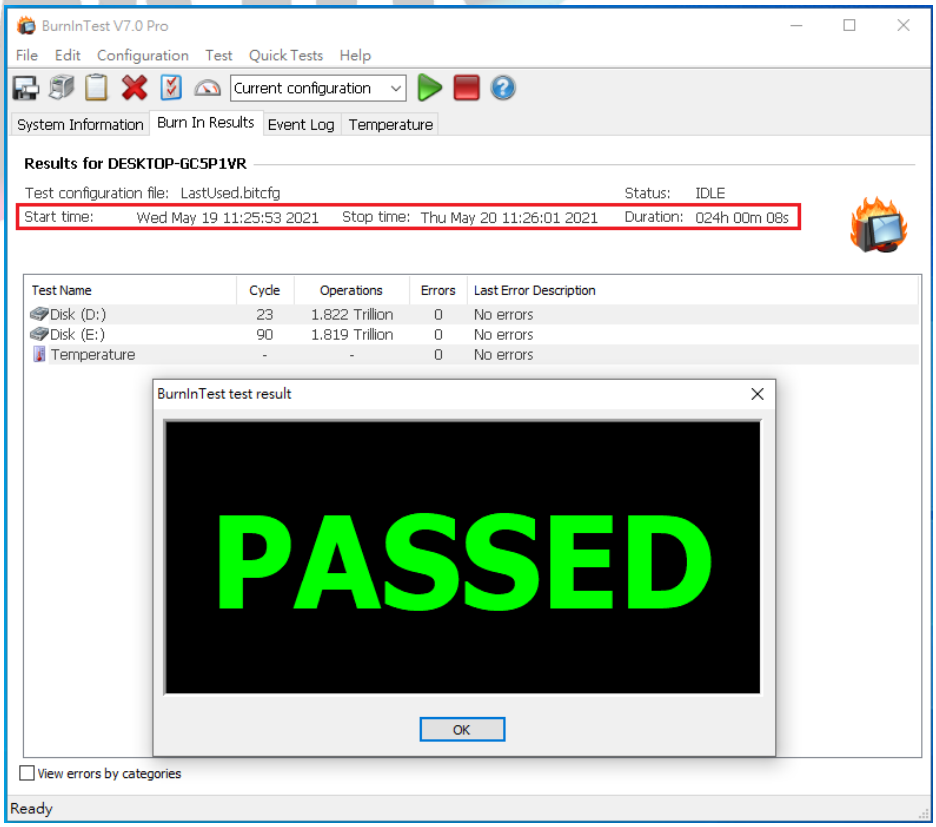




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

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

4.2 PC895A adapter I/O performance is based on U.2 NVMe SSD.