MINERVA

GD9801G SlimSAS 8i to M.2 Uual ports with 3.5”Housing

Performance & Burn In Test Rev 1.0

Table of Contents

1. **Overview**

2. **Performance Measurement Tools and Results**

   2.1 Test Platform
   2.2 Test target and M.2 NVMe SSD x2
   2.3 Install Hardware
   2.4 BIOS & Windows 10 OS environment setup
   2.5 CrystalDiskMark 8.0.0 x64 performance test
   2.6 AS SSD Benchmark 2.0. performance test
   2.7 ATTO Disk Benchamrk 4.01 performance test
   2.8 AnvilBenchmark_V110_B337 Benchmark performance test

3. **Burn In Tests and Results**

   3.1 BurnInTestv8.1 Pro burn in test

4. **Summary**

1. Overview

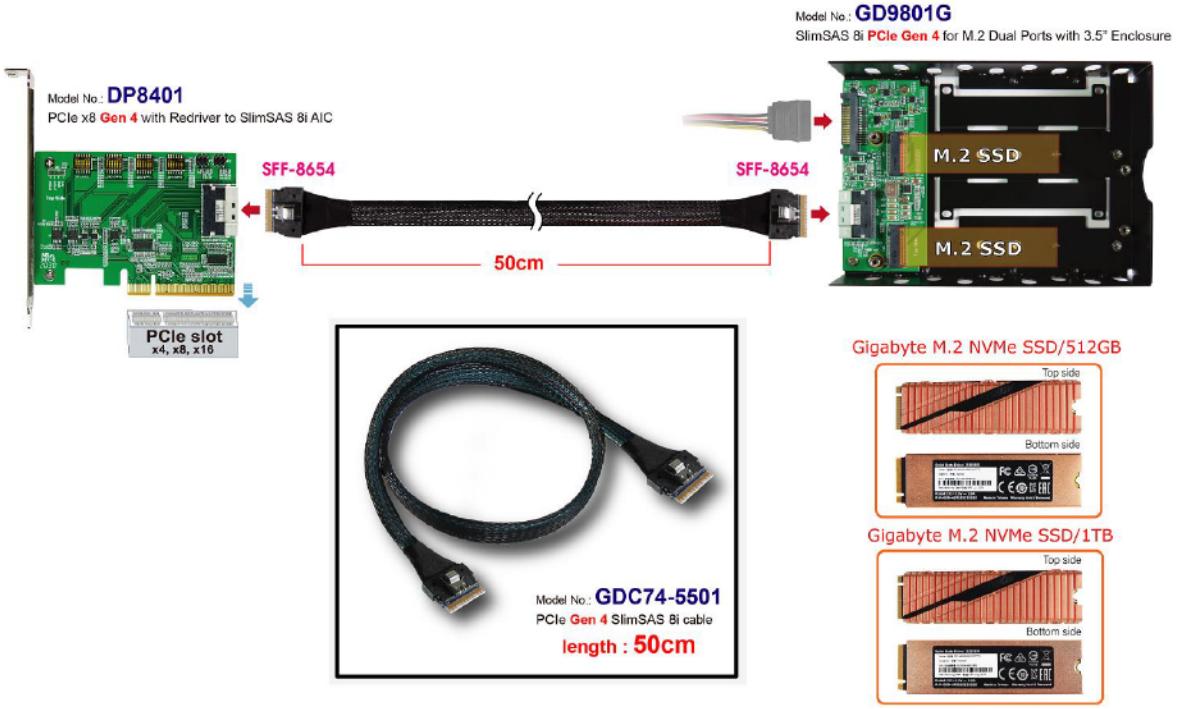
This adapter has built-in SlimSAS(SFF-8654) 8i connector and M.2 M-key connector dual ports, which can be inserted into two M.2 NVMe SSDs. It is designed for use by supporting PCIe Gen 4 x8, x16 bifurcation AIC and SFF-9402 pinout PCIe Switch RAID Card.

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 to SlimSAS(SFF-8654) 8i Cable
Adapter: GD9801G SlimSAS(SFF-8654) 8i to M.2 dual ports adapter
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: GD9801G adapter and GIGABYTE M.2 1TB & M.2 500GB NVMe SSD



2.3 Install Hardware

First inserts the M.2 SSD into the GD9801G M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). To connect the GD9801G adapter 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

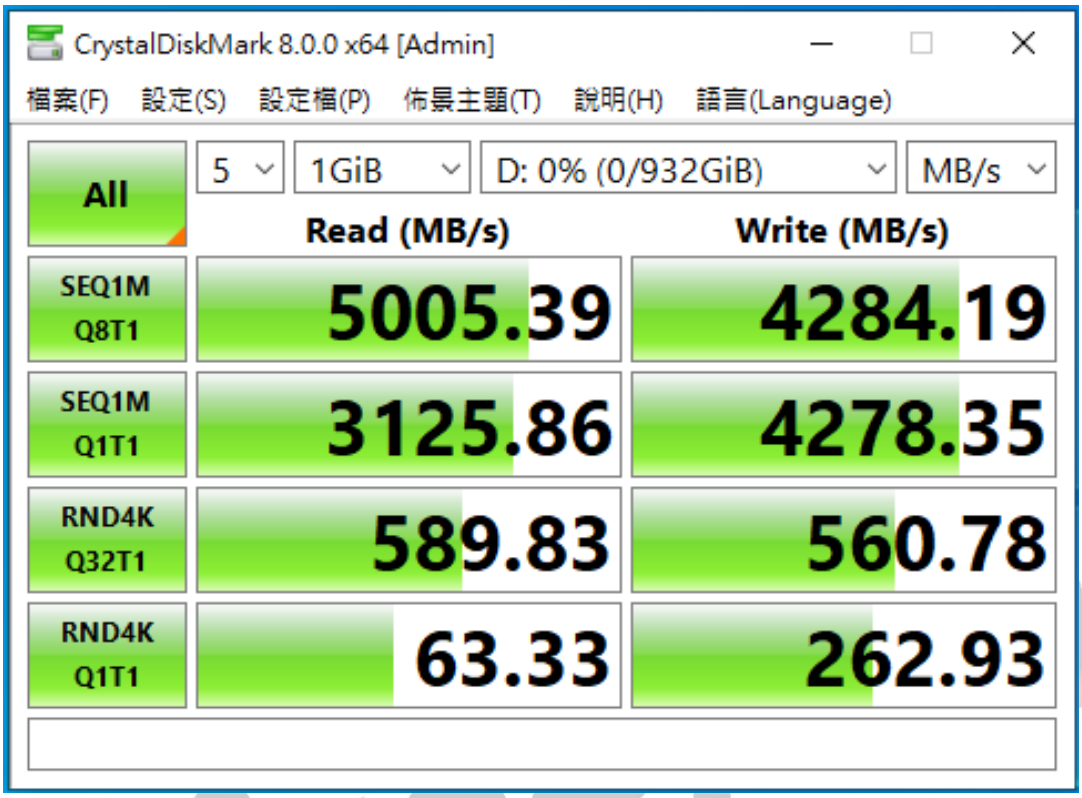
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

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

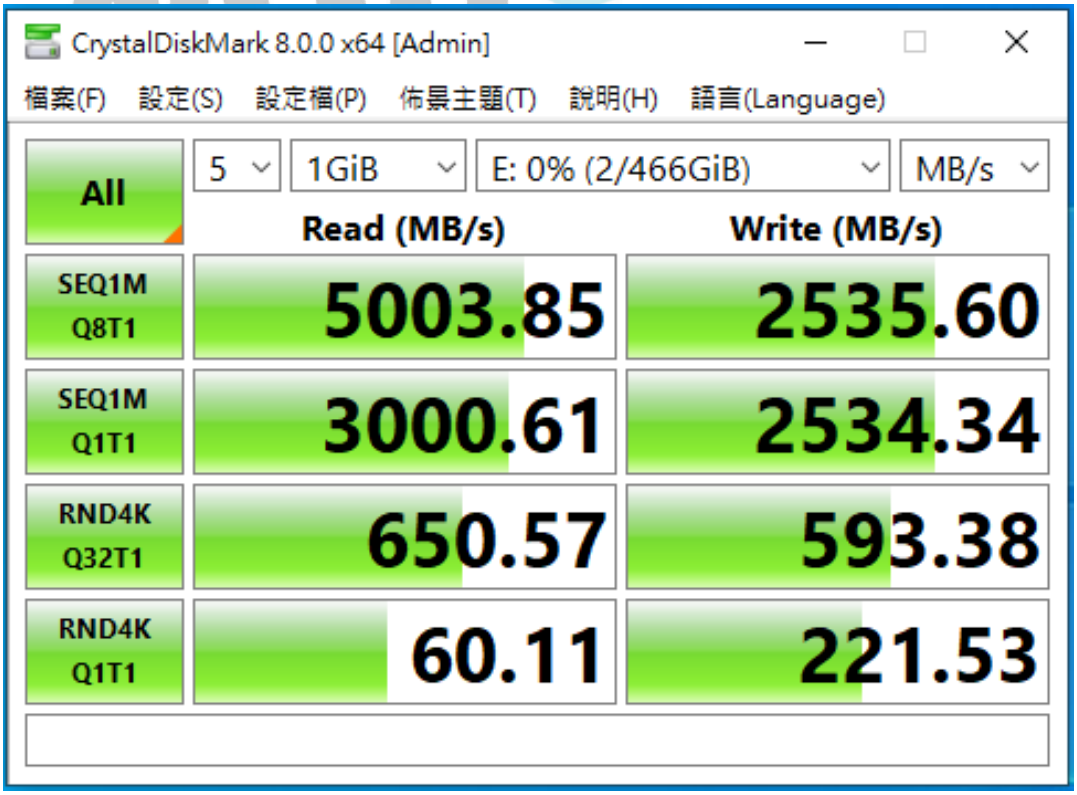
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

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



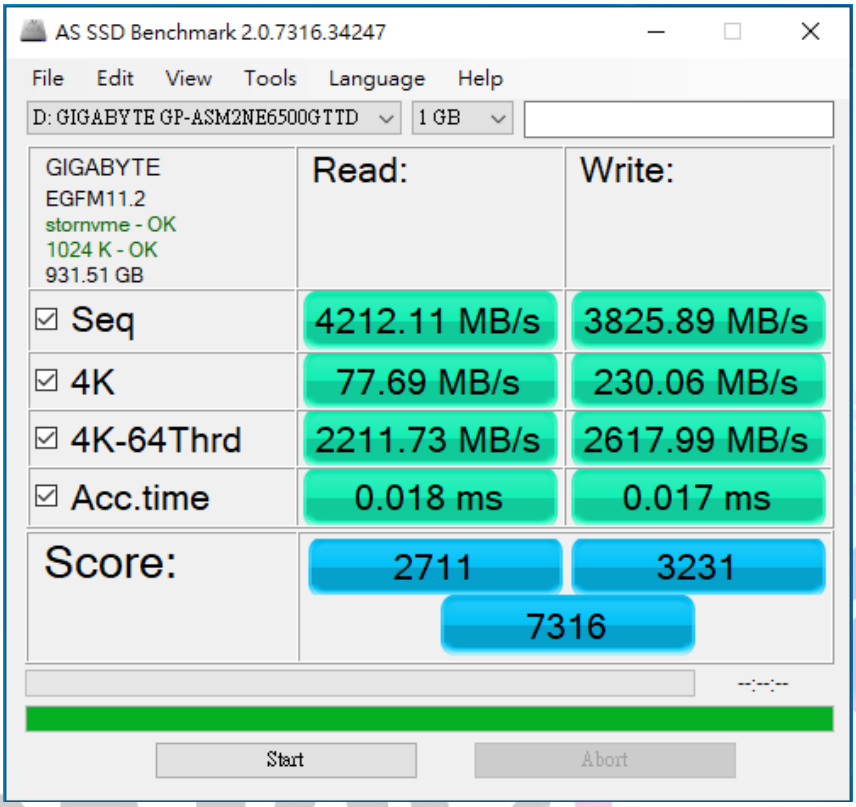
2.5.2 **M.2 NVMe GIGABYTE / 500GB** in **Drive D:** performance as below:



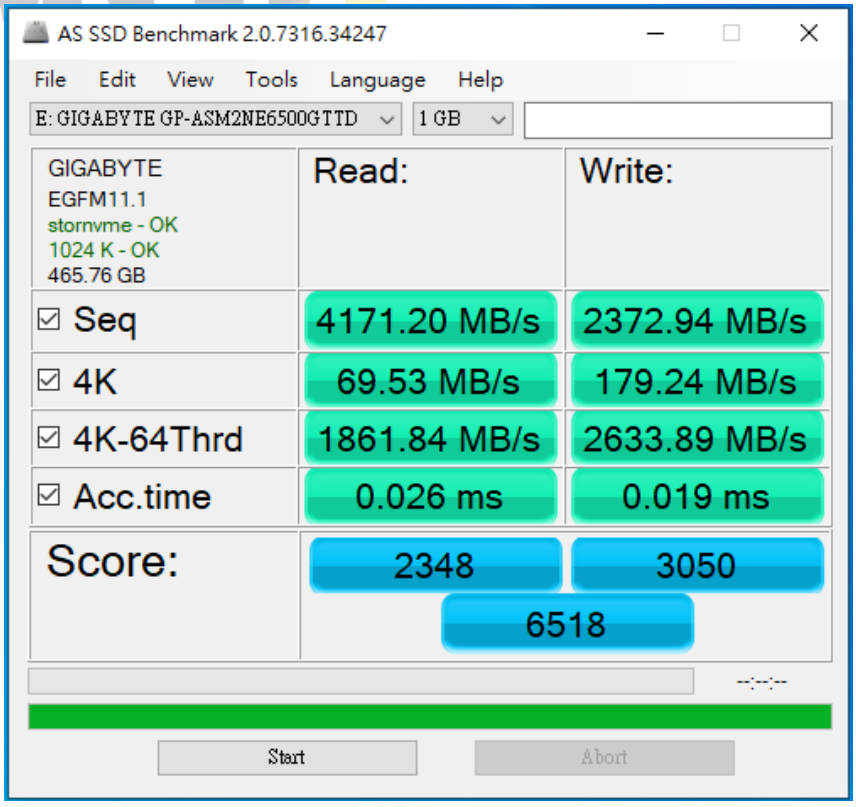
2.6 AS SSD Benchmark 2.0 performance test

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

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

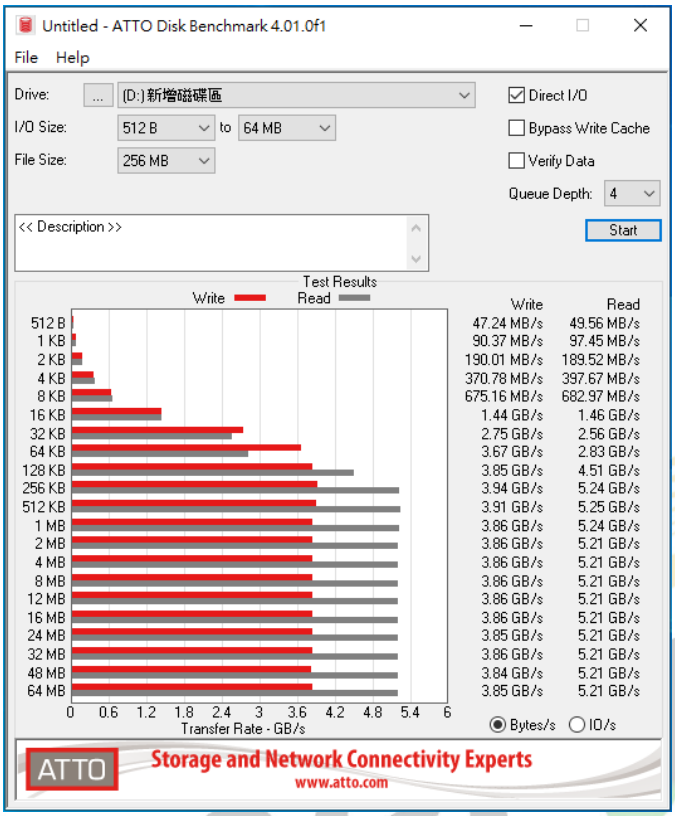


2.6.2 M.2 NVMe GIGABYTE / 500GB in **Drive E:** performance as below:

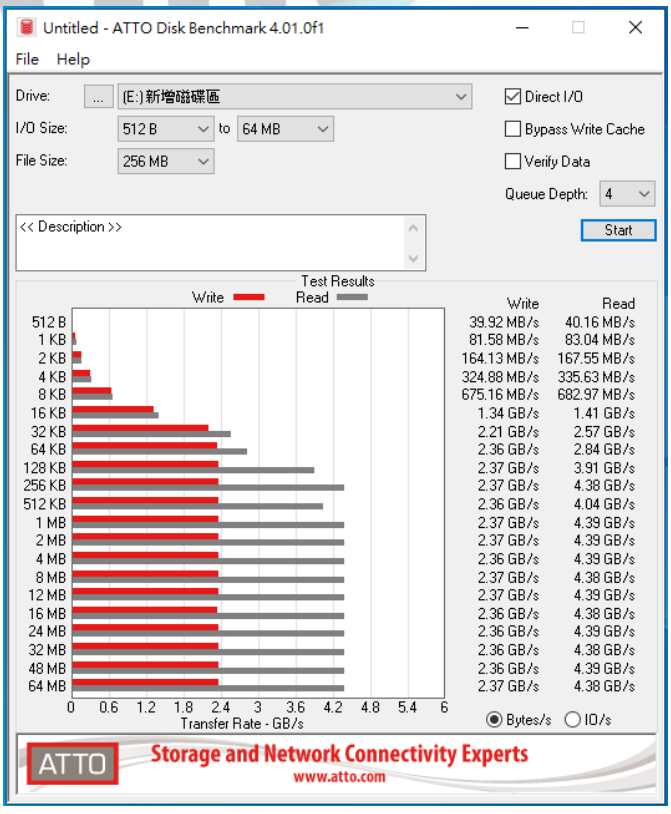


2.7 ATTO Disk Benchamrk 4.01 performance test

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



2.7.2 **M.2 NVMe GIGABYTE / 500GB in Drive E:** performance as below:



2.8 AnvilBenchmark_V110_B337

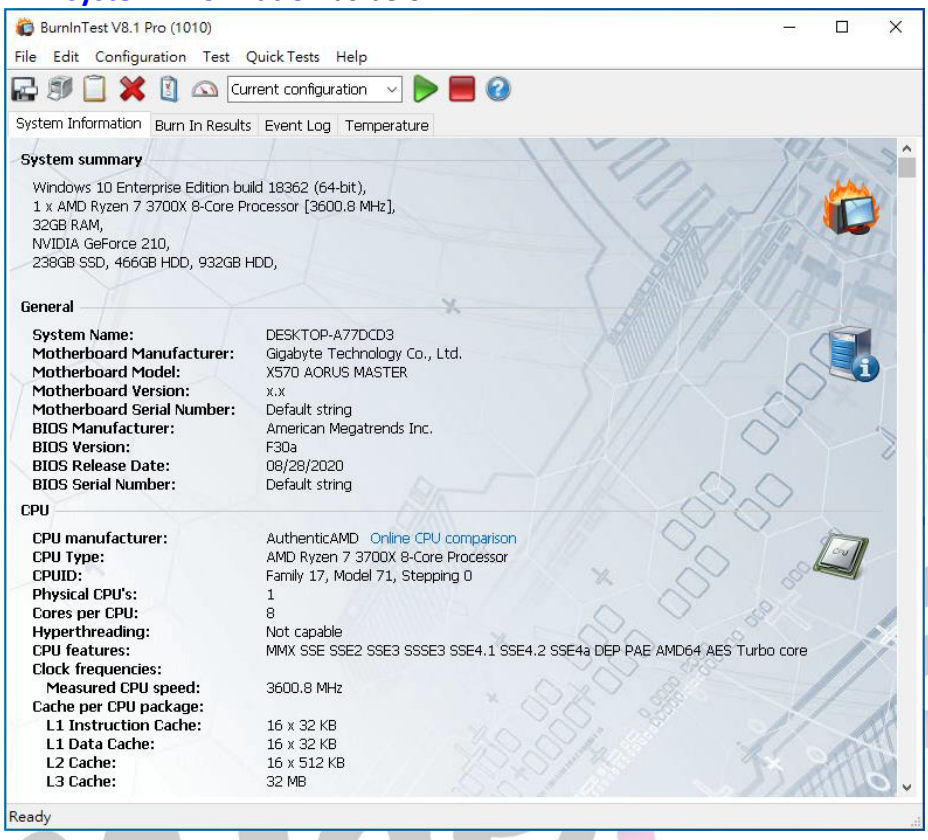
2.8.1 M.2 NVMe GIGABYTE / 1TB in **Drive D:** performance as below:

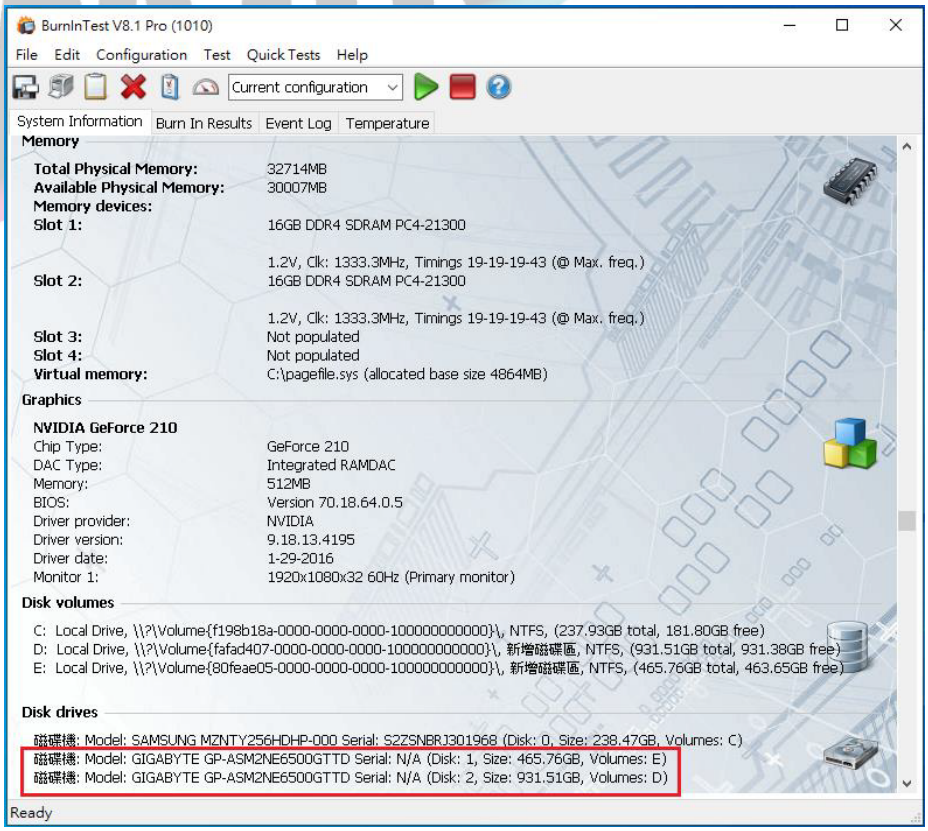
2.8.2 M.2 NVMe GIGABYTE / 500GB **in Drive E:** performance as below:

3. Burn In Tests and Results

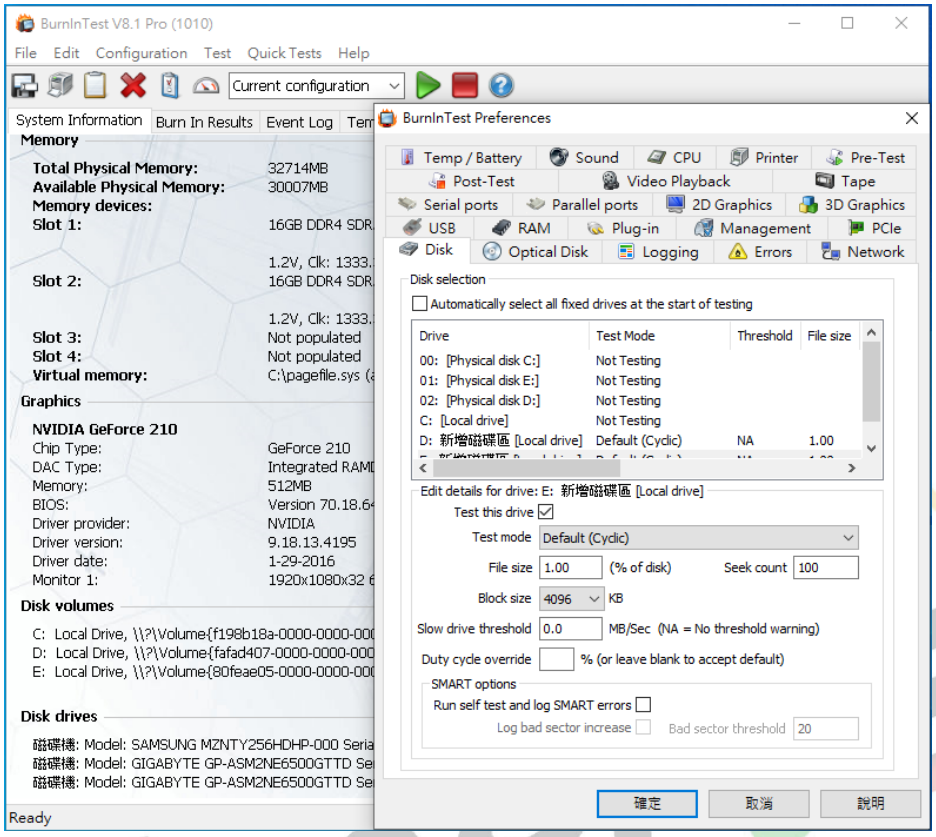
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

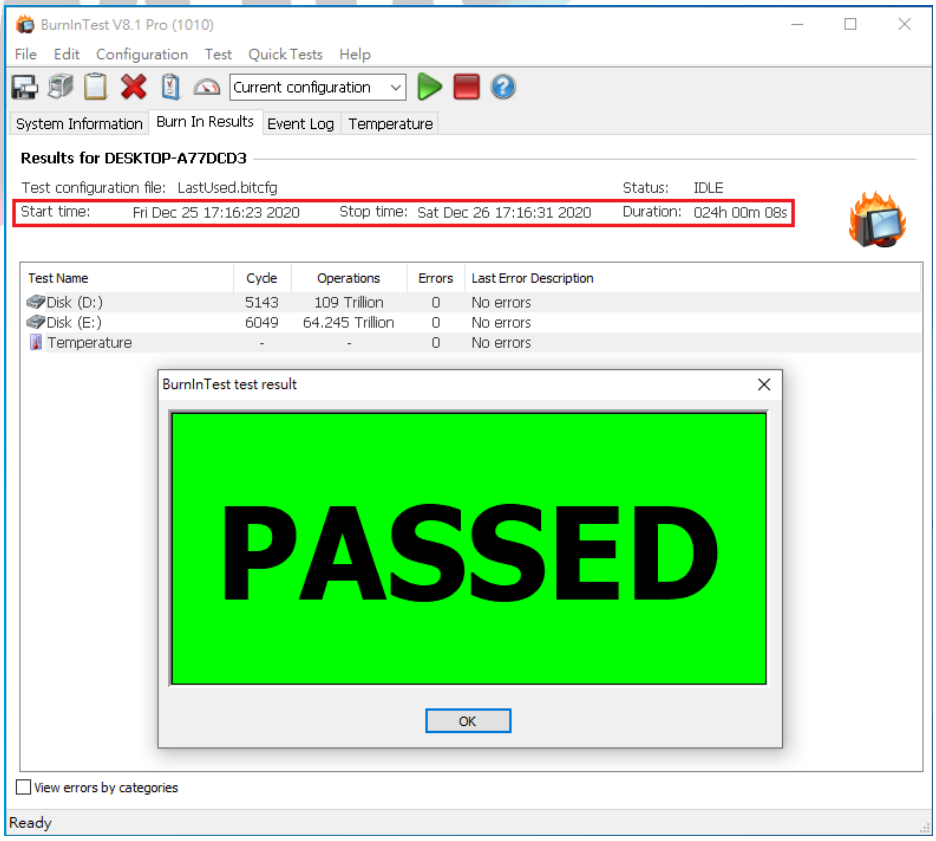




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

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

4.2 GD9801G adapter I/O performance is based on NVMe SSD.