MINERVA

GD0804A SlimSAS 4i to PCIe x4 & U.2 to PCIe x4

Performance & Burn In Test Rev. 1. 0

※ Using SFF-8654 4i to U.2, 50cm Cable

Table of Contents

1. Overview

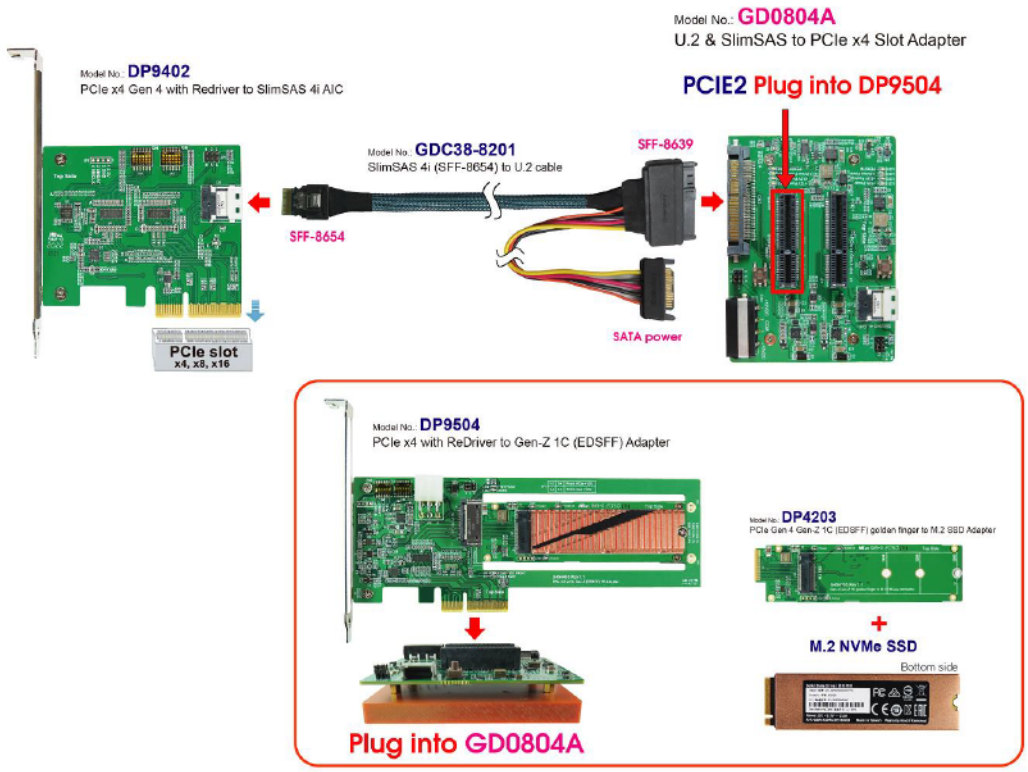
The Adapter may provide PCIe x4 Gen4, 16GT/s high-speed signals extension from U.2(SFF-8639) to PCIe x4 Slot.

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
AIC:	DP9402 PCIe x4 Gen 4 with Redriver to SlimSAS 4i Add-in Card
Adapter:	GD0804A U.2 to PCIe x4 Slot & Slim SAS 4i to PCIe x4 Slot
AIC:	DP9504 PCIe x4 Gen 4 with Redriver to Gen-Z 1C Add-in Card
Adapter:	DP4203 Gen-Z 1C to M.2 M-key adapter
Cable	SlimSAS 4i to U.2, 50cm cable
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: GD0804A, DP9504, DP4203 & **GIGABYTE M.2/1TB NVMe SSD**



2.3 Install Hardware

Inserts M.2 NVMe SSD into DP4203 adapter, and plugs DP4203 to DP9504 AIC. The DP9504 plugs into GD0804A Adapter

2.4 BIOS & Windows 10 OS environment setup

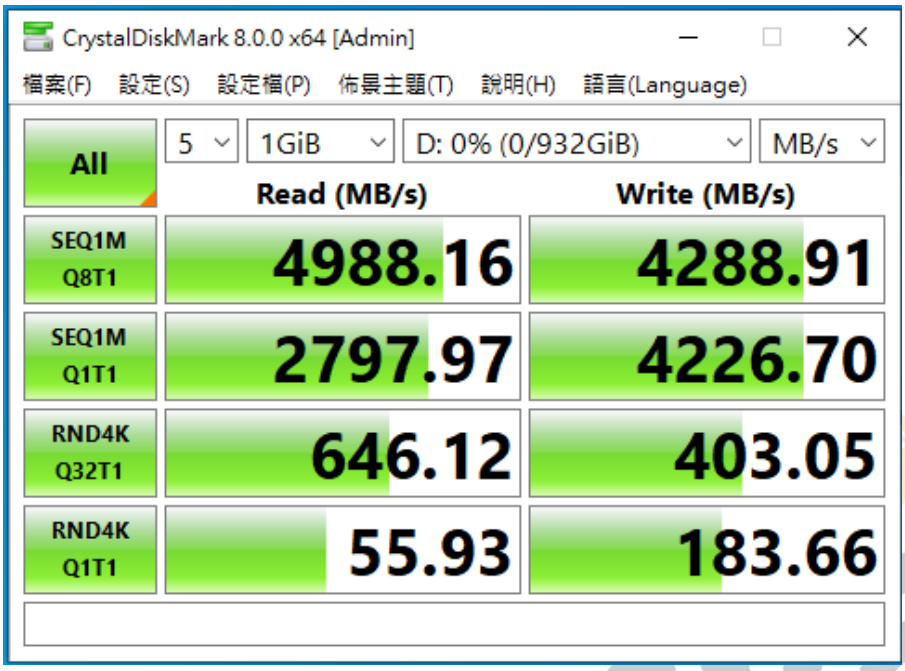
2.4.1 Primary SATA SSD installed Windows 10 OS.

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

2.5 CrystalDiskMark 8.0 x64 performance test

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

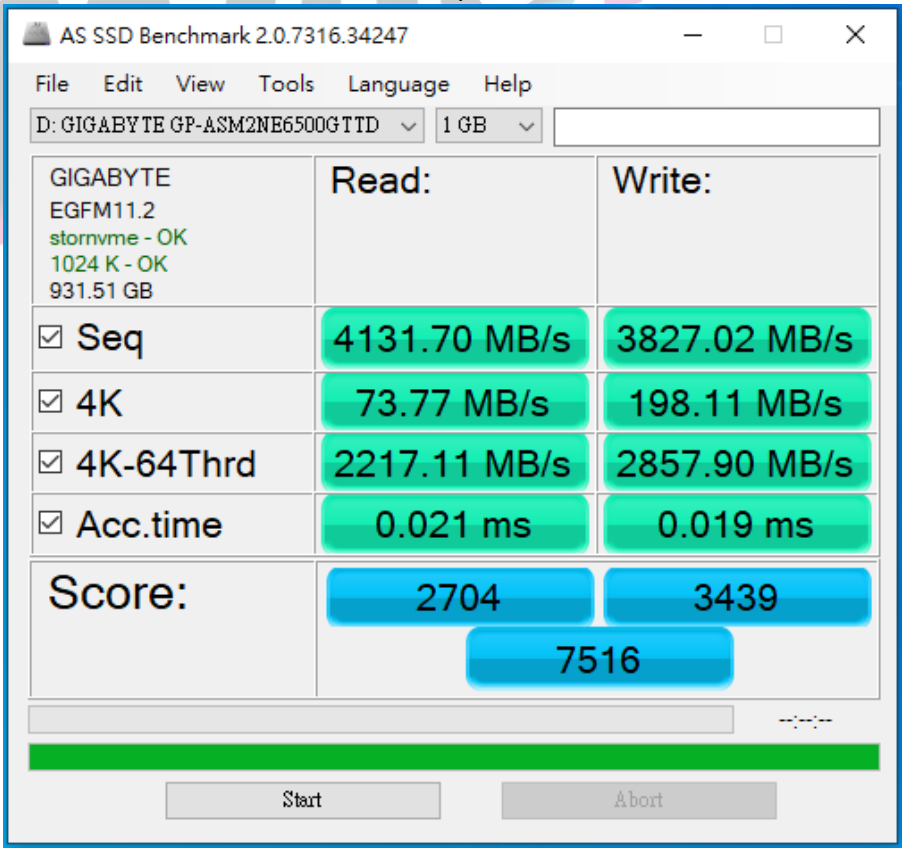
2.5.1 GIGABYTE M.2 NVMe SSD/ 1TB performance as below:



2.6 AS SSD Benchmark 2.0.7 performance test

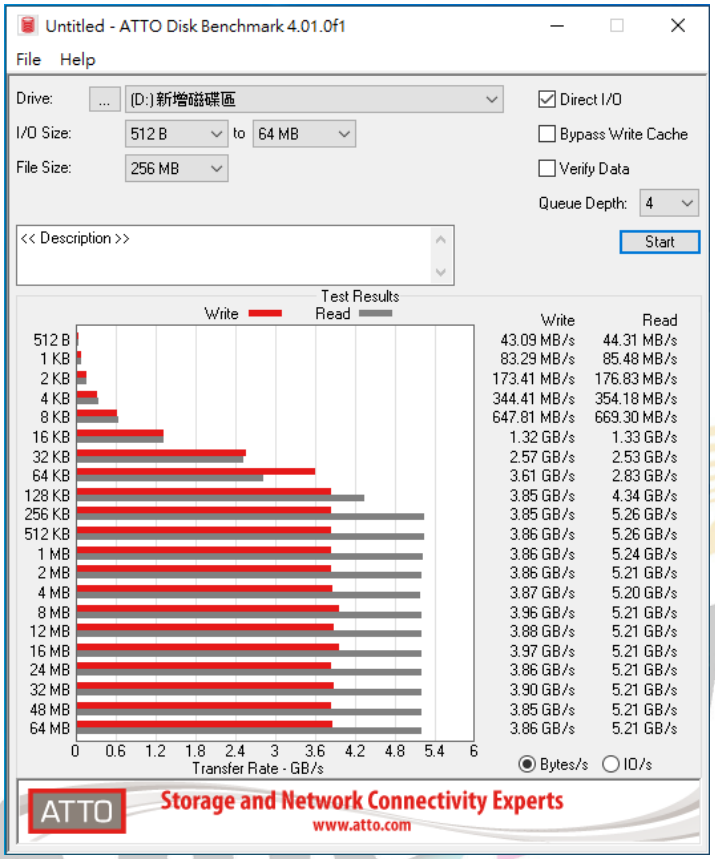
※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 GIGABYTE M.2 NVMe SSD/ 1TB performance as below:



2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 **GIGABYTE M.2 NVMe SSD/ 1TB** performance as below:



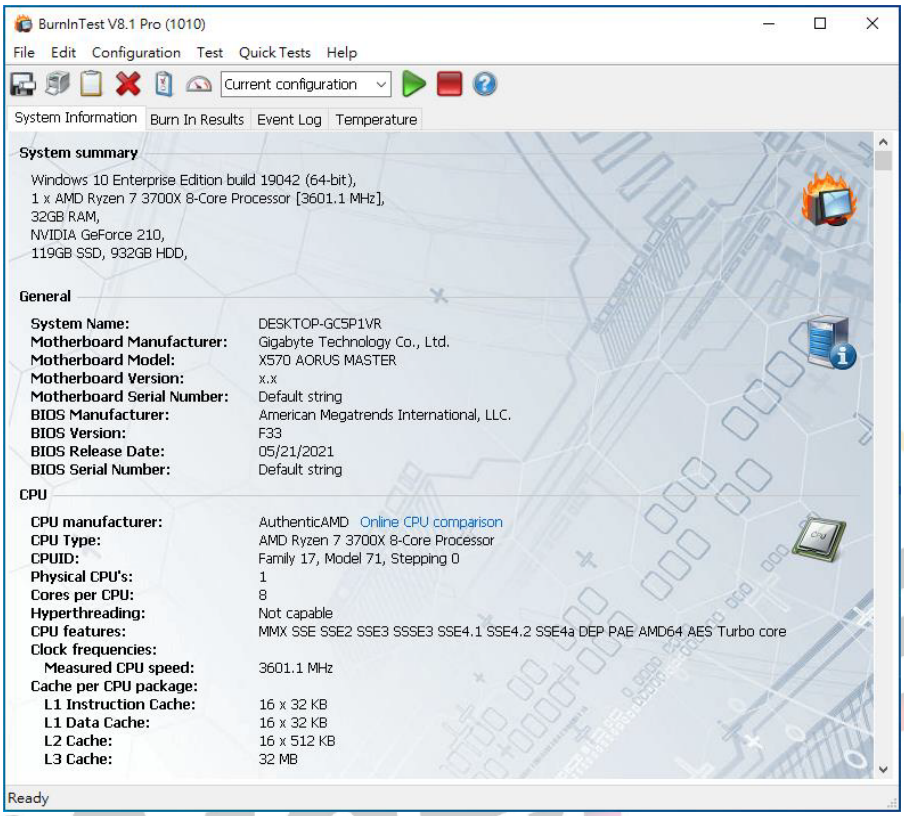
2.8 AnvilBenchmark_V110_B337

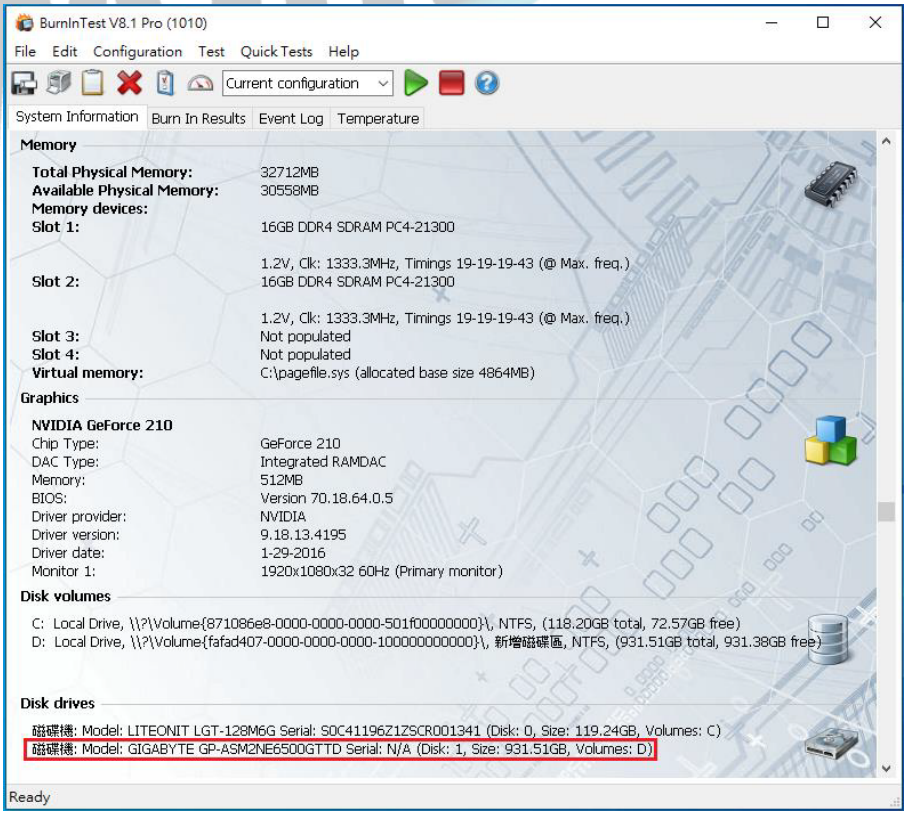
2.8.1 **GIGABYTE M.2 NVMe SSD/ 1TB** performance as below:

3. Burn In Tests and Results

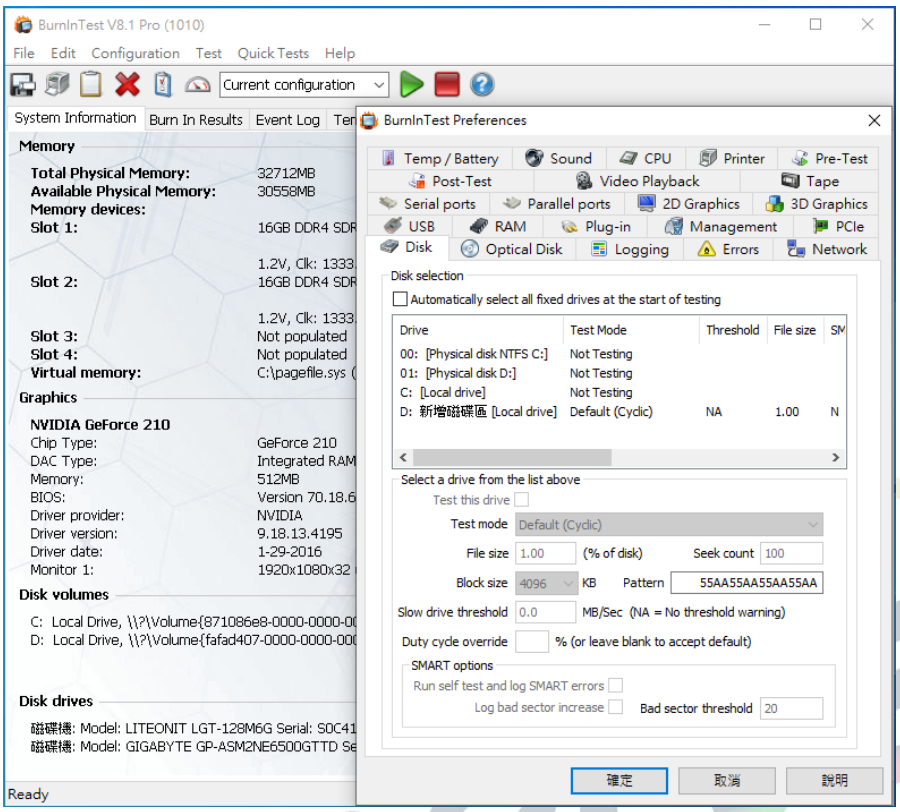
3.1 BurnInTest v8.1 Pro for GIGABYTE M.2 NVMe SSD/ 1TB

3.1.1 System Information as below:

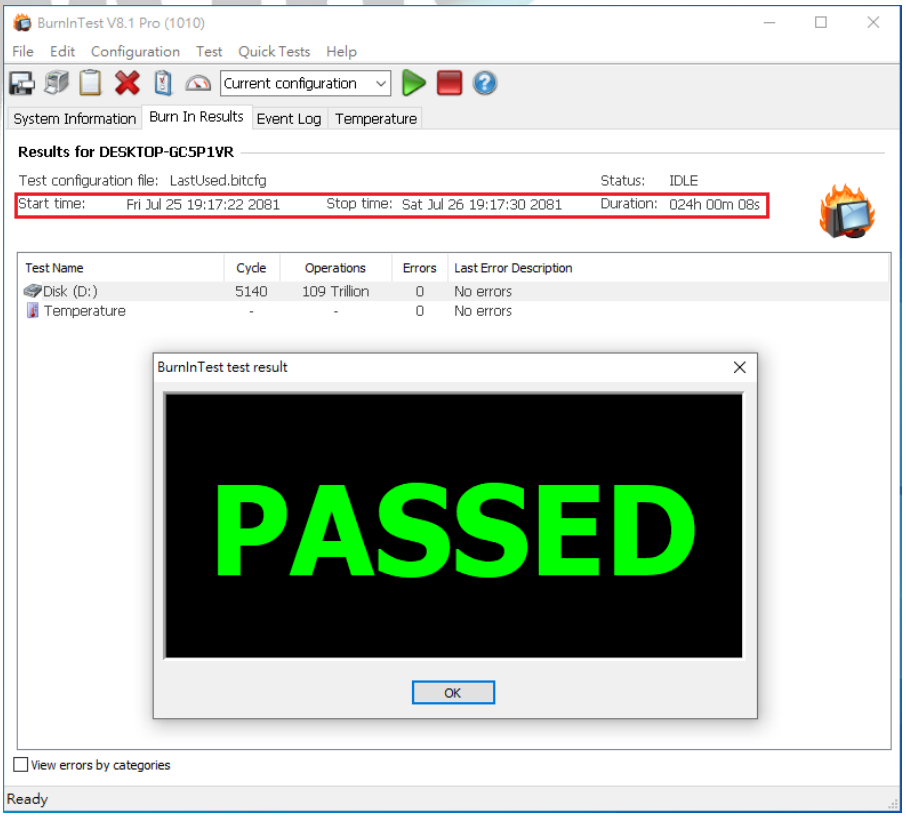




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 NVMe SSD is PCIe Gen 4, 16GT/s , 4 Lanes Interface, I/O speed, max. to 64Gbps.
4.2 GD0804A Adapter I/O performance is based on M.2 NVMe SSD.
4.3 DP9504 Host Bus Adapter I/O performance is based on M.2 NVMe SSD.
4.4 DP4203 Host Bus Adapter I/O performance is based on M.2 NVMe SSD.