MINERVA

GDC38-8204 SlimSAS 4i PCIe 4.0 to U.2 Cable(L:150cm)

Performance & Burn In Test Rev. 1. 0

Table of Contents

SFF-8654 4i PCIe Gen 4 to U.2(SFF-8639),150cm Cable

1. Overview

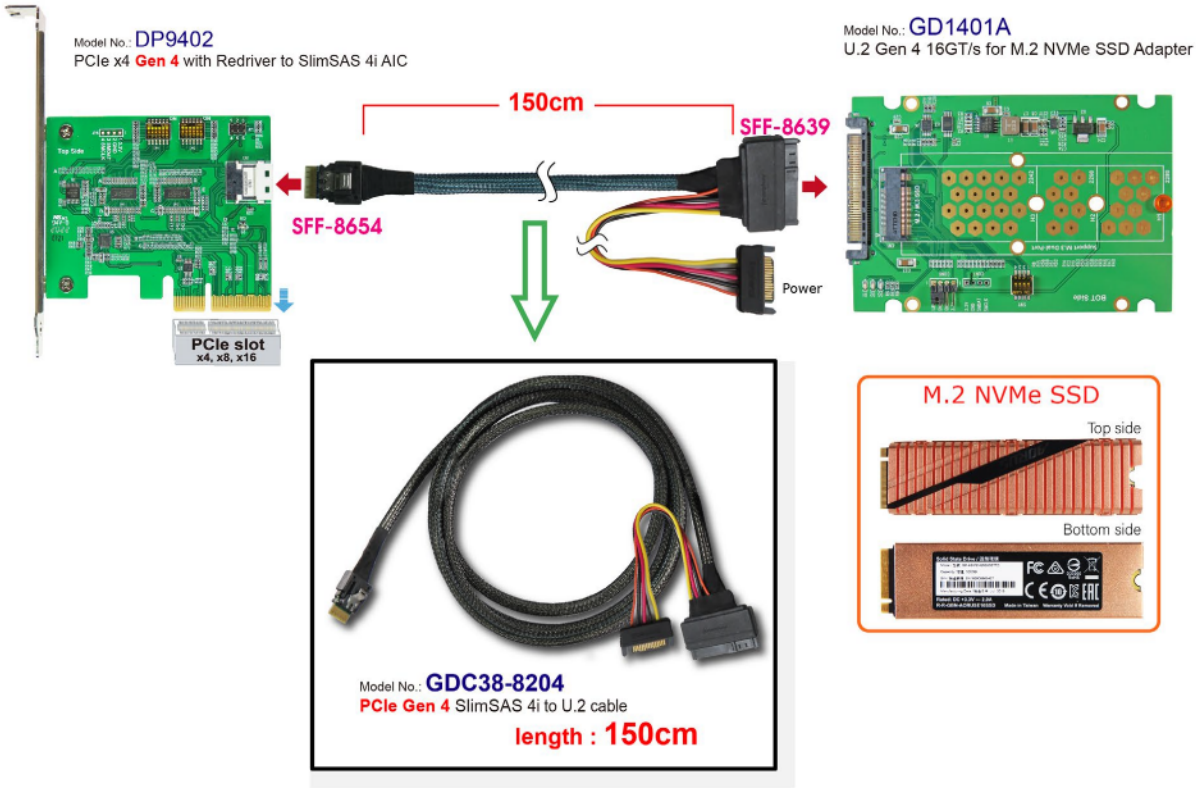
The cable may provide 4 Lanes PCIe data link wide. When it plugs into PCIe x4 with Redriver AIC to extend 150cm length, the PCIe signals can be transmit perfactly and is not attnuation.

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:	GD1401A U.2 PCIe Gen 4 to M.2 NVMe SSD 2.5" Adapter
Cable:	SFF-8654 to U.2(SFF-8639) PCIe Gen 4, 150cm Cable
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP9402 AIC, GD1401A Adapter and **Gigabyte 500GB NVMe SSD**



2.3 Install Hardware

Inserts M.2 NVMe SSD into GD1401A adapter converter's M.2 M-key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connects GD1401A converter to DP9402 Riser Card(PCIe x4 Gen4 with Redriver to SlimSAS 4i ADD-in Card), Using SFF-8654 4i to U.2(SFF-8639) cable and plugs DP9402 into GIGABYTE **X570 AORUS MASTER**

2.4 BIOS & Windows 10 OS environment setup

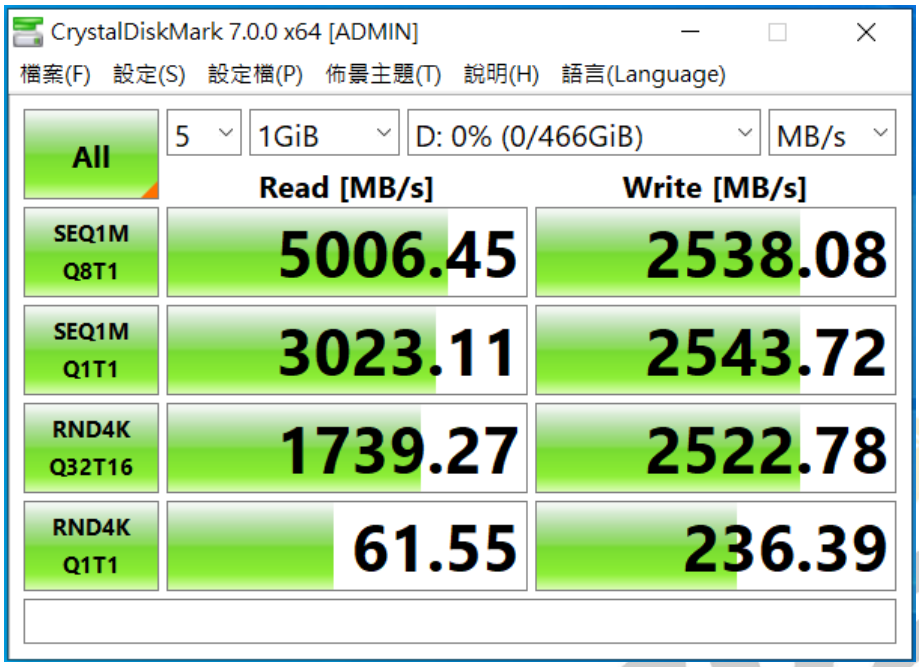
2.4.1 Primary SATA SSD installed Windows 10 OS.

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

2.5 CrystalDiskMark 7.0 x64 performance test

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

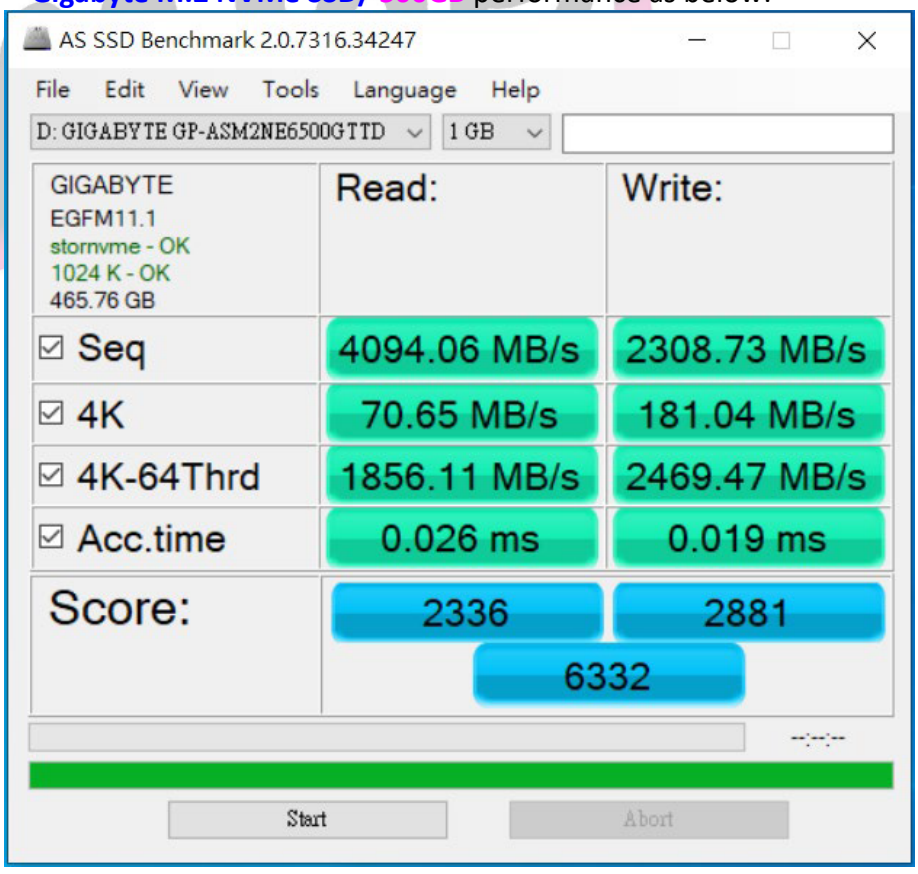
2.5.1 **Gigabyte M.2 NVMe SSD/ 500GB** performance as below:



2.6 AS SSD Benchmark 2.0.7 performance test

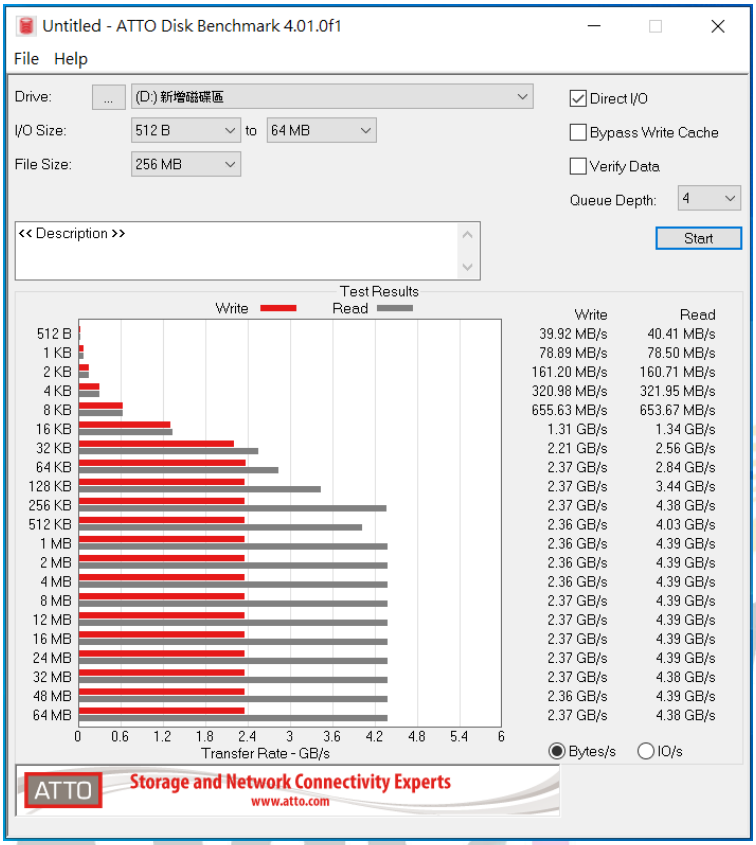
※Benchmark(Read & Write by MB/s, default block size = 16MB)

2.6.1 **Gigabyte M.2 NVMe SSD/ 500GB** performance as below:



2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 **Gigabyte M.2 NVMe SSD/ 500GB** performance as below:



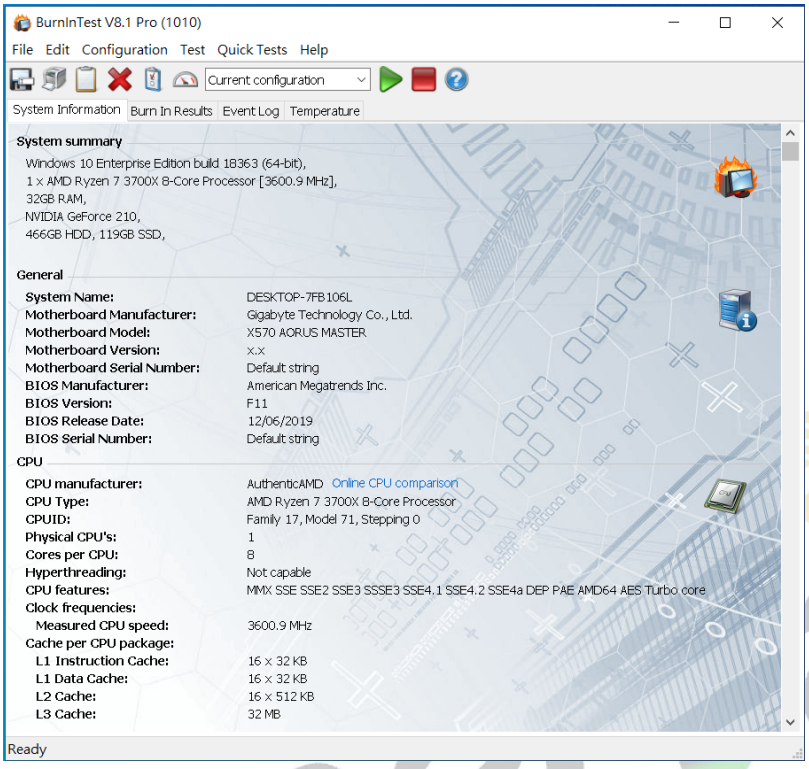
2.8 AnvilBenchmark_V110_B337

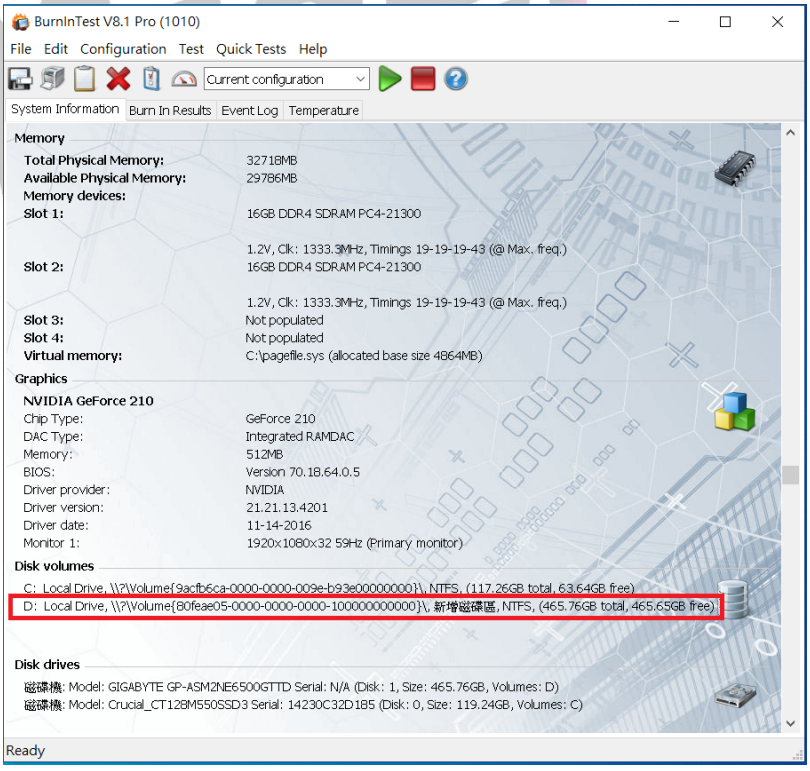
2.8.1 **Gigabyte M.2 NVMe SSD/ 500GB** perforance as below:

3. Burn In Tests and Results

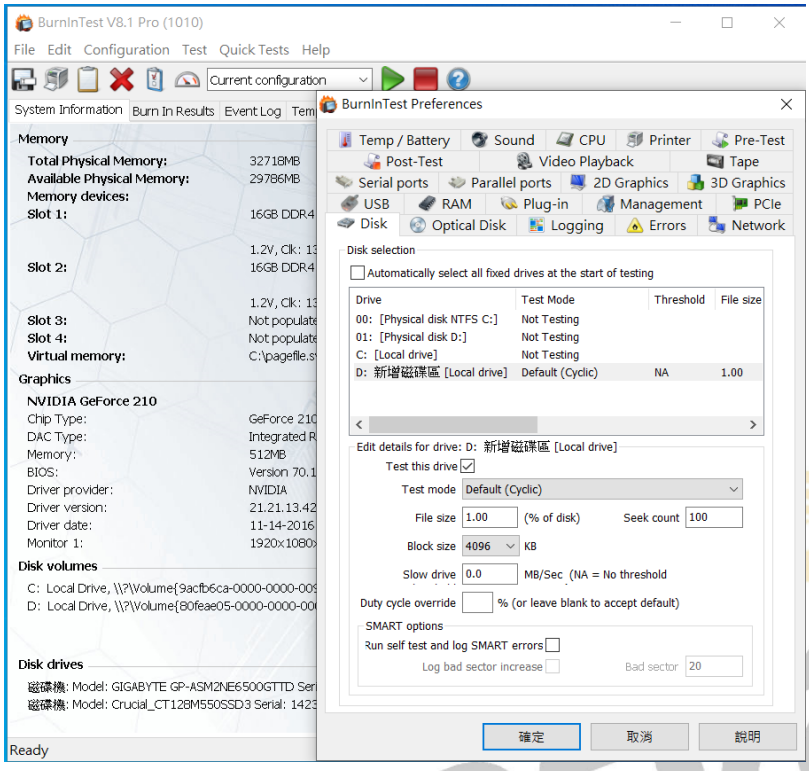
3.1 BurnInTest v8.1 Pro for Gigabyte M.2 NVMe SSD/ 500GB

3.1.1 System Information as below:

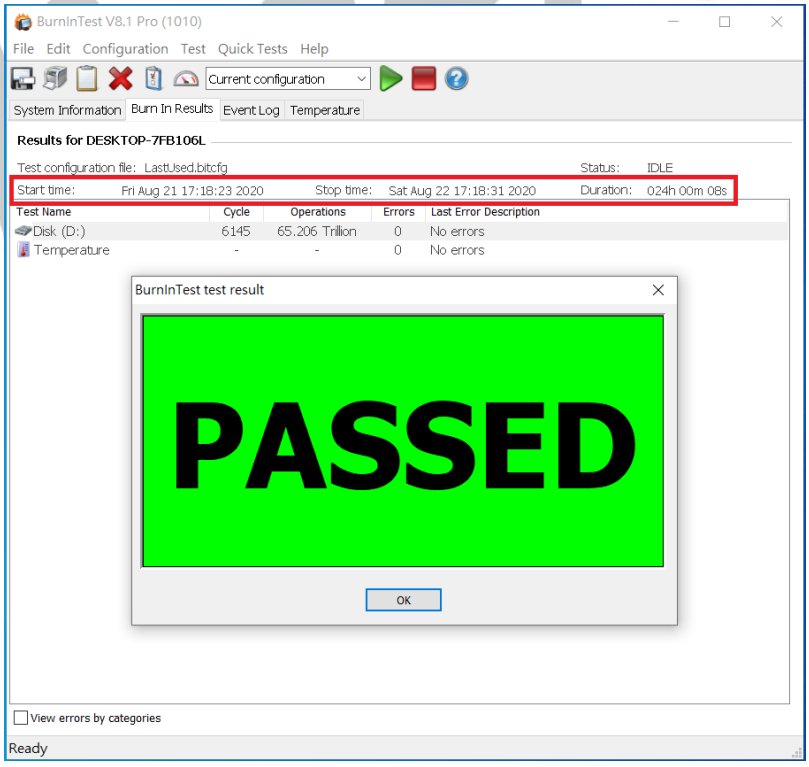




3.1.2 Disk test mode(10 ways cycle test)



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 DP9402 AIC I/O performance is based on M.2 NVMe SSD.

4.3 GD1401A adapter I/O performance is based on M.2 NVMe SSD.