



MINERVA

DP9609 PCIe x4 Gen4 with ReDriver for MCIO 38P AIC

Performance & Burn In Test Rev. 1. 0

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DP9609 Add-in Card

1. Overview

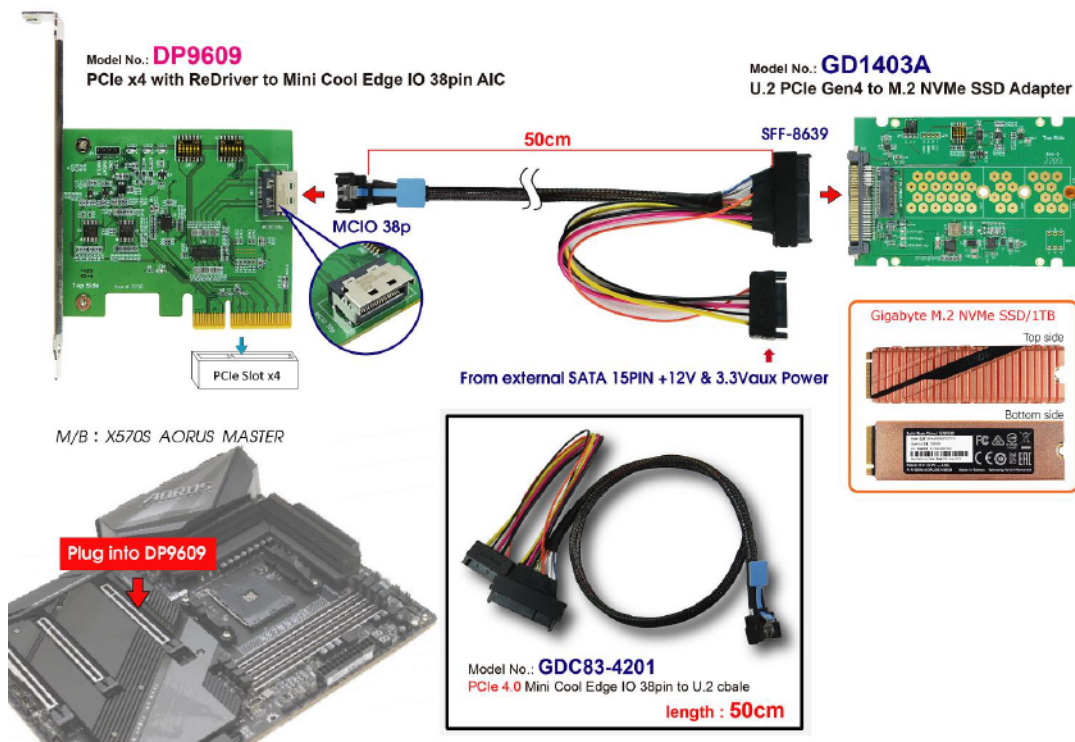
This add-in card built-in ReDriver provides PCIe x4 Gen4, 16GT/s high-speed signals extension to MCIO 38P.

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: DP9609 PCIe x4 Gen 4 with Redriver to MCIO 38P Add-in Card
Adapter: GD1403A U.2 PCIe Gen 4 to M.2 NVMe SSD Adapter
Cable: MCIO 38P PCIe 4.0 to U.2(SFF-8639), **50cm** Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: DP9609 AIC, GD1403A adapter & Gigabyte M.2 NVMe 1TB SSD



DP9609 Add-in Card

2.3 Install Hardware

Inserts M.2 NVMe SSD into GD1403A adapter's M.2 M-key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connects GD1403A converter to DP9609 ADD-in Card (PCIe x4 Gen4 with Redriver to MCIO 38P), using MCIO 38P to U.2 cable and plugs DP9609 into GIGABYTE **X570 AORUS MASTER**

2.4 BIOS & Windows 10 OS environment setup

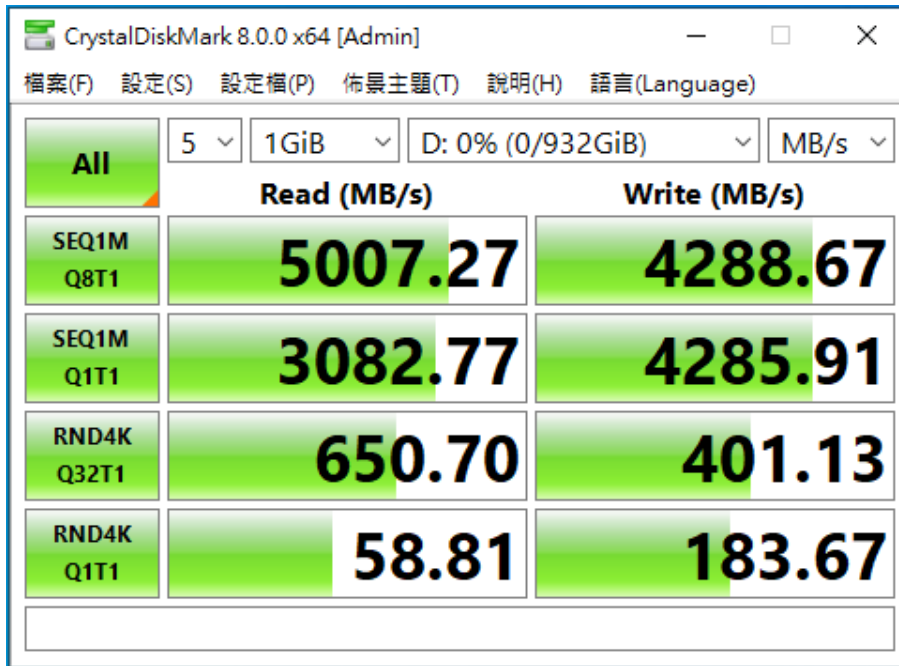
- 2.4.1 Primary SATA SSD installed Windows 10 OS.
- 2.4.2 M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.



DP9609 Add-in Card

2.5 CrystalDiskMark 8.0 x64 performance test

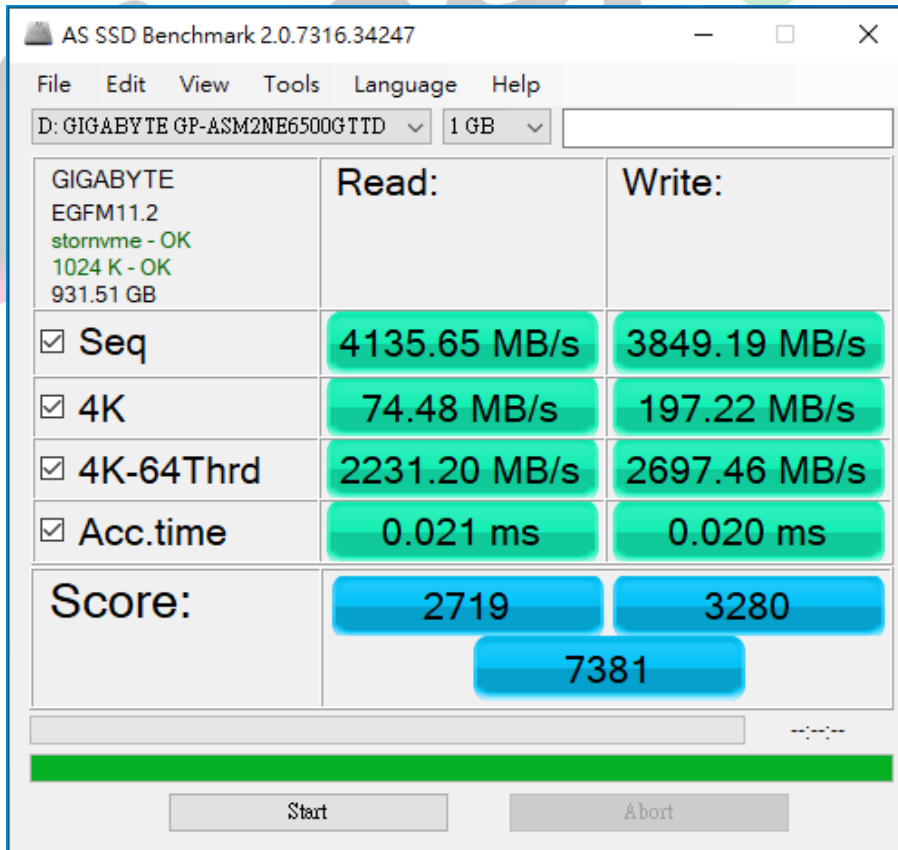
※ Benchmark (Sequential Read & Write / default = 1MB)



2.6 AS SSD Benchmark 2.0.7 performance test

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

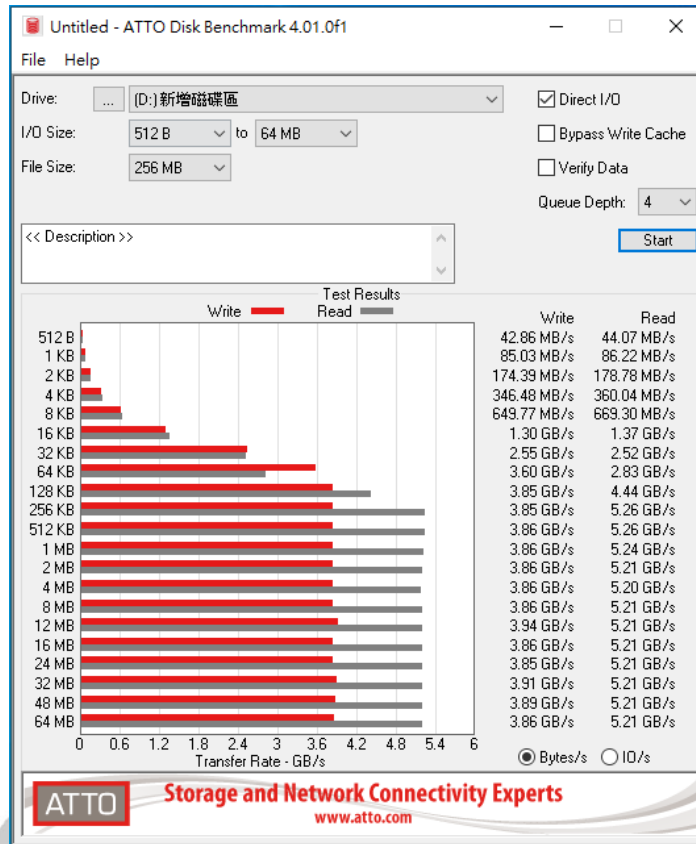
2.6.1 Gigabyte M.2 NVMe 1TB SSD performance as below:



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2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 Gigabyte M.2 NVMe 1TB SSD performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Gigabyte M.2 NVMe 1TB SSD performance as below:

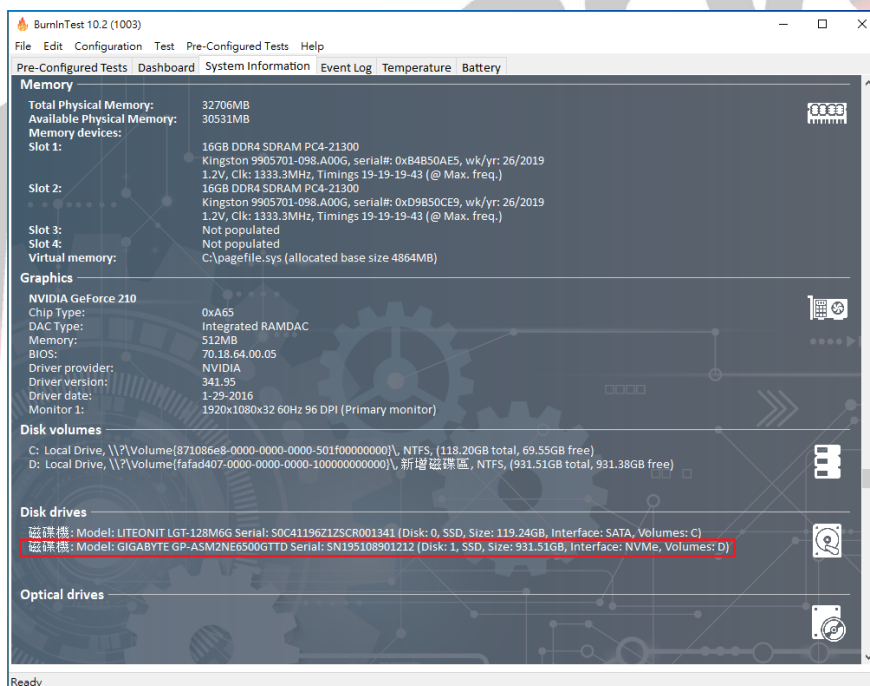
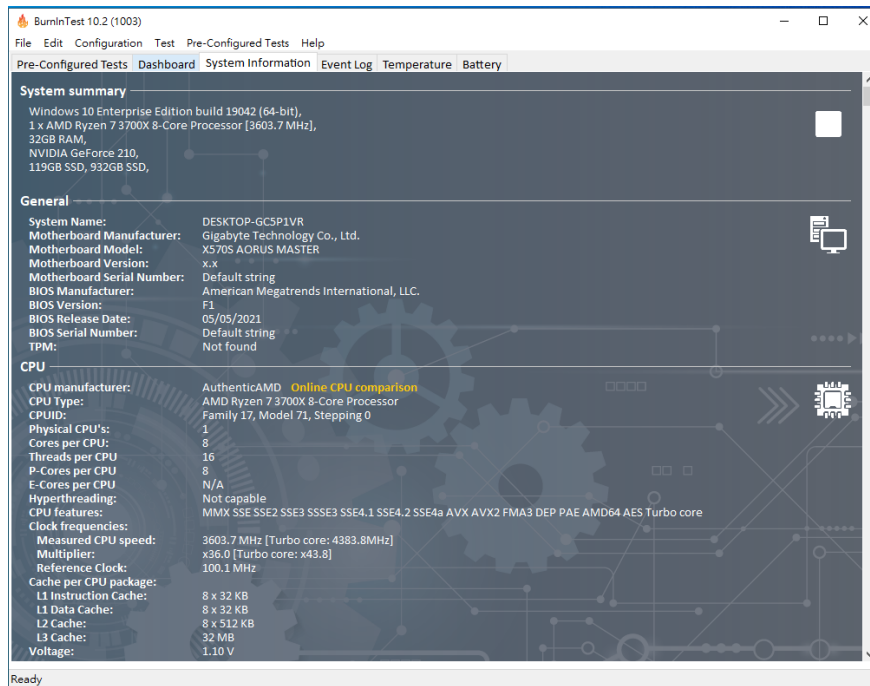


DP9609 Add-in Card

3. Burn In Tests and Results

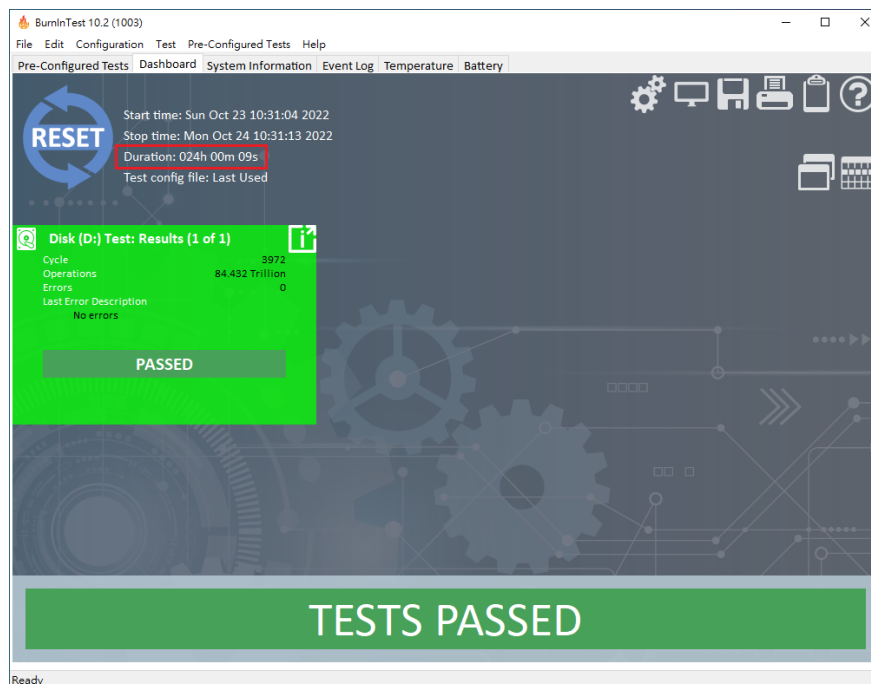
3.1 BurnInTest v10.2 Pro for Gigabyte M.2 NVMe 1TB SSD

3.1.1 System Information as below:



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3.1.2 24-hour Burn-in test PASSED



4. Summary

- 4.1 M.2 NVMe SSD is PCIe Gen4, 16GT/s , 4 Lanes Interface, I/O speed, max. to 64Gbps.
- 4.2 DP9609 AIC I/O performance is based on M.2 NVMe SSD.
- 4.3 GD1403A adapter I/O performance is based on M.2 NVMe SSD.