



MINERVA

DP6401 M.2 PCIe 4.0 for SlimSAS 4i (SFF-8654) Adapter

Performance & Burn In Test Rev. 1. 0

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DP6401 Adapter

1. Overview

This adapter may provide PCIe Gen4, 16GT/s 4-Lane data link high-speed signals extension to SlimSAS 4i(SFF-8654).

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: DP6401 M.2 PCIe Gen 4 with Redriver to SlimSAS 4i
- Cable: SFF-8654 4i PCIe Gen4 to U.2(SFF-8639) Cable, 50cm
- OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: DP6401 Adapter and Intel U.2 D7-P5510 3.84TB NVMe SSD



DP6401 Adapter

2.3 Install Hardware

Plugs U.2 SSD into one side of SFF-8654 4i to U.2(SFF-8639) cable and cable another side connects to DP6401 adapter's SlimSAS 4i connector. And then plugs DP6401 Adapter into M.2 M-key of 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 U.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

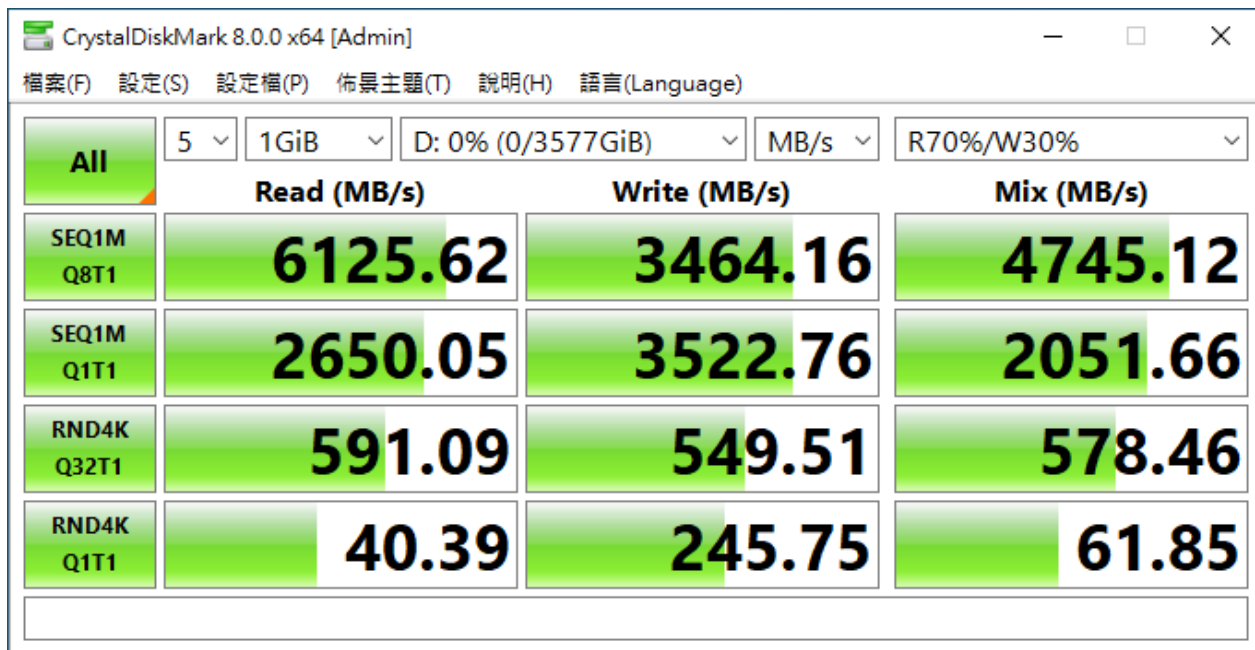


DP6401 Adapter

2.5 CrystalDiskMark 8.0 x64 performance test

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

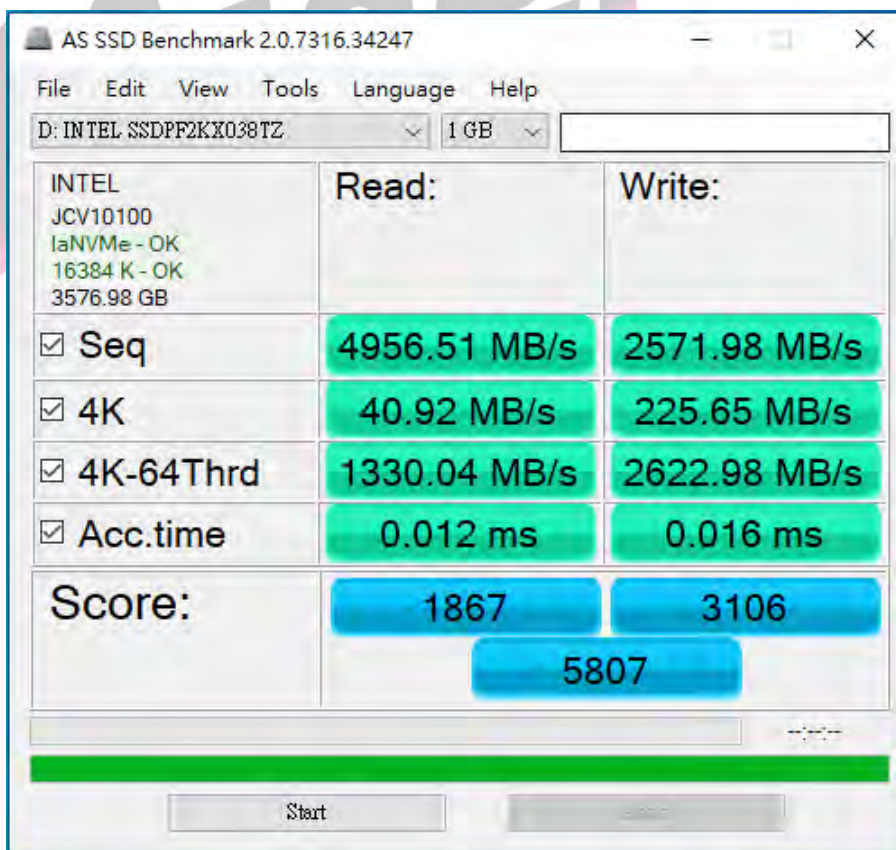
2.5.1 Intel U.2 D7-P5510 NVMe SSD / 3.84TB performance as below:



2.6 AS SSD Benchmark 2.0.7 performance test

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

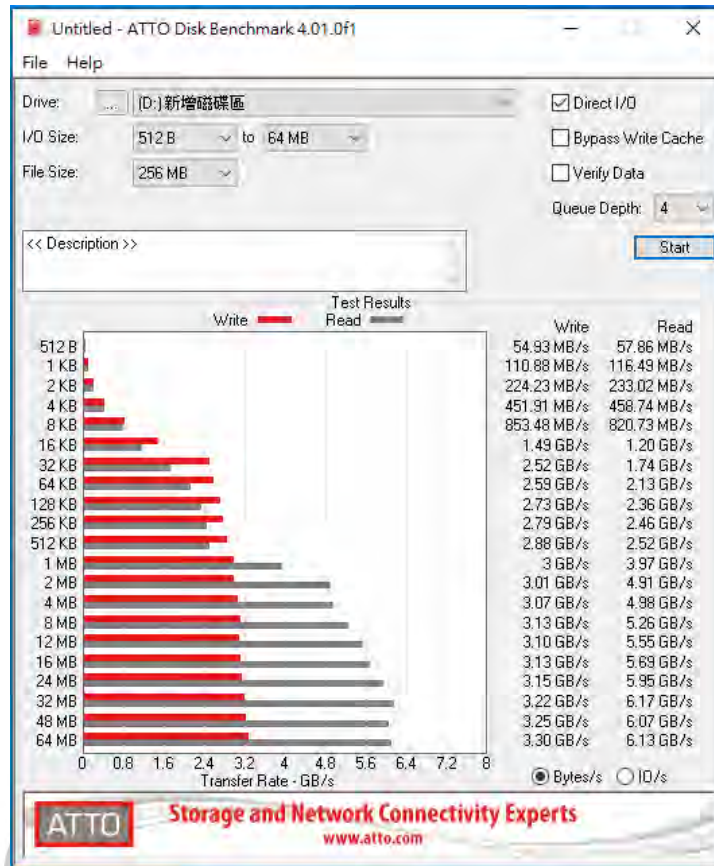
2.6.1 Intel U.2 D7-P5510 NVMe SSD / 3.84TB performance as below:



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2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 Intel U.2 D7-P5510 NVMe SSD / 3.84TB performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Intel U.2 D7-P5510 NVMe SSD / 3.84TB performance as below:

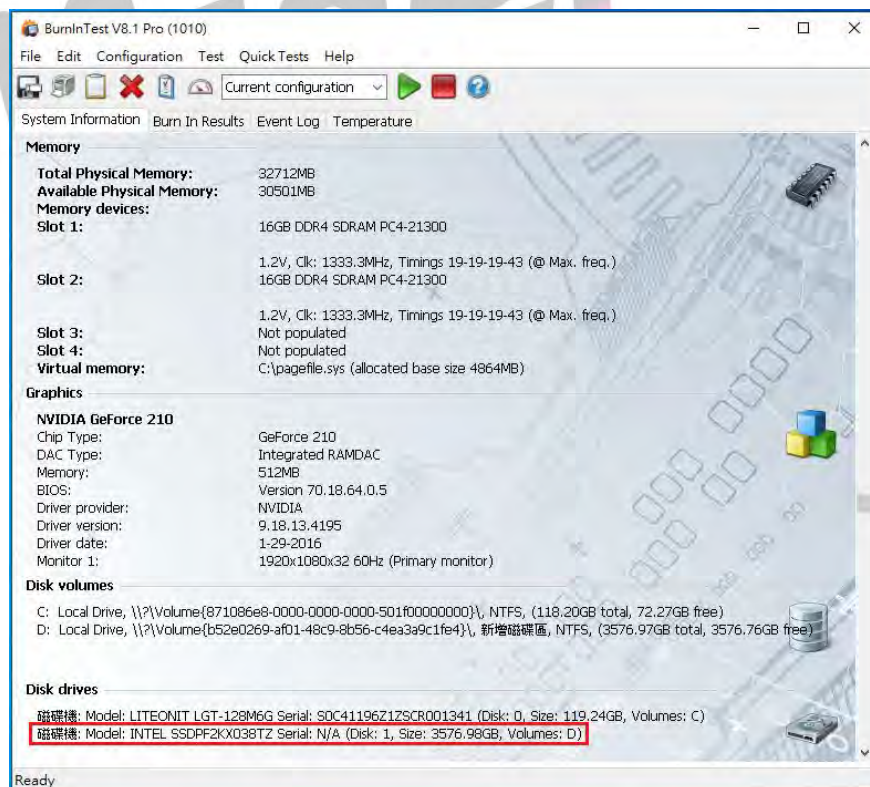
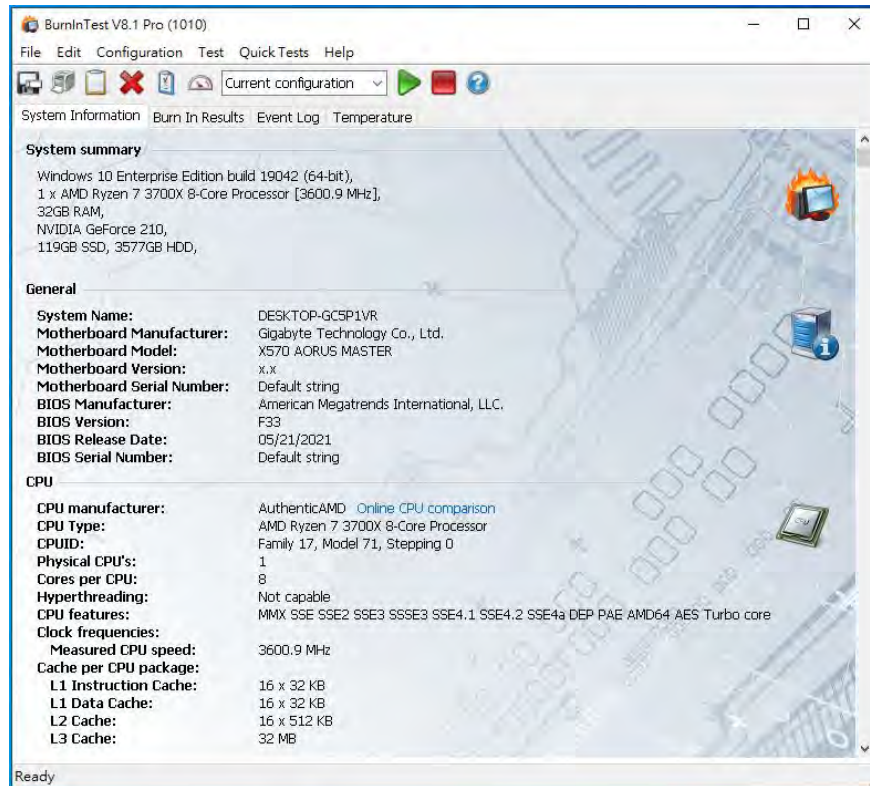


DP6401 Adapter

3. Burn In Tests and Results

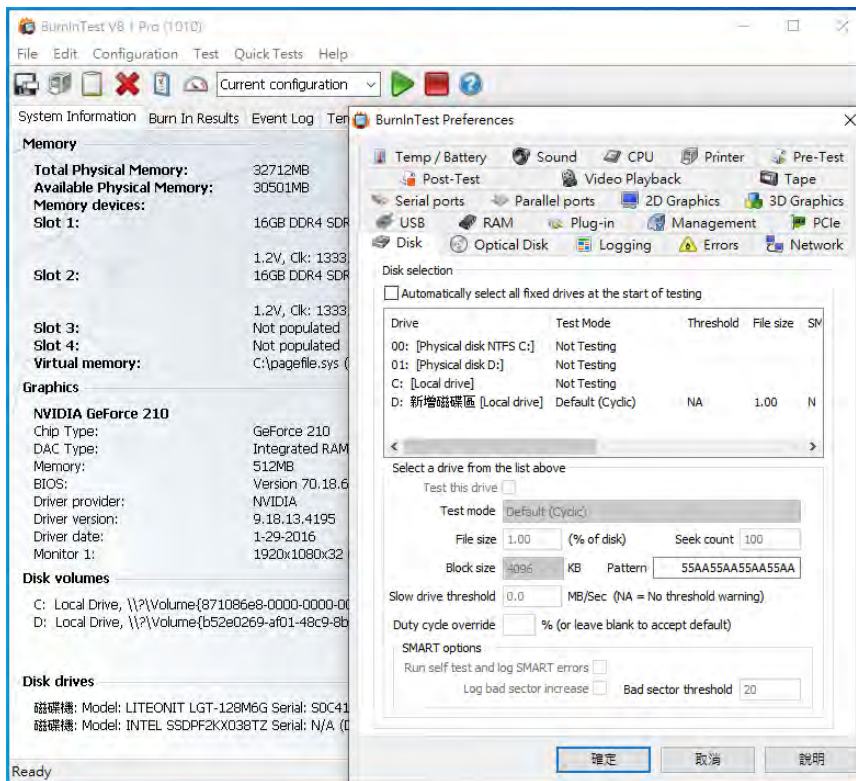
3.1 BurnInTest v8.1 Pro for Intel U.2 D7-P5510 NVMe SSD / 3.84TB

3.1.1 System Information as below:

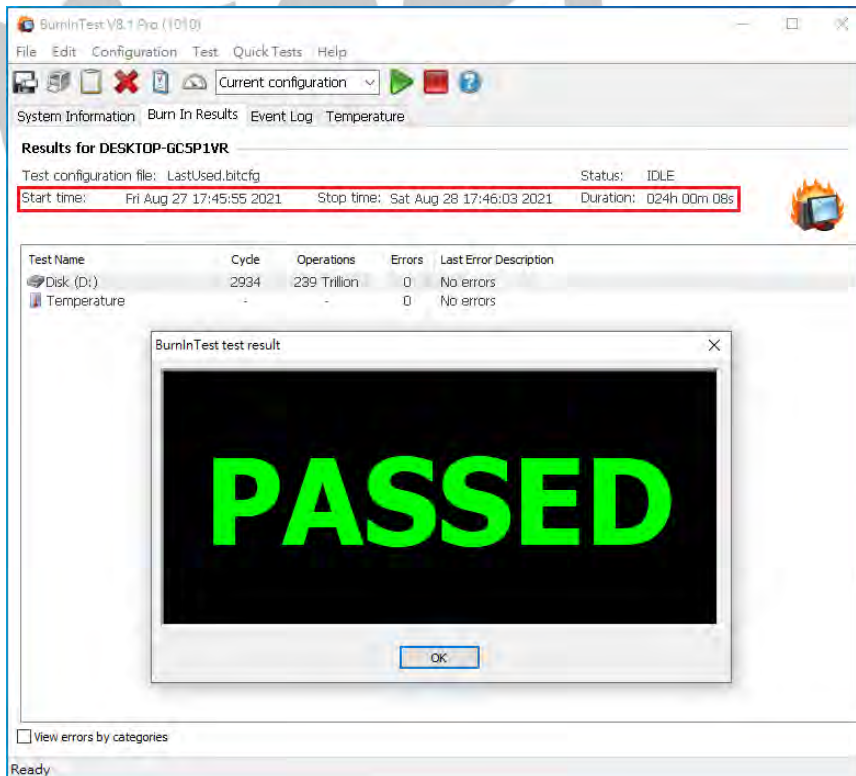


DP6401 Adapter

3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



DP6401 Adapter

4. Summary

- 4.1 U.2 NVMe SSD is PCIe Gen4 16GT/s, 4 Lanes Interface, I/O speed, max. to 64Gbps.
- 4.2 DP6401 adapter I/O performance is based on U.2 NVMe SSD.

