



MINERVA

U.3 Male to U.3 Female for PCIe 4.0, 16GT/s Adapter

Performance & Burn In Test Rev. 1. 0

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4. Summary

GD1410A Converter Card

1. Overview

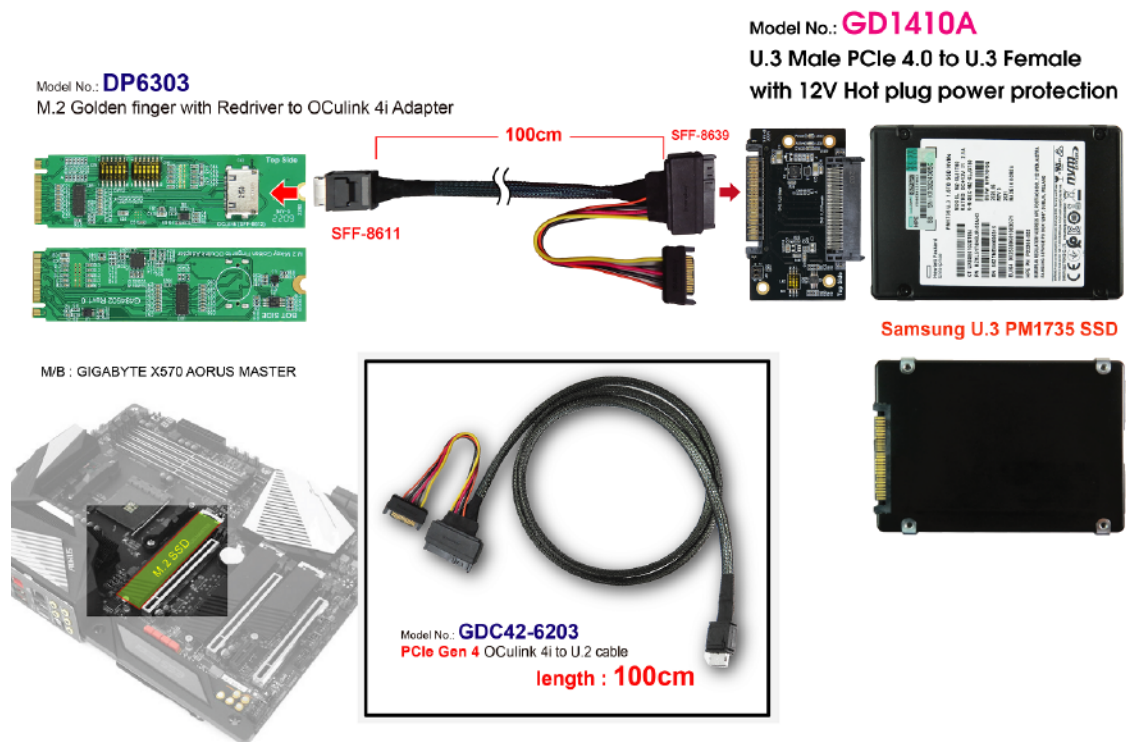
The GD1410A adapter supports PCIe 4.0, 16GT/s high-speed transmission, and provides U.3 Male to U.3 Female conversion.

2. Tools and Results of Performance Measurement

2.1 Test Platform:

M/B : GIGABYTE **X570S 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: DP6303 M.2 PCIe 4.0 to OCulink 4i Add-In Card
Adapter: GD1410A U.3 Male to U.3 Female Adapter
Cable: SFF-8612 4i to U.3(SFF-8639), 100cm Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: GD1410A adapter & Samsung U.3 NVMe 1.6TB SSD



GD1410A Converter Card

2.3 Install Hardware

The U.3 NVMe SSD inserts into GD1410A converter's U.3 female connector. Connects GD1410A to DP6303 AIC(M.2 PCIe 4.0 to OCulink 4i), then using SFF-8612 to U.2(SFF-8639) cable, plugs DP6303 adapter into **M.2 connector** of GIGABYTE **X570S AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

- 2.4.1 Primary SATA SSD installed Windows 10 OS.
- 2.4.2 U.3 NVMe SSD, formatted to NTFS Mode. Don't install any program.

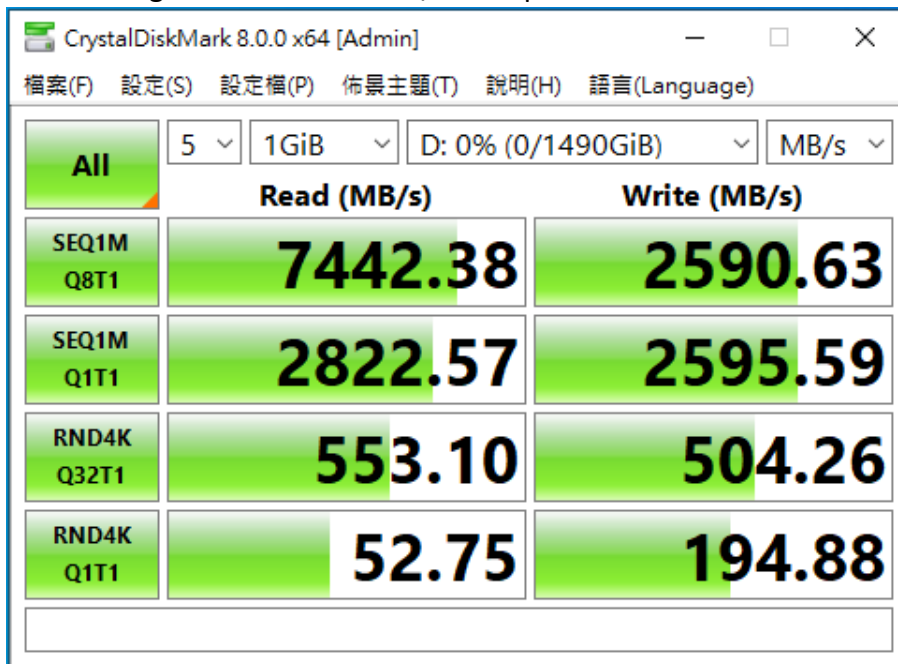


GD1410A Converter Card

2.5 CrystalDiskMark 8.0.0 x64 performance test

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

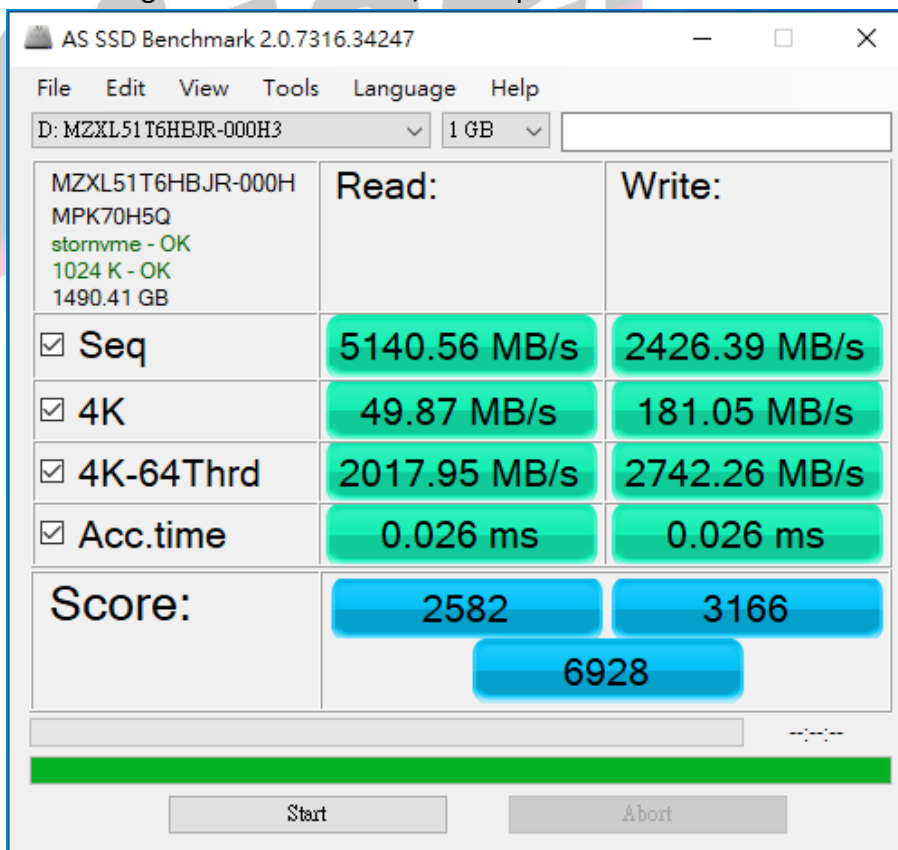
2.5.1 Samsung U.3 PCIe 4.0 NVMe/ 1.6TB performance as below:



2.6 AS SSD Benchmark 2.0.7 performance test

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

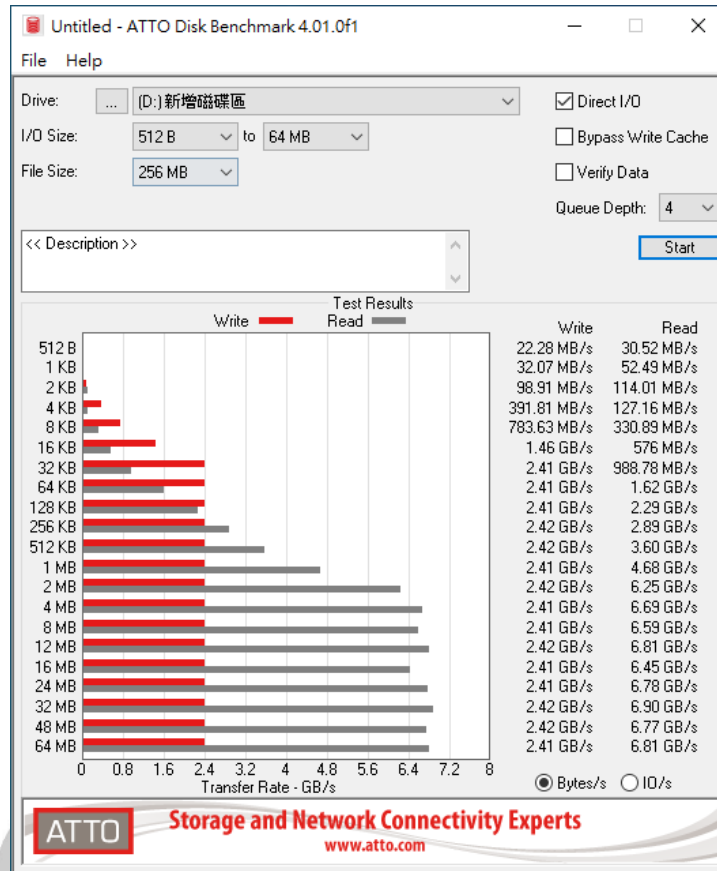
2.6.1 Samsung U.3 PCIe 4.0 NVMe/ 1.6TB performance as below:



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2.7 ATTO Disk Benchmark 4.0.1 performance test

2.7.1 Samsung U.3 PCIe 4.0 NVMe/ 1.6TB performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Samsung U.3 PCIe 4.0 NVMe/ 1.6TB performance as below:

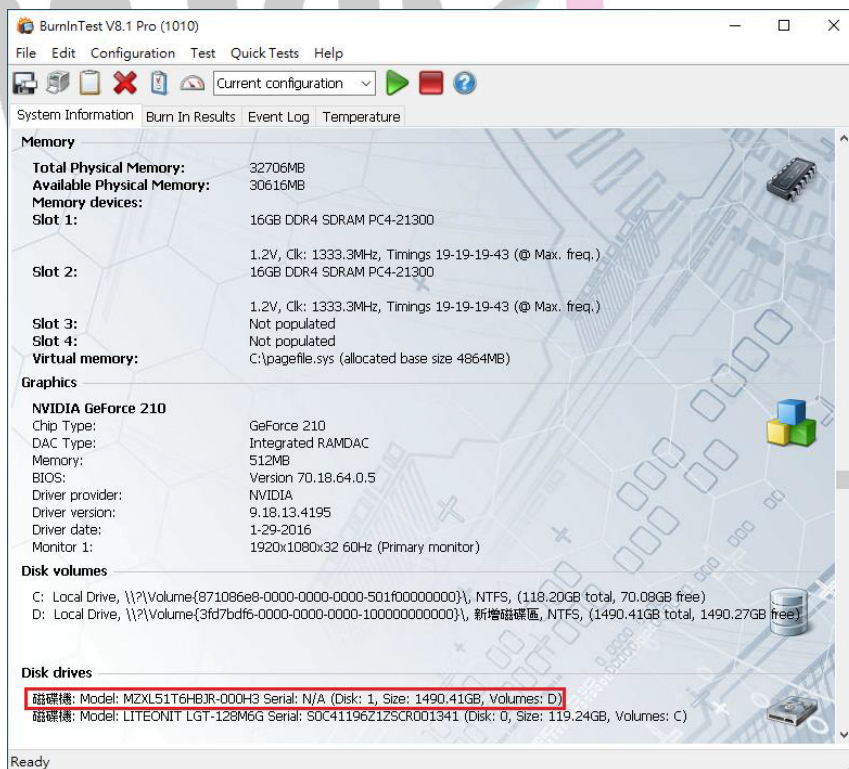
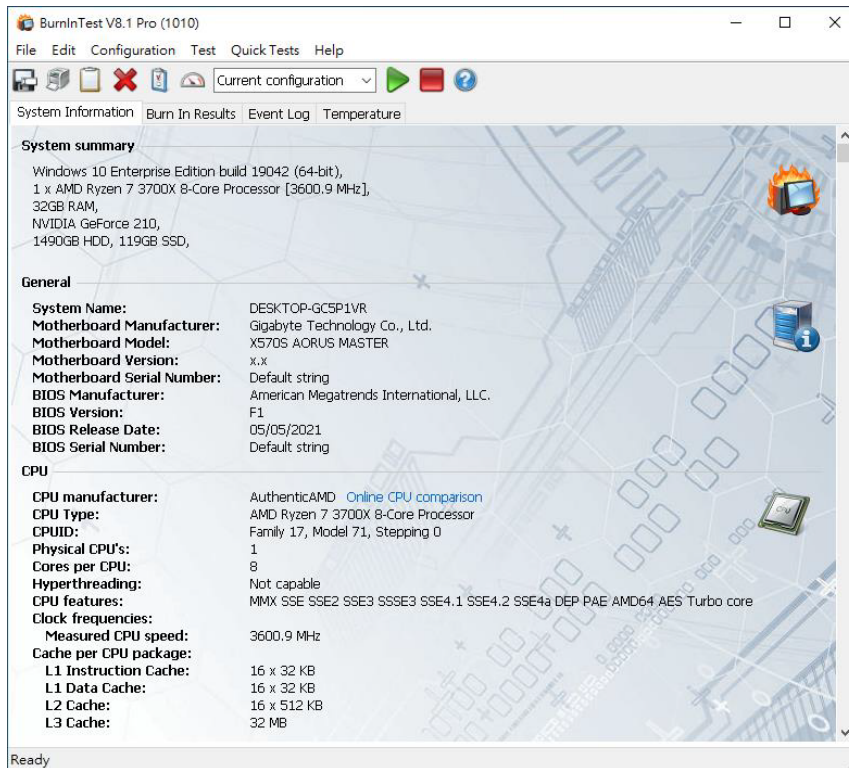


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3. Burn In Tests and Results

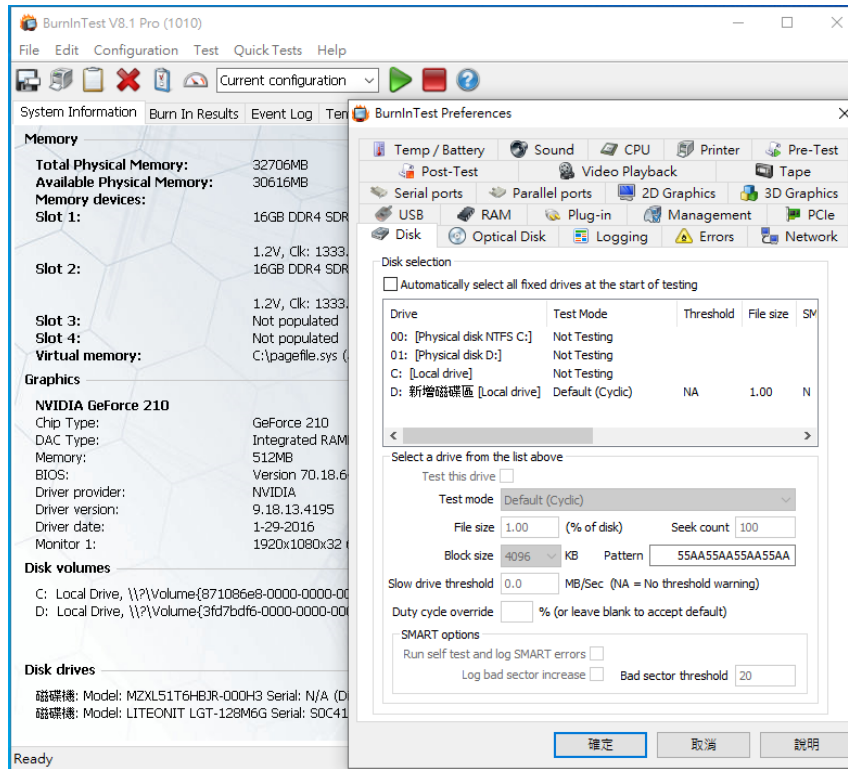
3.1 BurnInTest v8.1 Pro for GIGABYTE M.2 Gen4(GP-ASM2NE6100TTD)/ 500GB SSD

3.1.1 system information as below:

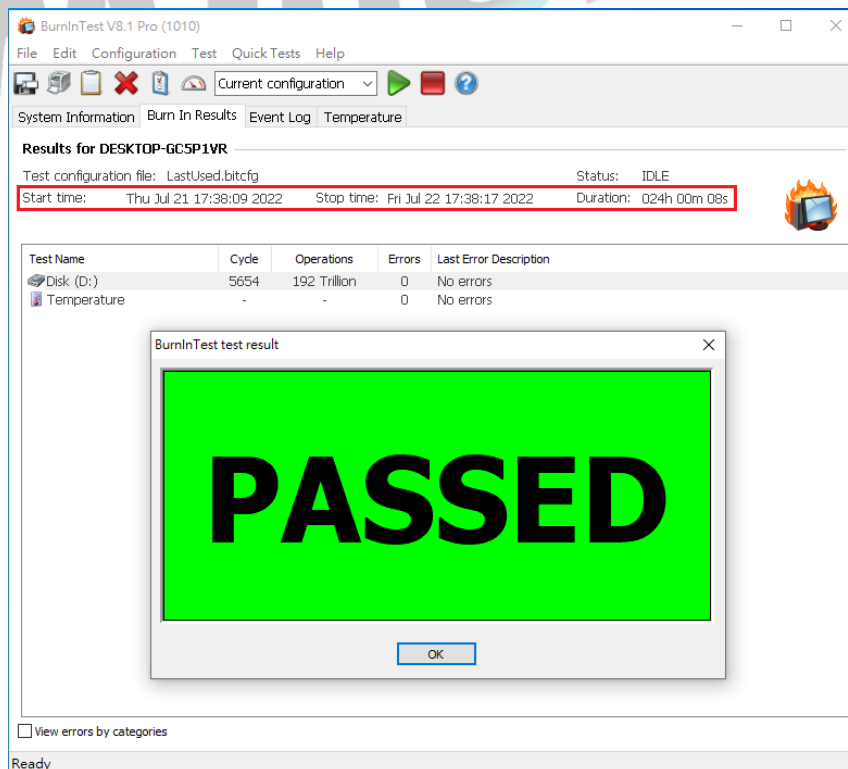


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3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



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4. Summary

- 4.1 U.3 SSD is PCIe 4.0, 4 Lanes Interface, I/O speed, max. to 64Gbps.
- 4.2 GD1410A adapter I/O performance is based on U.3 NVMe PCIe 4.0, 4 Lanes SSD.

