



MINERVA

DP6604 M.2 PCIe 4.0 GF with ReDriver for MCIO 38P Adapter

Performance & Burn In Test Rev. 1. 0

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DP6604 M.2 with PCIe 4.0 ReDriver for MCIO 38P Adapter

1. Overview

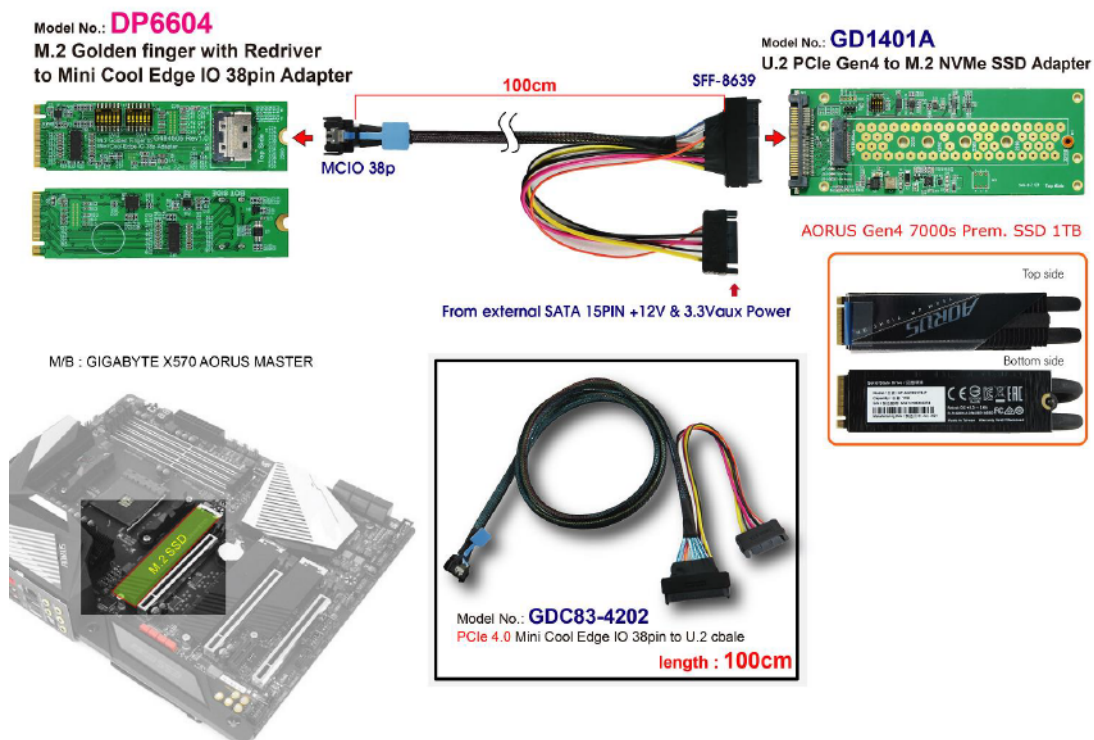
This DP6404 adapter may provide PCIe Gen4, 16GT/s high-speed signal extension to MCIO 38P.

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: DP6604 M.2 PCIe 4.0 with Redriver to MCIO 38P
Adapter: GD1401A U.2 PCIe 4.0 to M.2 NVMe SSD Adapter
Cable: MCIO 38P PCIe 4.0 to U.2(SFF-8639), **100cm** Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: DP6604 Adapter, GD1401A Adapter and Gigabyte M.2 1TB NVMe SSD



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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 DP6604 adapter(M.2 PCIe 4.0 with Redriver to MCIO 38P), Using **MCIO 38P to U.2(SFF-8639) cable** and plugs DP6604 into M.2 M-key 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 M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

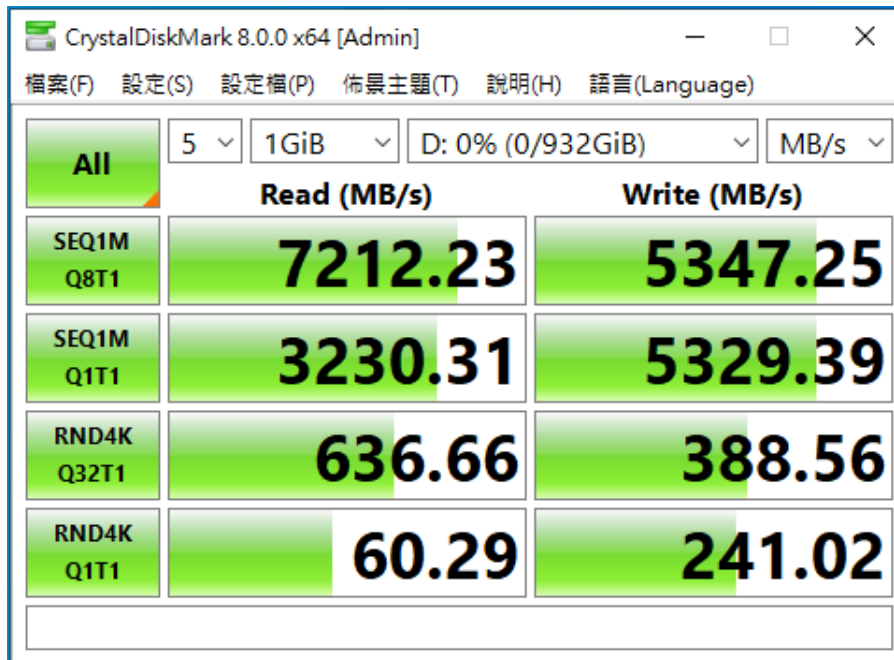


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2.5 CrystalDiskMark 8.0 x64 performance test

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

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

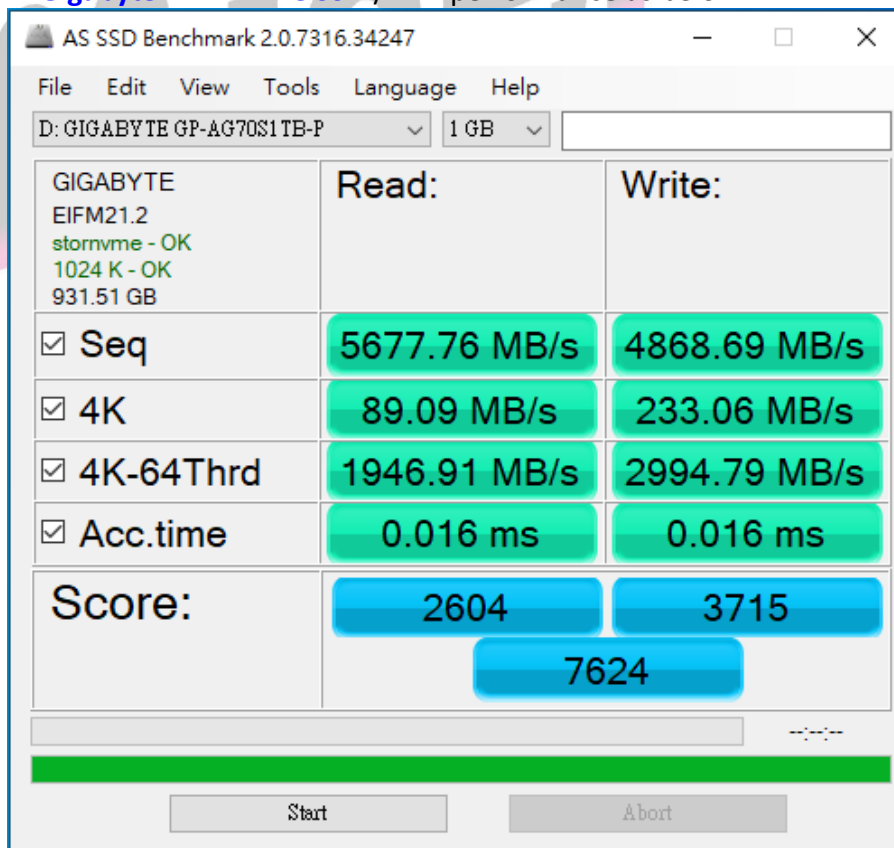


	Read (MB/s)	Write (MB/s)
SEQ1M Q8T1	7212.23	5347.25
SEQ1M Q1T1	3230.31	5329.39
RND4K Q32T1	636.66	388.56
RND4K Q1T1	60.29	241.02

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:

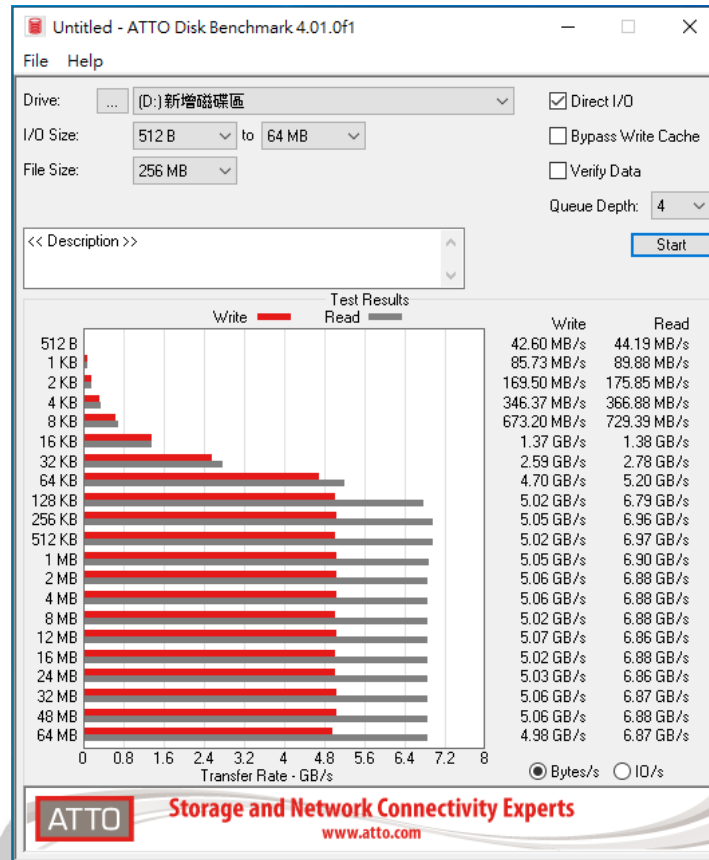


	Read:	Write:
Seq	5677.76 MB/s	4868.69 MB/s
4K	89.09 MB/s	233.06 MB/s
4K-64Thrd	1946.91 MB/s	2994.79 MB/s
Acc.time	0.016 ms	0.016 ms
Score:	2604	3715
	7624	

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2.7 ATTO Disk Benchmark 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:

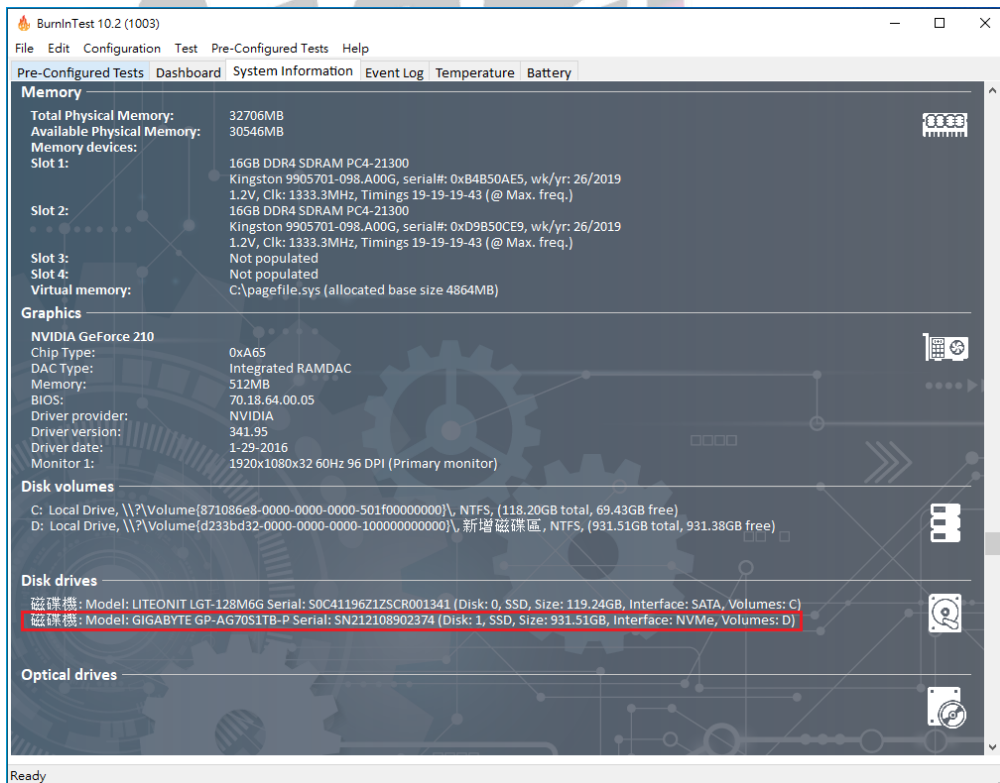
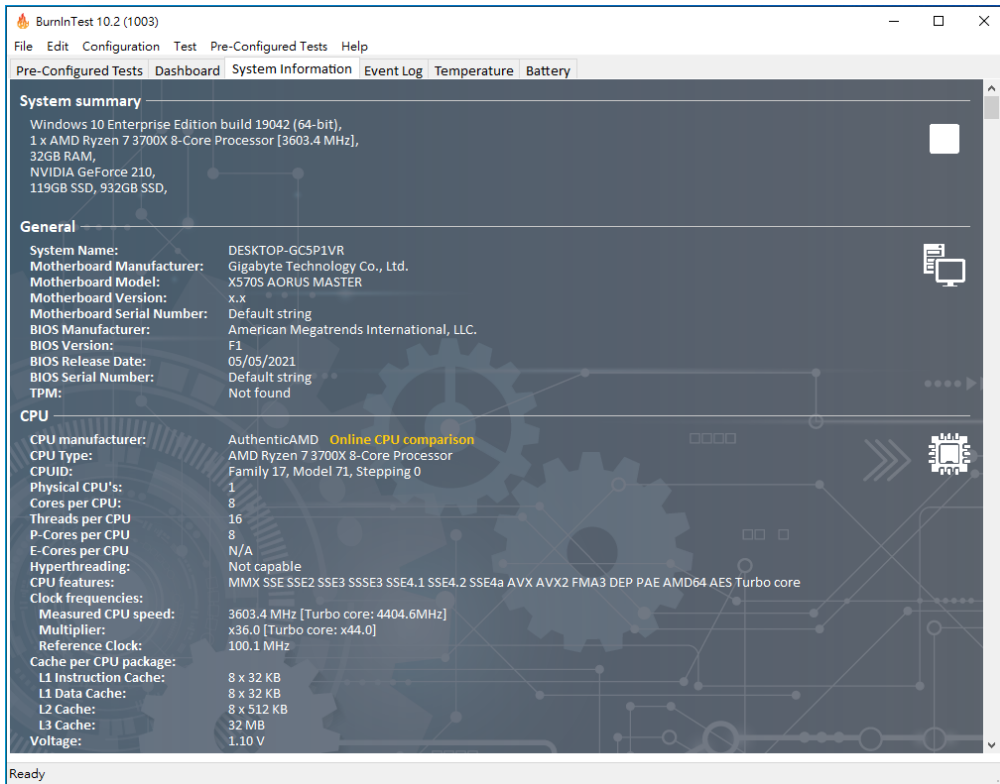


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3. Burn In Tests and Results

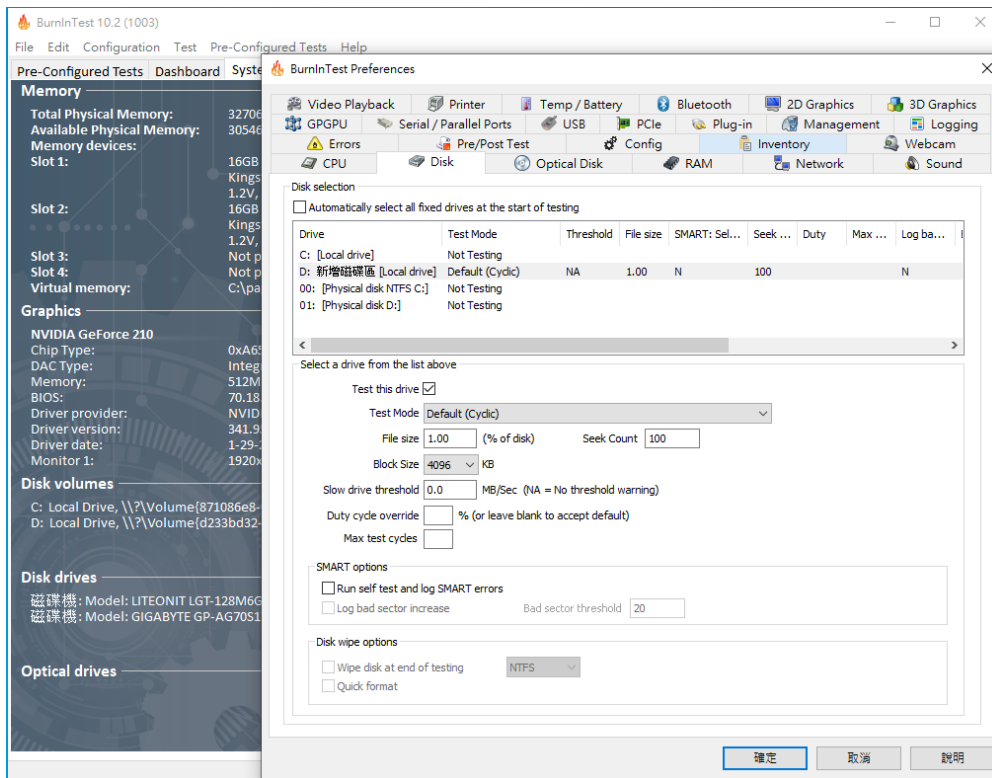
3.1 BurnInTest v10.2 Pro for Gigabyte M.2 NVMe SSD / 1TB

3.1.1 System Information as below:

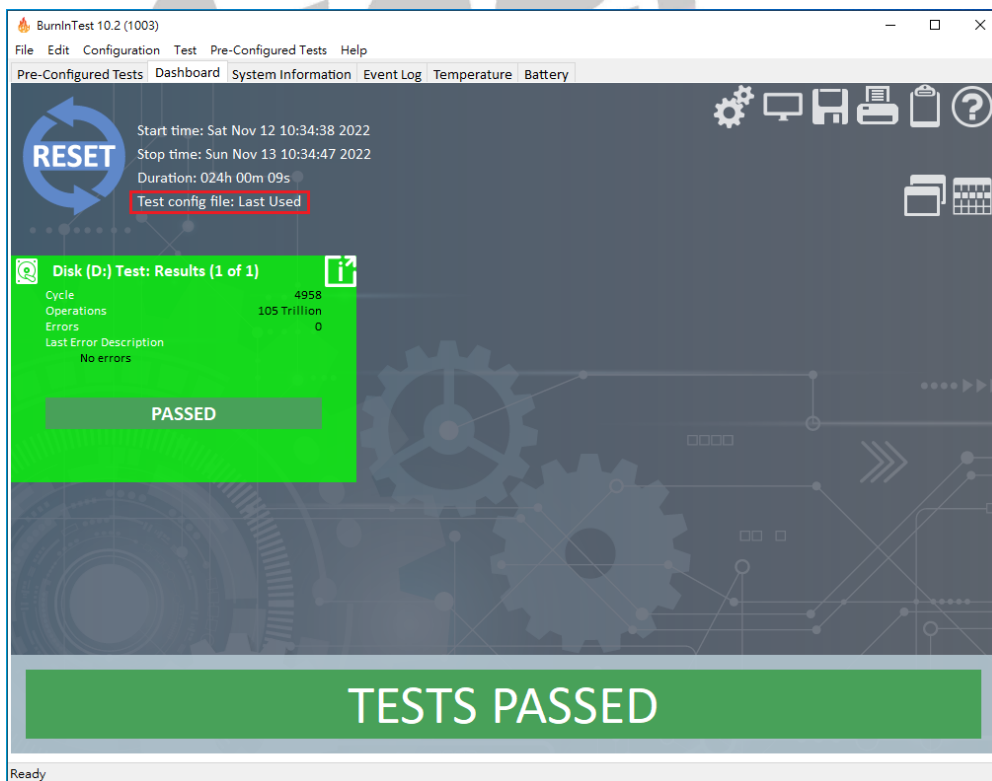


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3.1.2 Disk test mode (10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



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4. Summary

- 4.1 M.2 NVMe SSD is PCIe Gen4 16GT/s, 4 Lanes Interface, I/O speed, max. to 64Gbps.
- 4.2 DP6604 adapter I/O performance is based on M.2 NVMe SSD.
- 4.3 GD1401A adapter I/O performance is based on M.2 NVMe SSD.

