MINERVA

DP6401 M.2 PCIe 4.0 GF with ReDriver for SlimSAS 4i Adapter

Performance & Burn In Test Rev. 1. 0

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DP6401 M.2 with PCIe 4.0 ReDriver for SlimSAS 4i Adapter

1. Overview

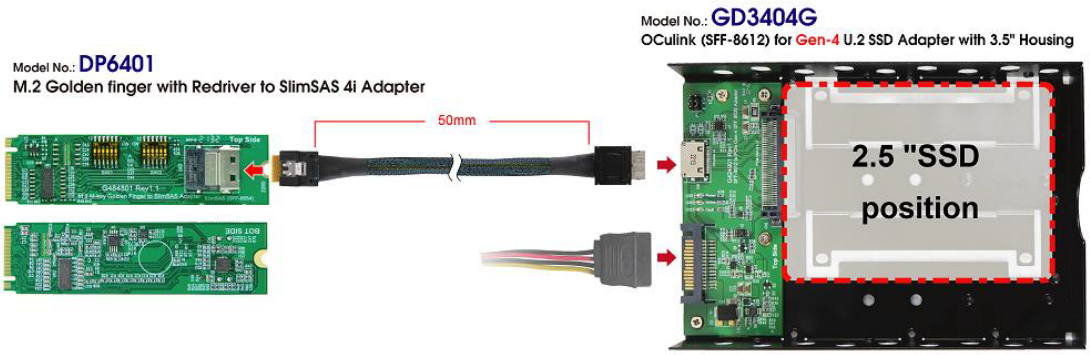
The DP6401 adapter may provide PCIe Gen4, 16GT/s high-speed signals extension to SlimSAS 4i interface connector.

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:	DP6401 M.2 PCIe 4.0 with Redriver to SlimSAS 4i
Adapter:	GD3404G OCulink to U.2 PCIe 4.0 Adapter
Cable:	SFF-8654 4i Male to SFF-8611 4i Male, **50cm** Cable
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: DP6401 Adapter, GD3404G Adapter and **Samsung PM1733 U.2 4TB NVMe SSD**



2.3 Install Hardware

Inserts U.2 NVMe SSD into GD3404G adapter converter's U.2 connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connects GD3404G converter to DP6401 adapter(M.2 PCIe Gen4 with Redriver to SlimSAS 4i), Using **SFF-8654 4i Male to SFF-8611 Male cable** and plugs DP6401 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 U.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

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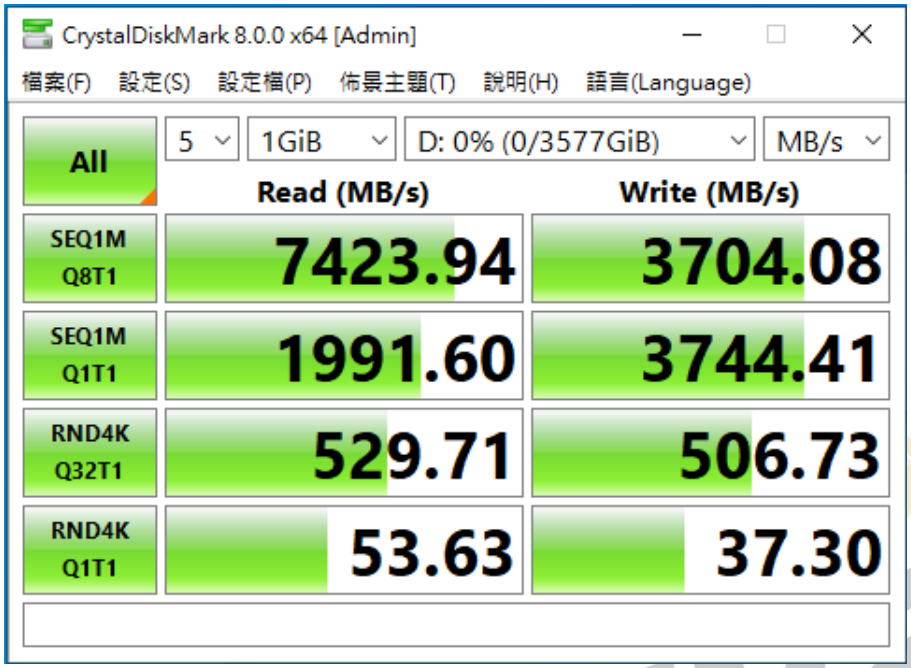
2.5 CrystalDiskMark 8.0 x64 performance test

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

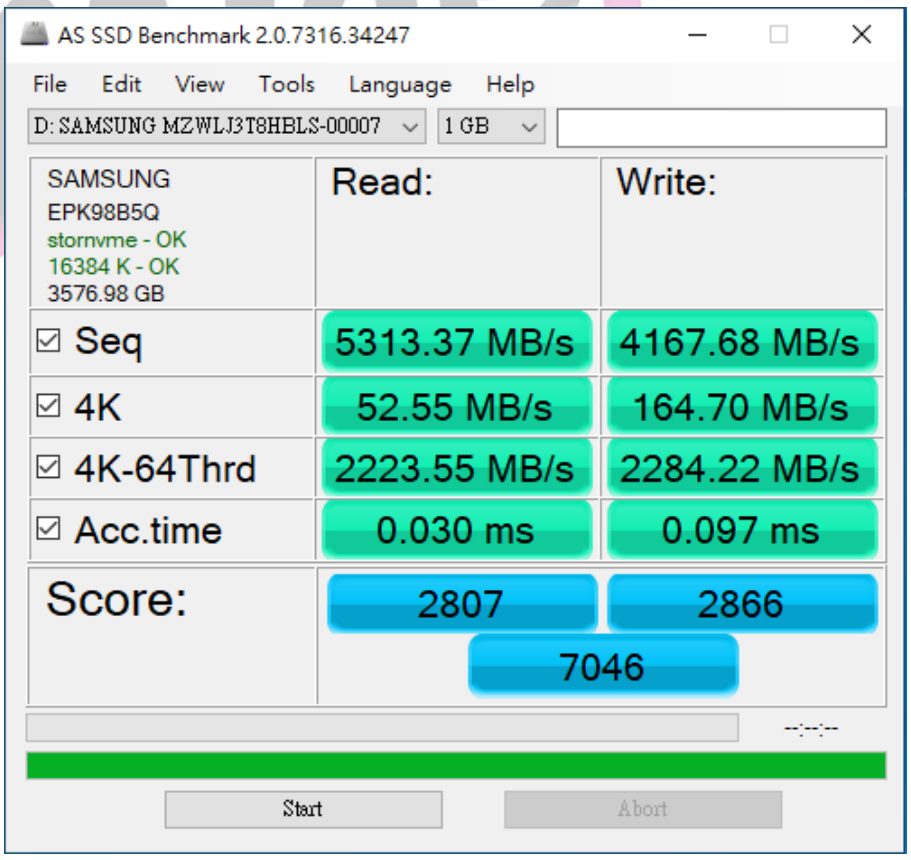
2.5.1 **Samsung PM1733 U.2 NVMe SSD / 4TB** performance as below:



2.6 AS SSD Benchmark 2.0.7 performance test

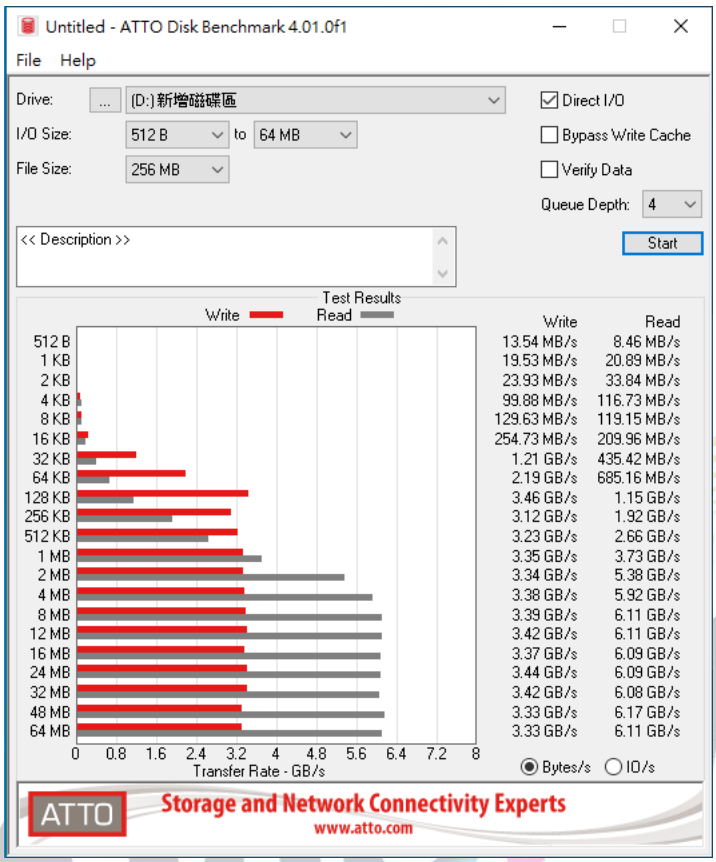
※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 **Samsung PM1733 U.2 NVMe SSD / 4TB** performance as below:



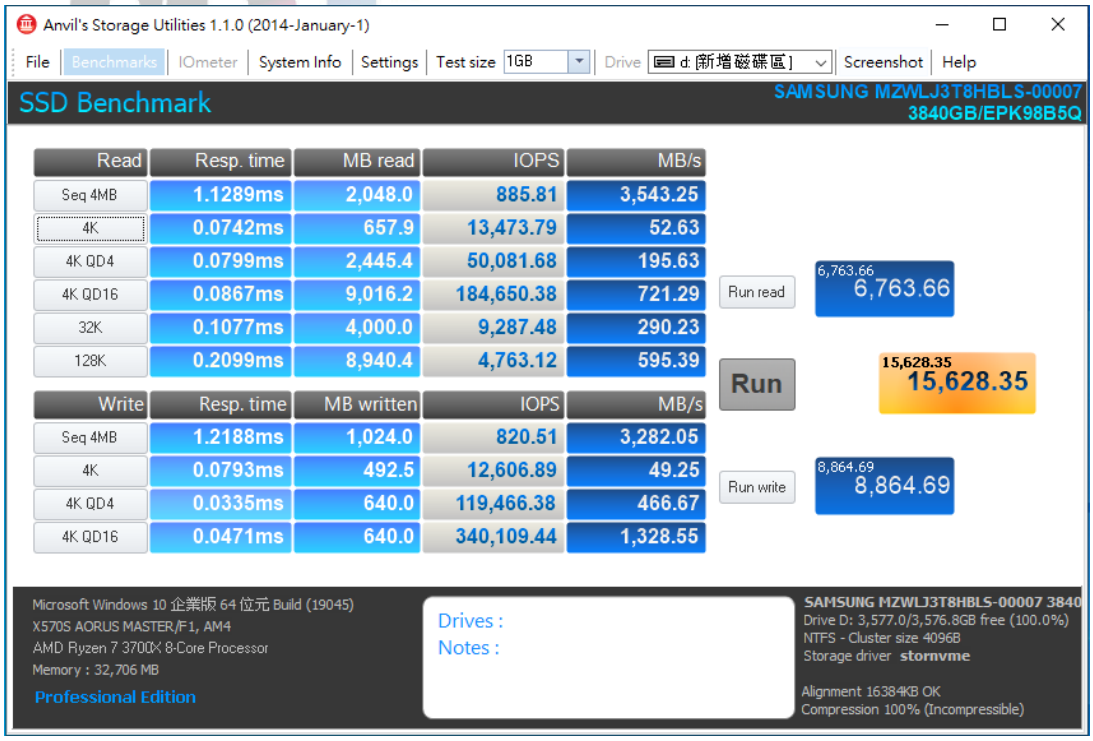
2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 Samsung PM1733 U.2 NVMe SSD / 4TB performance as below:



2.8 AnvilBenchmark_V110_B337

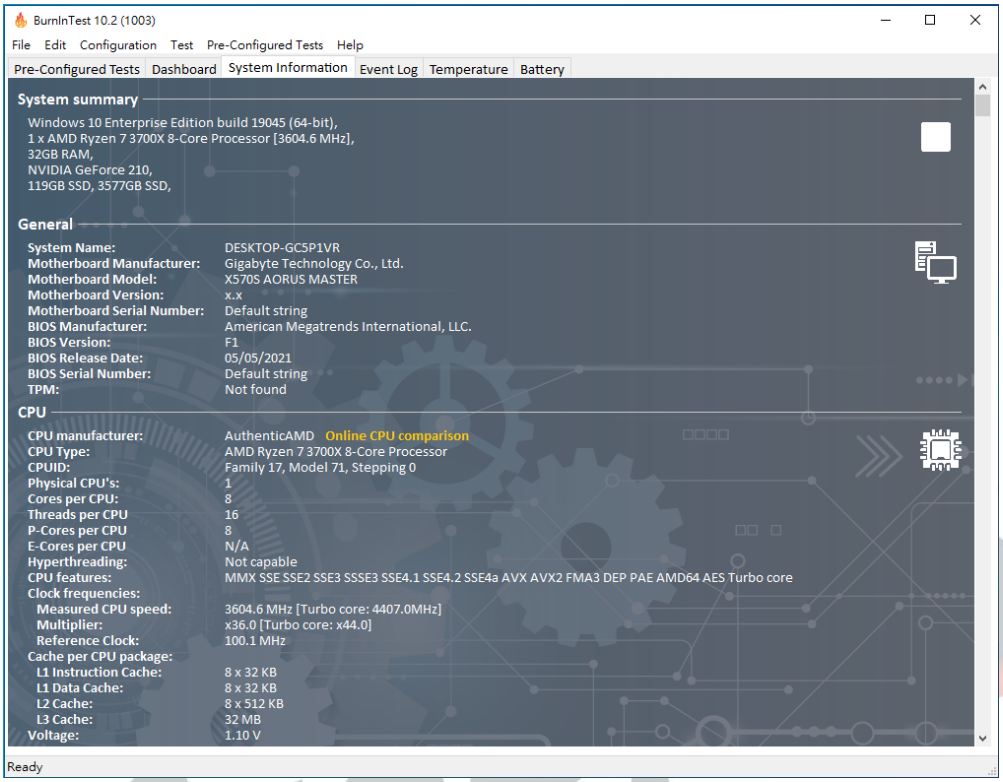
2.8.1 Samsung PM1733 U.2 NVMe SSD / 4TB performance as below:

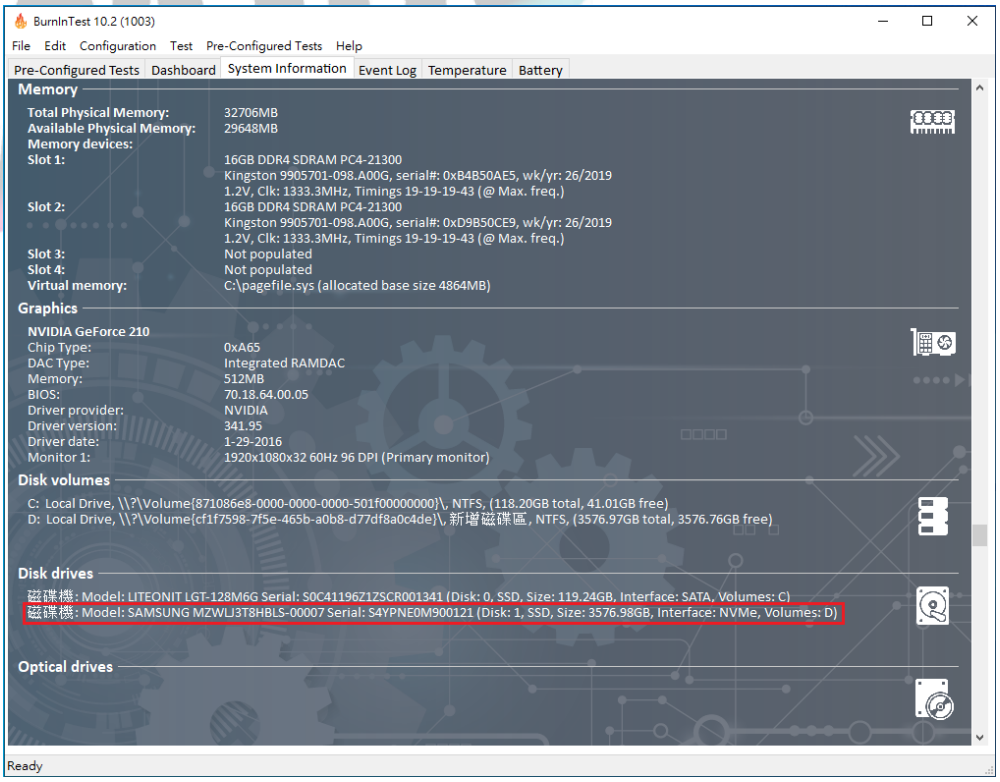


3. Burn In Tests and Results

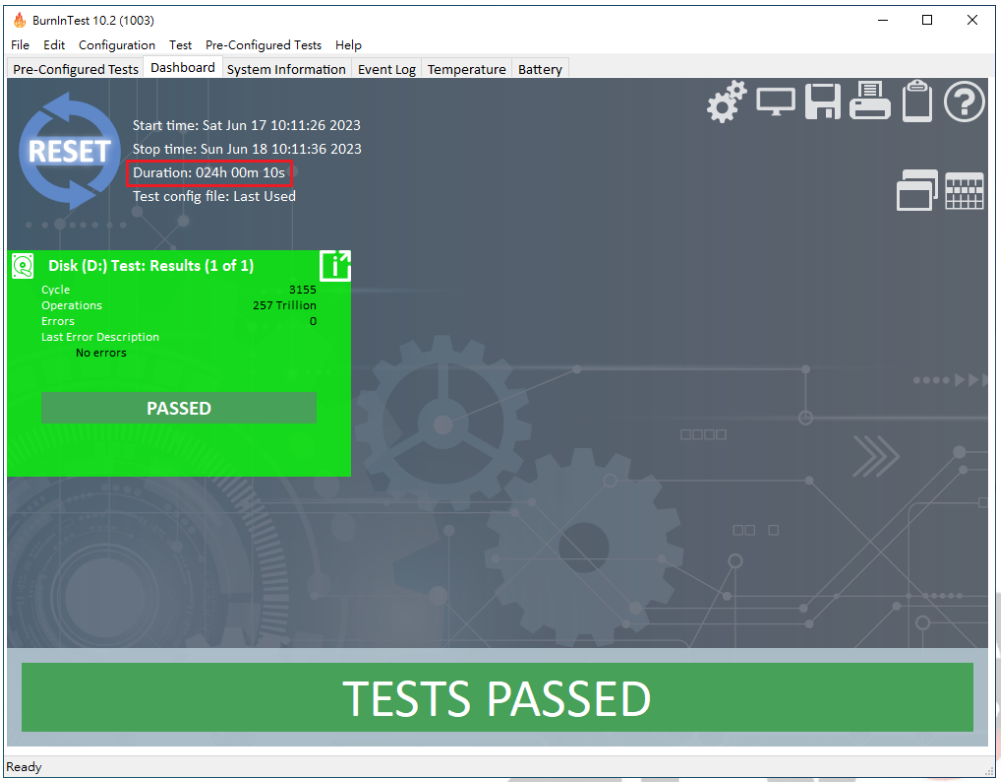
3.1 BurnInTest v10.2 Pro for Samsung PM1733 U.2 NVMe SSD / 4TB

3.1.1 System Information as below:





3.1.2 24-hour Burn-in test PASSED



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.

4.3 GD3404G adapter I/O performance is based on U.2 NVMe SSD.