



# MINERVA

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

---

## Performance & Burn In Test Rev. 1. 0

### Table of Contents

1. Overview
2. Performance Measurement Tools and Results
  - 2.1 Test Platform
  - 2.2 Test target and M.2 NVMe SSD
  - 2.3 Install Hardware
  - 2.4 BIOS & Windows 10 OS environment setup
  - 2.5 CrystalDiskMark 8.0 x64 performance test
  - 2.6 AS SSD Benchmark 2.0.7 performance test
  - 2.7 ATTO Disk Benchamrk 4.0.1 performance test
  - 2.8 AnvilBenchmark\_V110\_B337 Benchmark performance test
3. Burn In Tests and Results
  - 3.1 BurnInTest v10.2 Pro burn in test
4. Summary

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

## 1. Overview

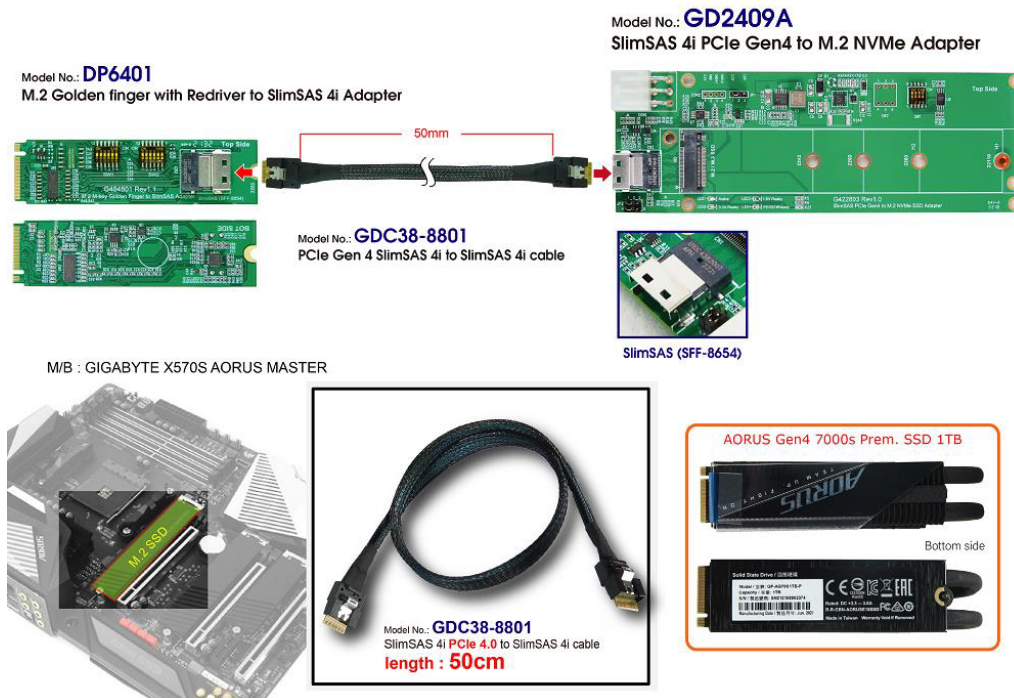
The DP6401 adapter may provide PCIe Gen4, 16GT/s high-speed signals extension to SlimSAS 4i interface connector.

## 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: GD2409A SlimSAS to M.2 PCIe 4.0 Adapter  
Cable: SFF-8654 4i Male to Male, **50cm** Cable  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: DP6401 Adapter, GD2409A Adapter and **GIGA M.2 1TB NVMe SSD**



### 2.3 Install Hardware

Inserts M.2 NVMe SSD into GD2409A adapter converter's M.2 connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connects GD2409A converter to DP6401 adapter(M.2 PCIe Gen4 with Redriver to SlimSAS 4i), Using **SFF-8654 4i Male to 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 M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

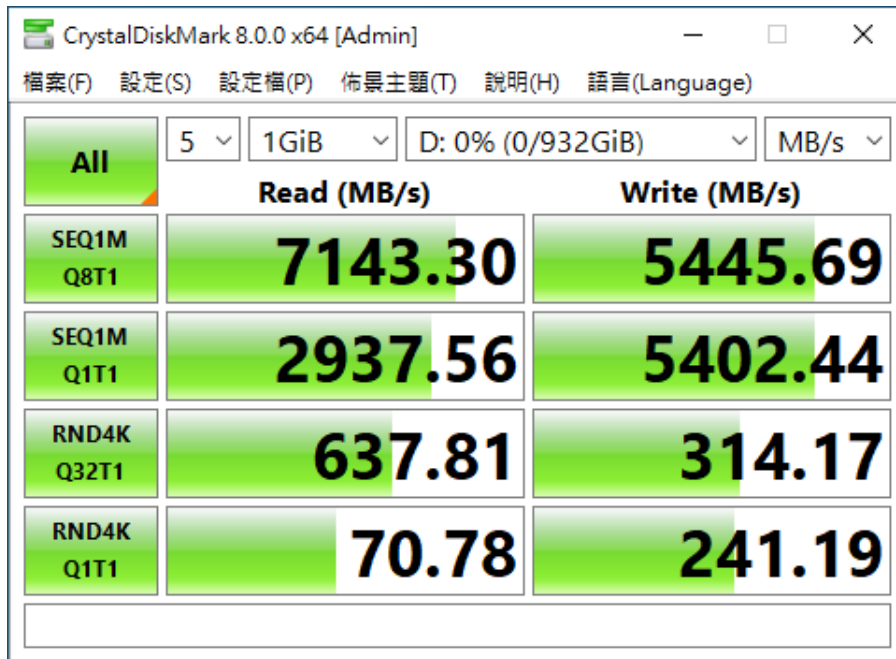


# DP6401 M.2 with PCIe 4.0 ReDriver for SlimSAS 4i Adapter

## 2.5 CrystalDiskMark 8.0 x64 performance test

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

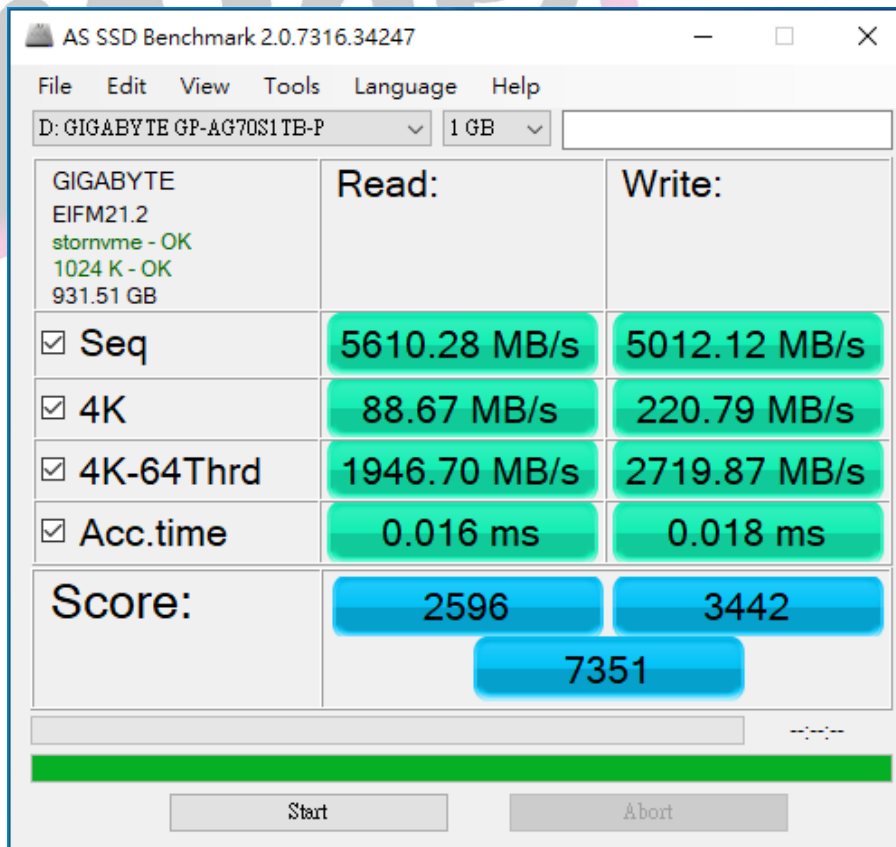
### 2.5.1 GIGA M.2 NVMe SSD / 1TB performance as below:



## 2.6 AS SSD Benchmark 2.0.7 performance test

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

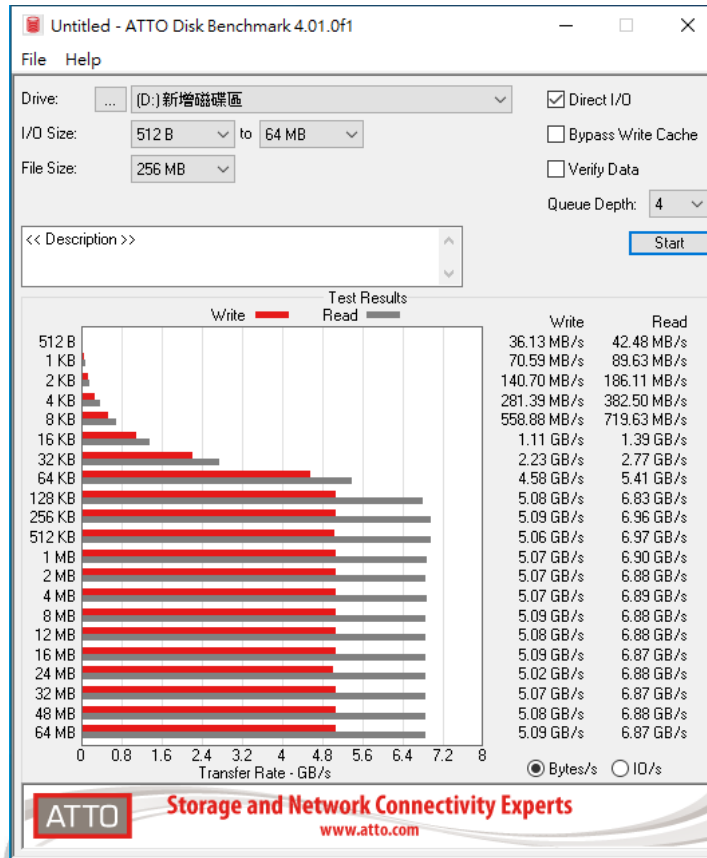
### 2.6.1 GIGA M.2 NVMe SSD / 1TB performance as below:



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

## 2.7 ATTO Disk Benchmark 4.01 performance test

### 2.7.1 GIGA M.2 NVMe SSD / 1TB performance as below:



## 2.8 AnvilBenchmark\_V110\_B337

### 2.8.1 GIGA M.2 NVMe SSD / 1TB performance as below:

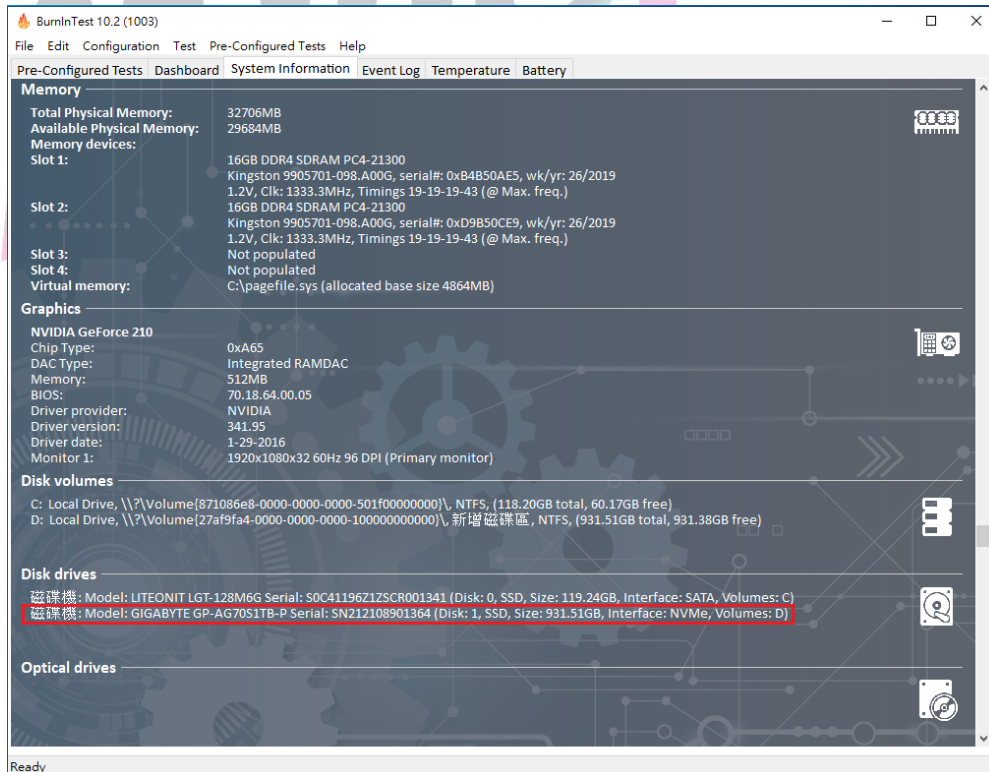
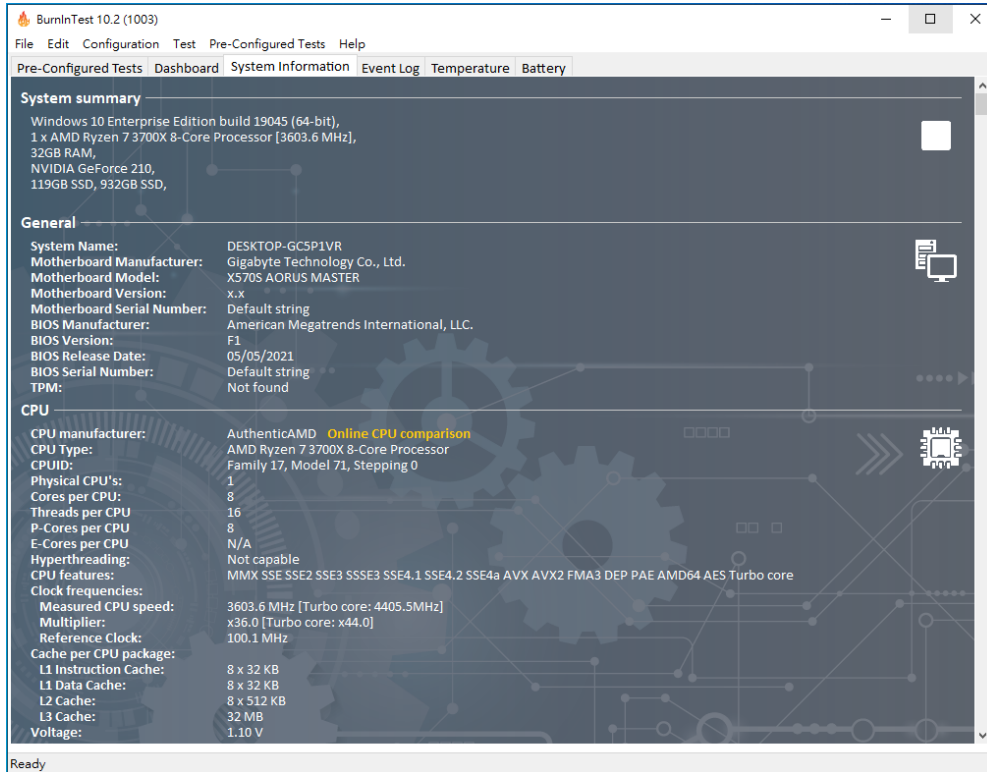


# DP6401 M.2 with PCIe 4.0 ReDriver for SlimSAS 4i Adapter

## 3. Burn In Tests and Results

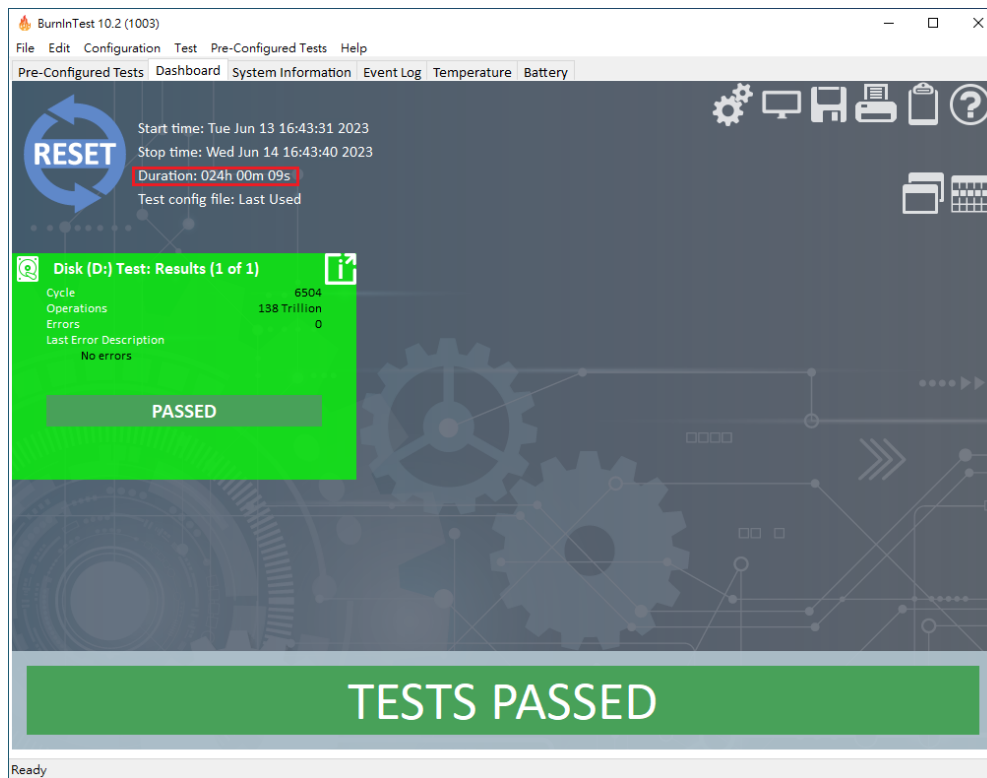
### 3.1 BurnInTest v10.2 Pro for GIGA M.2 NVMe SSD / 1TB

#### 3.1.1 System Information as below:



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

## 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 DP6401 adapter I/O performance is based on M.2 NVMe SSD.
- 4.3 GD2409A adapter I/O performance is based on M.2 NVMe SSD.