



# MINERVA

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

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### 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 v10.0 Pro burn in test
4. Summary

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

## 1. Overview

This DP6604 adapter may provide PCIe Gen4, 16GT/s high-speed signal extension to MCIO 38P.

## 2. Tools and Results of Performance Measurement

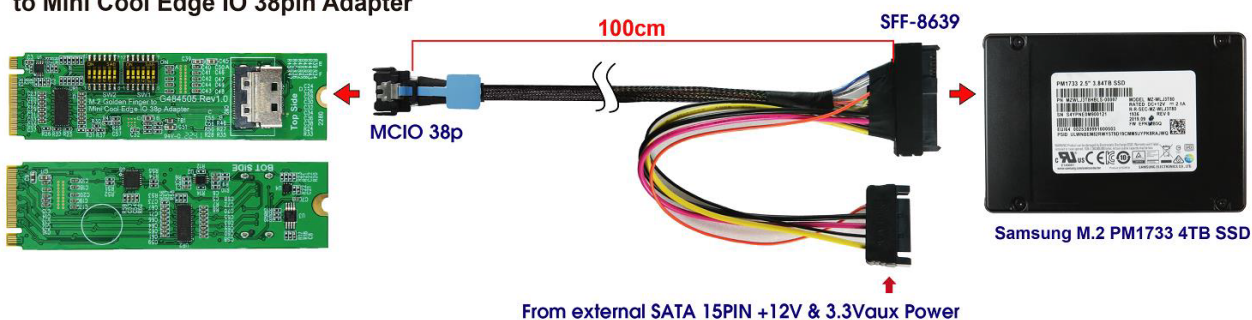
### 2.1 Test Platform

- 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
- 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 and Samsung U.2 4TB NVMe SSD

Model No.: **DP6604**

M.2 Golden finger with Redriver to Mini Cool Edge IO 38pin Adapter



M/B : GIGABYTE X570 AORUS MASTER



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

### 2.3 Install Hardware

Inserts U.2 NVMe SSD into MCIO 38P cable, and connects cable(**MCIO 38P to U.2, 100cm**) to DP6604(M.2 PCIe 4.0 with Redriver to MCIO 38P) AIC. The DP6604 plugs into M.2 Slot 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.

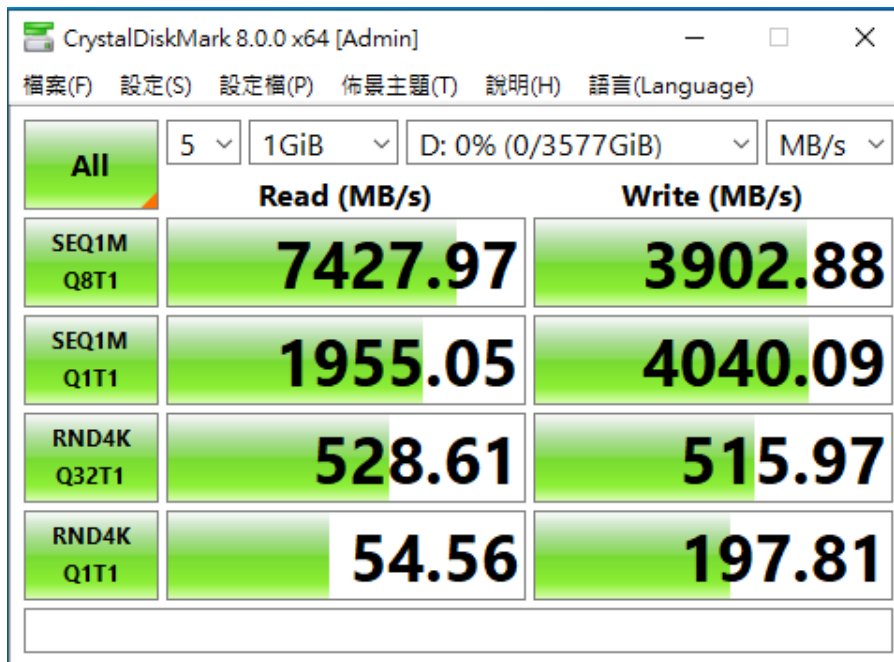


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### 2.5 CrystalDiskMark 8.0 x64 performance test

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

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



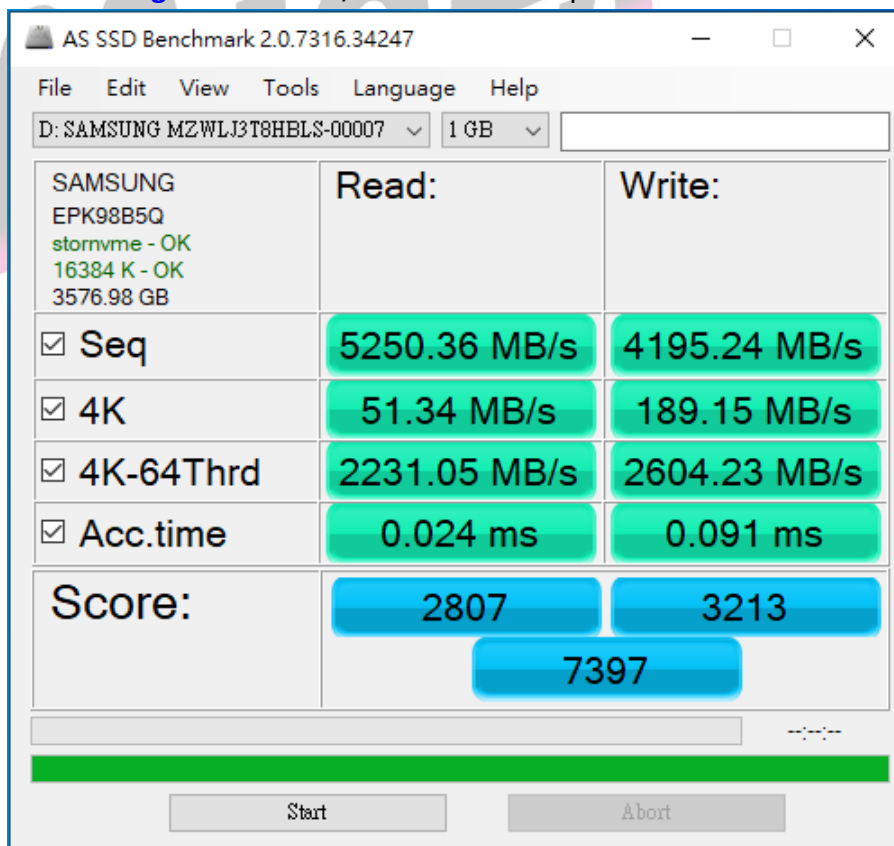
The screenshot shows the CrystalDiskMark 8.0.0 x64 [Admin] window. The test is configured for 5 passes, 1 GiB block size, and the D: drive (0/3577 GiB). The results are as follows:

	Read (MB/s)	Write (MB/s)
All		
SEQ1M Q8T1	7427.97	3902.88
SEQ1M Q1T1	1955.05	4040.09
RND4K Q32T1	528.61	515.97
RND4K Q1T1	54.56	197.81

### 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.2 PM1733 / 4TB NVMe SSD performance as below:



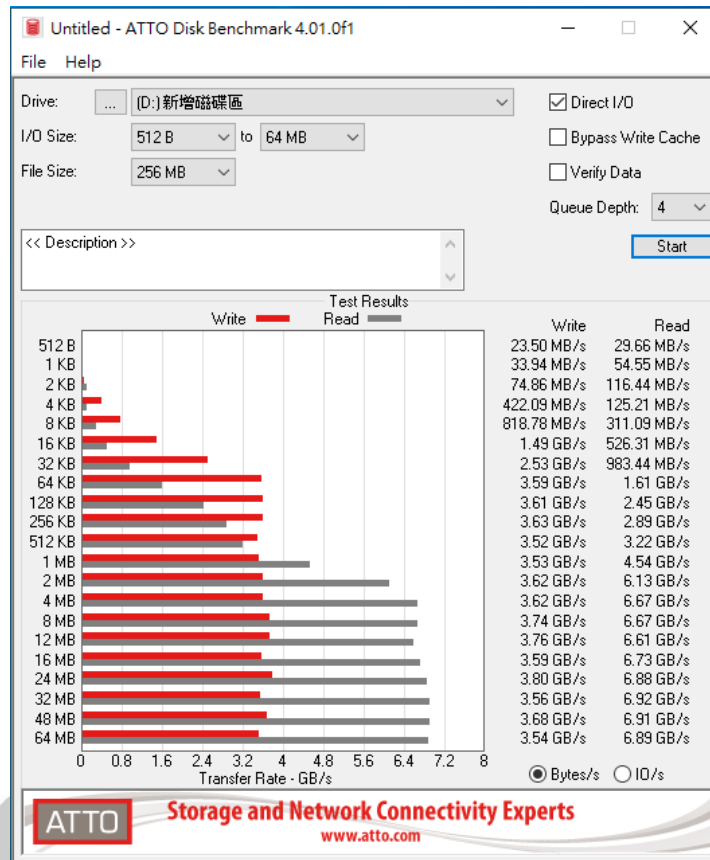
The screenshot shows the AS SSD Benchmark 2.0.7316.34247 window. The test is configured for the D: drive (SAMSUNG MZWLJ3T8HBL5-00007) with a 1 GB block size. The results are as follows:

	Read:	Write:
SAMSUNG EPK98B5Q stormvme - OK 16384 K - OK 3576.98 GB		
<input checked="" type="checkbox"/> Seq	5250.36 MB/s	4195.24 MB/s
<input checked="" type="checkbox"/> 4K	51.34 MB/s	189.15 MB/s
<input checked="" type="checkbox"/> 4K-64Thrd	2231.05 MB/s	2604.23 MB/s
<input checked="" type="checkbox"/> Acc.time	0.024 ms	0.091 ms
Score:	2807	3213
	7397	

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## 2.7 ATTO Disk Benchmark 4.01 performance test

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



## 2.8 AnvilBenchmark\_V110\_B337

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

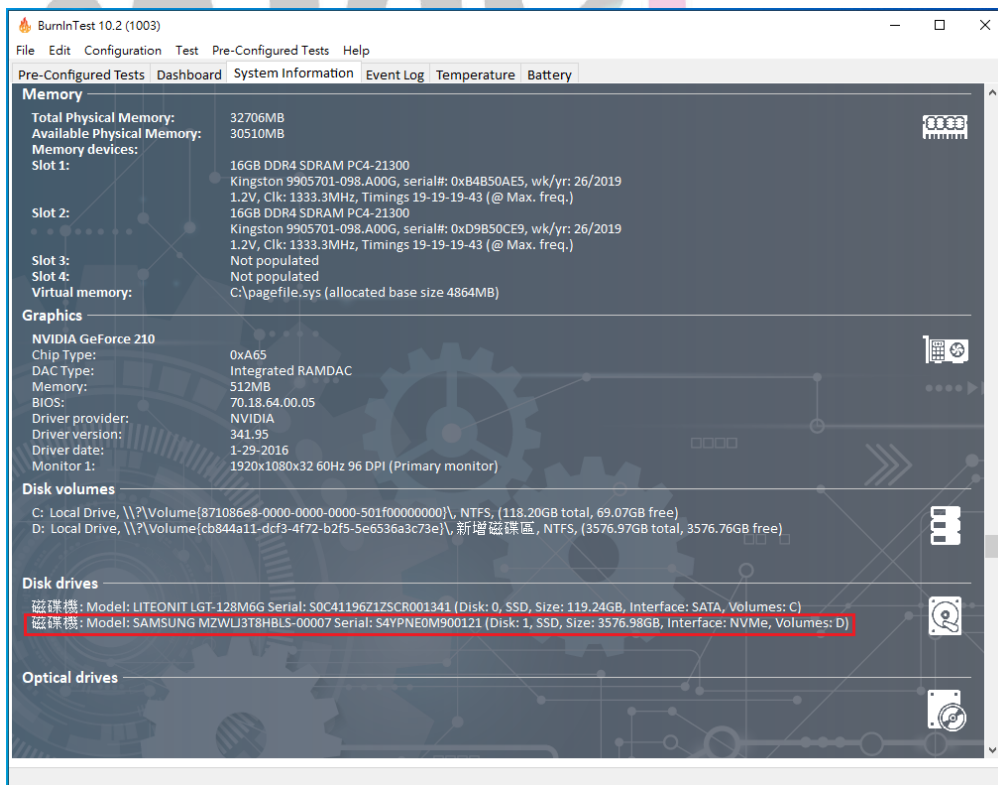
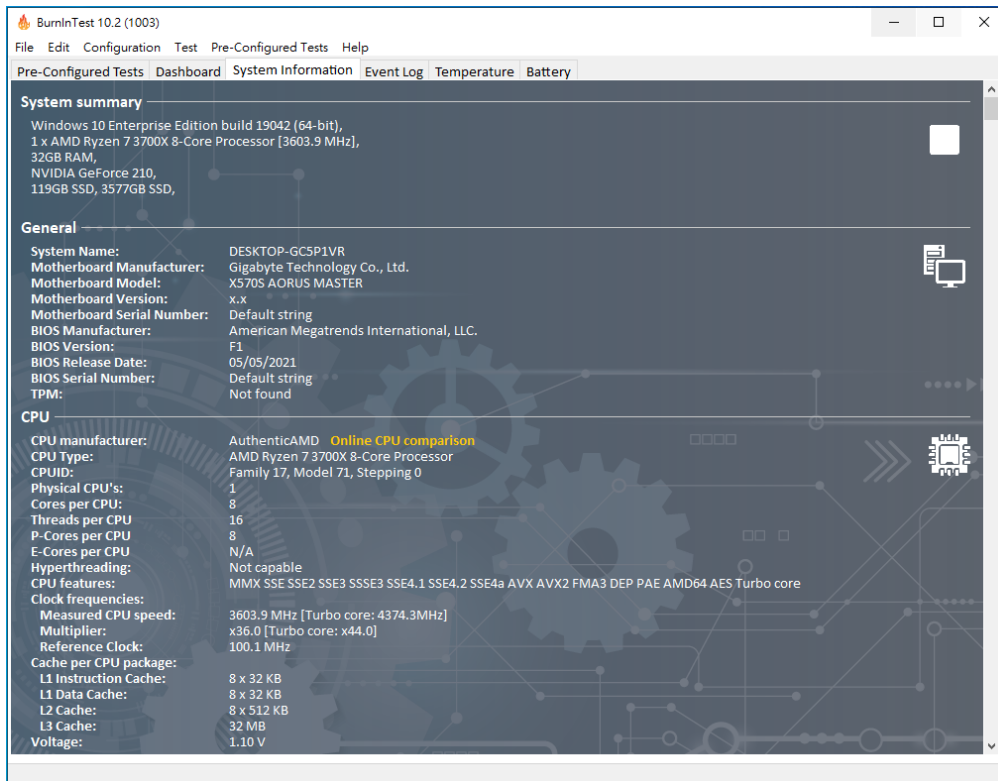


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## 3. Burn In Tests and Results

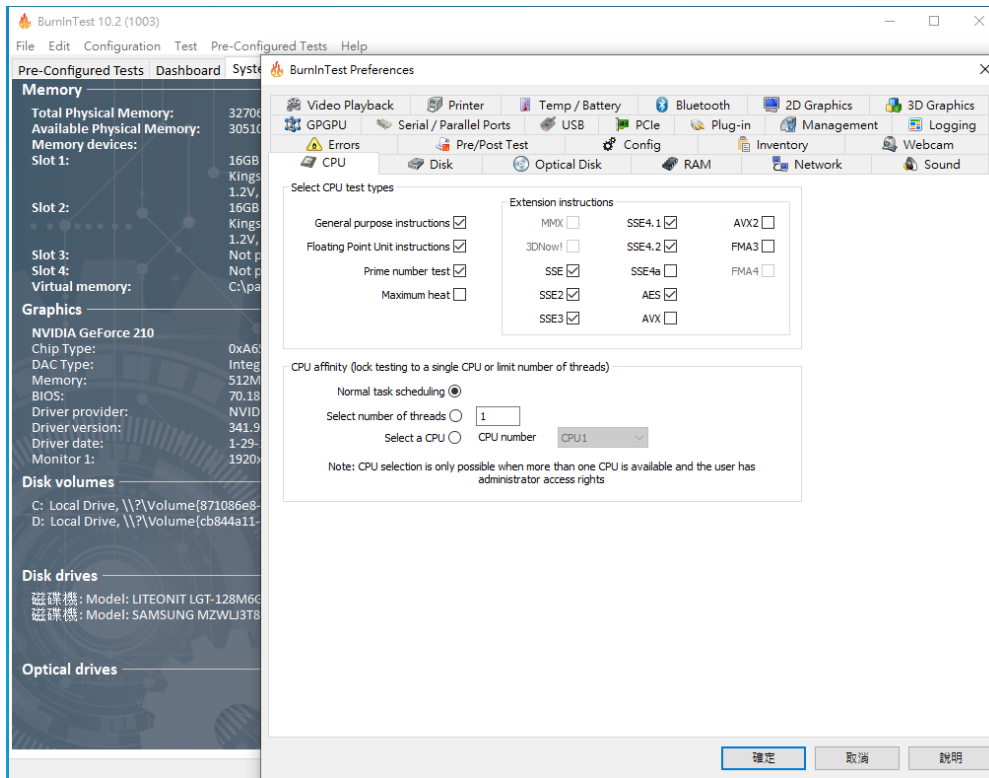
### 3.1 BurnInTest v10.2 Pro for Samsung U.2 PM1733 / 4TB NVMe SSD

#### 3.1.1 System Information as below:

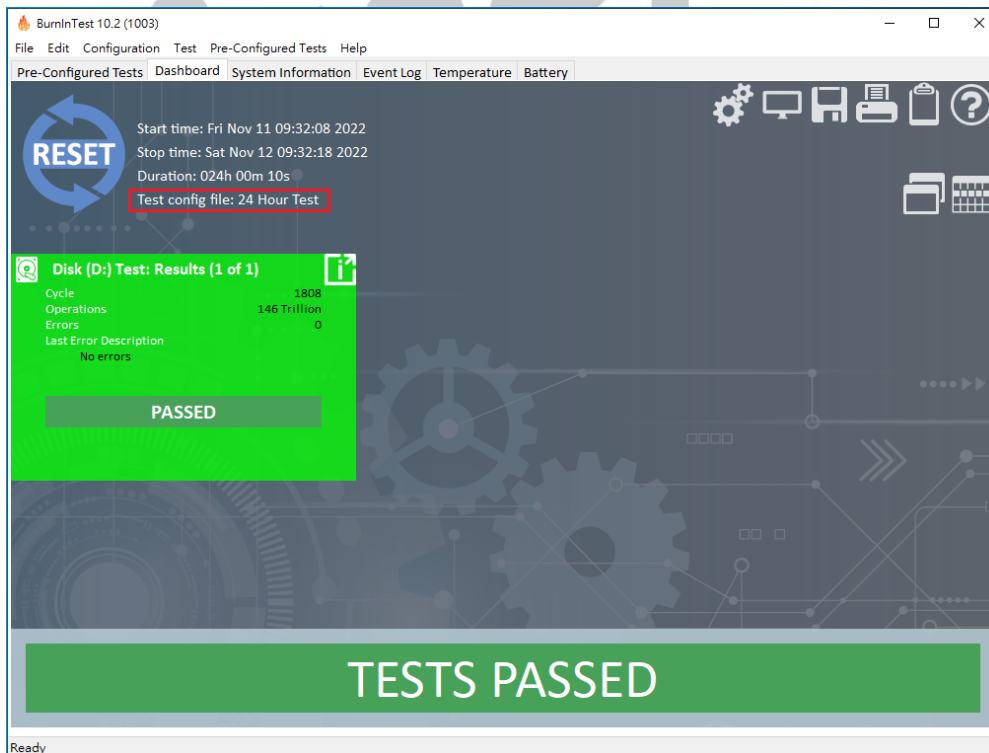


# DP6604 M.2 with PCIe 4.0 ReDriver for MCIO 38P Adapter

## 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 U.2 NVMe SSD.

