Performance & Burn In Test Rev 1.0

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1. Overview

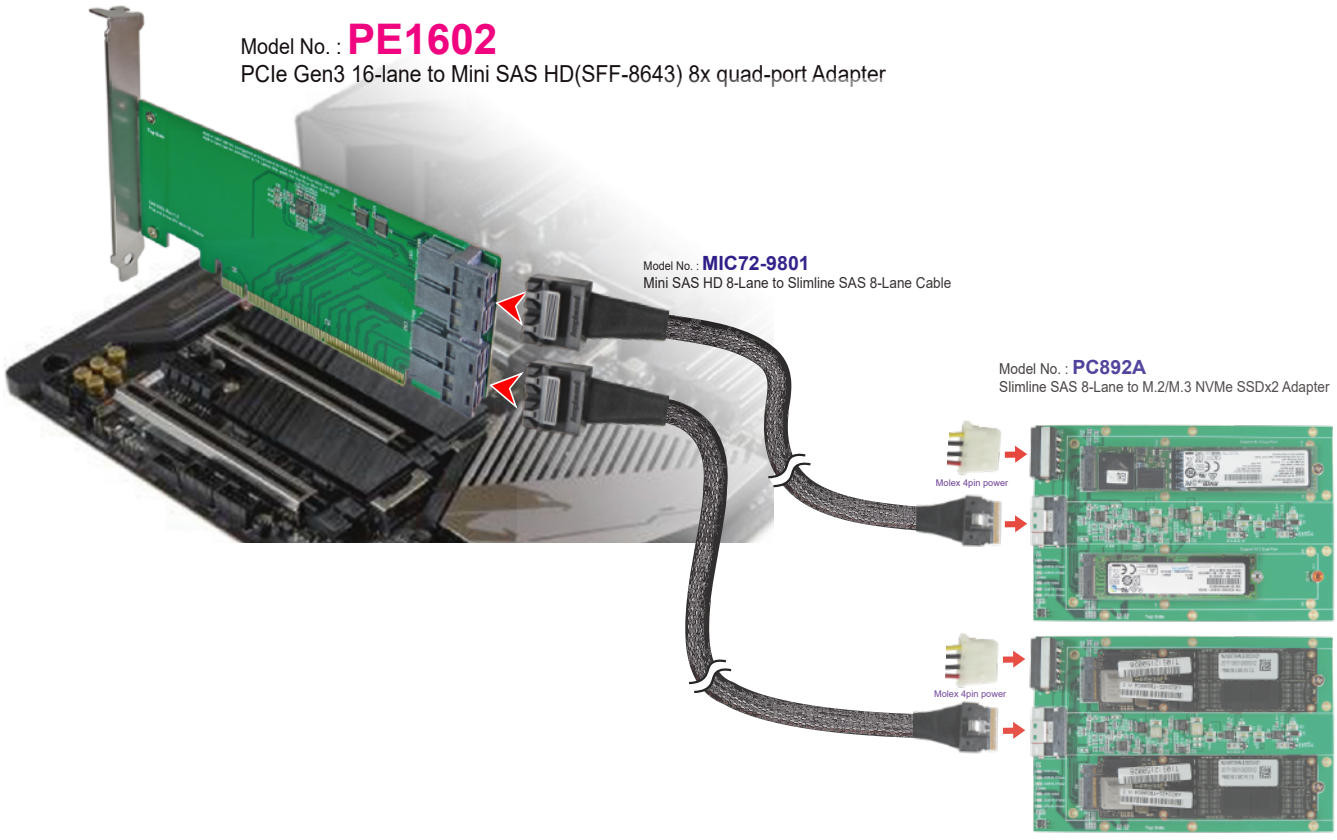
This riser card has built-in SFF-8643 8X connector dual ports. It is designed for use by PCIe x16 to configure quad SFF-8643 x4 bifurcations.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B :	GIGABYTE **X570 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:	PE1602 PCIe x16 to MINI SAS HD 8X dual ports ADD-in Card
Adapter:	PC892A SFF-8654 8i to M.2/M.3 dual ports Storage Adapter
Cable:	SFF-8643(MINI SAS HD) 8-Lane to SFF-8654 8i Cable x2
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: PE1602 AIC, PC892A adapter and M.3 NF1 & M.2 NVMe SSD



2.3 Install Hardware

First inserts PE1602 riser card into GABYTE **X570 AORUS MASTER** PCIe x16 Slot and, using the MIC72-9801 Cable to connect PC892A adapter with M.3 NF1, M.2 NVMe SSD.

2.4 BIOS & Windows 10 OS environment setup

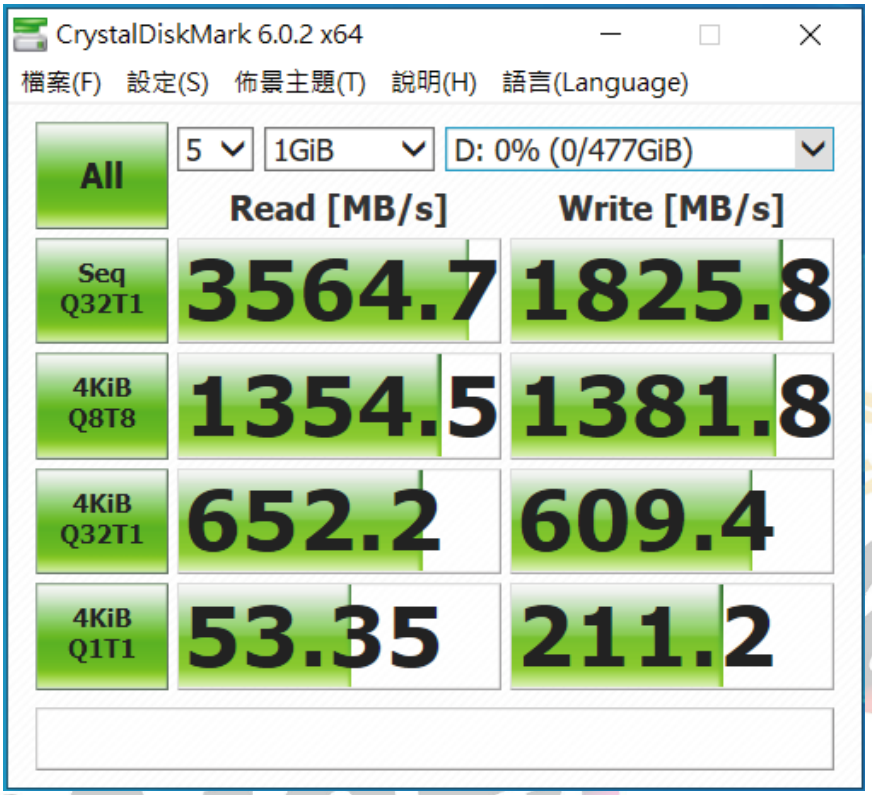
2.4.1 Primary SATA SSD installed Windows 10 OS.

2.4.2 M.3 NF1, M.2 NVMe SS, formatted to NTFS Mode. Don't install any program.

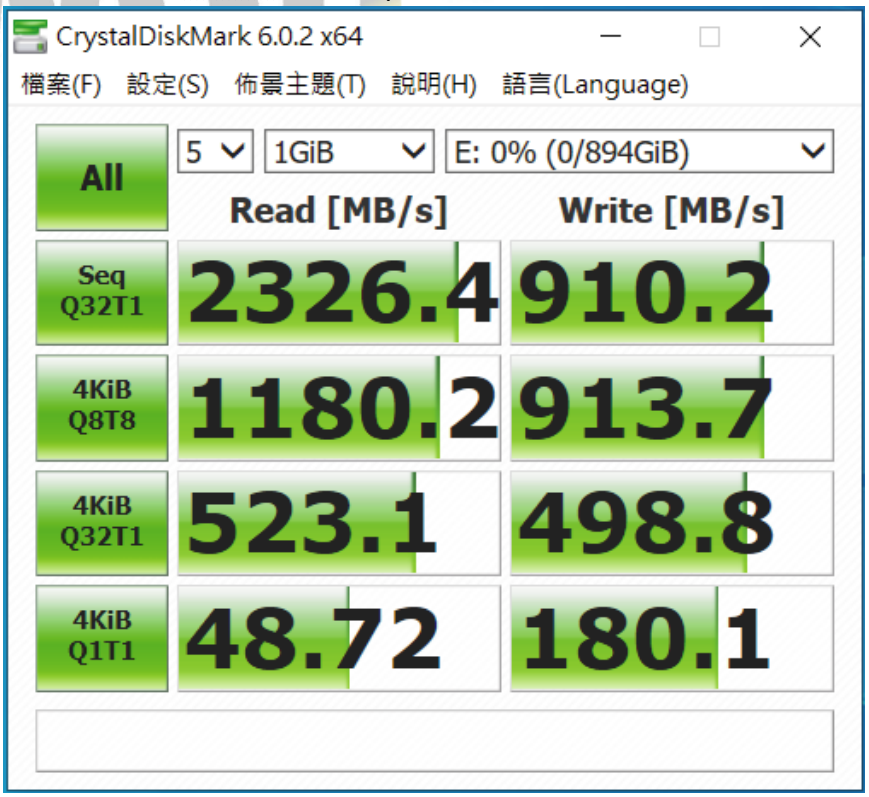
2.5 CrystalDiskMark 6.0.2 x64 performance test

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

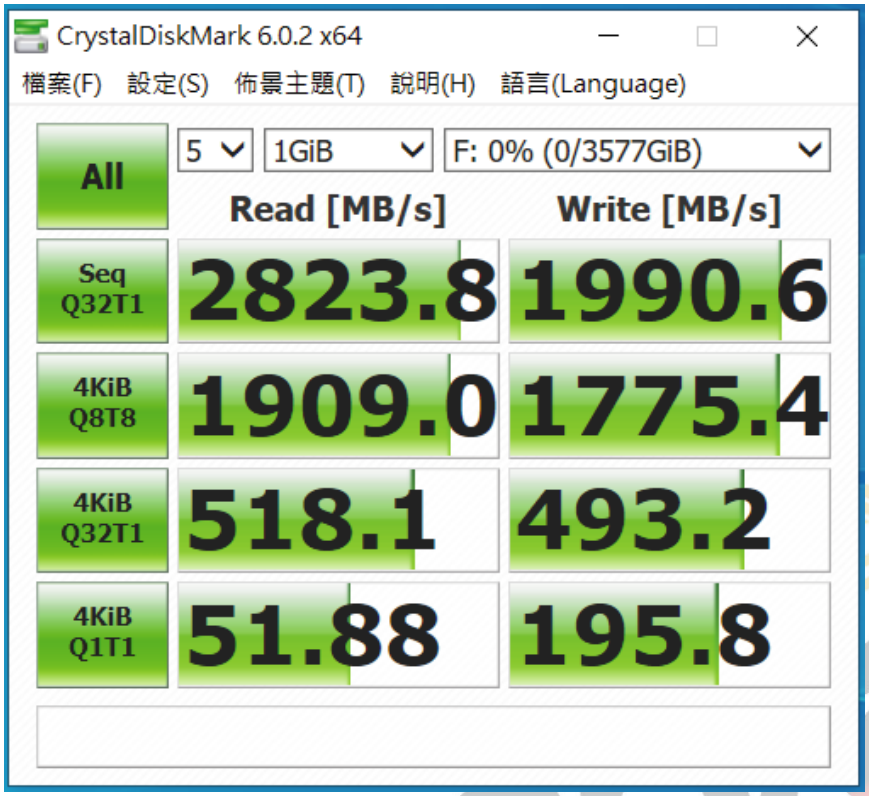
2.5.1 M.2 NVMe Samsung/512GB performance as below:



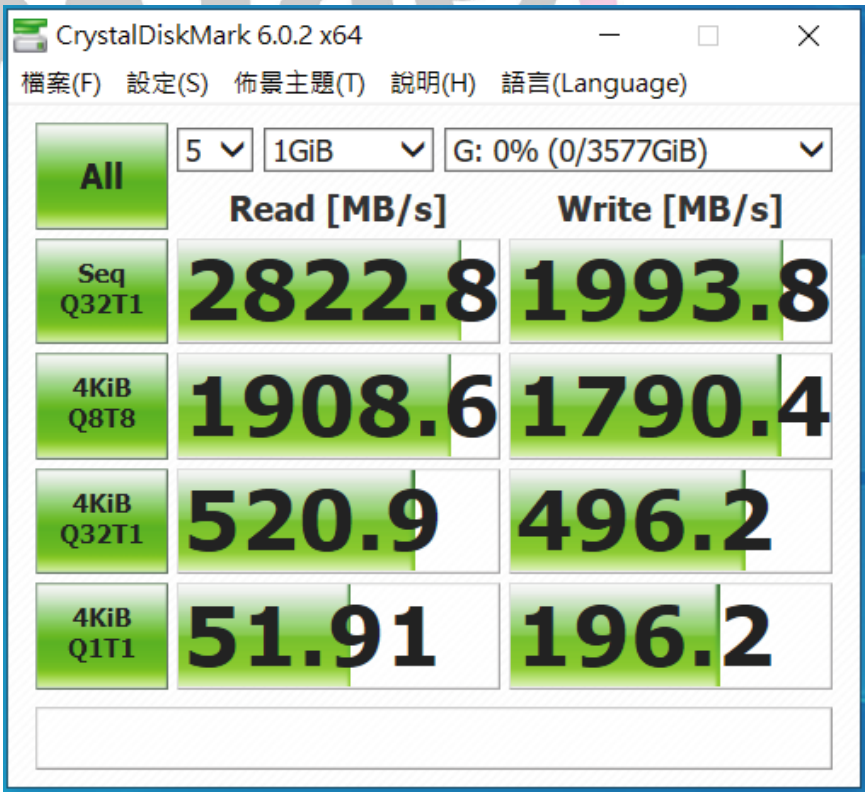
2.5.2 M.2 NVMe LITEON/960GB performance as below:



2.5.3 M.3 NF1 Samsung/4TGB performance as below:



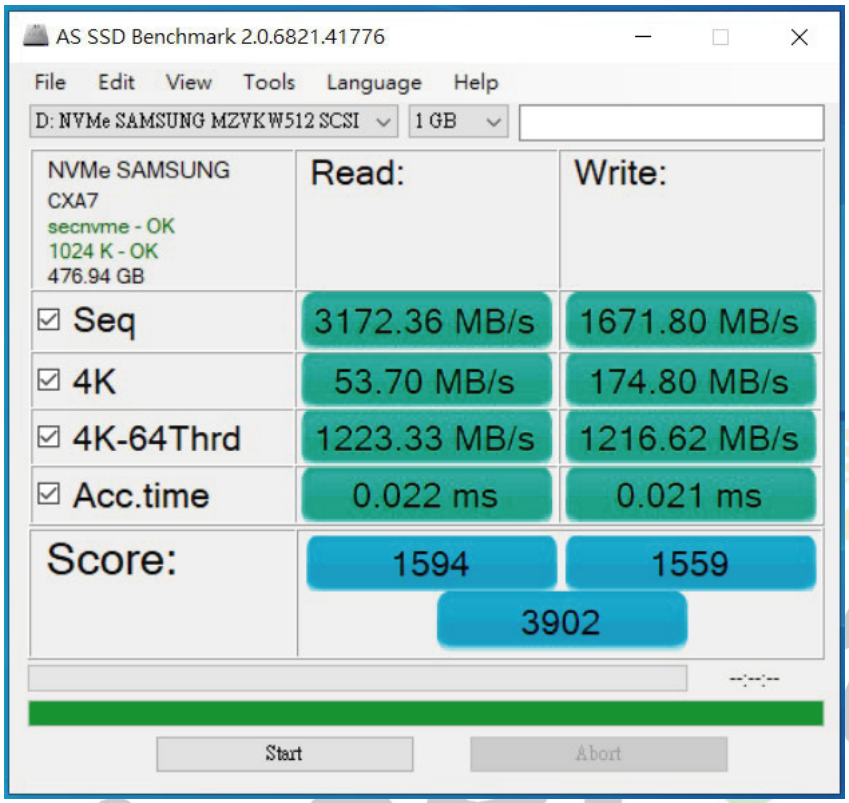
2.5.4 M.3 NF1 Samsung/4TGB performance as below:



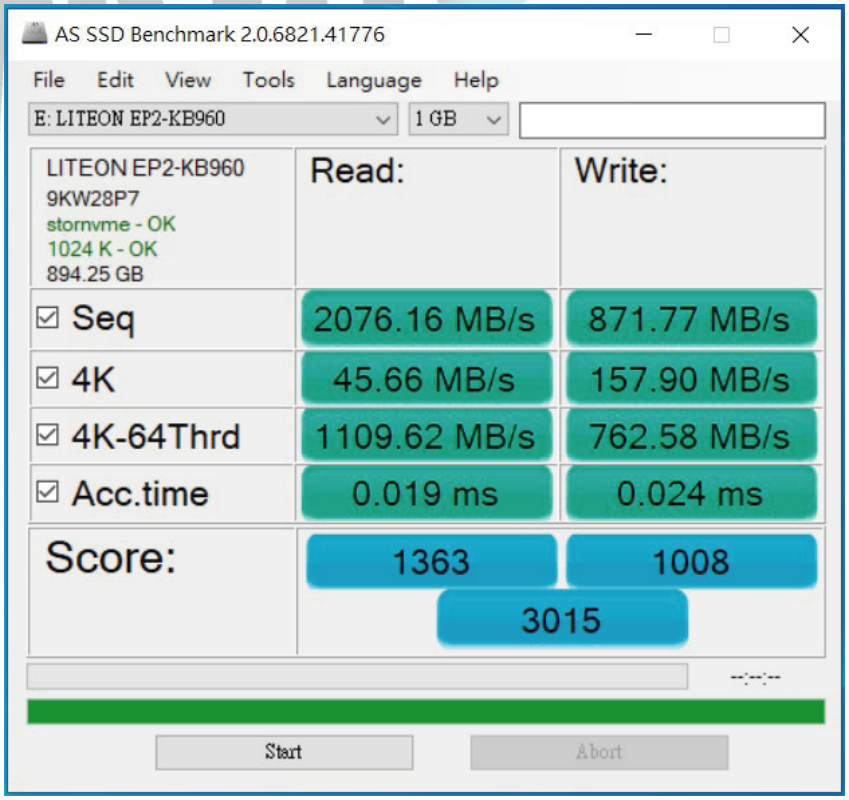
2.6 AS SSD Benchmark 2.0.6 performance test

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

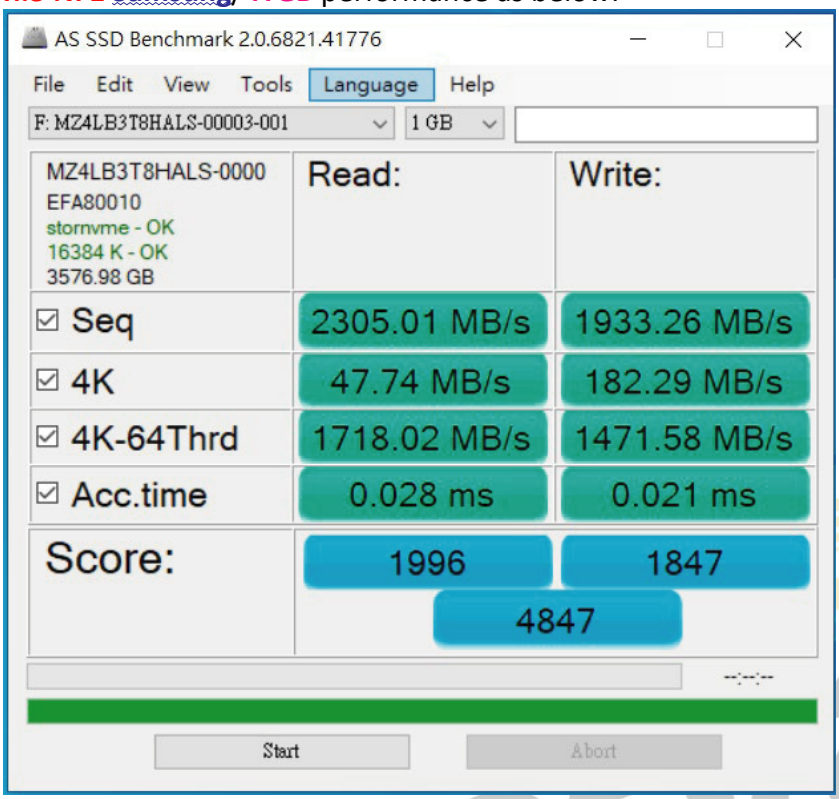
2.6.1 **M.2 NVMe Samsung/512GB** performance as below:



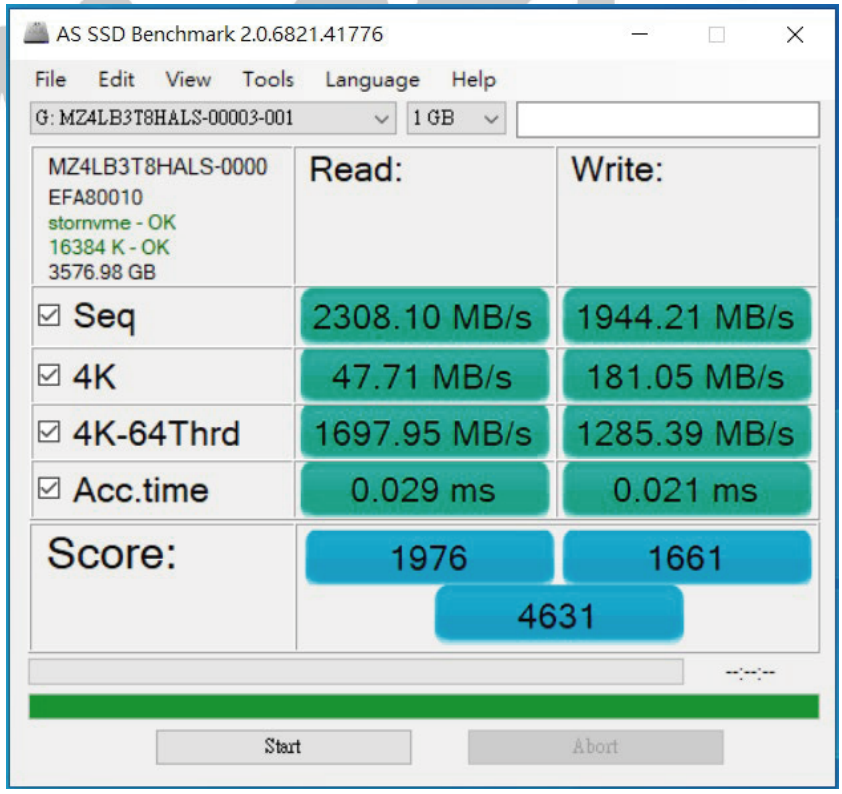
2.6.2 **M.2 NVMe LITEON/960GB** performance as below:



2.6.3 M.3 NF1 Samsung/4TGB performance as below:

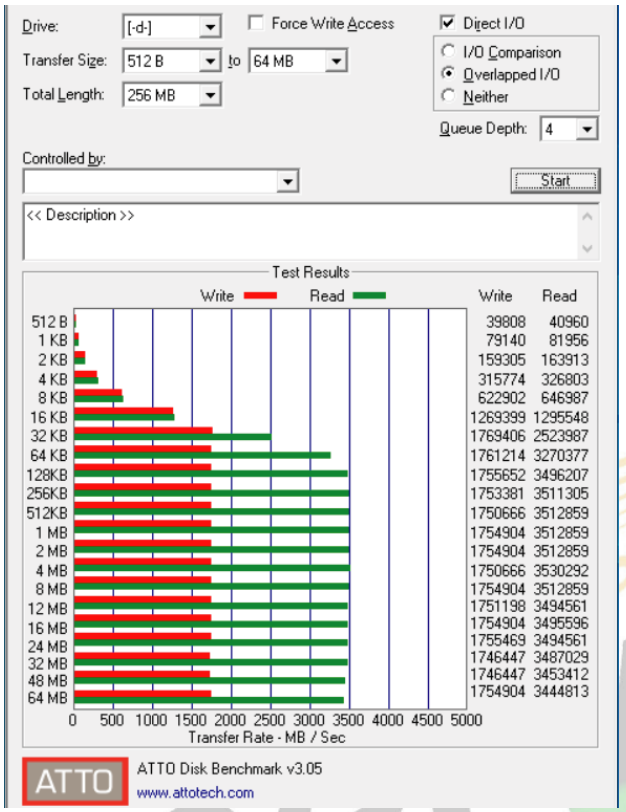


2.6.4 M.3 NF1 Samsung/4TGB performance as below:

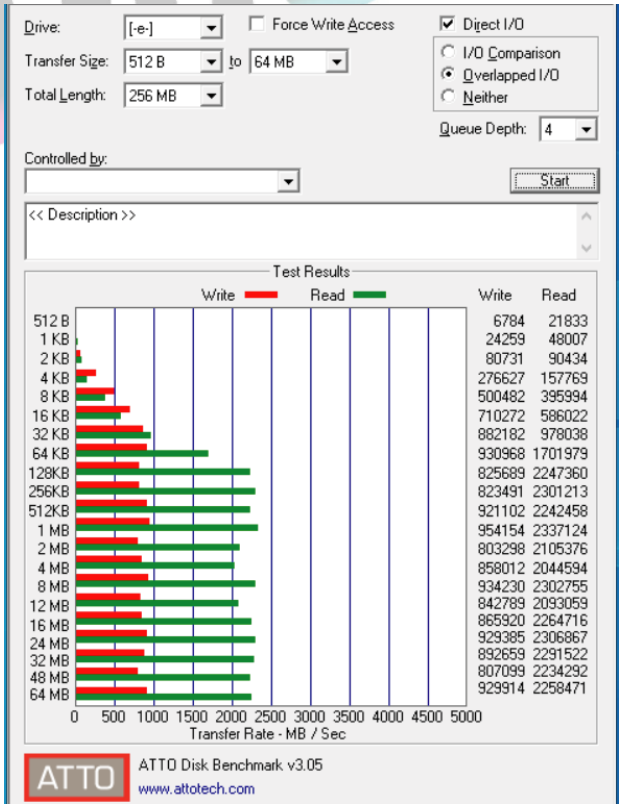


2.7 ATTO Disk Benchamrk 3.0.5 performance test

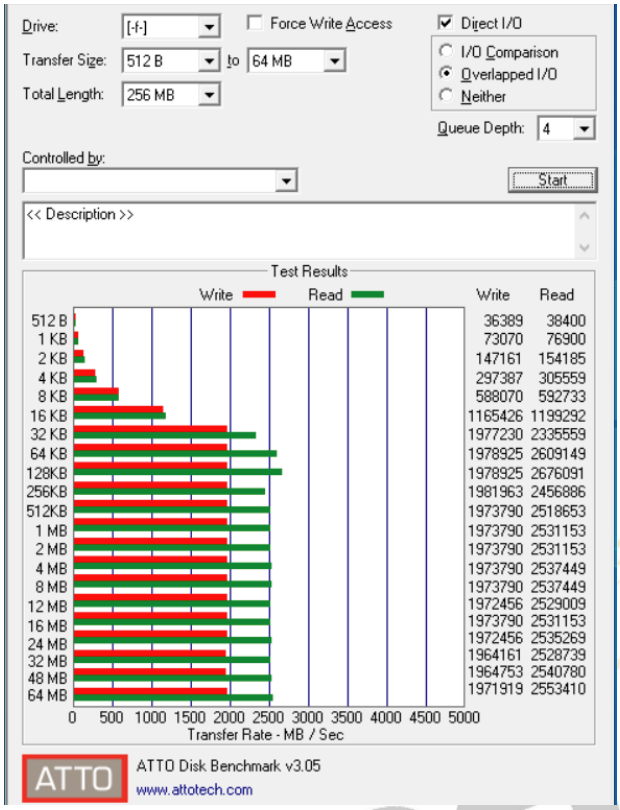
2.7.1 M.2 NVMe Samsung/512GB performance as below:



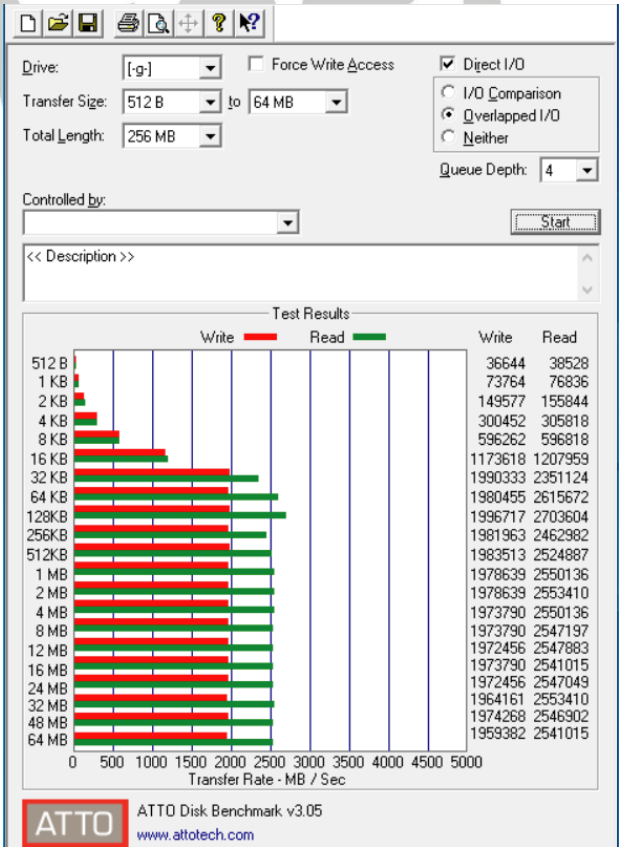
2.7.2 M.2 NVMe LITEON/960GB performance as below:



2.7.3 M.3 NF1 Samsung/4TGB performance as below:



2.7.4 M.3 NF1 Samsung/4TGB performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 M.2 NVMe Samsung/512GB performance as below:

2.8.2 M.2 NVMe LITEON/960GB performance as below:

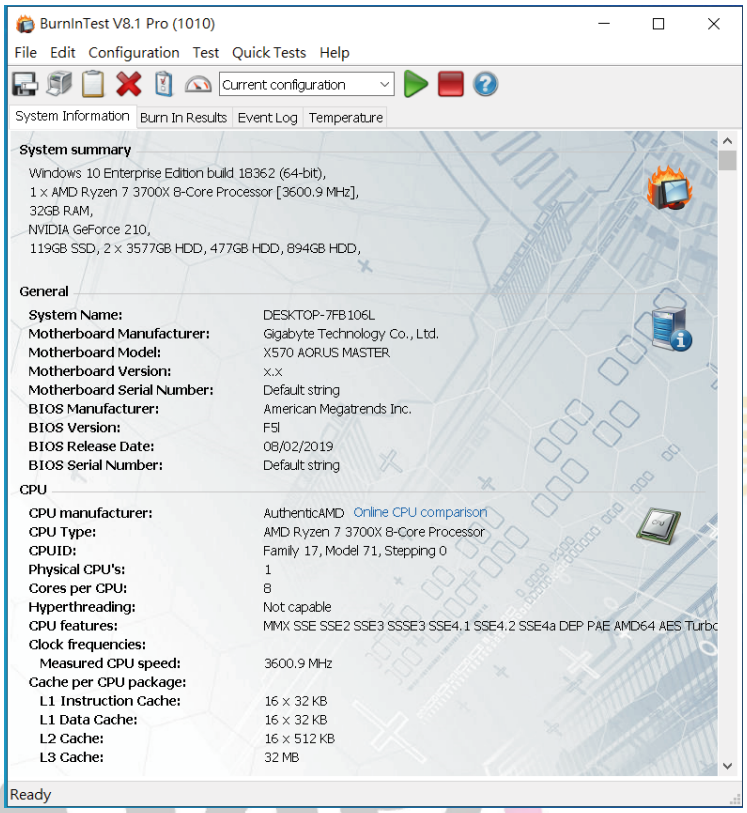
2.8.3 M.3 NF1 Samsung/4TGB performance as below:

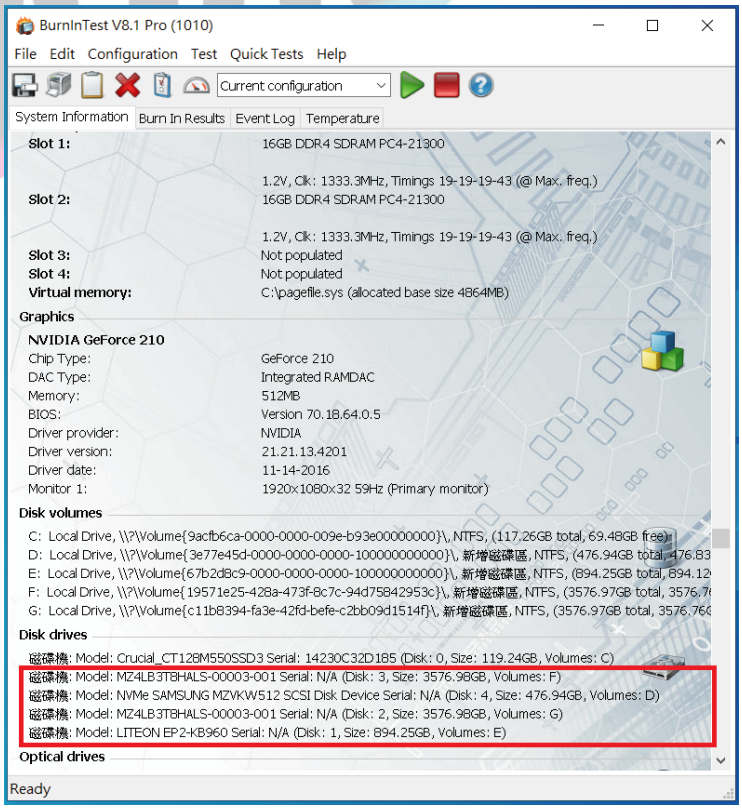
2.8.4 M.3 NF1 Samsung/4TGB performance as below:

3. Burn In Tests and Results

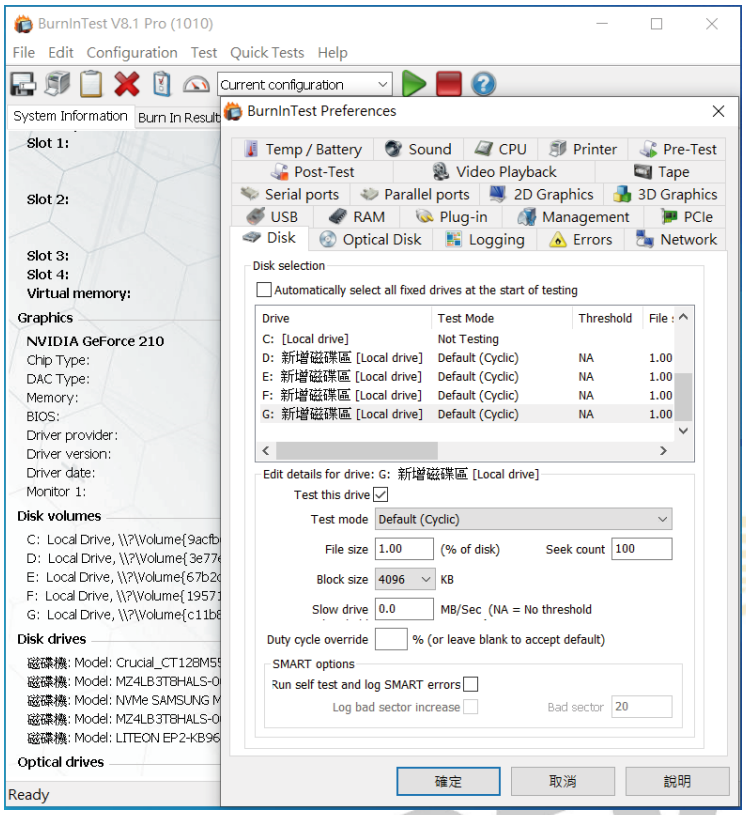
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

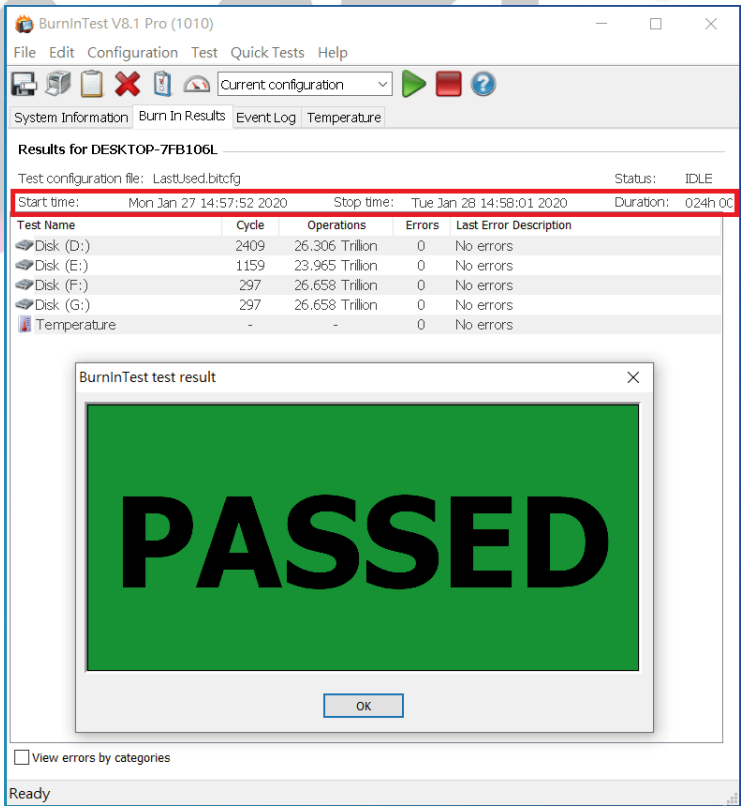




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

4.1 M.3 NF1, M.2 NVMe SSD is PCI-e Gen 3 / 4 Lane Interface, I/O speed, max. to 32Gbps.

4.2 PE1602 adapter I/O performance is based on M.3 NF1, M.2 NVMe SSD.