Performance & Burn In Test Rev 1.0

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PE0806 Add-in Card

1. Overview

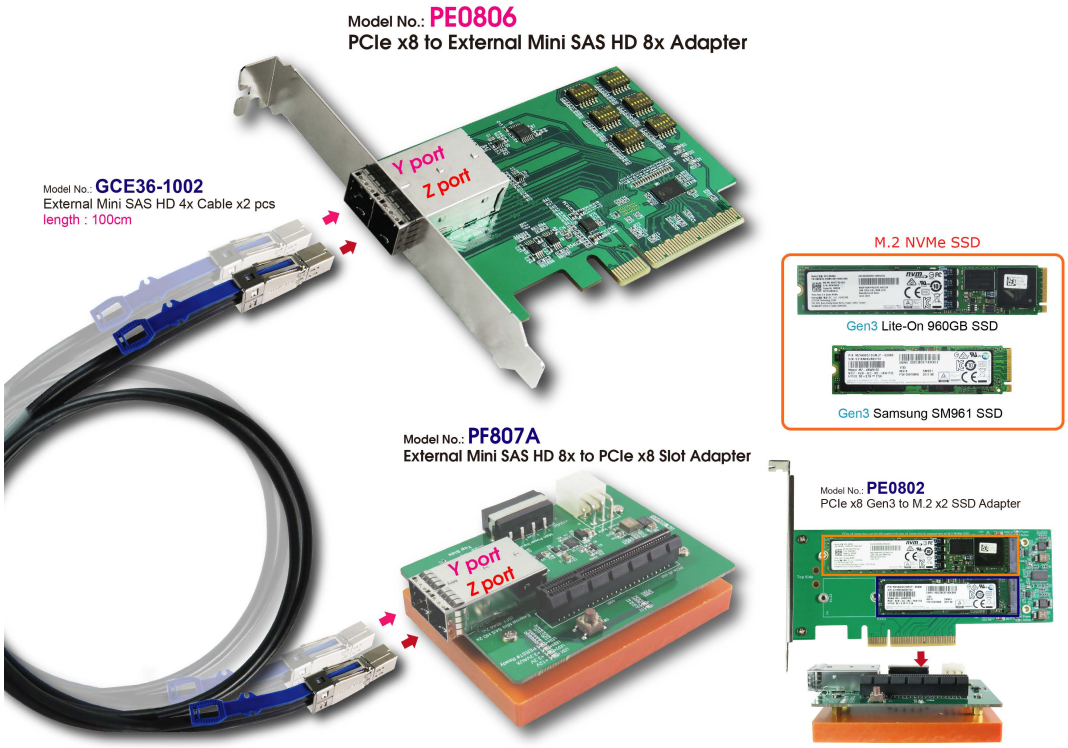
This riser card has built-in external Mini SAS HD(SFF-8644) 2x connector. It is designed for use by PCIe x8 to be bifurcated two x4 link width or can extend PCIe x8 channel reach. The ReDriver may support CTLE boosts up to **15 dB at 4 GHz.**

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
Add in Card:	PE0806 PCIe x8 to SFF-8644 2x AIC
Cable:	PCIe Gen 3 external Mini SAS 1x, 100cm Cable x2
Adapter:	PF807A SFF-8644 2x to PCIe x8 Slot adapter
Add in Card:	PE0802 PCIe x8 to M.2 dual port
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: PE0806, PF807A adapter & PE0802 with M.2 NVMe SSD



2.3 Install Hardware

First inserts the M.2 SSD into the PE0802 M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). Plugs PE0802 into PF807A adapter and connects it to the PE0806 AIC card (PCIe x16 Gen 4 to SFF-8654 8i x2), using the **GCE36-1002 Cable**, and Plugs PE0806 AIC into GIGABYTE **X570 AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

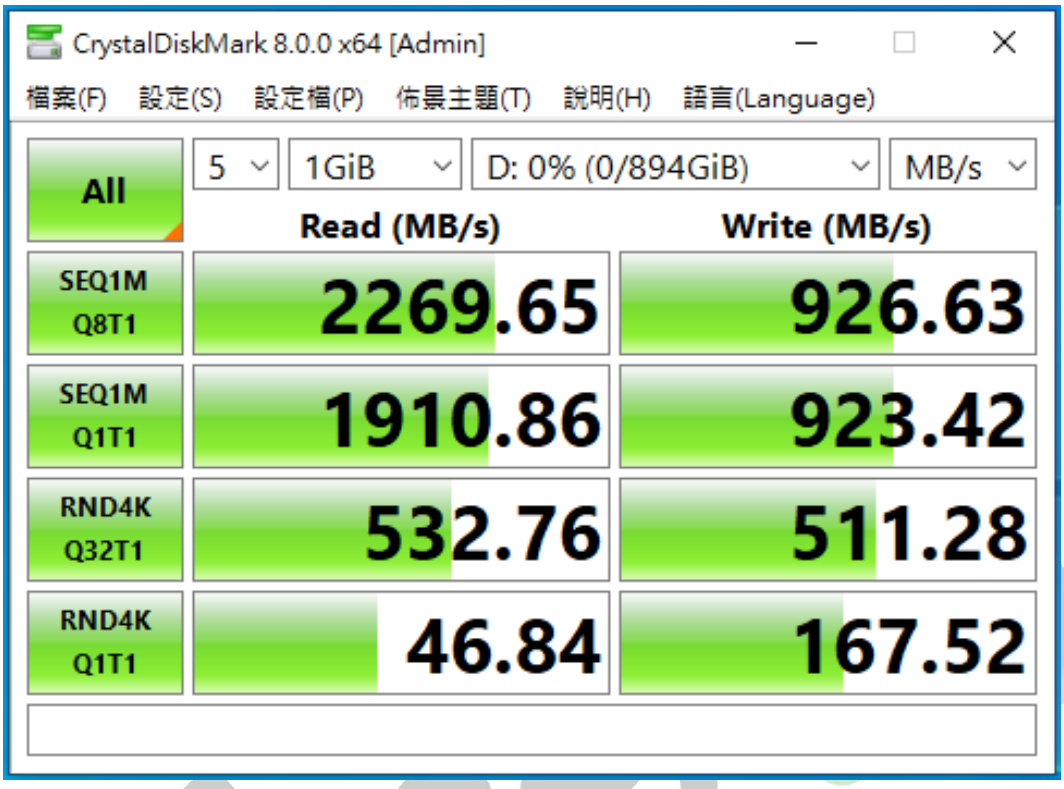
2.4.1 Primary SATA NVMe SSD install Windows 10 OS.

2.4.2 Two M.2 NVMe SSDs , formatted to NTFS Mode. Don't install any program.

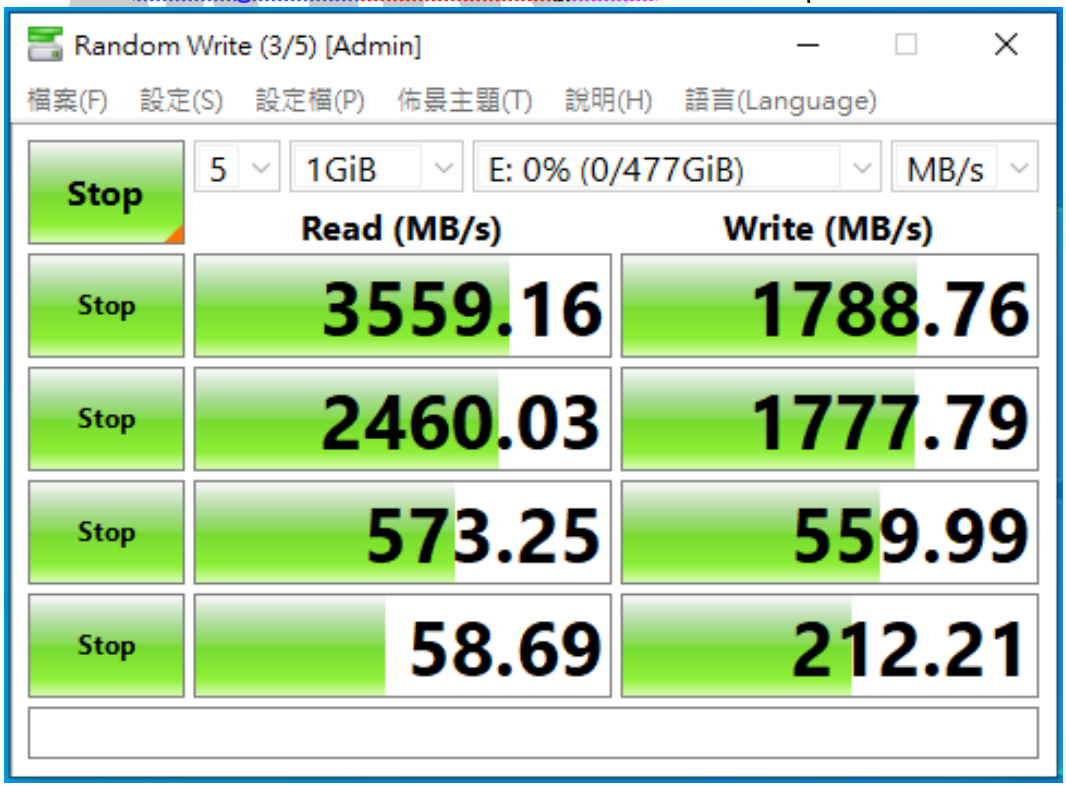
2.5 CrystalDiskMark 8.0.0 x64 performance test

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

2.5.1 LITEON M.2 22x110mm /1TB in **Drive D:** performance as below:



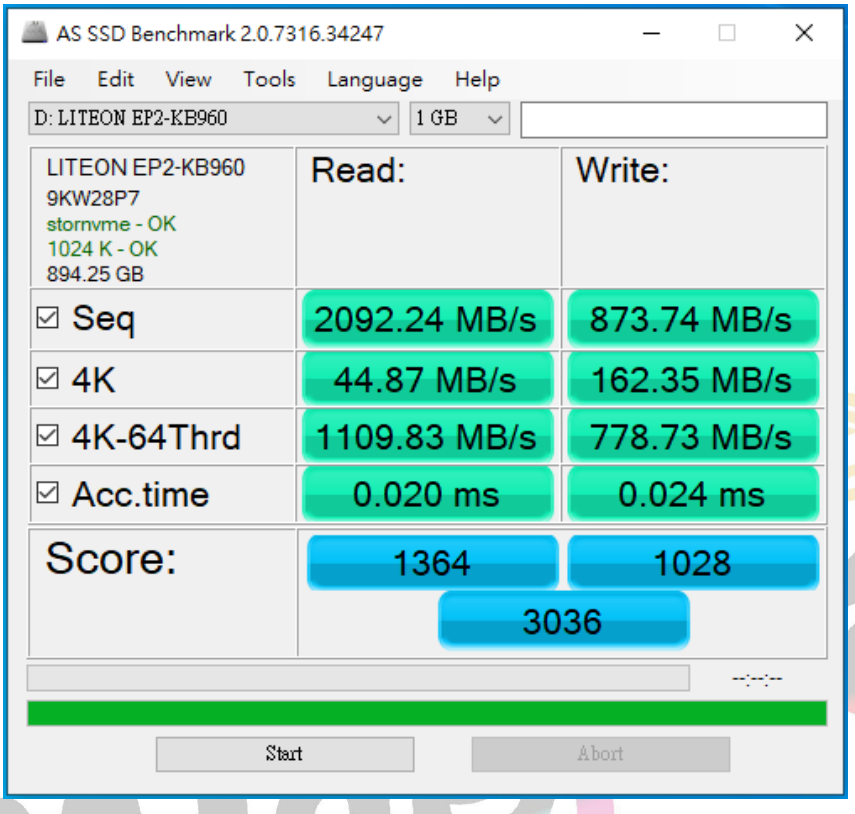
2.5.2 Samsung SM961 M.2 22x80mm /512GB in **Drive E:** performance as below:



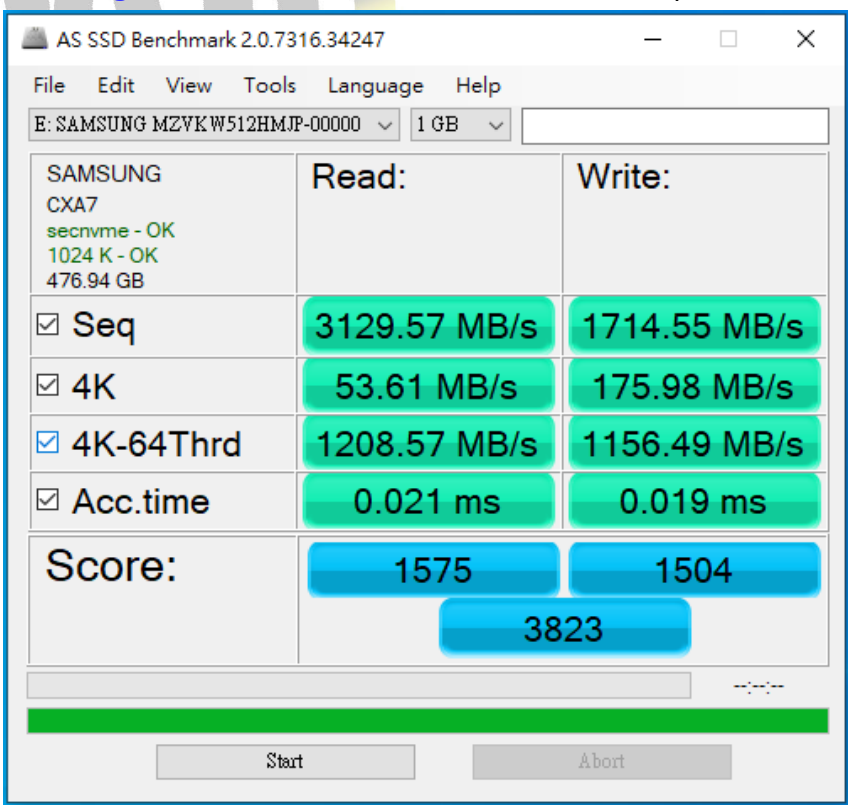
2.6 AS SSD Benchmark 2.0 performance test

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

2.6.1 **LITEON M.2 22x110mm/1TB** in **Drive D:** performance as below:

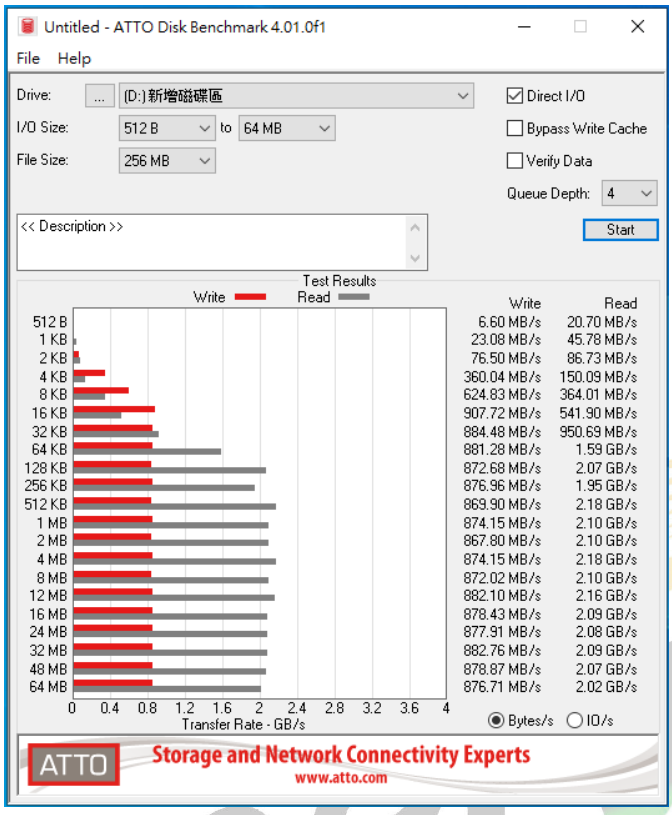


2.6.2 **Samsung SM961 M.2 22x80mm/512GB** in **Drive E:** performance as below:

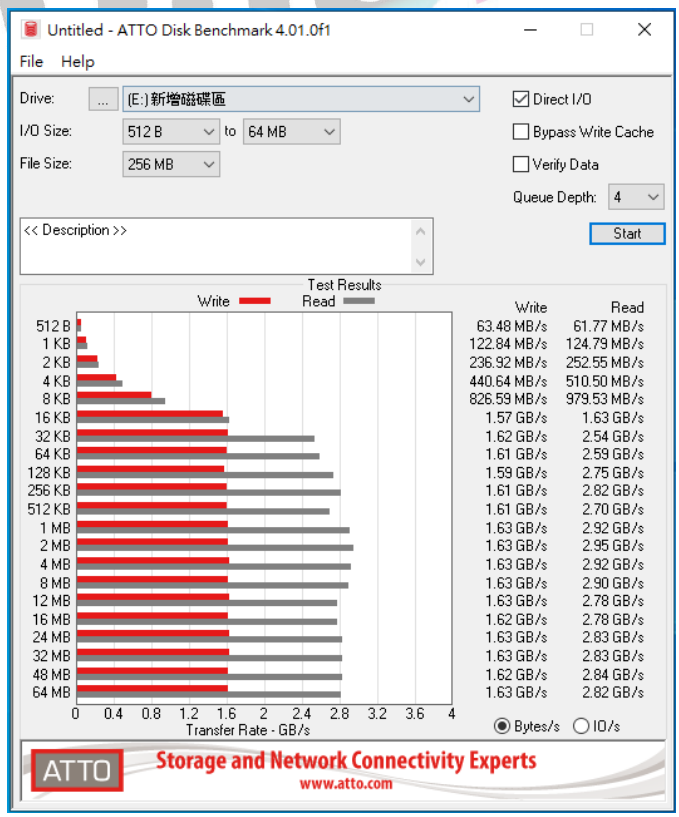


2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 **LITEON M.2 22x110mm /1TB in Drive D:** performance as below:

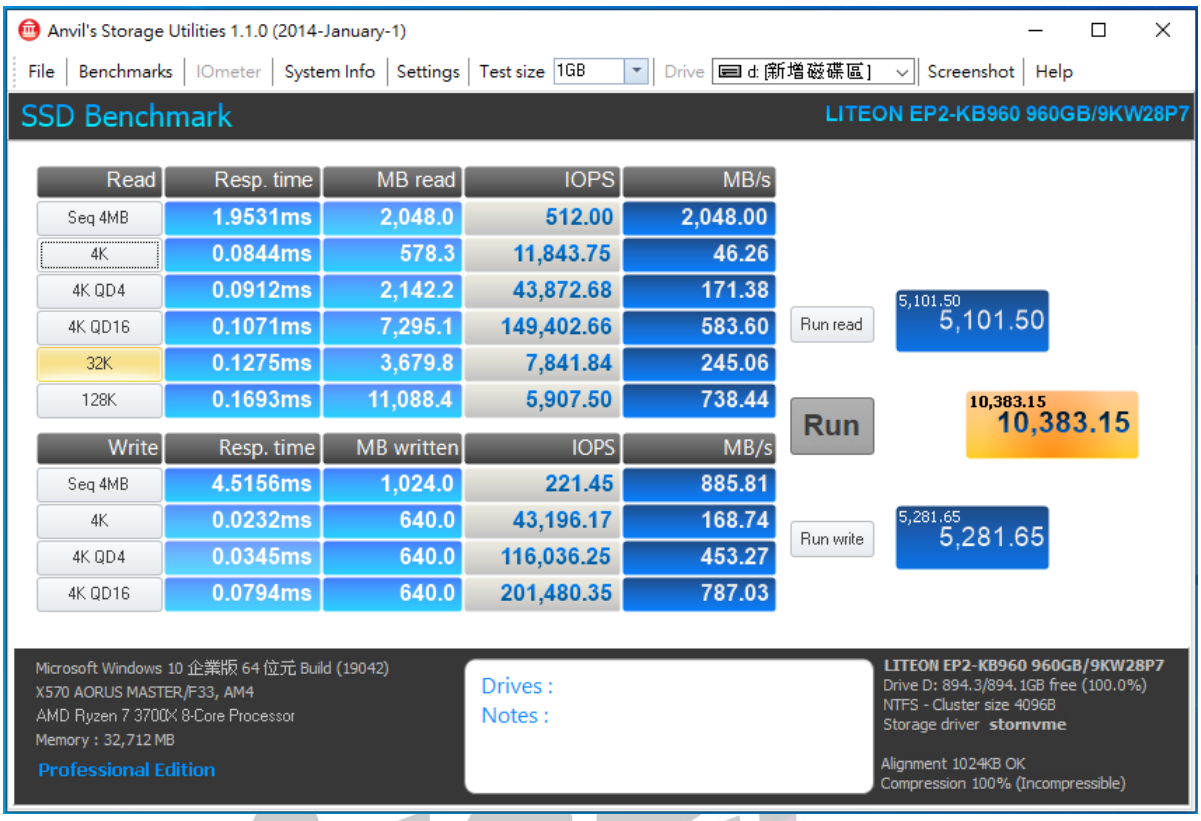


2.7.2 **Samsung SM961 M.2 22x80mm /512GB in Drive E:** performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 LITEON M.2 22x110mm /1TB in **Drive D:** performance as below:

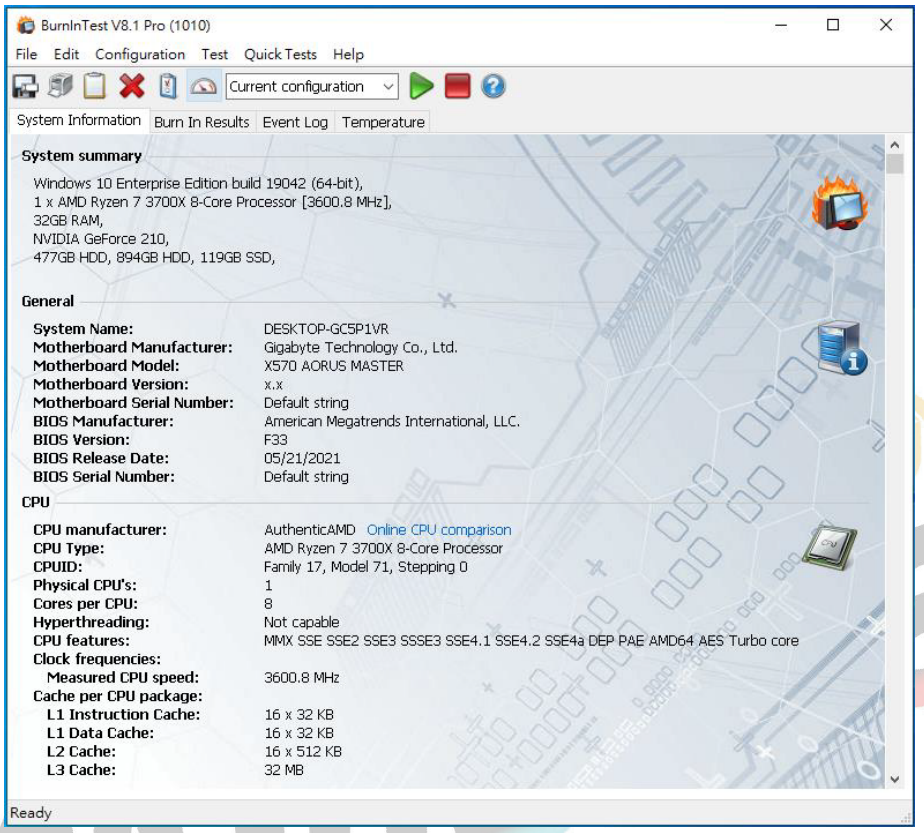


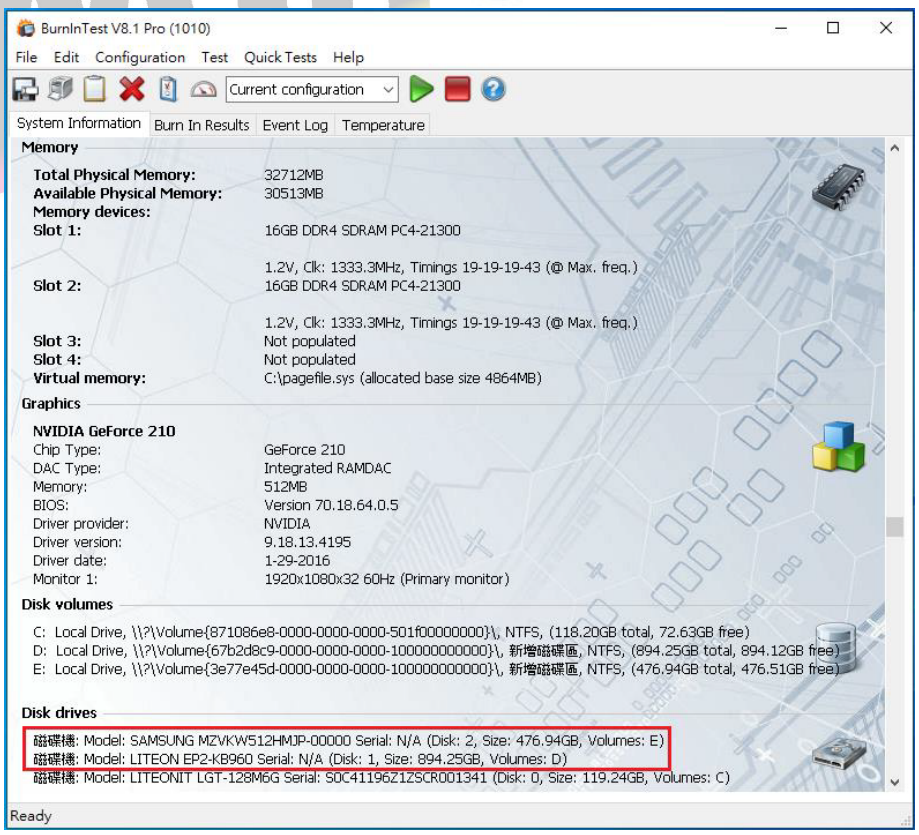
2.8.2 Samsung SM961 M.2 22x80mm/512GB **in Drive E:** performance as below:

3. Burn In Tests and Results

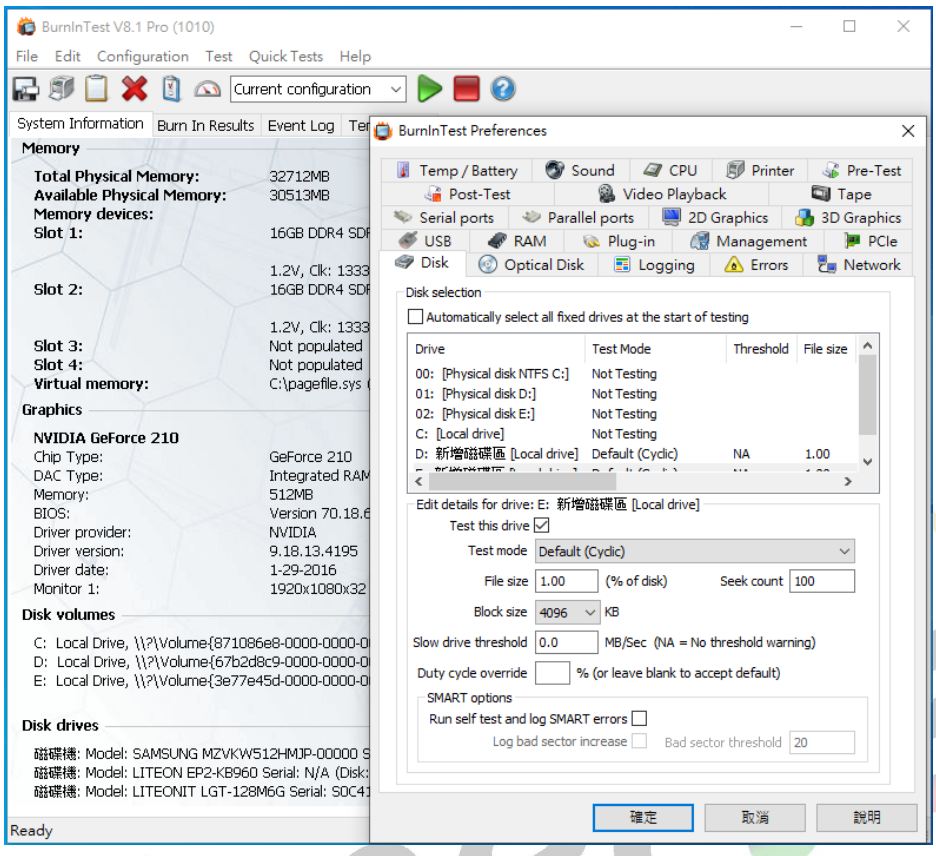
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

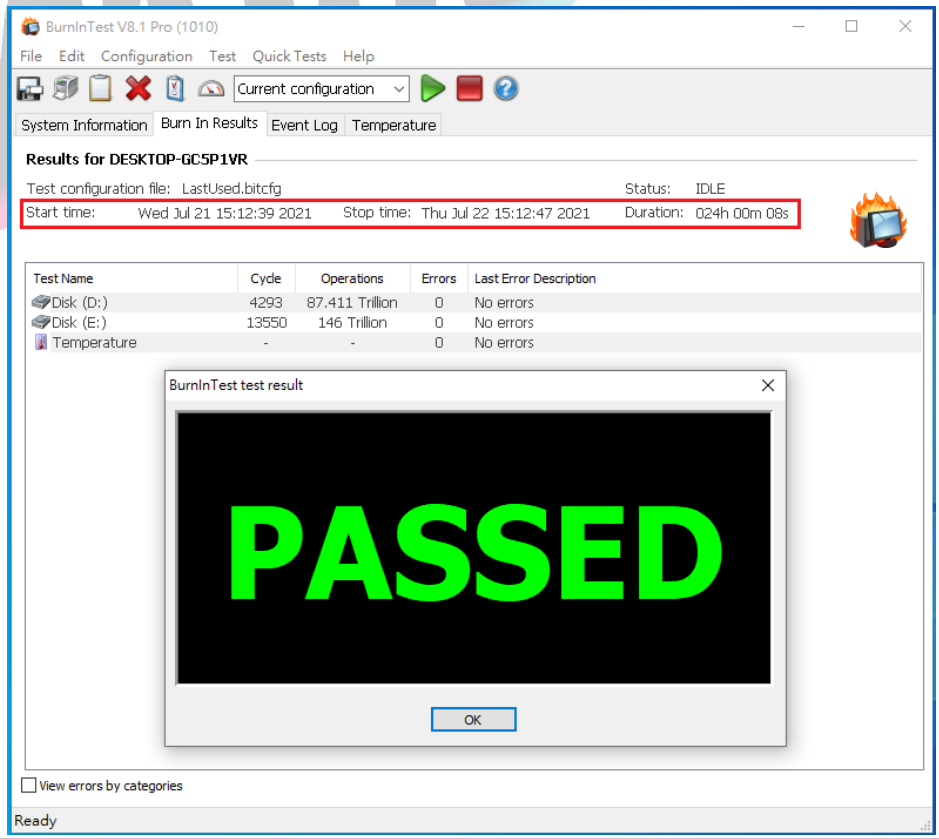




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 NVMe SSD is PCIe Gen 3 / 4 Lane Interface, I/O speed, max. to32Gbps.

4.2 PE0806 AIC I/O performance is based on NVMe SSD.