



MINERVA

PE0802 PCIe X8 to M.2 NVMe Dual-port Add-in card

Performance & Burn In Test Rev. 1. 0

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PE0802 Add-in card

1. Overview

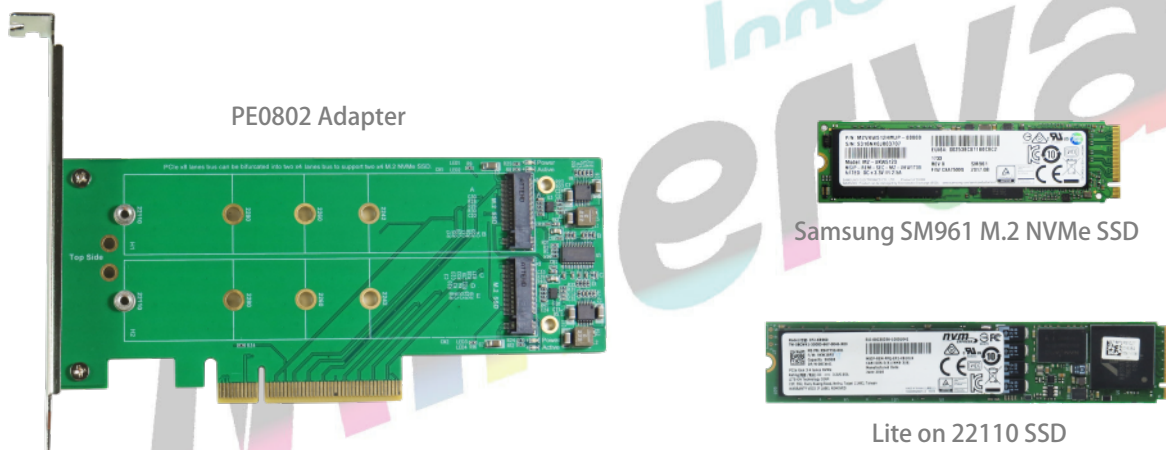
PE0802 Add-in card, providing two M.2 M-key connector can be M.2 (PCI-e I/F NVMe) SSD plugged into it and uses heat sink strip to M2 SSD, then PE0802 can plug in PCIe slot of M/B.

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
Adapter: PE0802 PCIe x8 to Dual-port M.2 NVMe AIC
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: PE0802 AIC & Samsung SM961 512GB SSD & Lite-On EP2-KB960 960GB SSD



2.3 Install Hardware

Inserts M.2 SSD into PE0802 Add-in card's M.2 M-key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Plugs PE0802 into **PCI-e slot of X570 AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

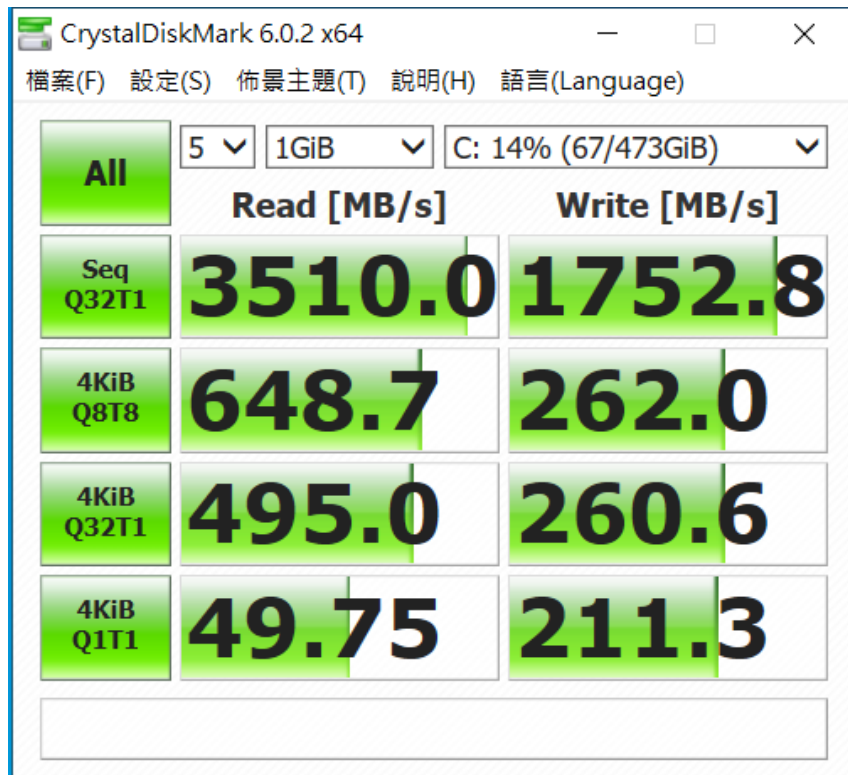
- 2.4.1 Primary M.2 is installed Windows 10 64bit OS
- 2.4.2 Second M.2 Secondary M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

2.5 CrystalDiskMark 6.0.2 x64 performance test

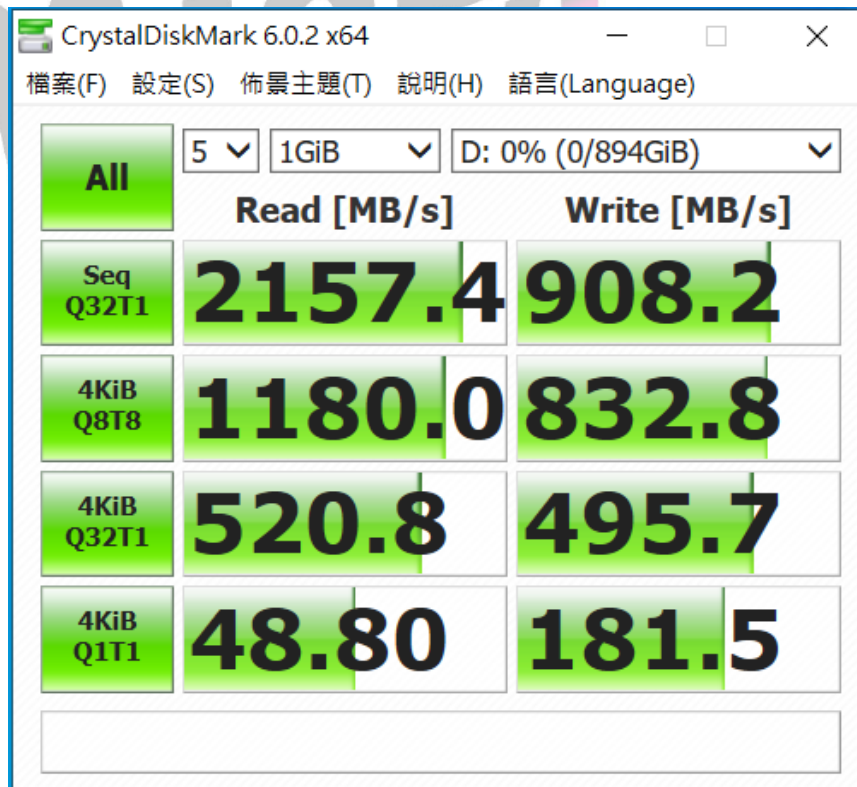
✂Benchmark (Sequential **Read & Write** / default = **1MB**)

PE0802 Add-in card

2.5.1 [Samsung SM961 M.2\(NVMe\) 22x80mm /512GB](#) performance as below:



2.5.2 [M.2 NVMe LITEON/1TB](#) performance as below:

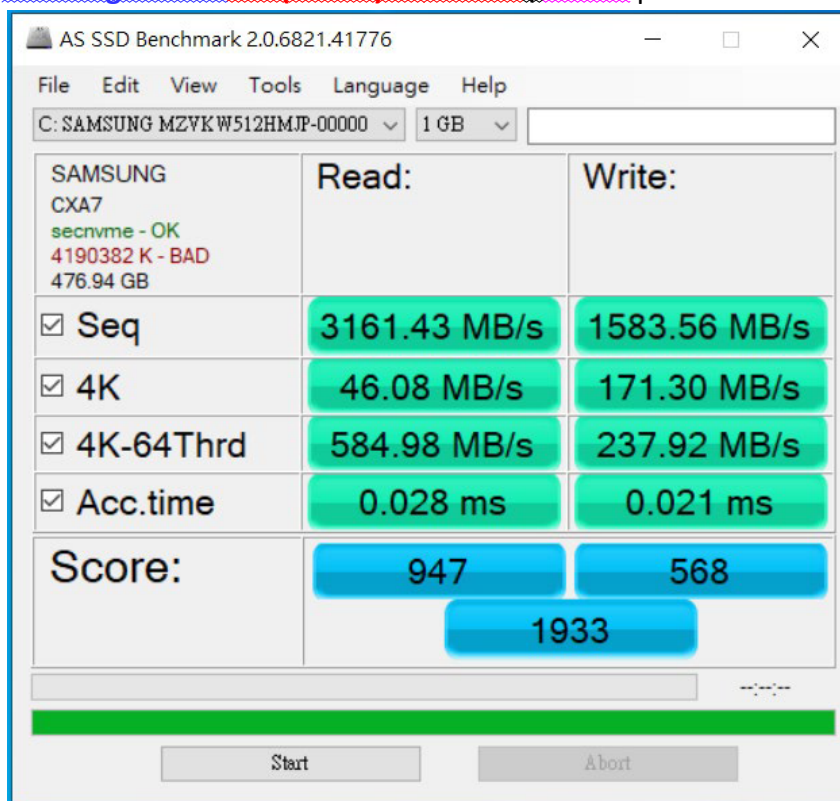


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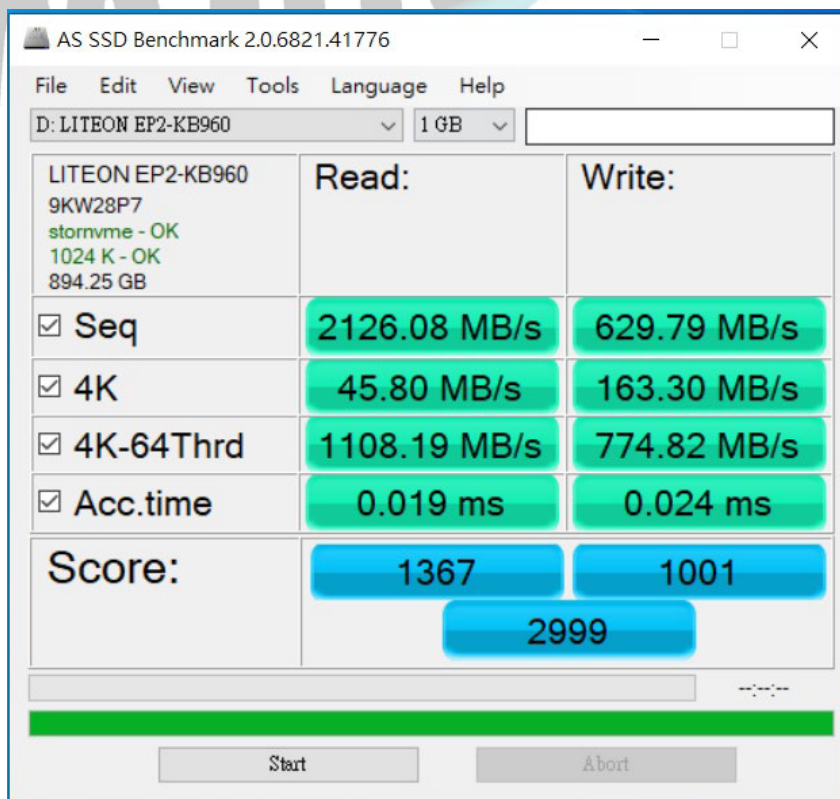
2.6 AS SSD Benchmark 2.0.6 performance test

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

2.6.1 [Samsung SM961 M.2\(NVMe\) 22x80mm /512GB](#) performance as below:



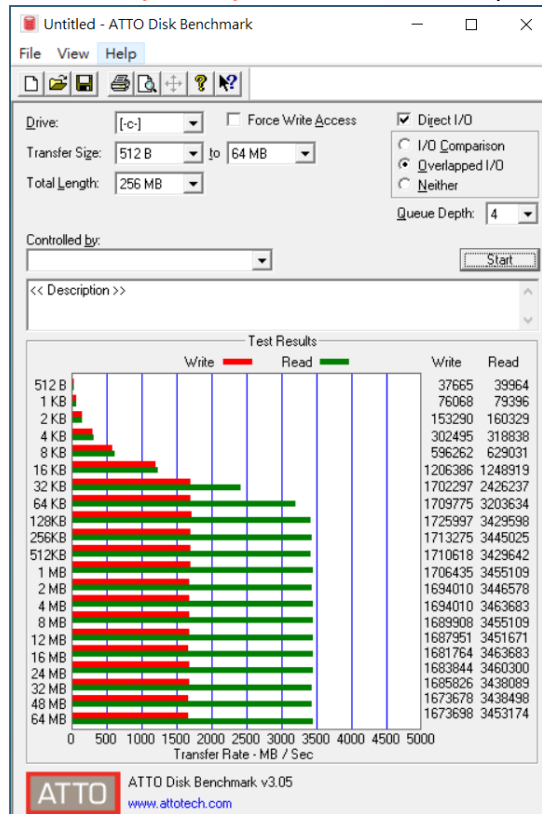
2.6.2 [M.2 NVMe LITEON/1TB](#) performance as below:



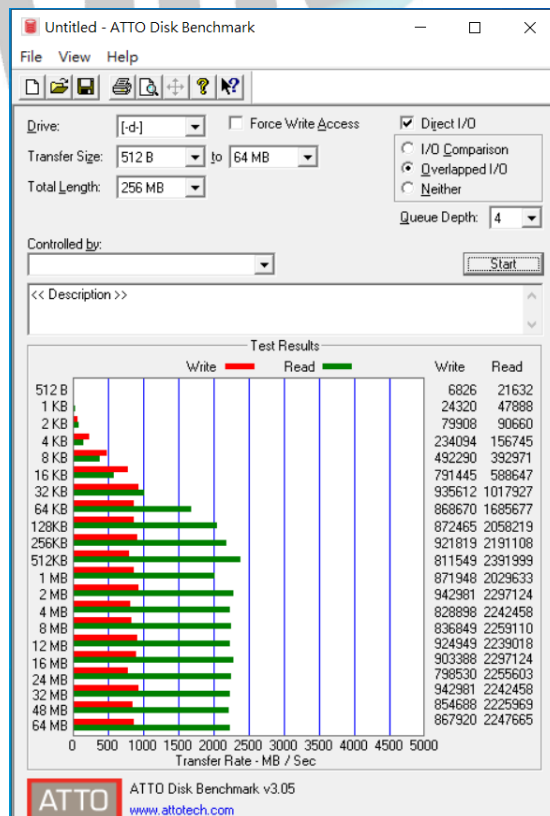
PE0802 Add-in card

2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 Samsung SM961 M.2(NVMe) 22x80mm /512GB performance as below:



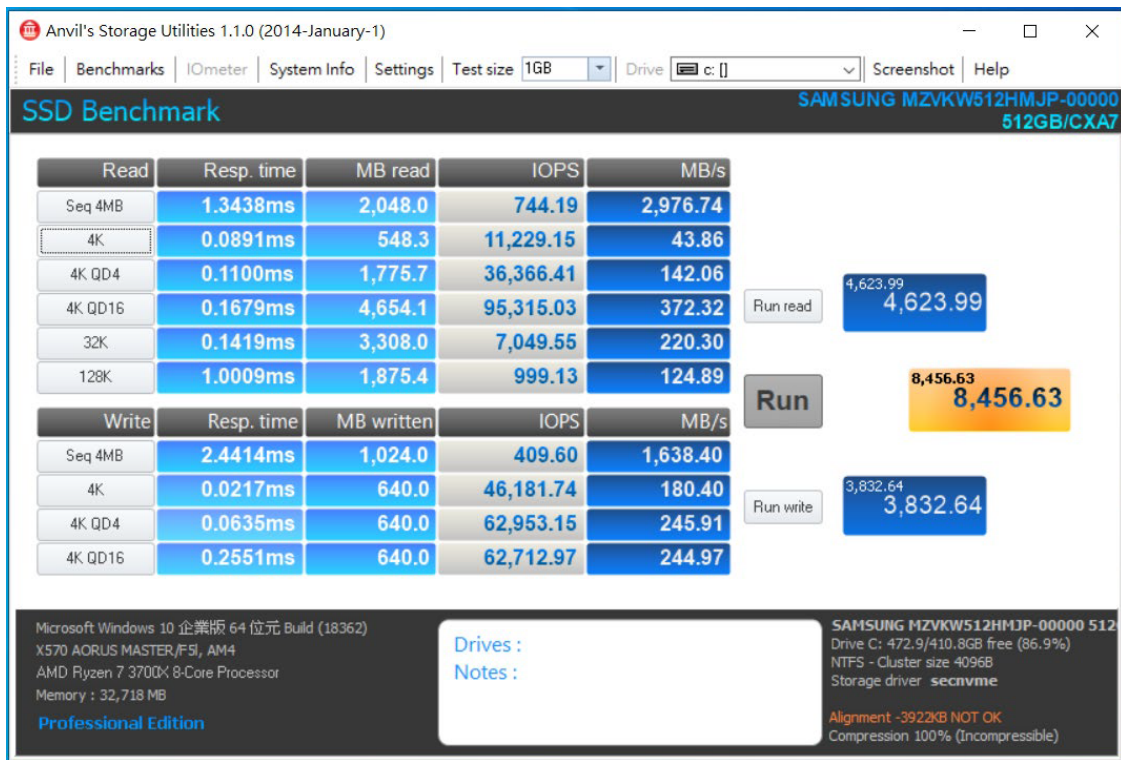
2.7.2 M.2 NVMe LITEON/1TB performance as below:



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2.8 AnvilBenchmark_V110_B337

2.8.1 Samsung SM961 M.2(NVMe) 22x80mm/512GB performance as below:



2.8.2 M.2 NVMe LITEON/1TB performance as below:

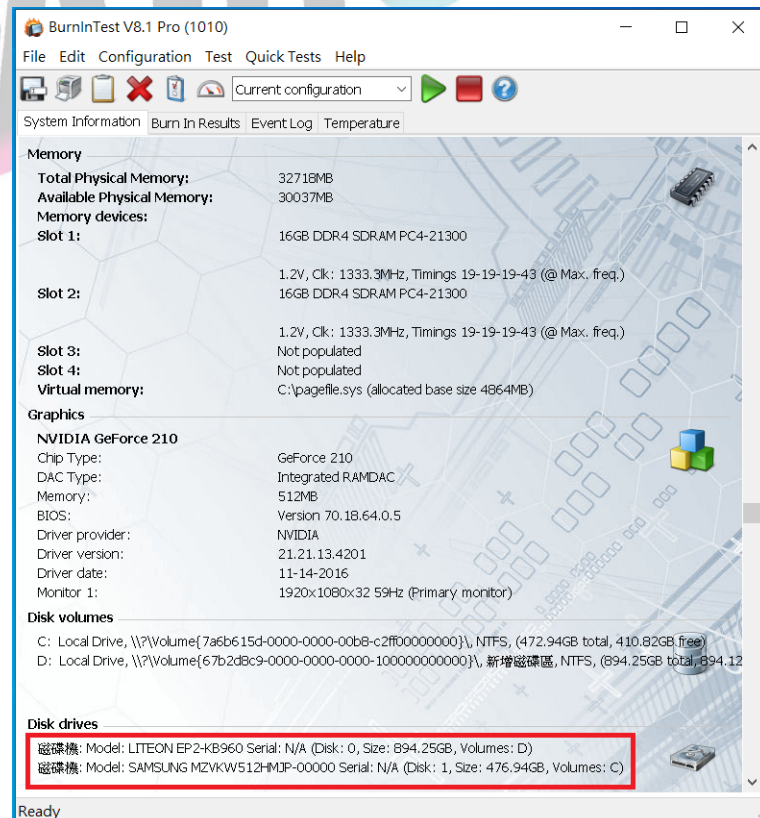


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3. Burn In Tests and Results

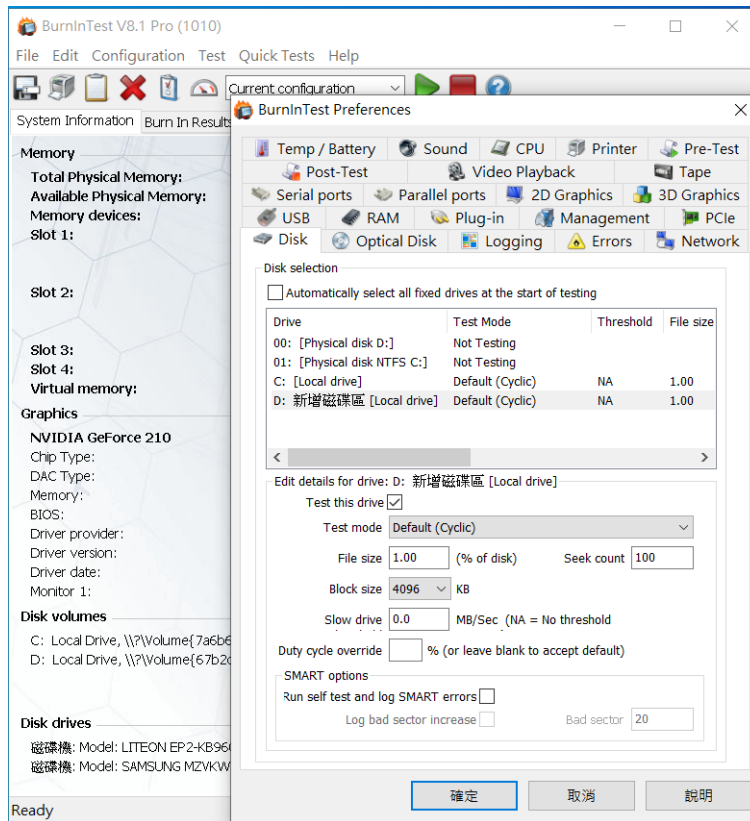
3.1 BurnInTest v8.1 Pro for [Sam/512GB](#) & [Liteon/1TB](#)

3.1.1 system information as below:

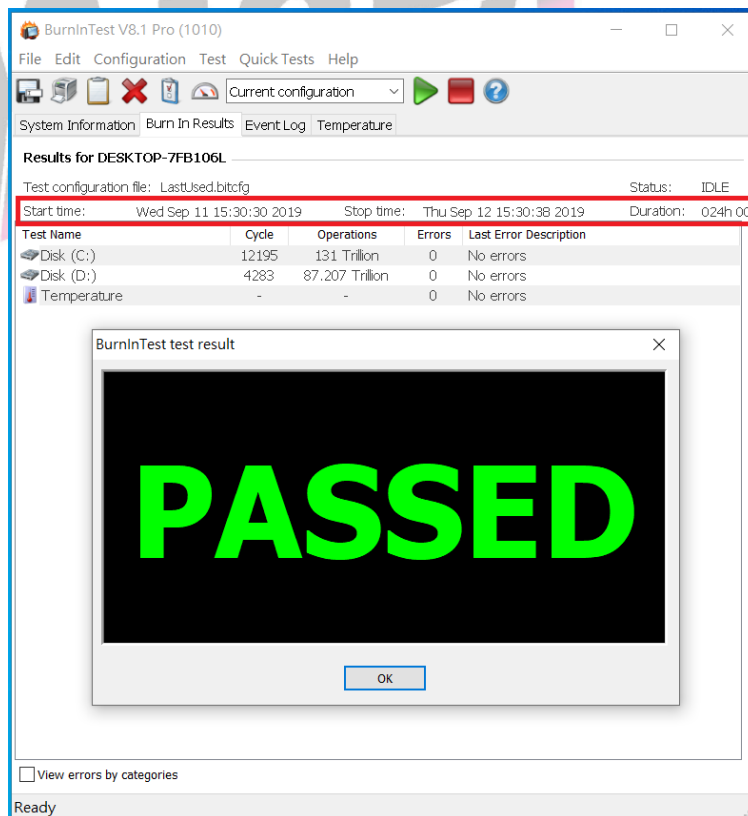


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3.1.2 Disk test mode (10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

- 4.1 M.2 SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 4GB.
- 4.2 PE0802 adapter I/O performance is based on M.2 NVMe PCI-e Gen 3 / 4 Lanes SSD.

