Performance & Burn In Test Rev 1.0

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1. Overview

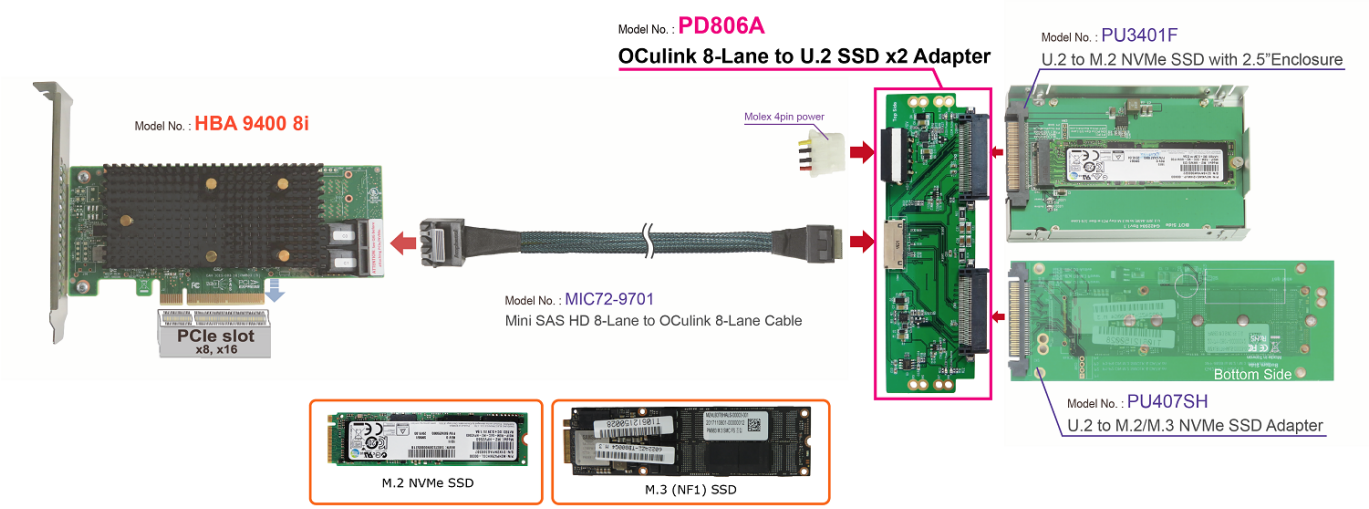
This adapter has built-in SFF-8612 8i connector and two U.2(SFF-8639) connectors, which can be inserted into U.2 to M.2 adapter+M.2, M.3 NVMe SSD. It is designed for use by Bradcom MegaRAID and HBA series, and can be set as needed for independent drive, or merge into RAID mode.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B : GIGABYTE **Z270-Gaming 8**
CPU : Intel **i7-7700,** 3.6GHz/ 8M Cache/ LGA1151
Memory : Kingston **KVR21N15D8/8,** DDR4-2133MHz, **16G**(8GB DIMM*2)
ATX Power : COOLER MASTER G750M, **750W ATX**, 12V V2.2 Power Supply
Graphic : Z270 Chipsets built-in **HD Graphics 630**
Adapter: Broadcom HBA-9400-8i Tri-mode Storage Adapter
Adapter: PD806A SFF-8612(OCulink 8i) to U.2 to M.2/M.3 Adapter
Cable: SFF-8643(MINI SAS HD) 8-Lane to SFF-8612 8i(OCulink) Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: PD806A adapter and U.2 to M.2, M.3 Adapter+ M.2, M.3 NF1 NVMe SSD



2.3 Install Hardware

First inserts the U.2 to M.2 adapter+M.2, M.3 NF1 SSD, into the PD806A riser card U.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). Connect the PD806A adapter to the Broadcom HBA 9400-8i AIC card, using the MIC72-9901 Cable. and Plug HBA 9400-8i AIC card into GIGABYTE **Z270-Gaming 8** PCIe slot.

2.4 BIOS & Windows 10 OS environment setup

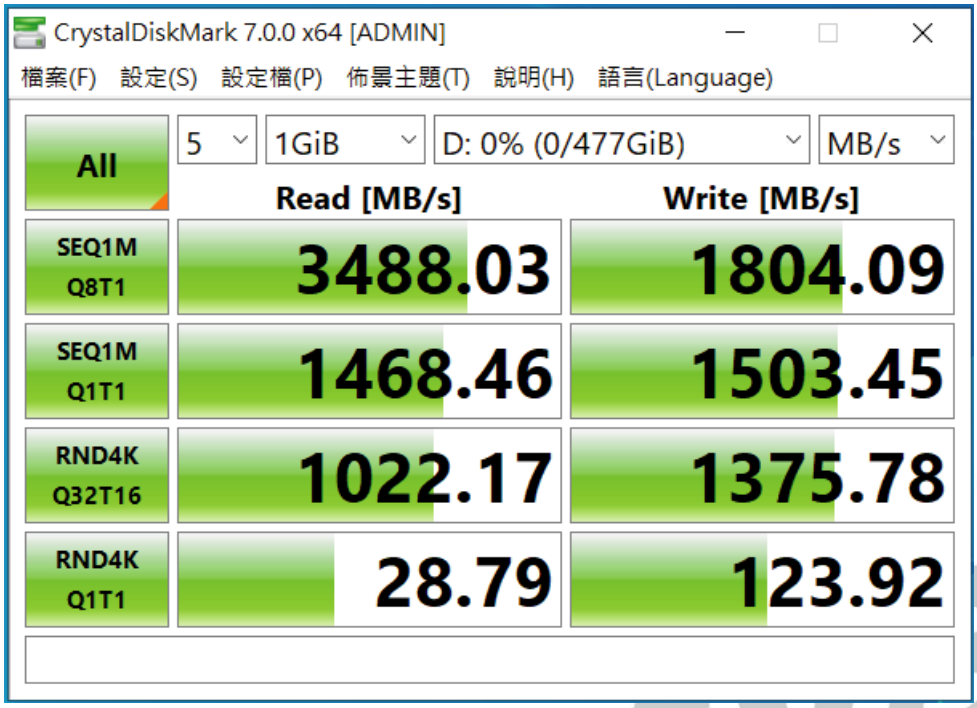
2.4.1 Primary SATA SSD installs Windows 10 OS.

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

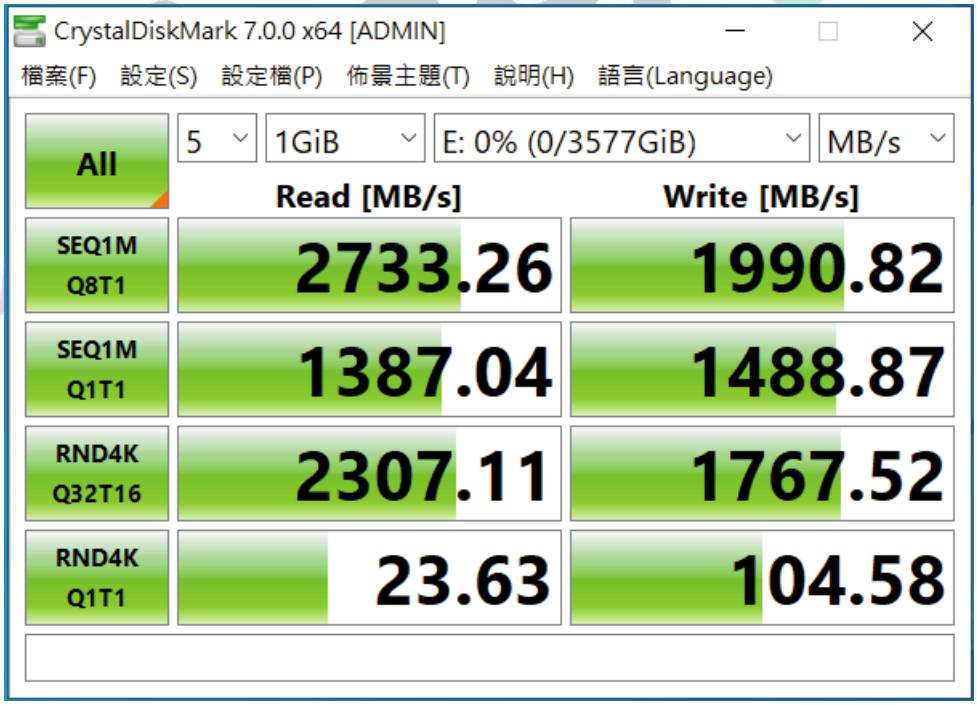
2.5 CrystalDiskMark 7.0.1 x64 performance test

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

2.5.1 Samsung SM961 M.2/512GB performance as below:



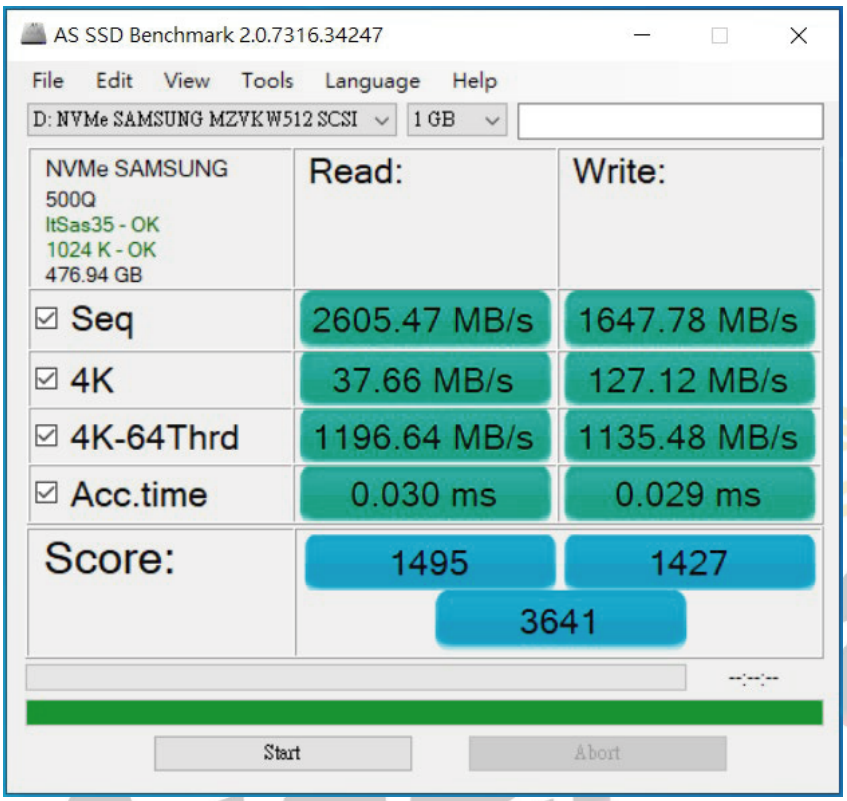
2.5.2 Samsung PM983 M.3 NF1/4TB performance as below:



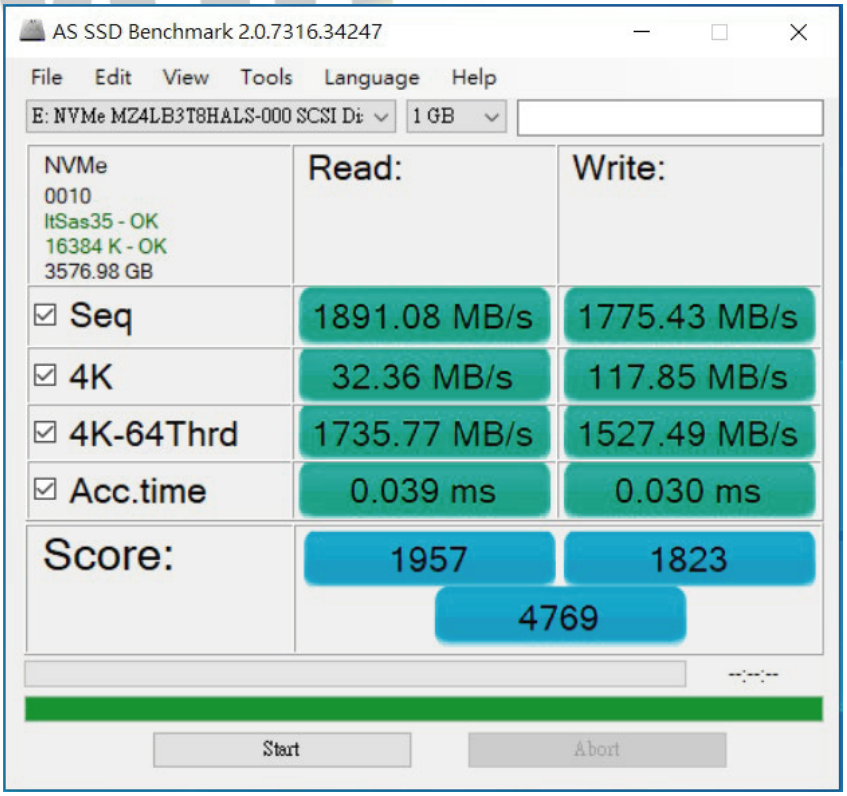
2.6 AS SSD Benchmark 2.0.7 performance test

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

2.6.1 Samsung SM961 M.2/512GB performance as below:

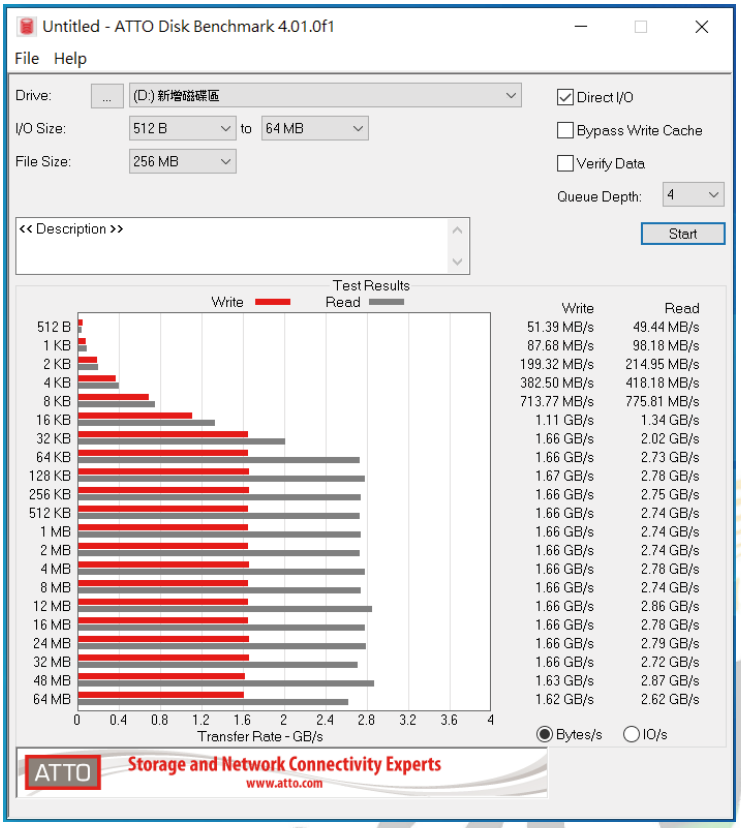


2.6.2 Samsung PM983 M.3 NF1/4TB performance as below:

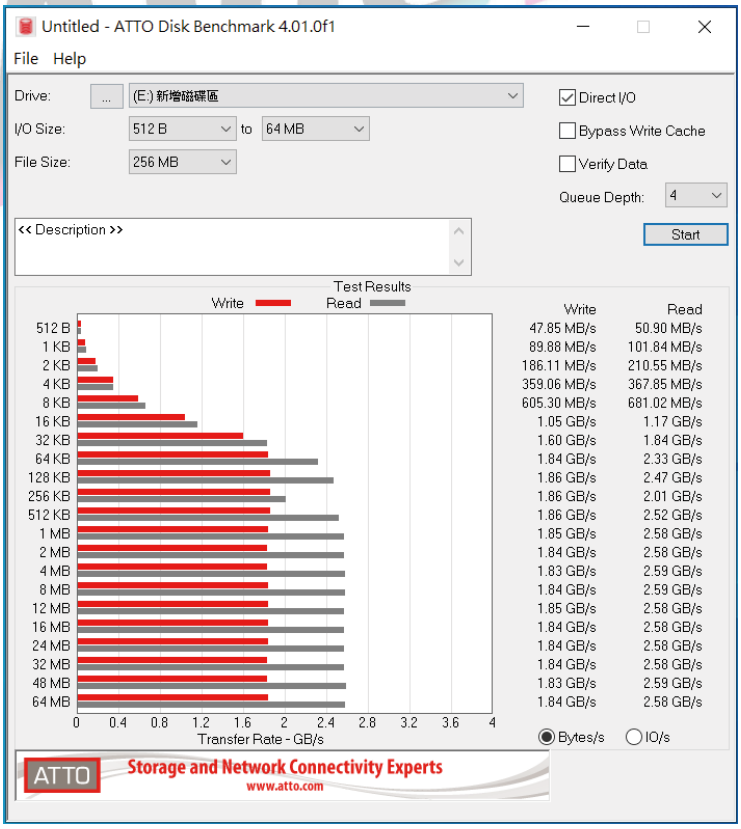


2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 Samsung SM961 M.2/512GB performance as below:



2.7.2 Samsung PM983 M.3 NF1/4TB performance as below:



2.8 AnvilBenchmark_V110_B337

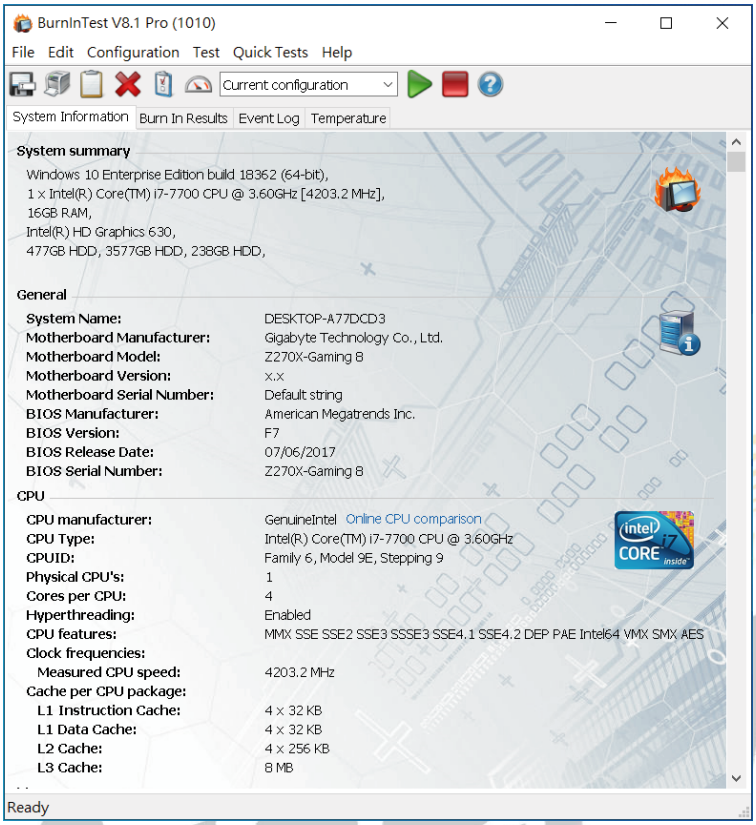
2.8.1 Samsung SM961 M.2/512GB performance as below:

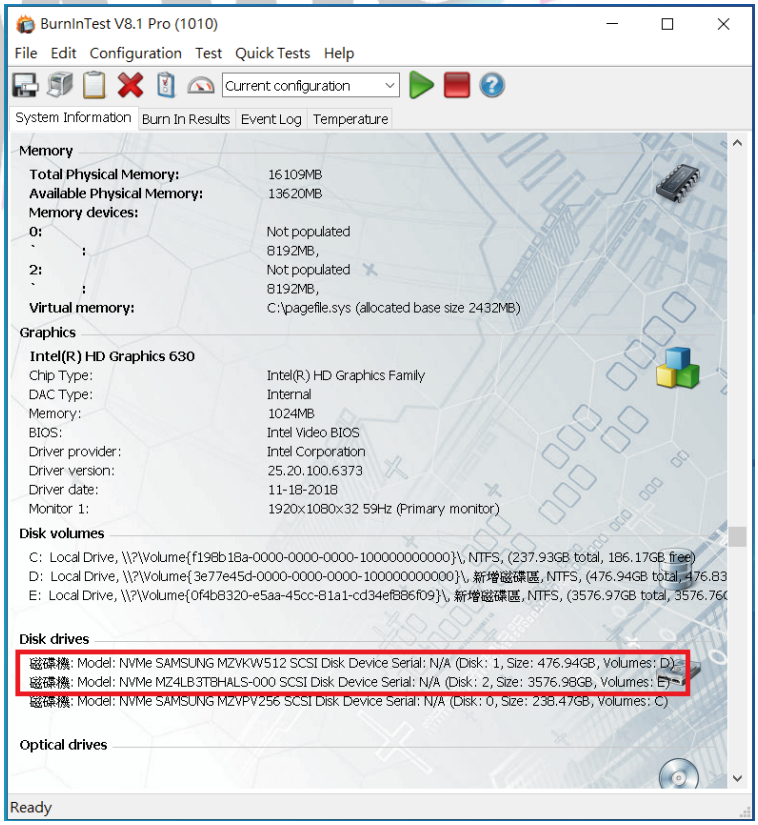
2.8.2 Samsung PM983 M.3 NF1/4TB performance as below:

3. Burn In Tests and Results

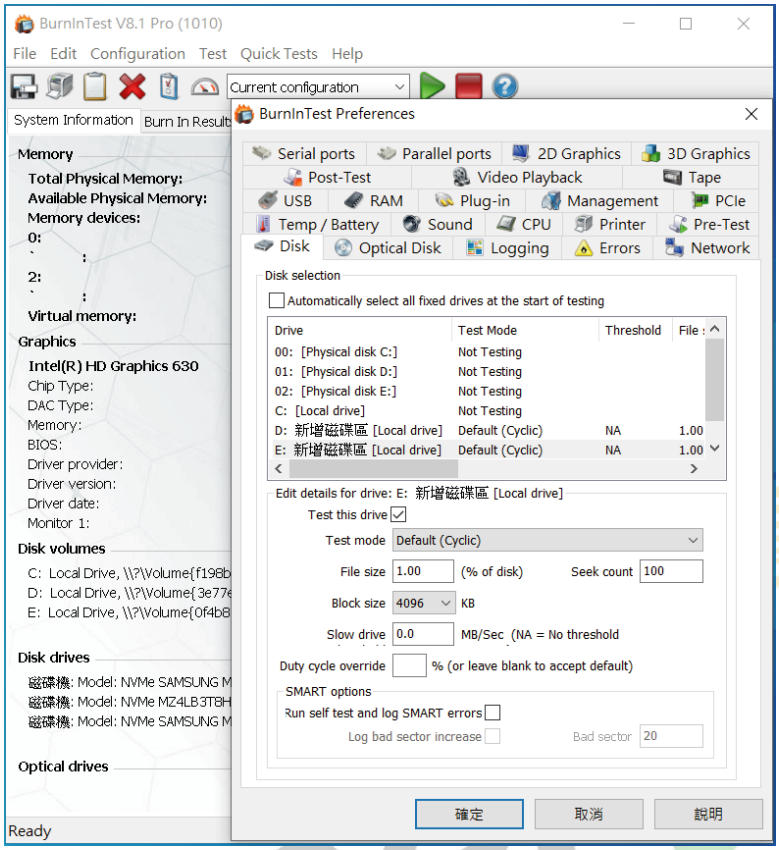
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

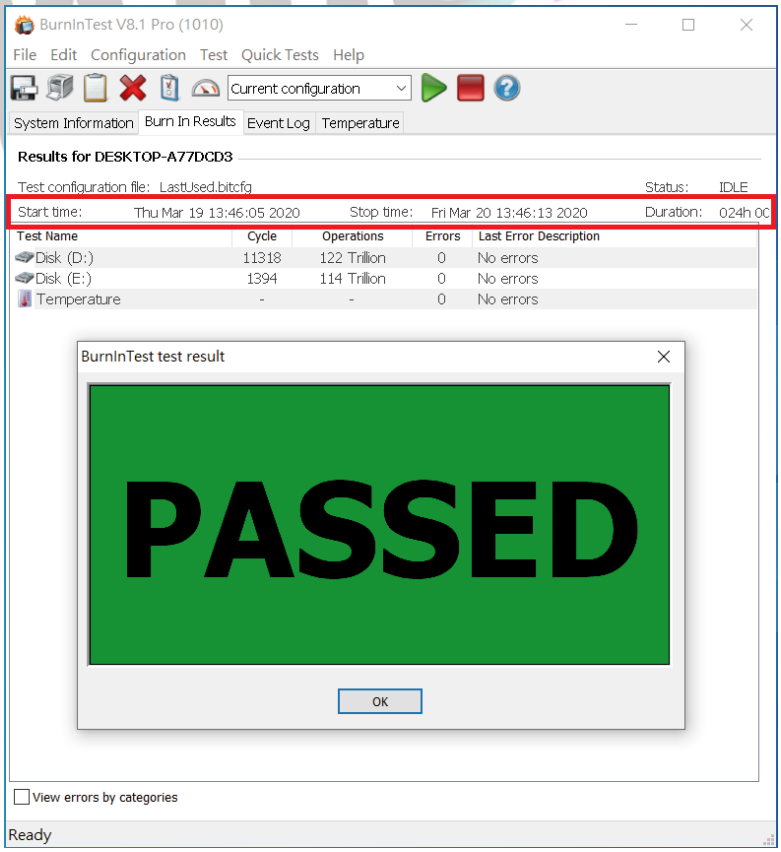




3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

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

4.2 PD806A adapter I/O performance is based on M.2, M.3NF1 NVMe SSD.