



MINERVA

PE0805 PCIe x8 Gen3 to OCulink 8i Add-in Card

Performance & Burn In Test Rev 1.1

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1. Overview

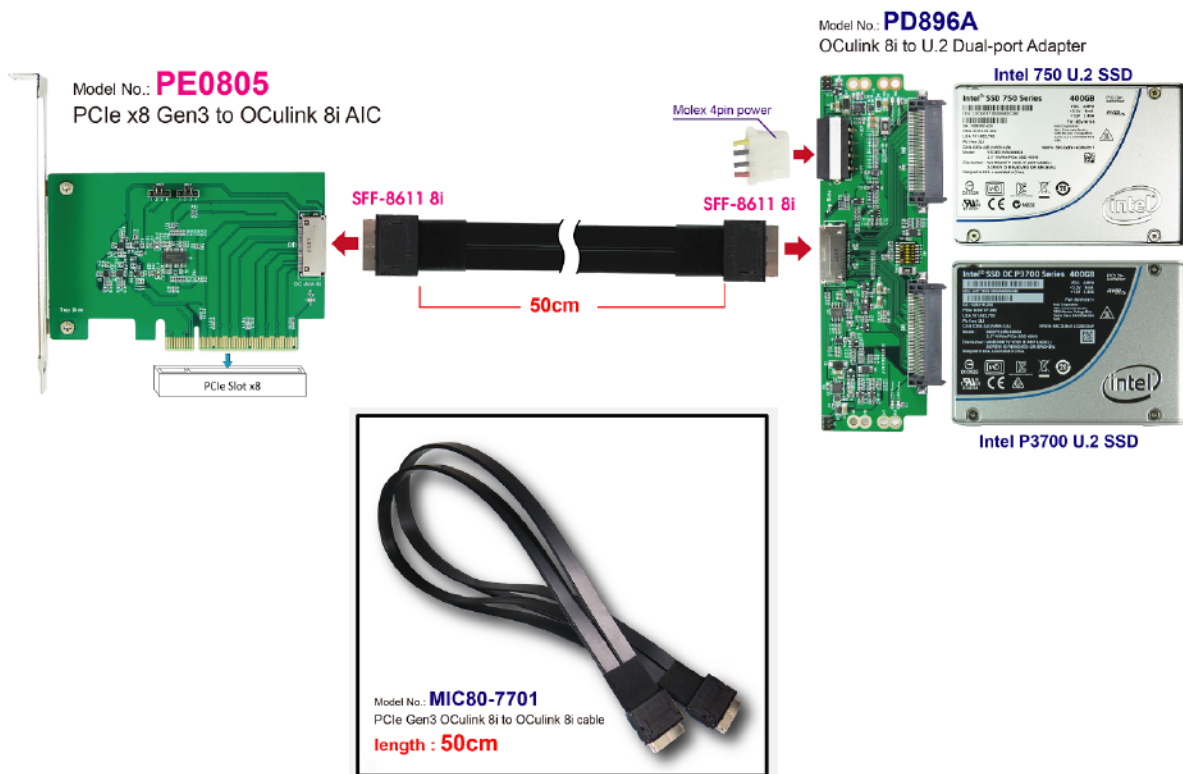
The PCIe x8 AIC has built-in OCulink 8i(SFF-8612) connector. It is designed for use by PCIe x8 to configure two x4 bifurcations or can be extended PCIe x8 data width link.

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: PE0805 PCIe x8 to OCulink 8i Adapter
Cable: SFF-8611 8i(OCulink) cable, 50cm
Adapter: PD896A SFF-8612 8i to U.2 Adapter dual port
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: cable, adapter, U.2 SSD x2pcs



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2.3 Install Hardware

First inserts PE0805 AIC into GABYTE **X570 AORUS MASTER** PCIe x16 Slot and, using the MIC80-7701 Cable to connect PD896A adapter with U.2 NVMe SSD x2pcs.

2.4 BIOS & Windows 10 OS environment setup

2.4.1 Primary M.2 NVMe SSD install Windows 10 OS.

2.4.2 U.2 SSD, formatted to NTFS Mode. Don't install any program.

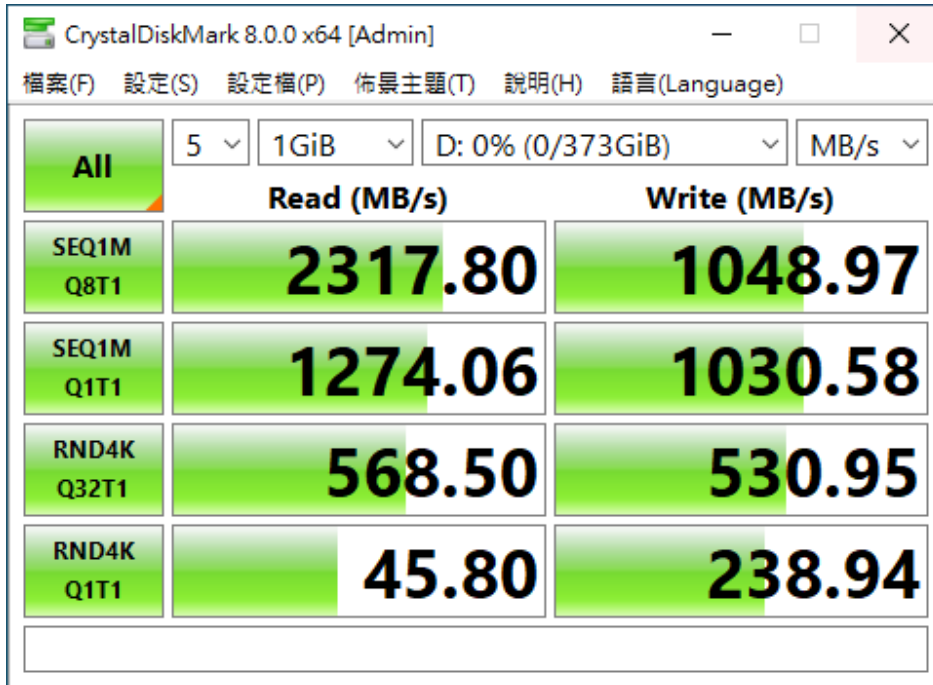


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2.5 CrystalDiskMark 8.0.0 x64 performance test

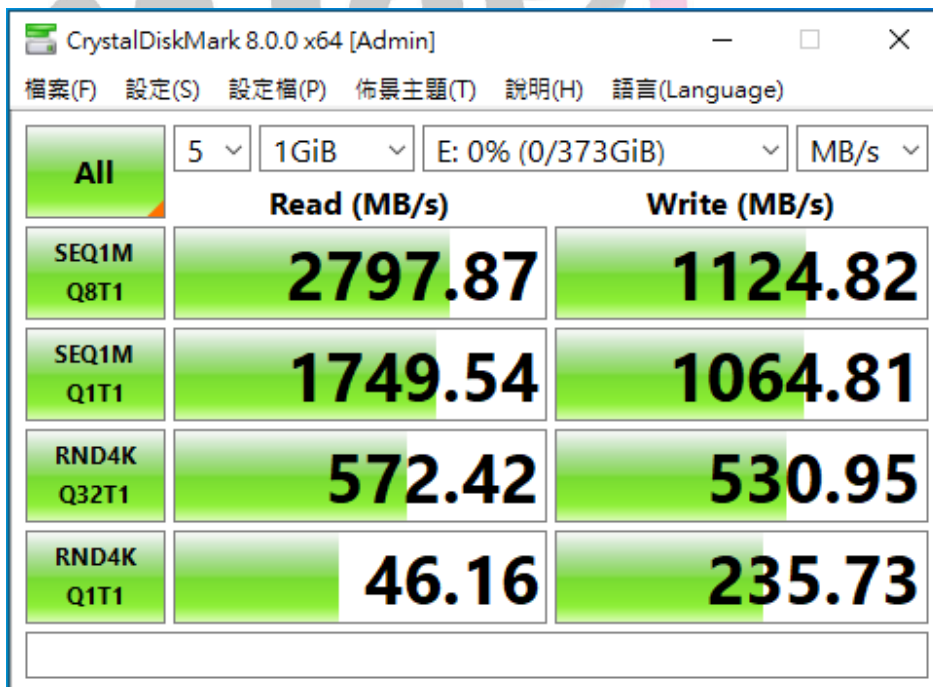
※ Benchmark (Sequential Read & Write / default = 1MB)

2.5.1 Intel 750 U.2 NVMe SSD/ 400GB performance as below:



	Read (MB/s)	Write (MB/s)
All		
SEQ1M Q8T1	2317.80	1048.97
SEQ1M Q1T1	1274.06	1030.58
RND4K Q32T1	568.50	530.95
RND4K Q1T1	45.80	238.94

2.5.2 Intel P3700 U.2 NVMe SSD/ 400GB performance as below:



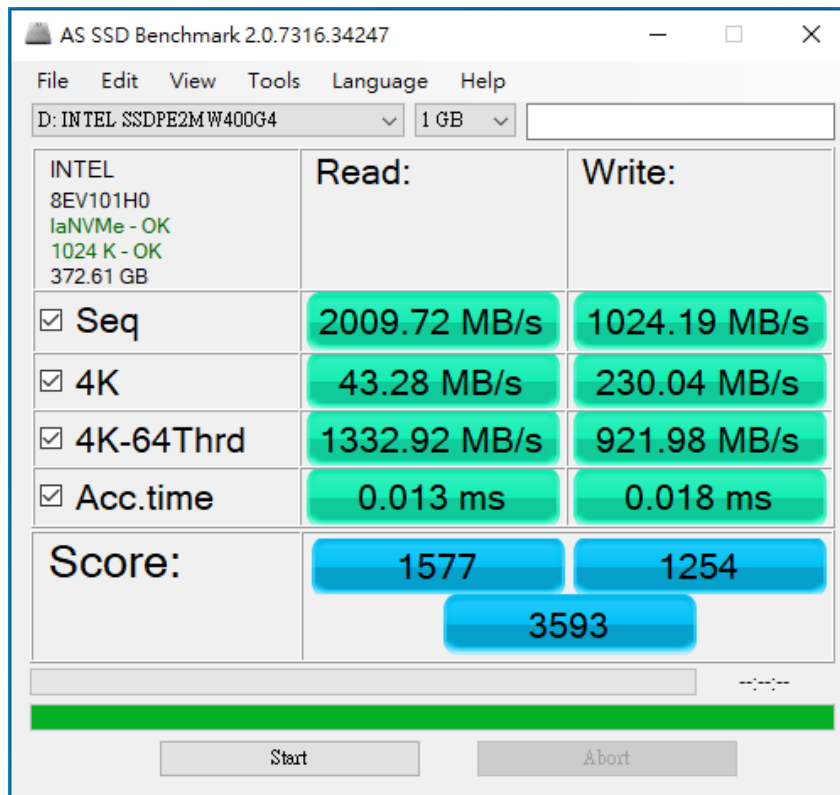
	Read (MB/s)	Write (MB/s)
All		
SEQ1M Q8T1	2797.87	1124.82
SEQ1M Q1T1	1749.54	1064.81
RND4K Q32T1	572.42	530.95
RND4K Q1T1	46.16	235.73

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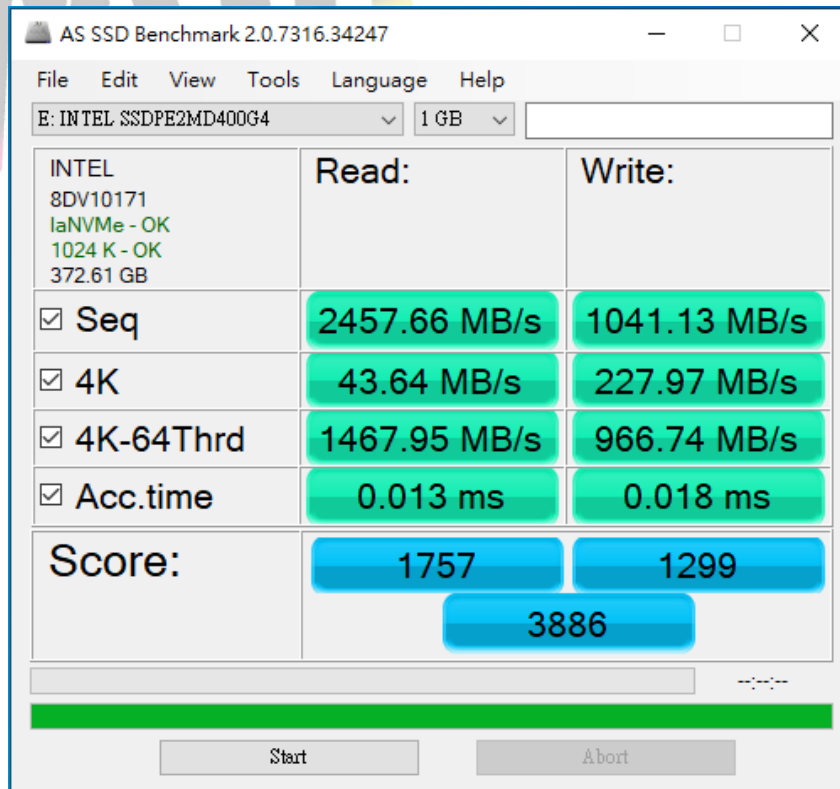
2.6 AS SSD Benchmark 2.0.7 performance test

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

2.6.1 Intel 750 U.2 NVMe SSD/ 400GB performance as below:



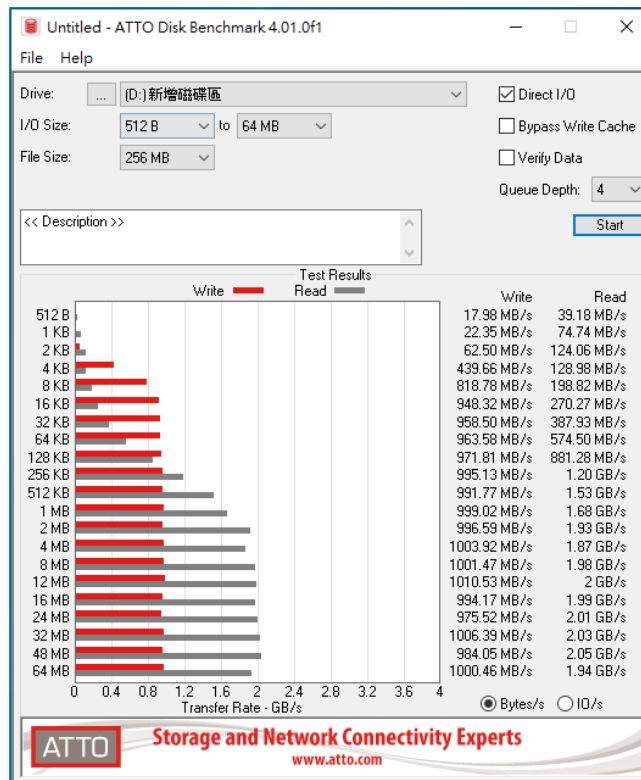
2.6.2 Intel P3700 U.2 NVMe SSD/ 400GB performance as below:



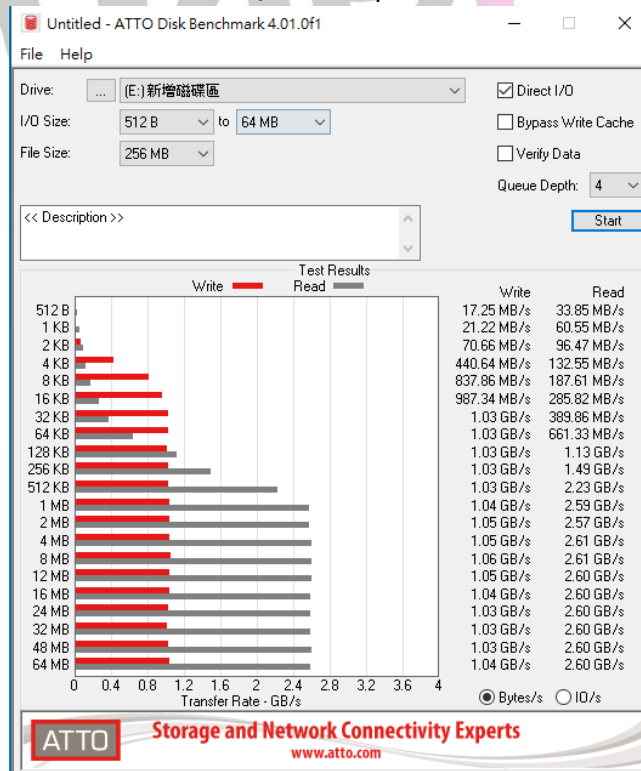
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2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 Intel 750 U.2 NVMe SSD/ 400GB performance as below:



2.7.2 Intel P3700 U.2 NVMe SSD/ 400GB performance as below:



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2.8 AnvilBenchmark_V110_B337

2.8.1 Intel 750 U.2 NVMe SSD/ 400GB performance as below:



2.8.2 Intel P3700 U.2 NVMe SSD/ 400GB performance as below:

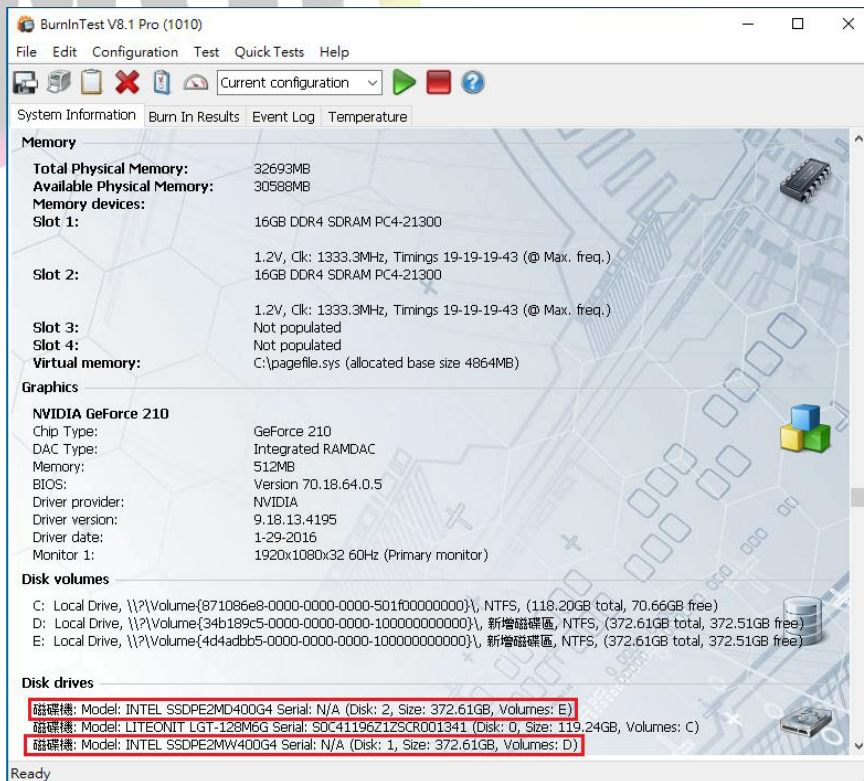
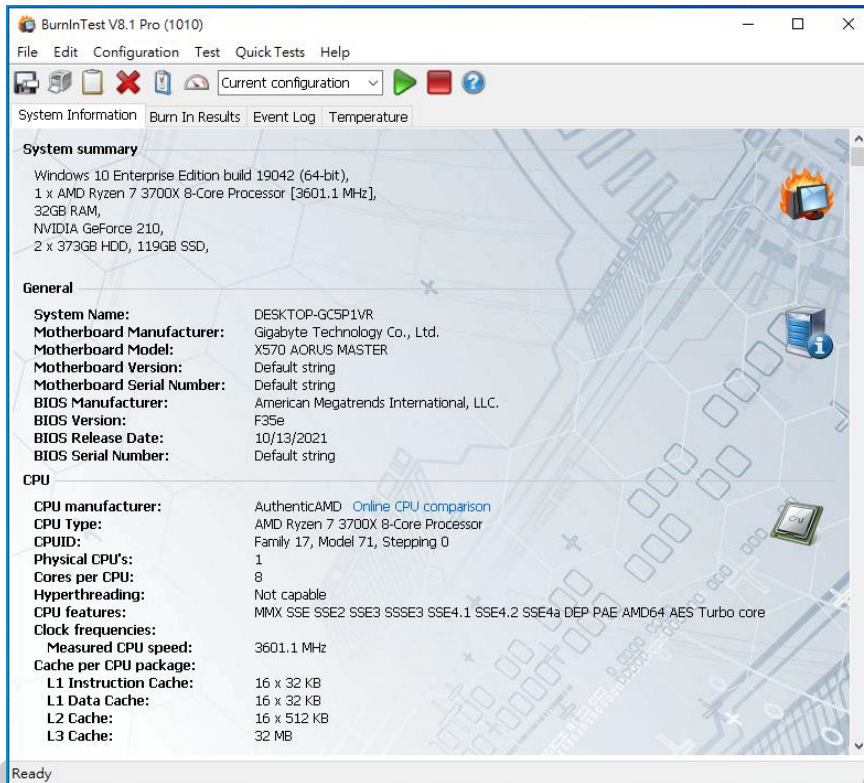


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3. Burn In Tests and Results

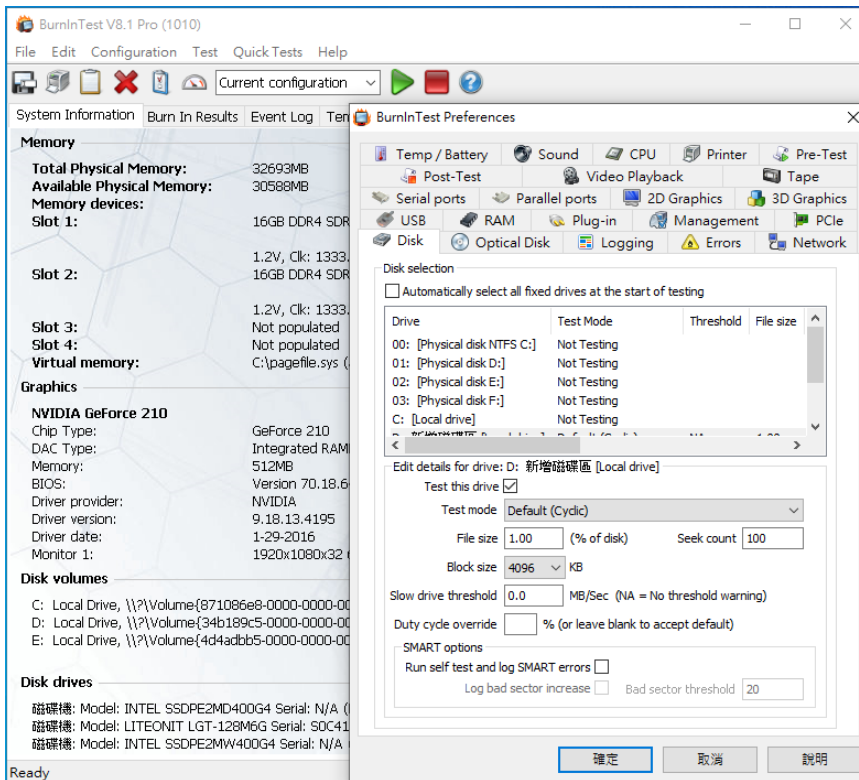
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

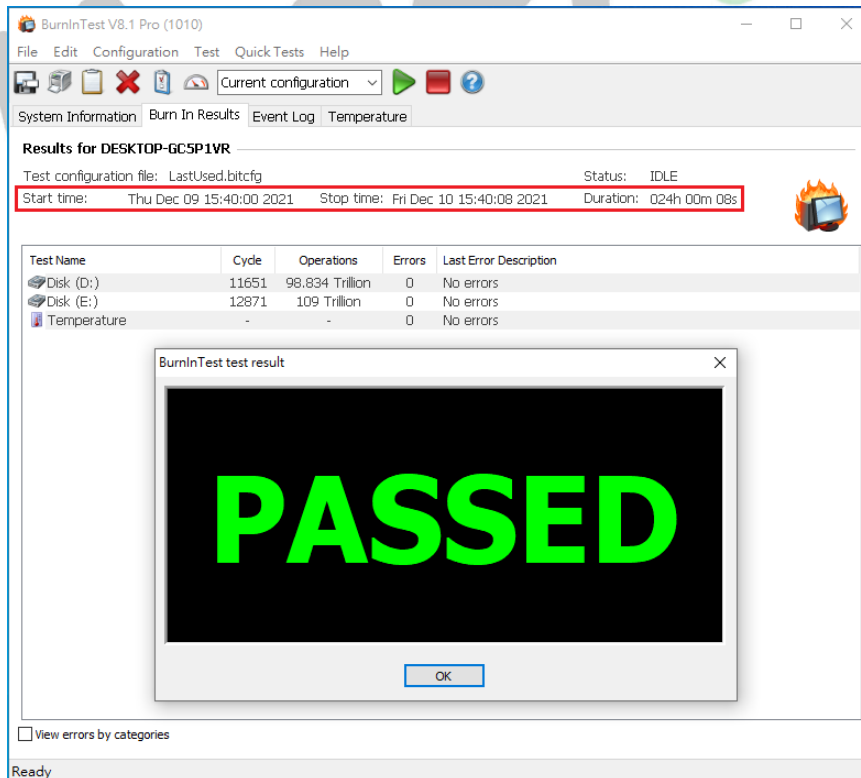


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3.1.2 Disk test mode(10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



4. Summary

- 4.1 U.2 NVMe SSD is PCIe Gen 3 / 4 Lane Interface, I/O speed, max. to 32Gbps.
- 4.2 PE0805 adapter I/O performance is based on U.2 NVMe SSD.

