



MINERVA

GE0185A MCIO 74P/PCIe 5.0 for EDSFF(Gen-Z)2C adapter

Performance & Burn In Test Rev. 1. 0

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GE0185A Converter Card

1. Overview

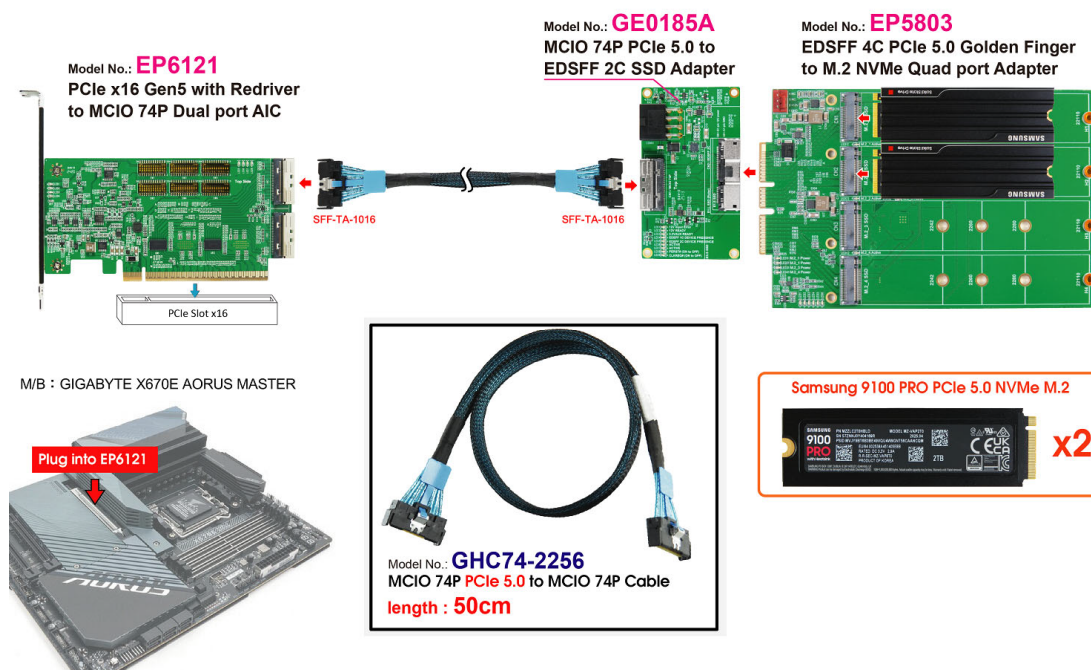
The GE0185A Adapter, providing EDSFF 2C connector can be connected to MCIO 74P for PCIe 5.0, 16GT/s 8-Lane interface.

2. Tools and Results of Performance Measurement

2.1 Test Platform:

M/B : GIGABYTE **X670E AORUS MASTER**
CPU : AMD **Ryzen 5, 7600X 6-Core**
Memory : Kingston **KF556C36BBEK2, DDR5-5600MT/s, 64GB**(32GB DIMM*2)
ATX Power : Apexgaming AN-550, **550W ATX**, 12V V2.2 Power Supply
AIC: EP6121 PCIe x16 Gen 5 with Redriver to MCIO 74P dual port ADD-in Card
Adapter: GE0185A MCIO 74P PCIe 5.0 to EDSFF(Gen-Z) 2C Adapter
Adapter: EP5803 EDSFF(Gen-Z) 4C PCIe 5.0 to M.2 quad port Adapter
Cable: MCIO 74P Male to Male for PCIe 5.0, **50cm** Cable
OS : Microsoft **Windows 11 64bit OS**

2.2 Test target: GE0185A Adapter & SAMSUNG PCIe 5.0 M.2 9100 PRO **2TB** SSD



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2.3 Install Hardware

Inserts M.2 NVMe SSD into EP5803 adapter converter's M.2 connector, and then connects EP5803 to GE0185A adapter. Using MCIO 74P Male to Male for PCIe 5.0, **50cm** Cable for EP6121 AIC(PCIe x16 Gen 5 with Redriver to MCIO 74 dual port ADD-in Card) and GE0185A adapter connection. The EP6121 plugs into GIGABYTE **X670E AORUS MASTER** mainboard.

2.4 BIOS & Windows 11 OS environment setup

- 2.4.1 Primary SATA SSD installed Windows 11 OS.
- 2.4.2 M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

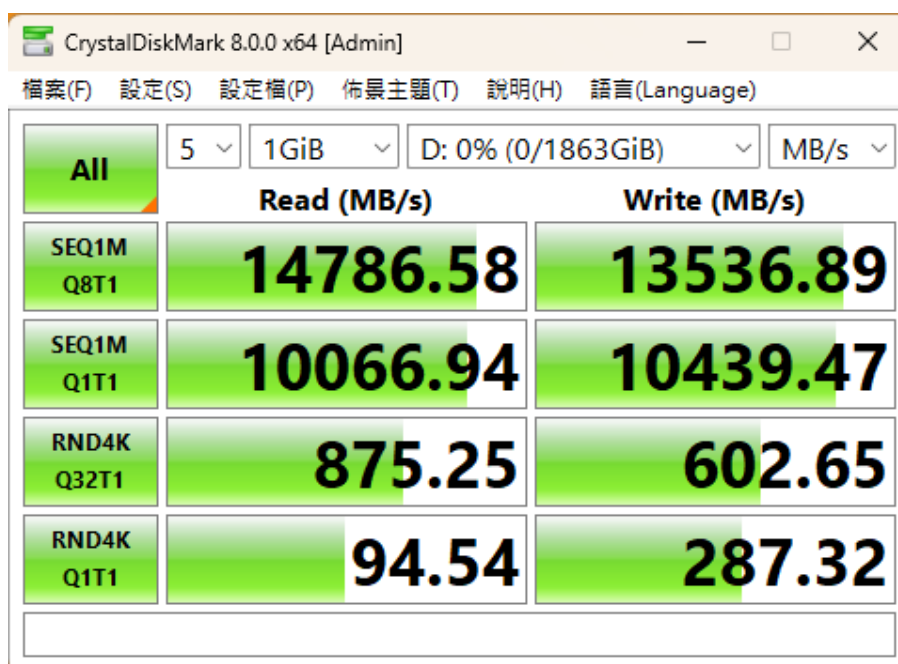
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2.5 CrystalDiskMark 8.0 x64 performance test

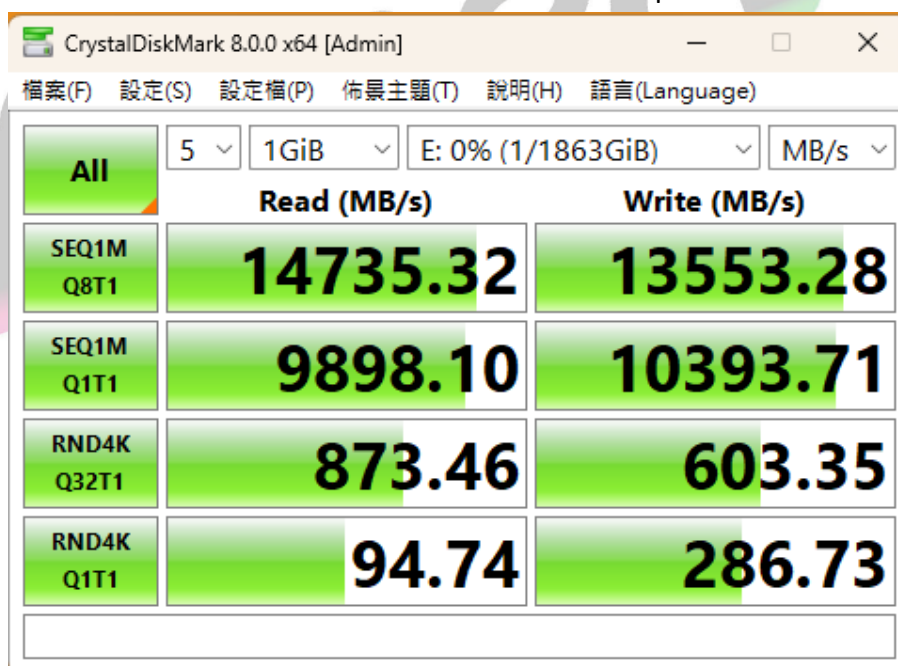
※Benchmark (Sequential **Read & Write** / default = **1MB**)

2.5.1 SAMSUNG M.2 9100 PRO **2TB** SSD in **Drive D:** performance as below:



	Read (MB/s)	Write (MB/s)
All		
SEQ1M Q8T1	14786.58	13536.89
SEQ1M Q1T1	10066.94	10439.47
RND4K Q32T1	875.25	602.65
RND4K Q1T1	94.54	287.32

2.5.2 SAMSUNG M.2 9100 PRO **2TB** SSD in **Drive E:** performance as below:



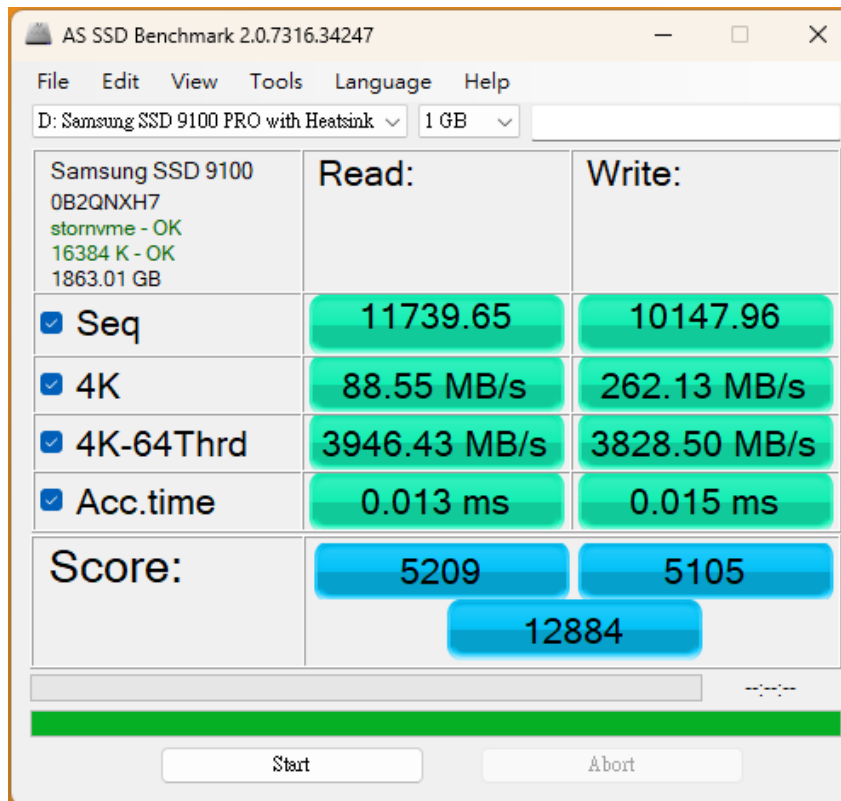
	Read (MB/s)	Write (MB/s)
All		
SEQ1M Q8T1	14735.32	13553.28
SEQ1M Q1T1	9898.10	10393.71
RND4K Q32T1	873.46	603.35
RND4K Q1T1	94.74	286.73

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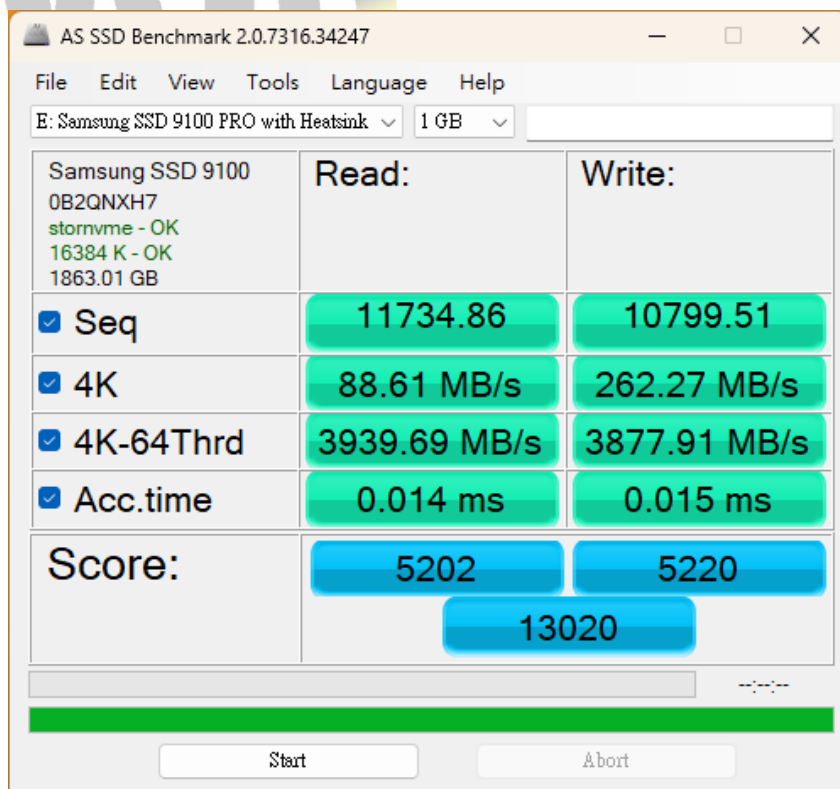
2.6 AS SSD Benchmark 2.0.7 performance test

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

2.6.1 SAMSUNG M.2 9100 PRO 2TB SSD in Drive D: performance as below:



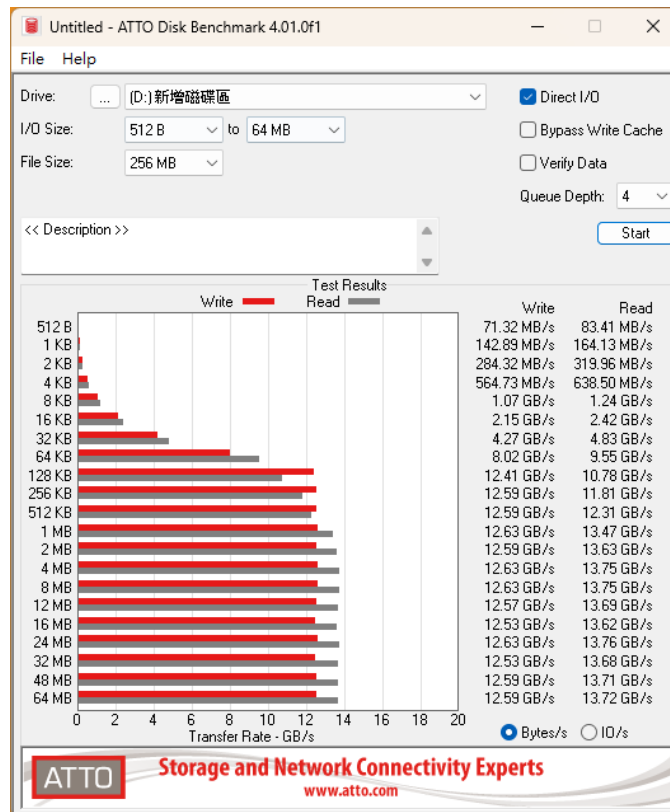
2.6.2 SAMSUNG M.2 9100 PRO 2TB SSD in Drive E: performance as below:



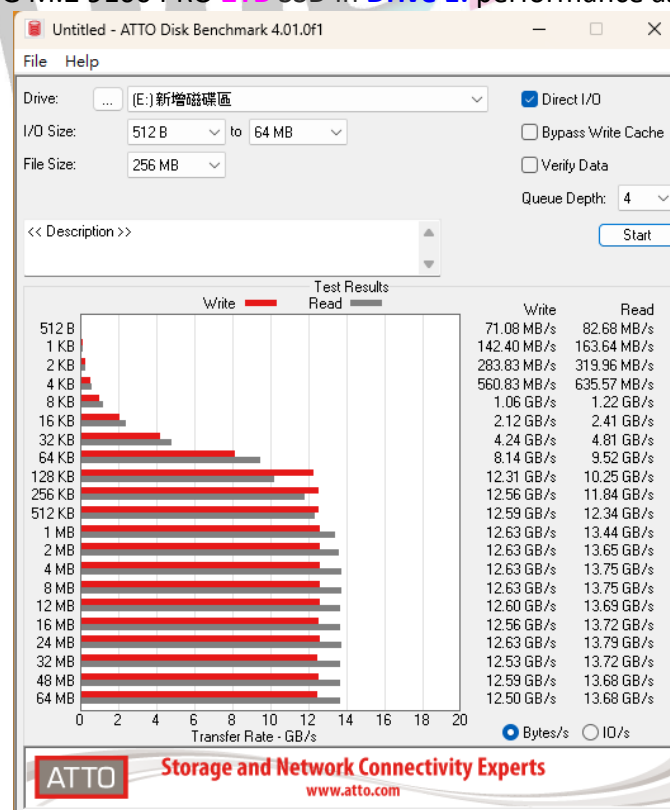
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2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 SAMSUNG M.2 9100 PRO 2TB SSD in Drive D: performance as below:



2.7.2 SAMSUNG M.2 9100 PRO 2TB SSD in Drive E: performance as below:



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2.8 AnvilBenchmark_V110_B337

2.8.1 SAMSUNG M.2 9100 PRO 2TB SSD in Drive D: performance as below:



2.8.2 SAMSUNG M.2 9100 PRO 2TB SSD in Drive E: performance as below:

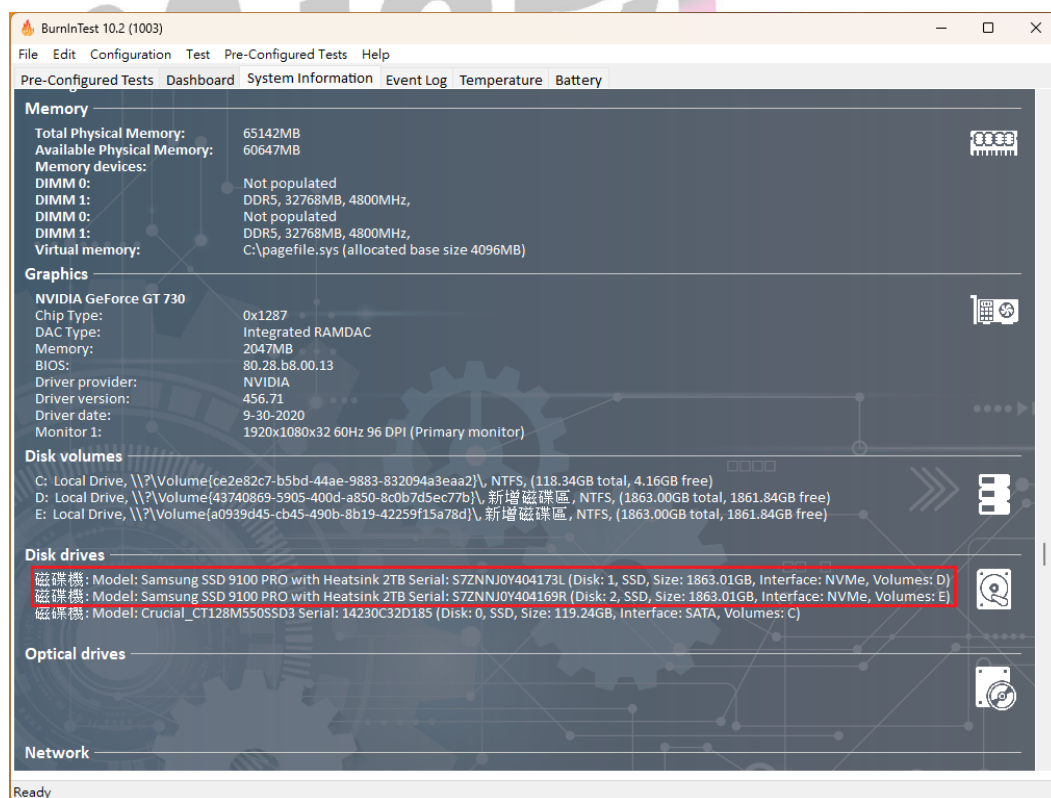
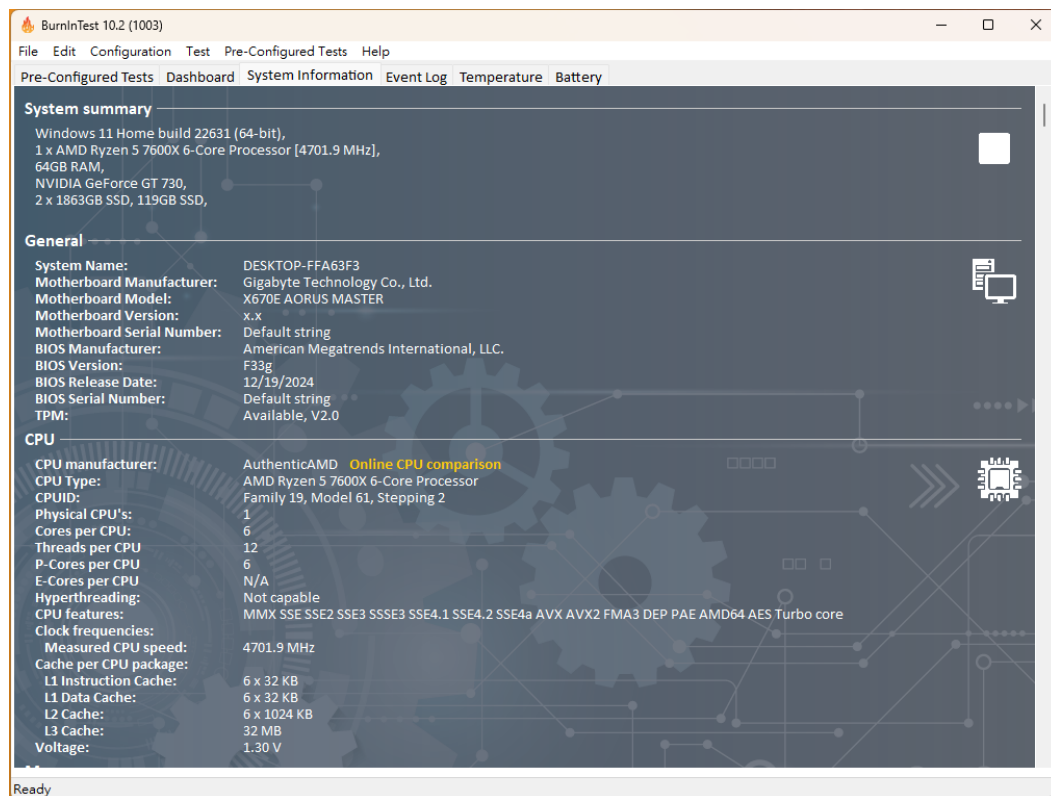


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3. Burn In Tests and Results

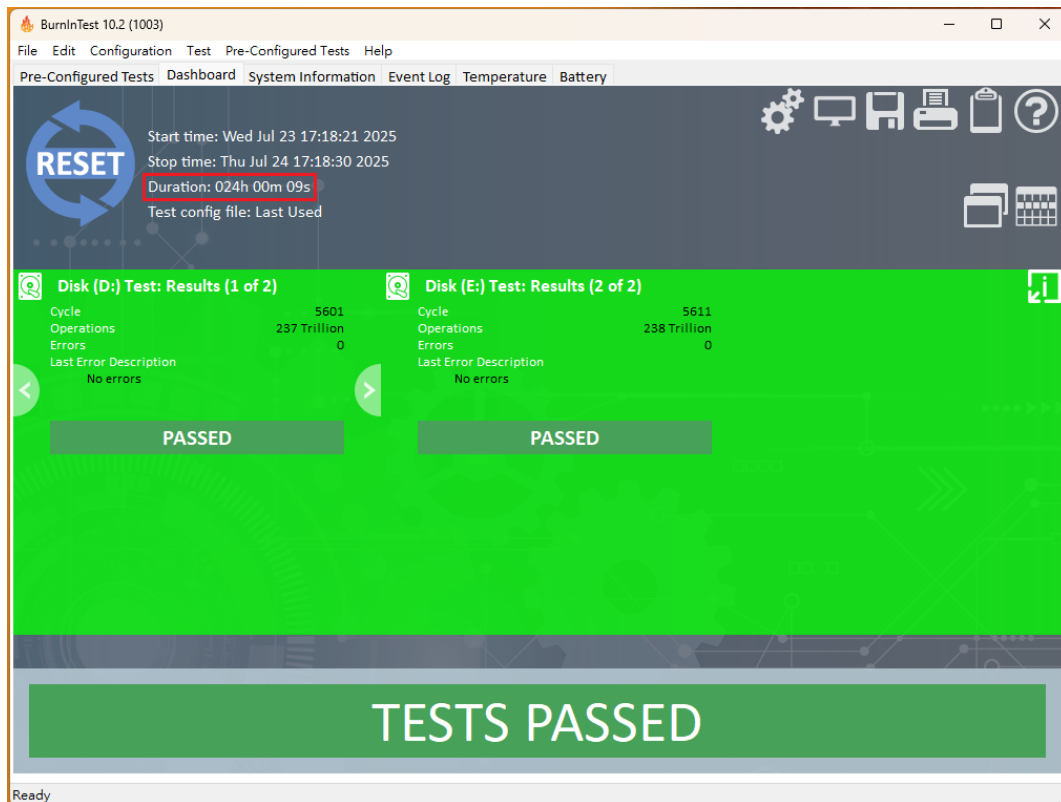
3.1 BurnInTest v10 Pro for GE0185A Adapter

3.1.1 System Information as below:



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3.1.2 24-hour Burn-in test **PASSED**



4. Summary

- 4.1 M.2 NVMe SSD is PCIe Gen 5, 32GT/s, 4 Lanes Interface, I/O speed is 128Gbps max.
- 4.2 GE0185A adapter I/O performance is based on M.2 NVMe SSD.