



MINERVA

GD9805A SlimSAS 8i to U.3 Dual port Adapter

Performance & Burn In Test Rev 1.0

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1. Overview

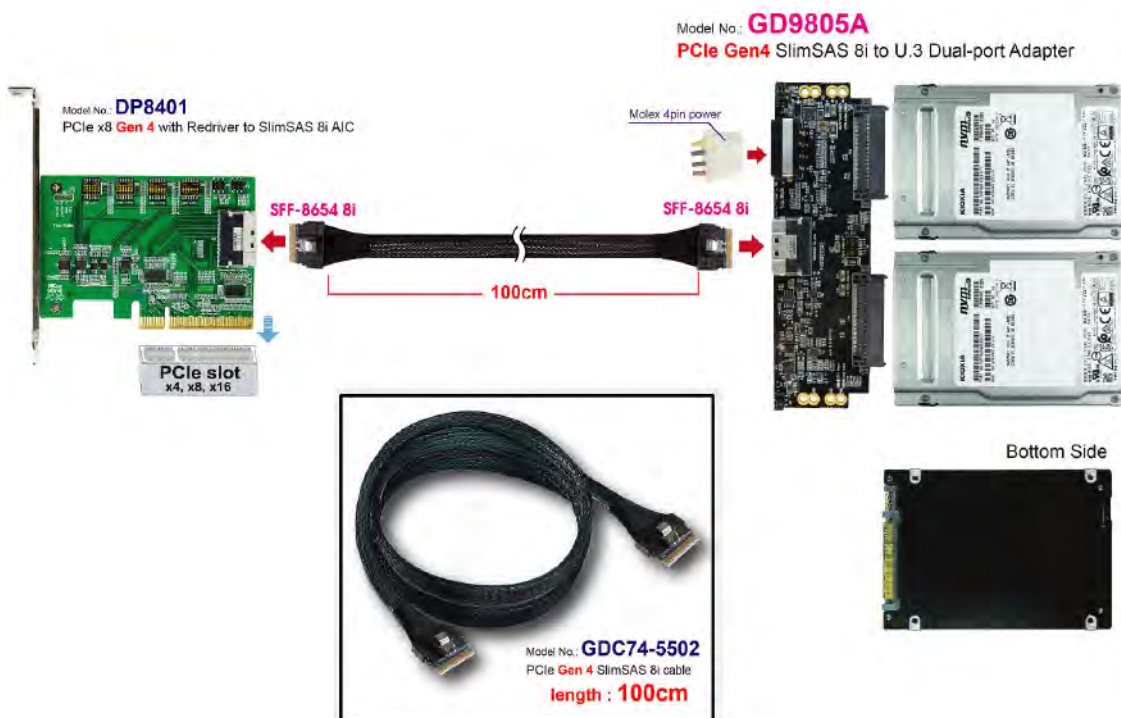
This adapter has built-in SlimSAS(SFF-8654) 8i connector and U.3 connector dual port which can be inserted into two U.3 NVMe SSDs. It is designed for use by supporting PCIe Gen 4 x8, x16 bifurcation AIC and SFF-9402 pinout PCIe Switch RAID Card.

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: DP8401 PCIe x8 to SlimSAS(SFF-8654) 8i AIC
Cable: PCIe Gen 4 SlimSAS(SFF-8654) 8i Maleto Male, 100cm Cable
Adapter: GD9805A SlimSAS(SFF-8654) 8i to U.3 dual port adapter
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: GD9805A & KIOXIA U.3 NVMe SSD/ **3.2TB x2**



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2.3 Install Hardware

First inserts the U.3 SSD into the GD9805A U.3 connector dual port and connect to the DP8401 AIC card (PCIe x8 Gen 4 to SFF-8654 8i) using the **GDC74-5502 Cable**, and Plugs DP8401 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 U.3 NVMe SSDs , formatted to NTFS Mode. Don't install any program.



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CrystalDiskMark 8.0.0 x64 performance test

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

2.5.1 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive D: performance as below:

The screenshot shows the CrystalDiskMark 8.0.0 x64 [Admin] interface. The drive selected is D: (0/2981GiB). The test results are as follows:

	Read (MB/s)	Write (MB/s)	Mix (MB/s)
SEQ1M Q8T1	4633.23	4240.73	3615.54
SEQ1M Q1T1	3359.11	4245.27	2642.42
RND4K Q32T1	535.71	418.40	526.52
RND4K Q1T1	45.94	209.59	59.87

2.5.2 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive E: performance as below:

The screenshot shows the CrystalDiskMark 8.0.0 x64 [Admin] interface. The drive selected is E: (0/2981GiB). The test results are as follows:

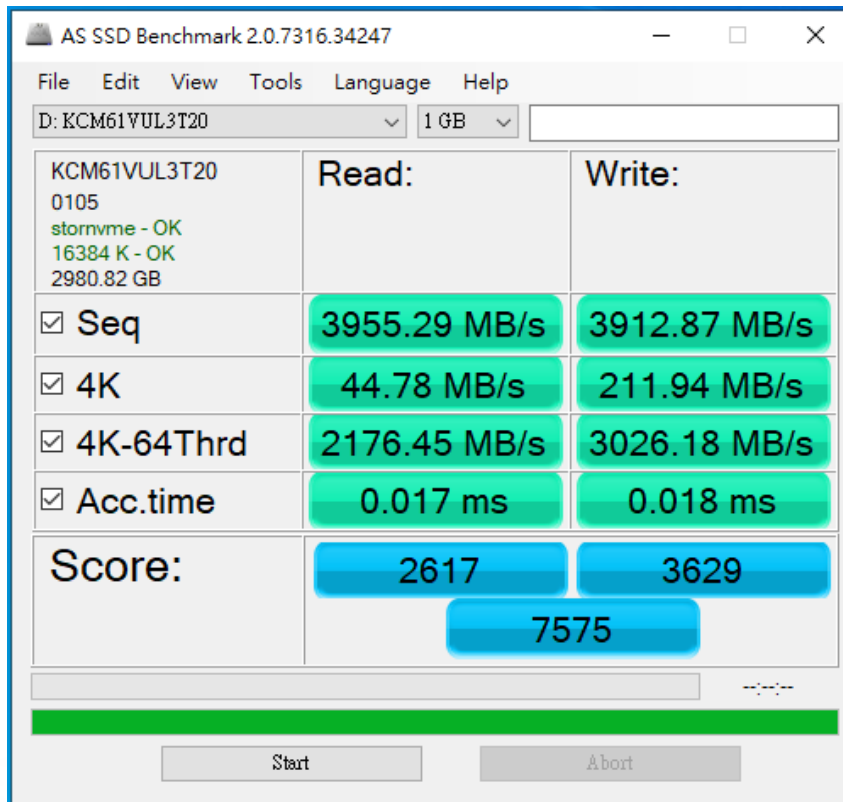
	Read (MB/s)	Write (MB/s)	Mix (MB/s)
SEQ1M Q8T1	4612.57	4240.20	3612.48
SEQ1M Q1T1	3339.14	4244.62	2619.95
RND4K Q32T1	532.80	422.04	528.13
RND4K Q1T1	46.05	211.76	58.90

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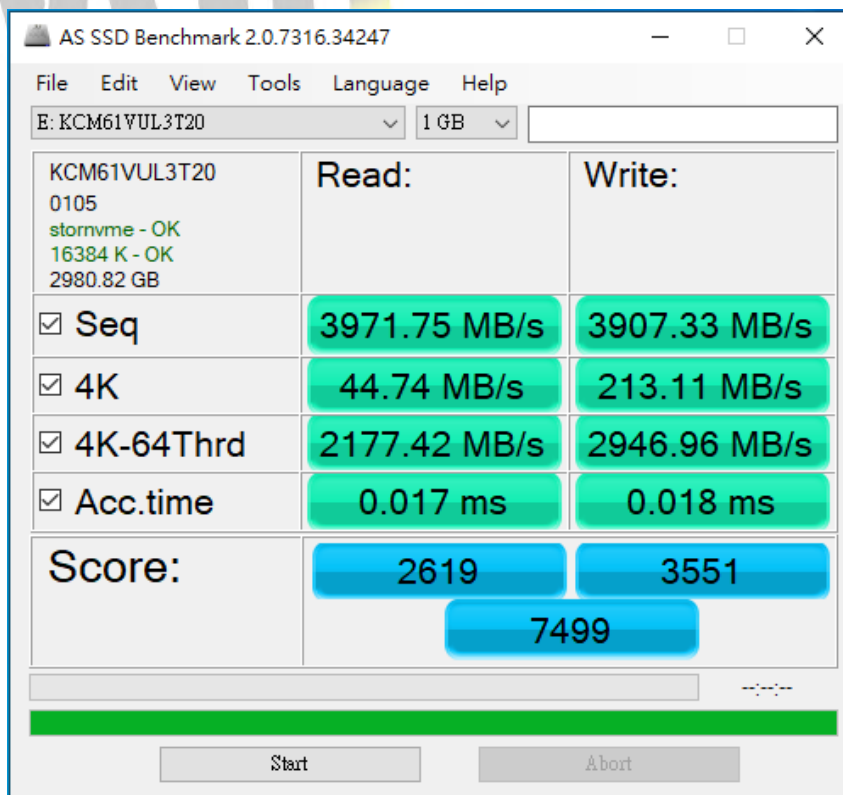
2.6 AS SSD Benchmark 2.0 performance test

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

2.6.1 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive D: performance as below:



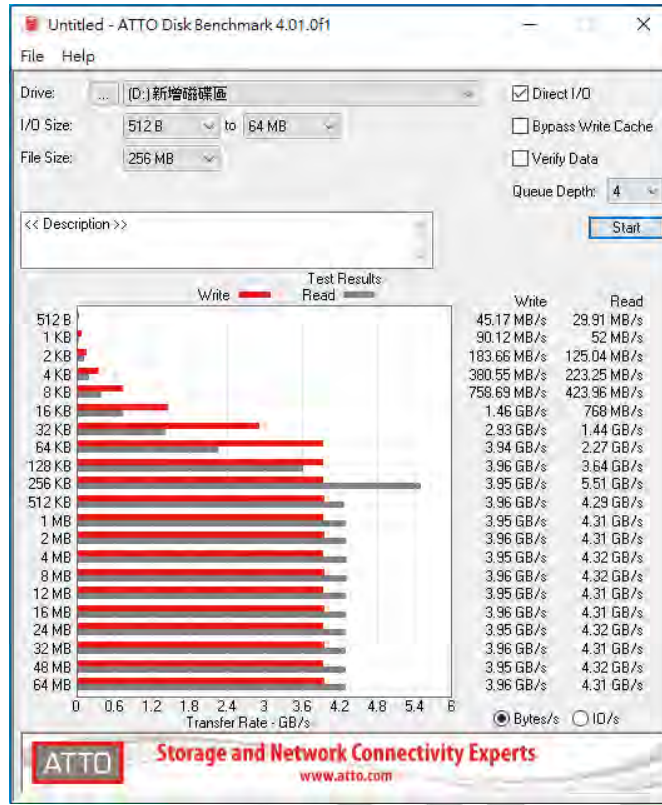
2.6.2 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive E: performance as below:



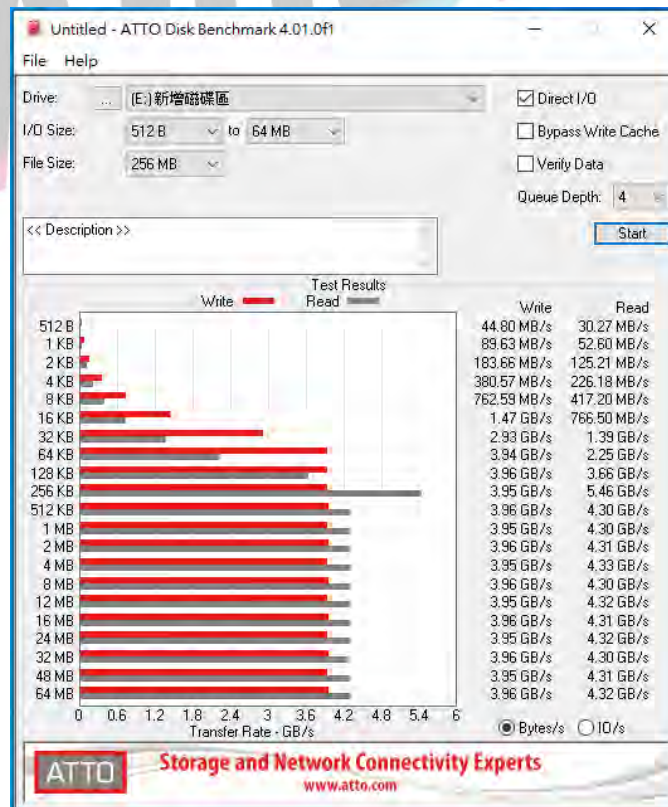
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2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive D: performance as below:



2.7.2 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive E: performance as below:



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2.8 AnvilBenchmark_V110_B337

2.8.1 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive D: performance as below:



2.8.2 KIOXIA U.3 NVMe SSD/ 3.2TB in Drive E: performance as below:

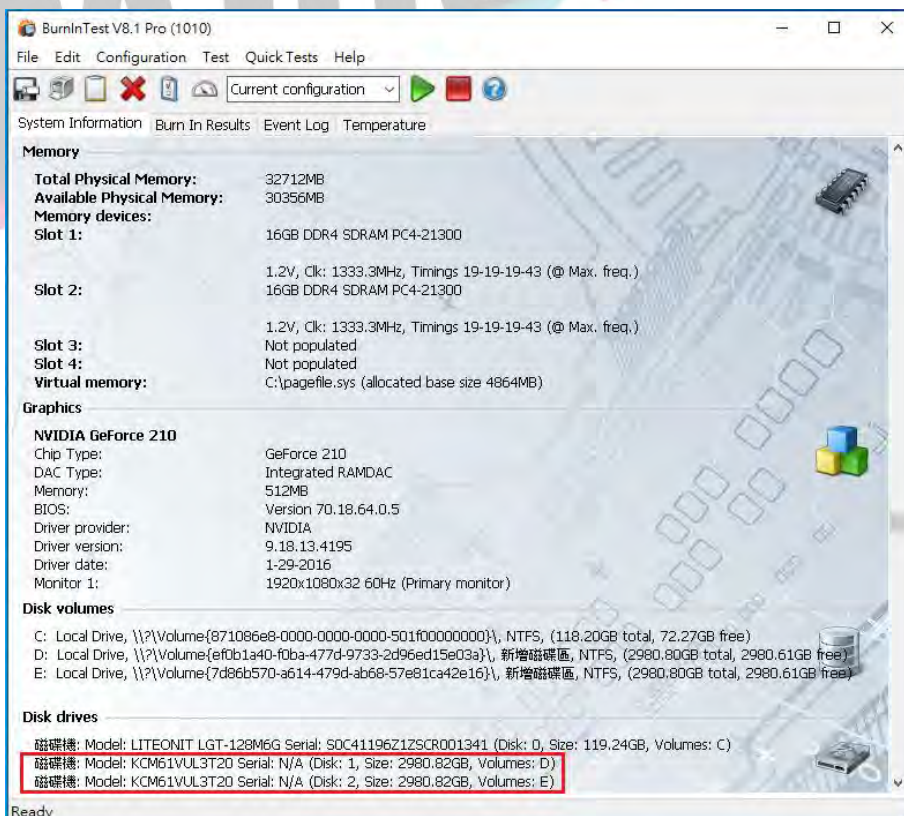
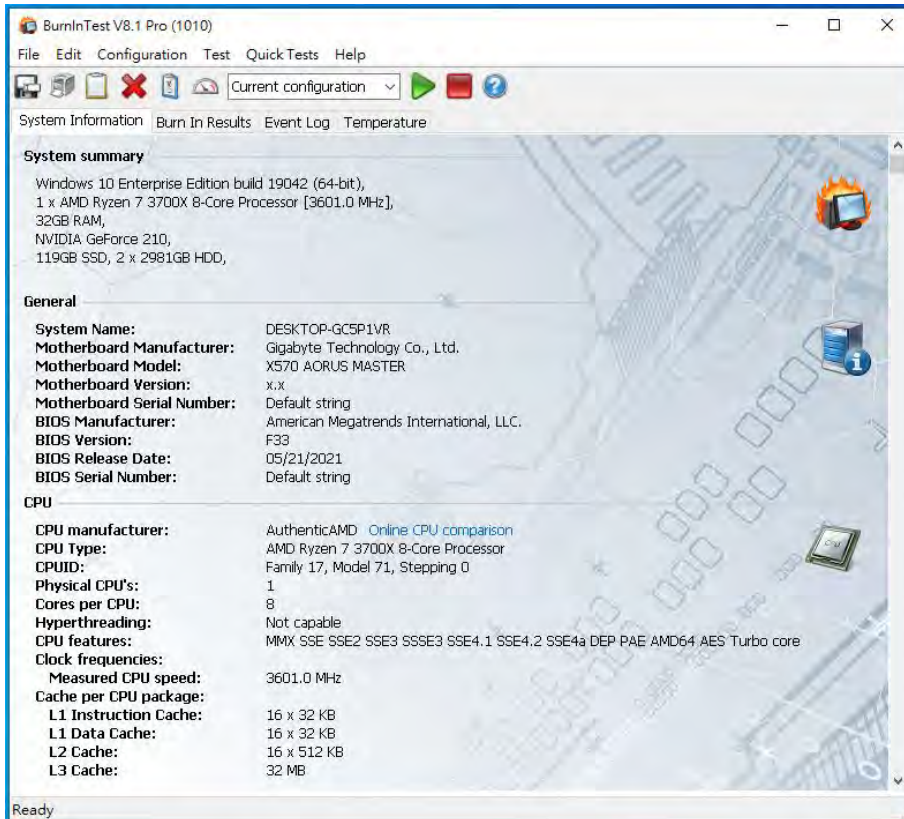


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3. Burn In Tests and Results

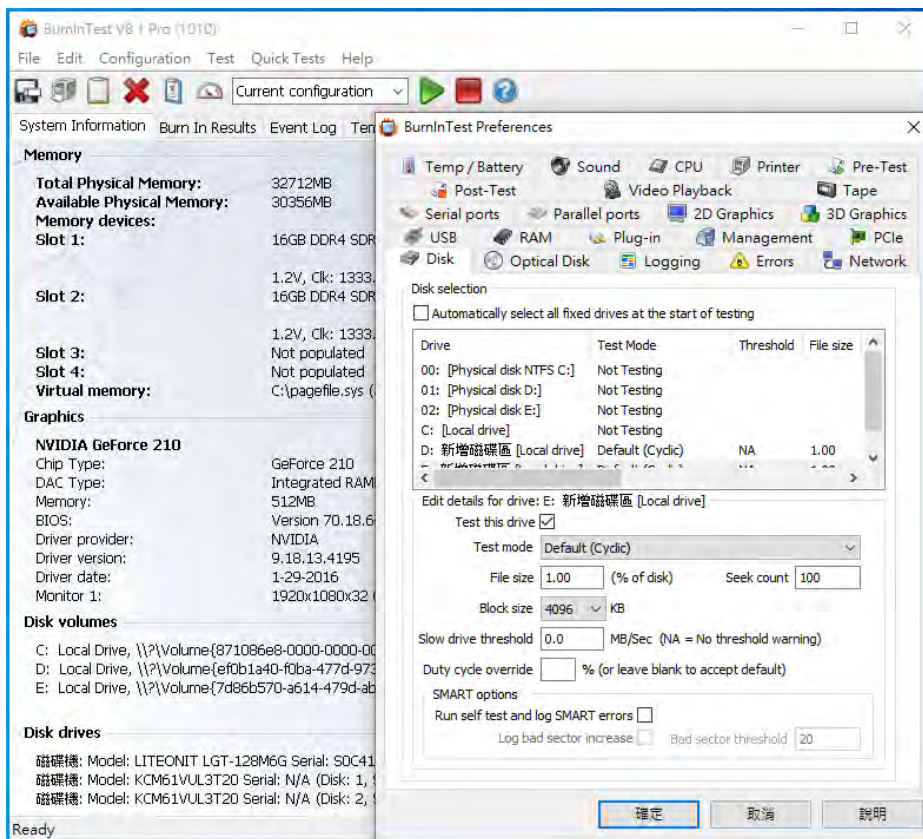
3.1 BurnInTest v8.1 Pro

3.1.1 system information as below:

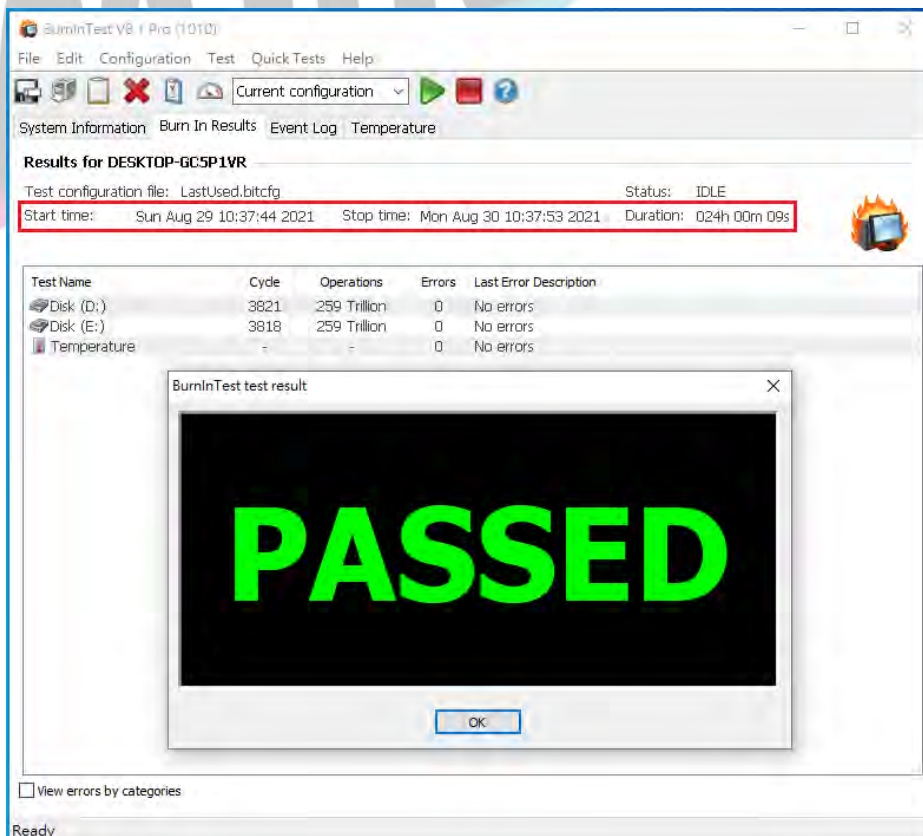


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3.1.2 Disk test mode (10 ways cycle test)



3.1.3 24-hour Burn-in test PASSED



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4. Summary

- 4.1 U.3 NVMe SSD is PCIe Gen 4 / 4 Lane Interface, I/O speed, max. to 64Gbps.
- 4.2 GD9805A adapter I/O performance is based on U.3 NVMe SSD.

