



# MINERVA

## DP8305 PCIe x8 Gen4 with ReDriver to OCulink 8i A.I.C

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### Performance & Burn In Test Rev 1.0

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# DP8305 Add-in Card

## 1. Overview

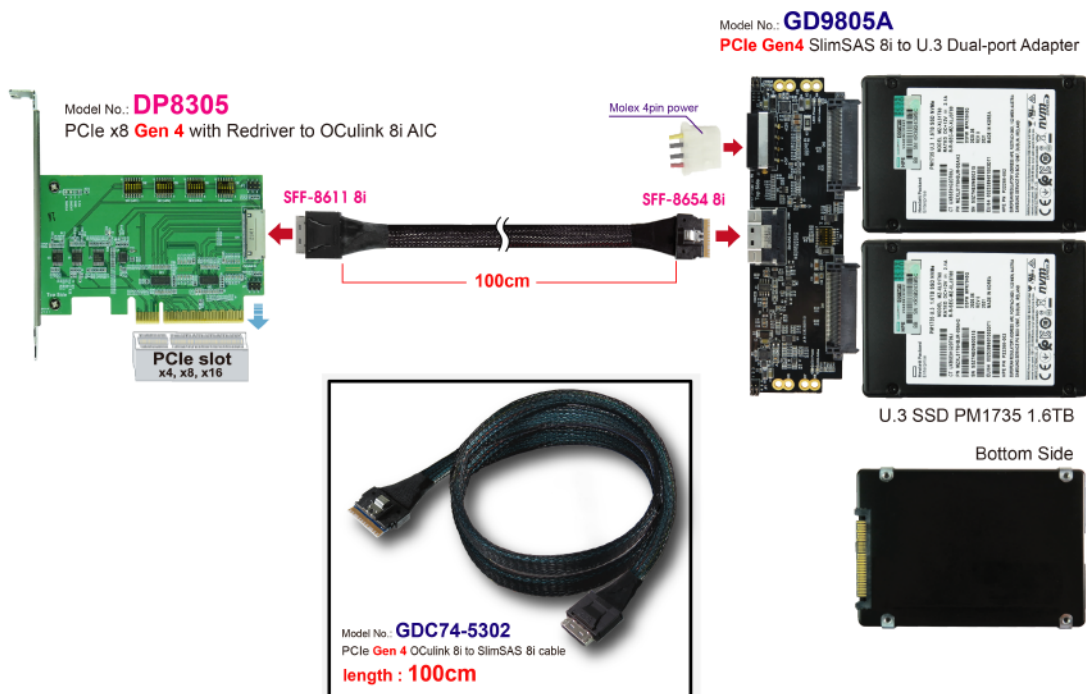
This riser card has built-in Oculink 8i(SFF-8612) 8i connector. It is designed for use by PCIe x8 to configure two x4 bifurcations or can extend PCIe x8 channel reach. The ReDriver may support CTLE to boost up to **13 dB at 8 GHz**.

## 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: DP8305 PCIe x8 to Oculink 8i(SFF-8612) AIC  
Cable: PCIe Gen 4 Oculink 8i(SFF-8611) to SlimSAS(SFF-8654) 8i, 100cm Cable  
Adapter: GD9805A SlimSAS(SFF-8654) 8i to U.3 dual port adapter  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: DP8305, GD9805A & SAMSUNG PM1735 U.3 NVMe SSD/ **1.6TB x2**



## DP8305 Add-in Card

### 2.3 Install Hardware

First inserts the U.3 SSD into the GD9805A SFF-8639 connector dual port and connects to the DP8305 AIC card (PCIe x8 Gen 4 to SFF-8612 8i) using the **GDC74-5302 Cable**, and then Plugs DP8305 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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## 2.5 CrystalDiskMark 8.0.0 x64 performance test

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

### 2.5.1 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive D: performance as below:

The screenshot shows the CrystalDiskMark 8.0.0 x64 interface for Drive D. The test results are as follows:

	Read (MB/s)	Write (MB/s)	Mix (MB/s)
SEQ1M Q8T1	7464.11	2585.69	3979.14
SEQ1M Q1T1	2653.34	2594.91	2257.88
RND4K Q32T1	548.68	502.60	545.23
RND4K Q1T1	51.53	185.12	64.73

### 2.5.2 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive E: performance as below:

The screenshot shows the CrystalDiskMark 8.0.0 x64 interface for Drive E. The test results are as follows:

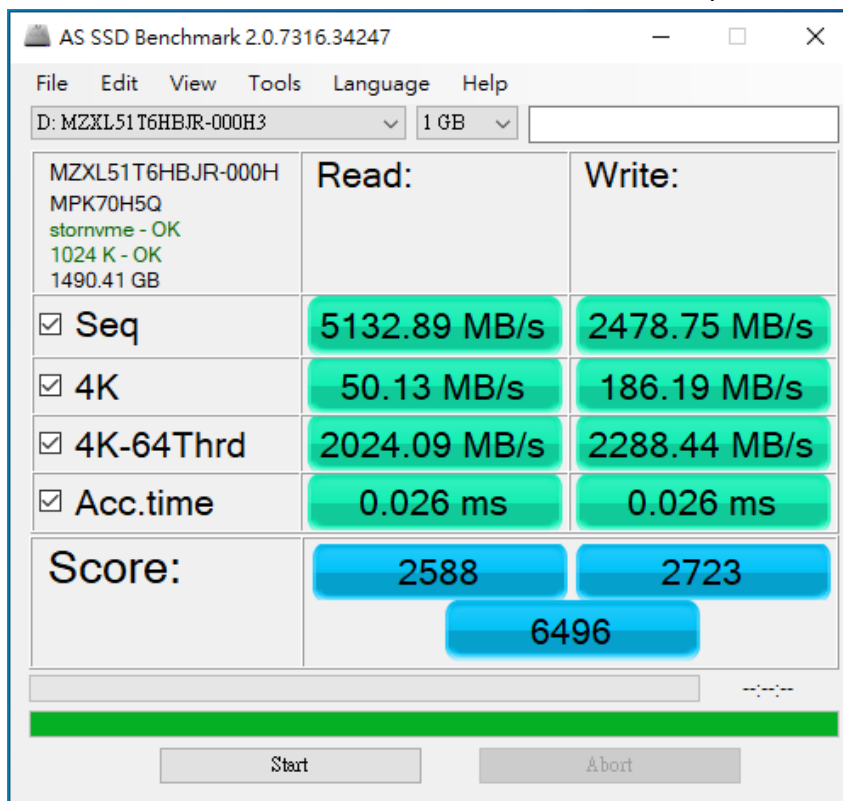
	Read (MB/s)	Write (MB/s)	Mix (MB/s)
SEQ1M Q8T1	7425.06	2588.58	4027.53
SEQ1M Q1T1	2729.20	2601.60	2247.26
RND4K Q32T1	553.62	498.15	543.96
RND4K Q1T1	51.28	179.52	64.52

## DP8305 Add-in Card

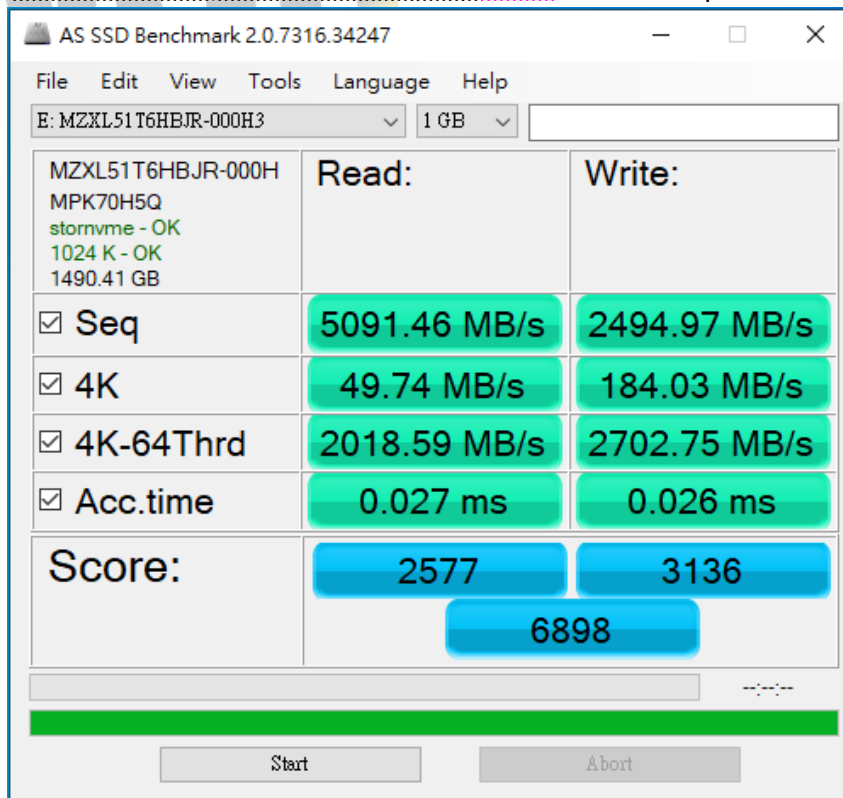
### 2.6 AS SSD Benchmark 2.0 performance test

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

#### 2.6.1 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive D: performance as below:



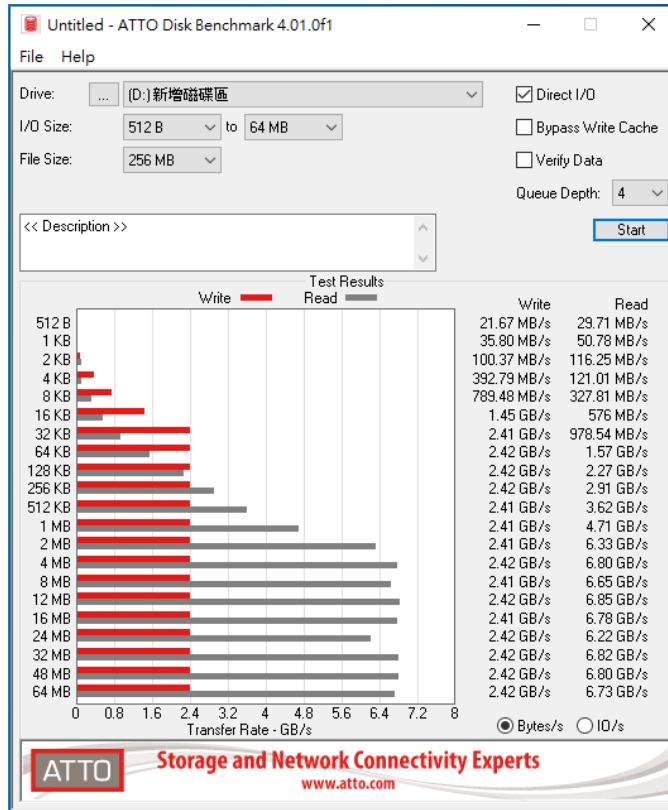
#### 2.6.2 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive E: performance as below:



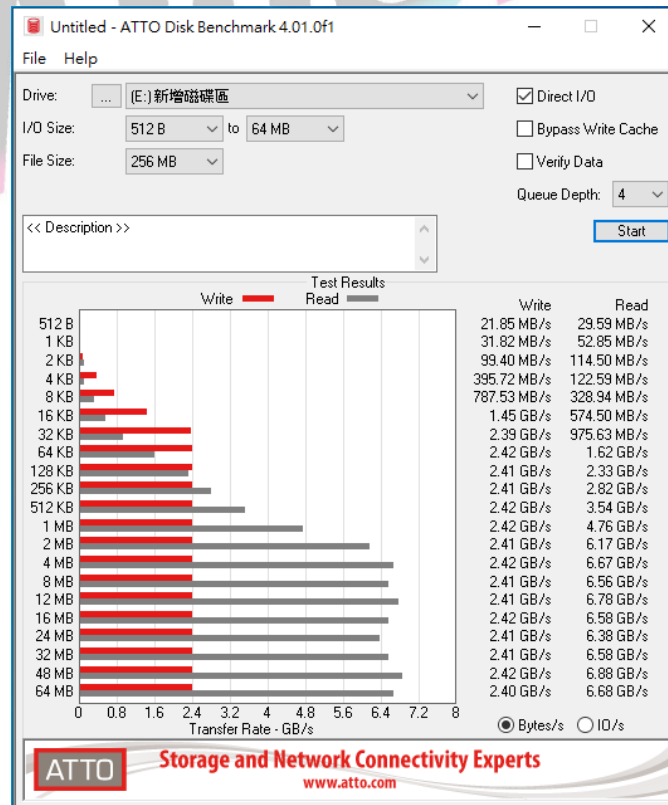
# DP8305 Add-in Card

## 2.7 ATTO Disk Benchmark 4.01 performance test

### 2.7.1 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive D: performance as below:



### 2.7.2 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive E: performance as below:



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## 2.8 AnvilBenchmark\_V110\_B337

### 2.8.1 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive D: performance as below:



### 2.8.2 SAMSUNG PM1735 U.3 NVMe SSD/ 1.6TB in Drive E: performance as below:

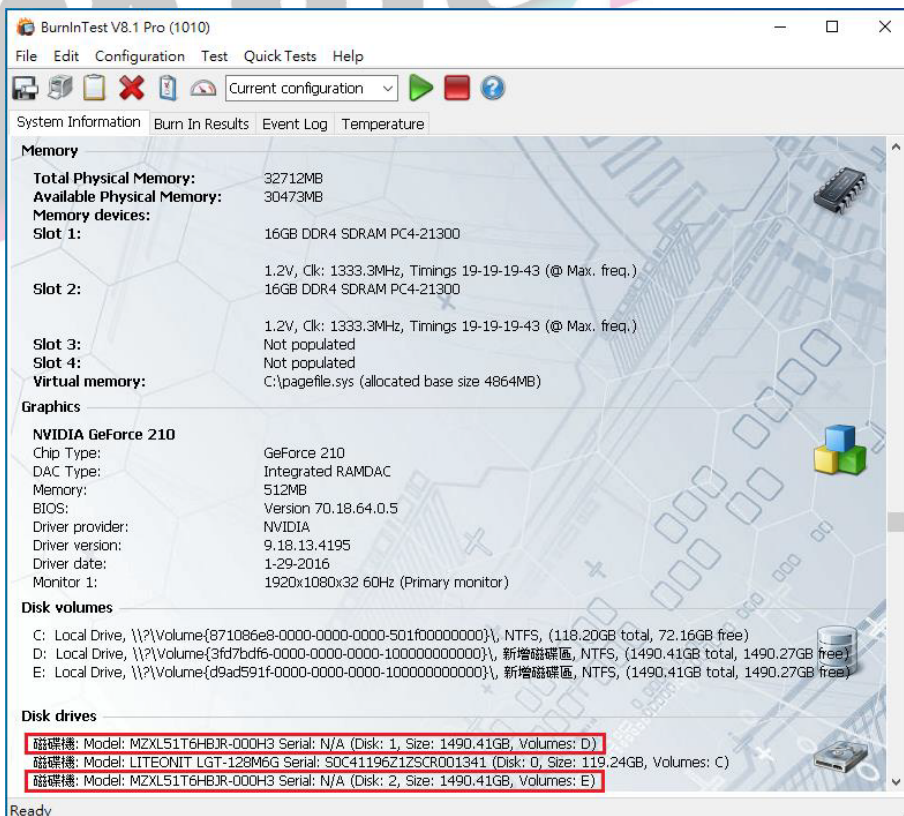
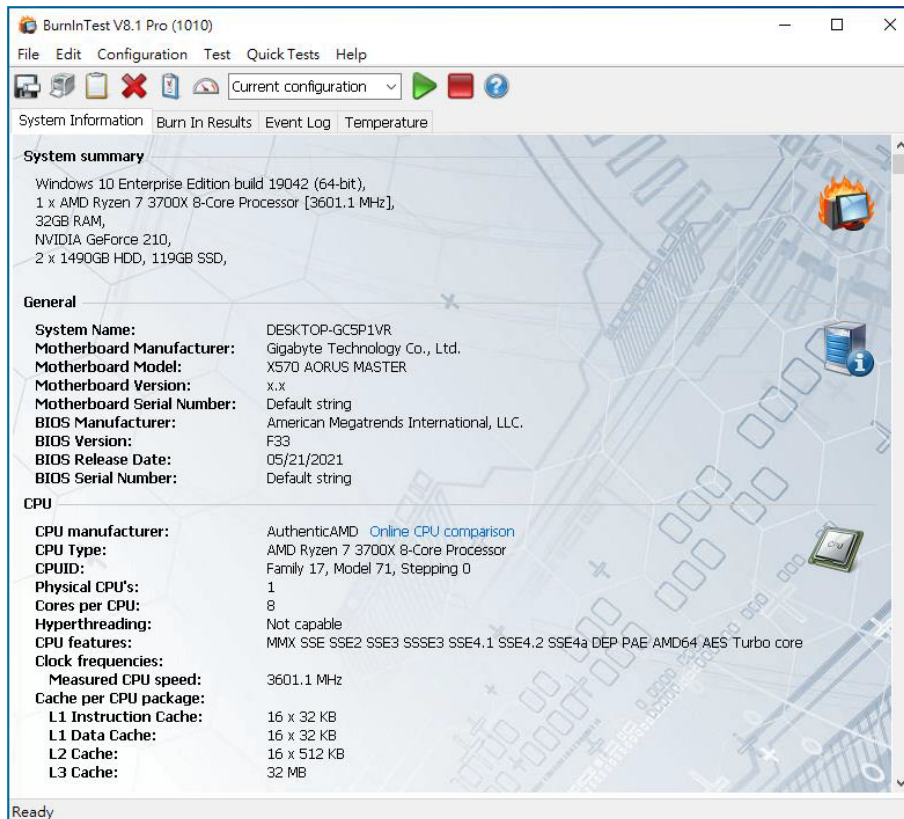


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## 3. Burn In Tests and Results

### 3.1 BurnInTest v8.1 Pro

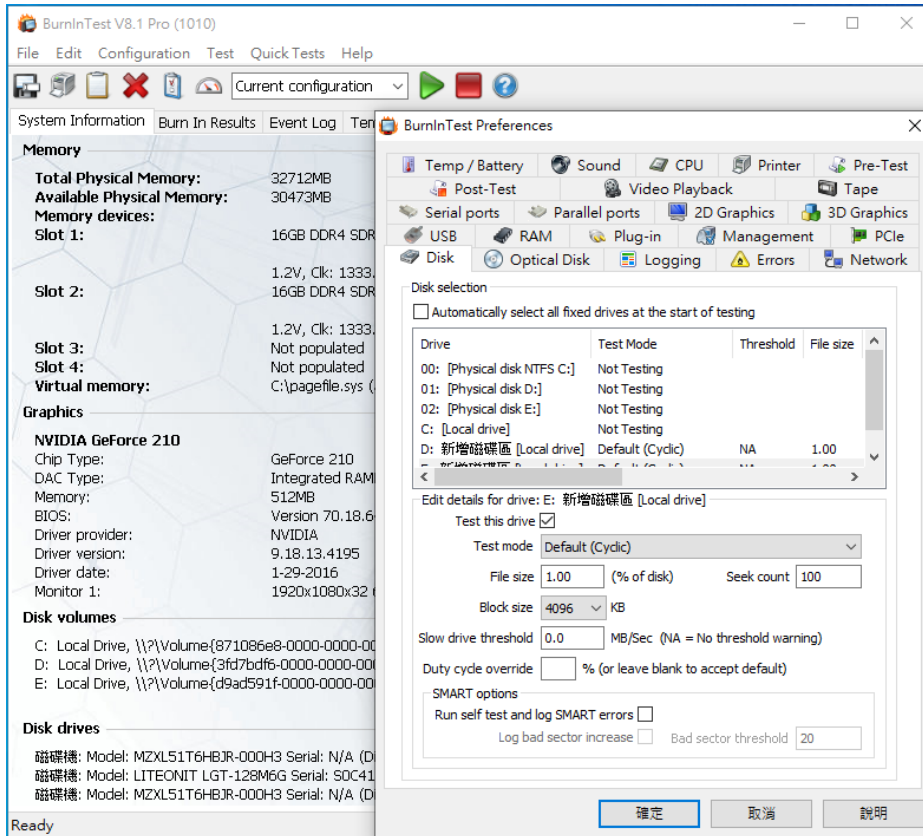
#### 3.1.1 system information as below:



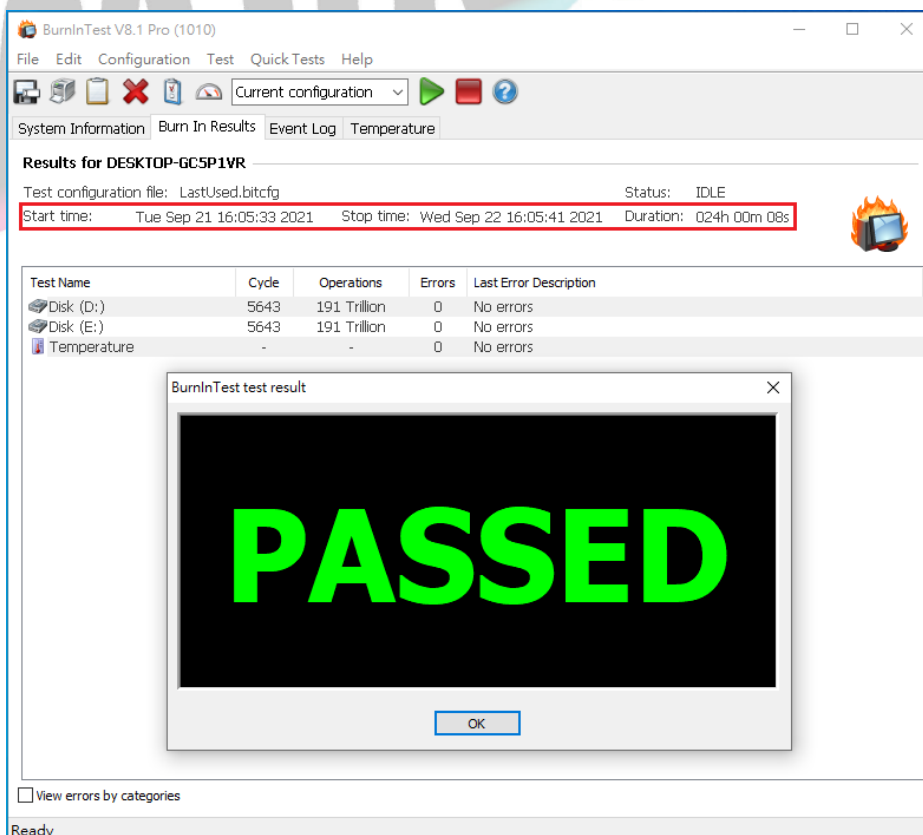


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## 3.1.2 Disk test mode( 10 ways cycle test)



## 3.1.3 24-hour Burn-in test PASSED



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## 4. Summary

- 4.1 DP8305 AIC is PCIe x8 Gen 4 with Oculink 8i
- 4.2 U.3 NVMe SSD is PCIe Gen 4 / 4 Lane Interface, I/O speed, max. to 64Gbps.
- 4.3 DP8305 AIC I/O performance is based on U.3 NVMe SSD.

