



# MINERVA

PC892A Slimline SAS(SFF-8654)8i to M.2/M.3 Dual ports converter

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## Performance & Burn In Test Rev 1.0

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# PC892A Rev1.0 Converter Card

## 1. Overview

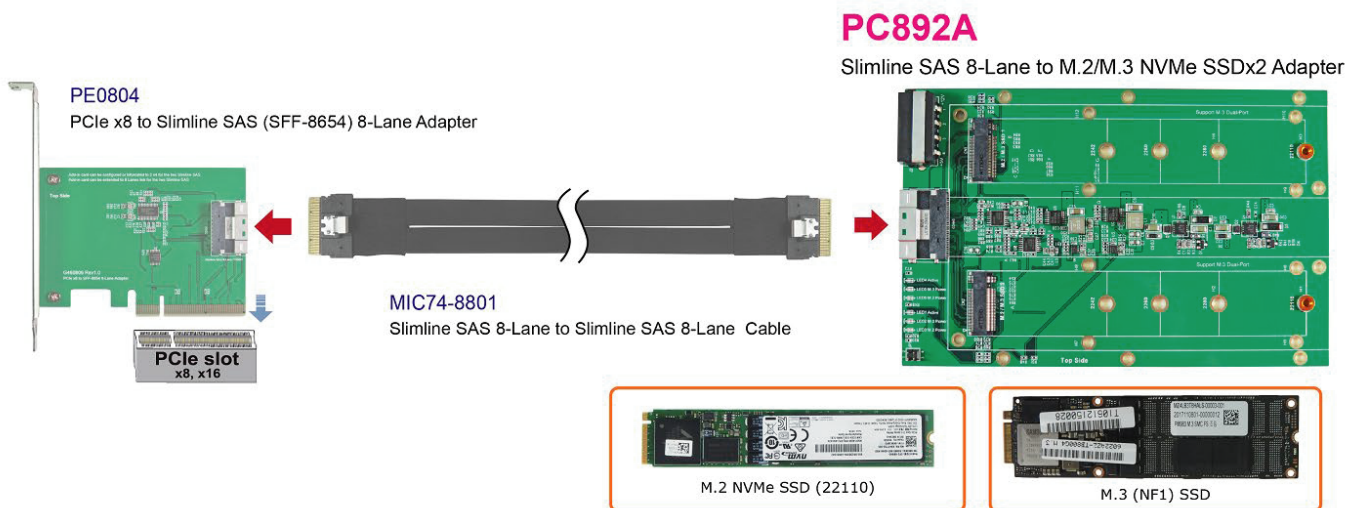
This riser card has built-in Slimline SAS(SFF-8654) 8i connector and M.2 M-key connector dual ports, which can be inserted into M.2 or M.3 NVMe SSD. It is designed for use by supporting bifurcation AIC and SFF-9402 pinout RAID Card.

## 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: PE0804 PCIe x8 to Slimline SAS 8i Adapter  
Cable: SFF-8654(Slimline SAS 8i) to SFF-8654(Slimline SAS 8i)Cable  
Adapter: PC892A SFF-8643 4X to M.2/M.3 Adapter dual ports  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: PC892A adapter and M.3 NF1 **4TB** & M.2 **960GB** NVMe SSD



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## 2.3 Install Hardware

First inserts the M.3 and M.2 SSD into the PC892A riser card M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). To connect the PC892A adapter to the PCIe to SFF-8654 8i AIC card using the **MIC74-8801 Cable**, and Plugs PE0804 AIC card into GIGABYTE **X570 AORUS MASTER**.

## 2.4 BIOS & Windows 10 OS environment setup

2.4.1 Primary NVMe SSD install Windows 10 OS.

2.4.2 M.3 and M.2 NVMe SSD , formatted to NTFS Mode. Don't install any program.

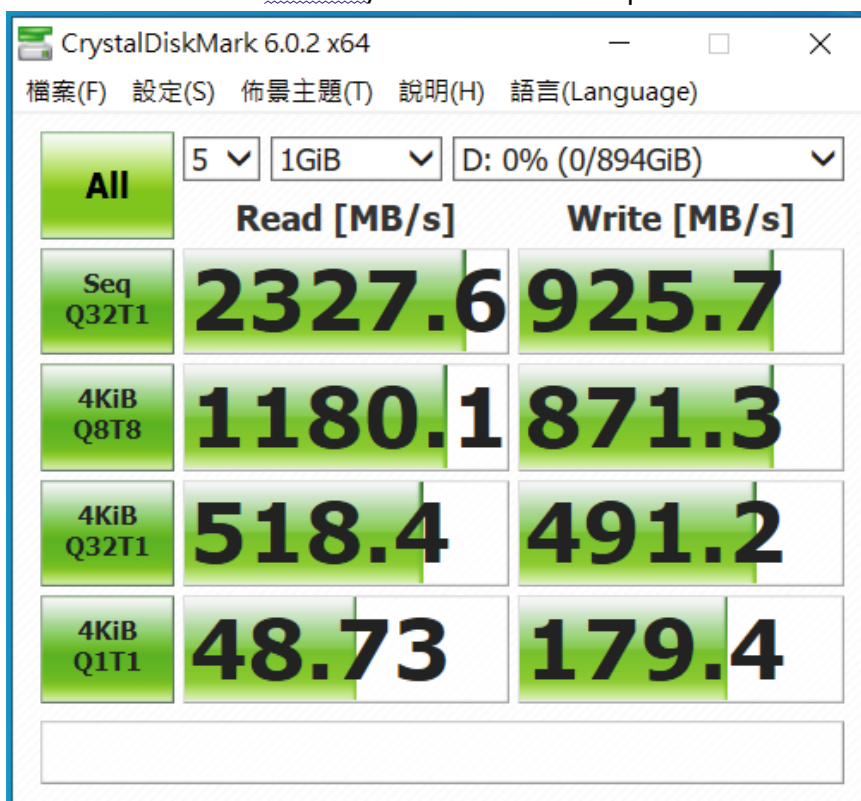


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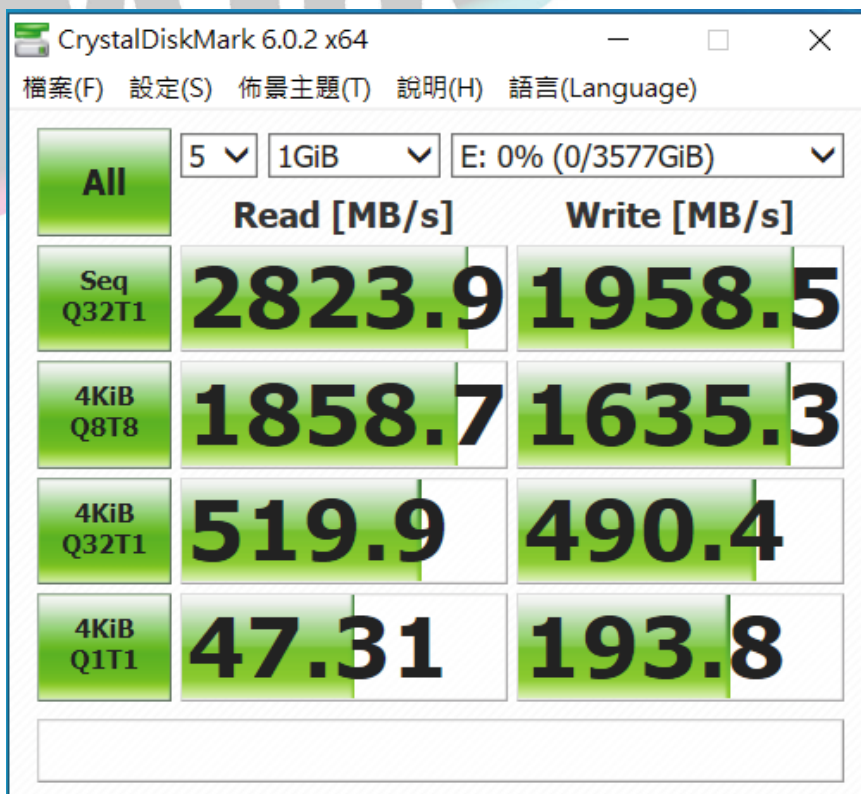
## 2.5 CrystalDiskMark 6.0.2 x64 performance test

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

2.5.1 **M.2 NF1 NVMe LITEON/ 960GB** in **Drive D:** performance as below:



2.5.2 **M.3 NF1 NVMe Samsung PM983/4TB** in **Drive E:** performance as below:

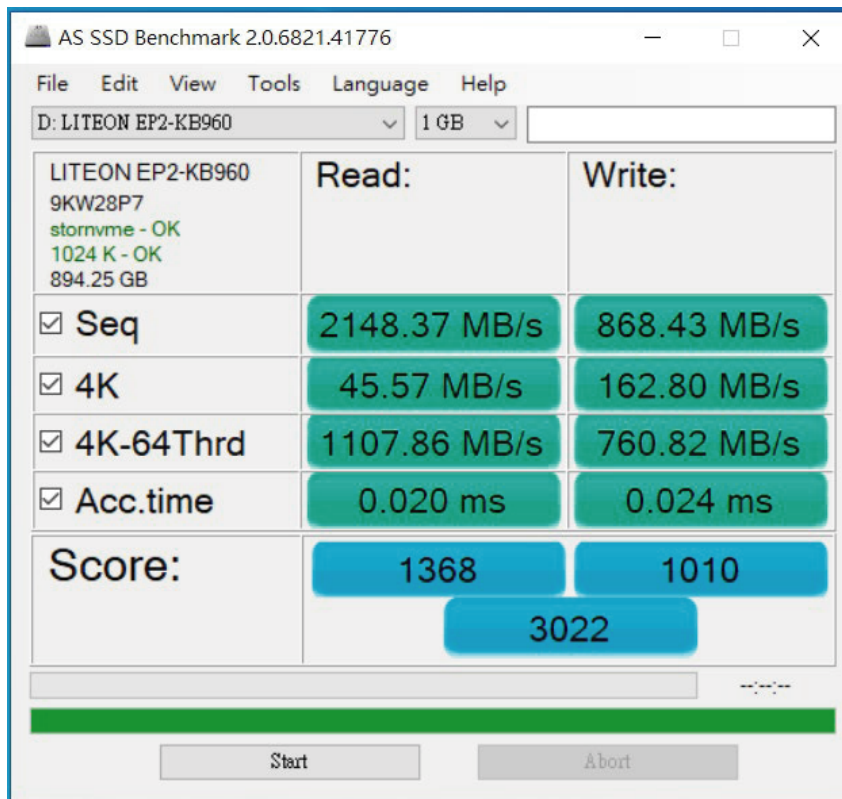


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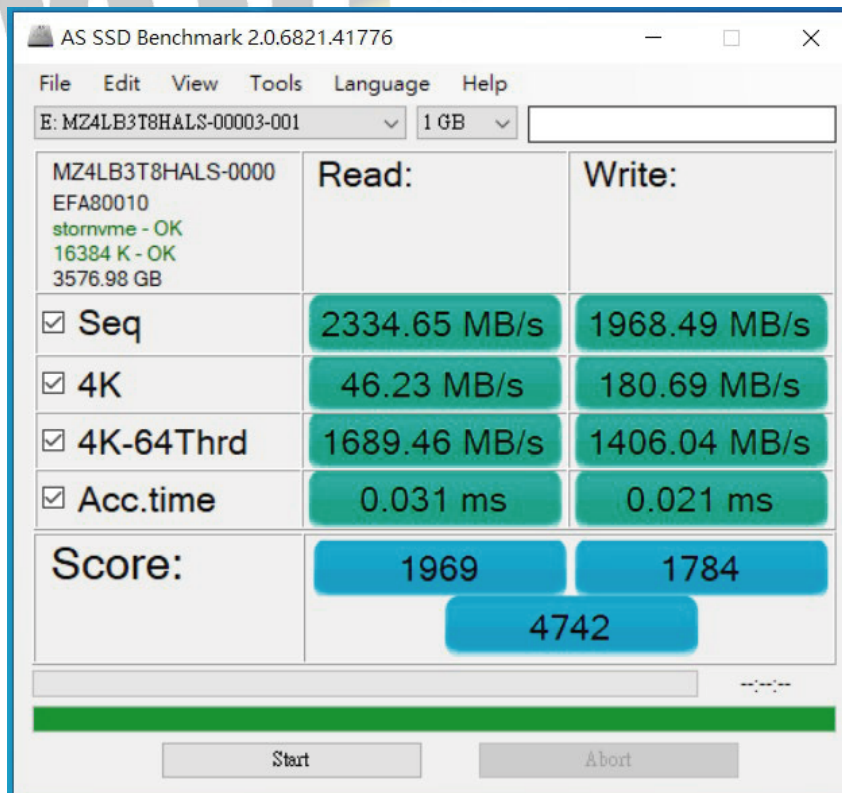
## 2.6 AS SSD Benchmark 1.9 performance test

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

2.6.1 **M.2 NF1 NVMe LITEON/ 960GB** in Drive D: performance as below:



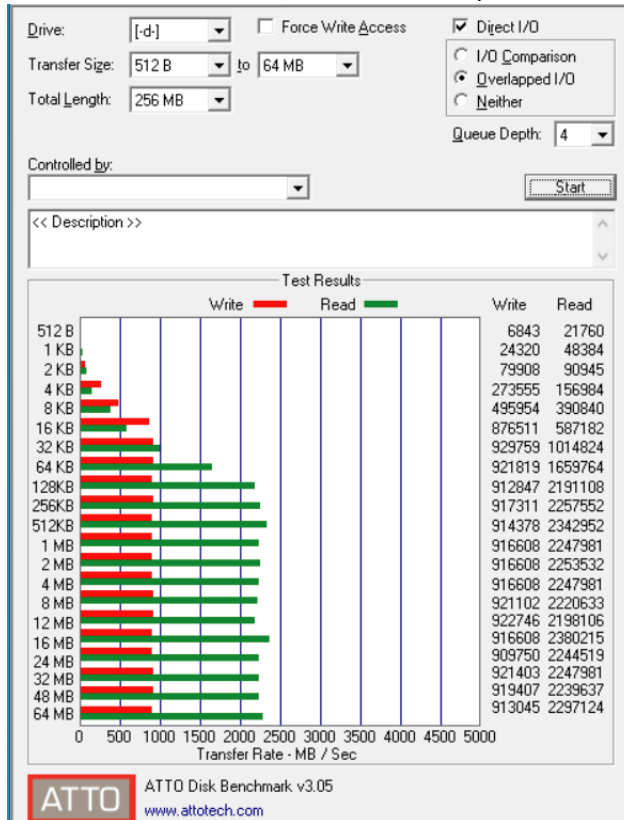
2.6.2 **M.3 NF1 NVMe Samsung PM983/4TB** in Drive E: performance as below:



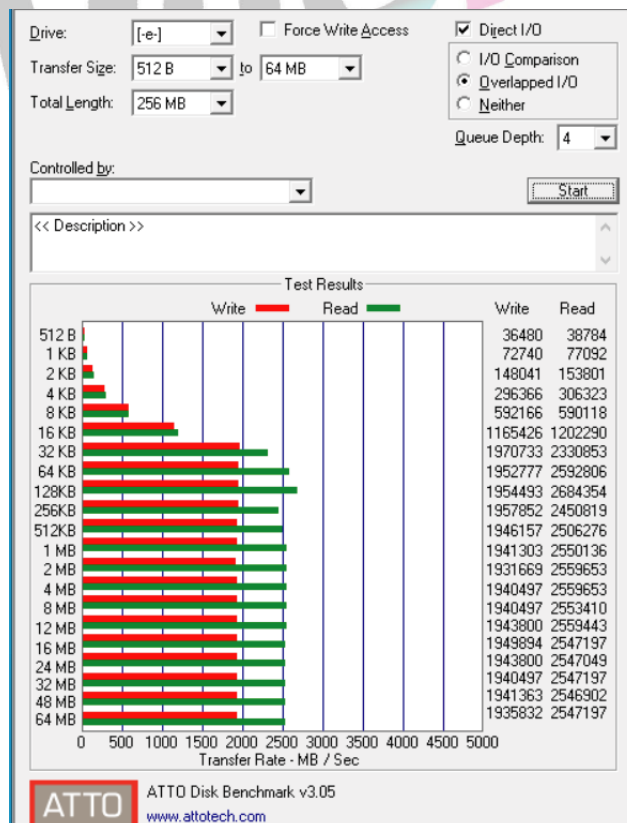
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## 2.7 ATTO Disk Benchmark 3.05 performance test

### 2.7.1 M.2 NF1 NVMe LITEON / 960GB in Drive D: performance as below:



### 2.7.2 M.3 NF1 NVMe Samsung PM983/4TB in Drive E: performance as below:





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## 2.8 AnvilBenchmark\_V110\_B337

### 2.8.1 M.2 NF1 NVMe LITEON / 960GB in Drive D: performance as below:



### 2.8.2 M.3 NF1 NVMe Samsung PM983/4TB in Drive E: performance as below:

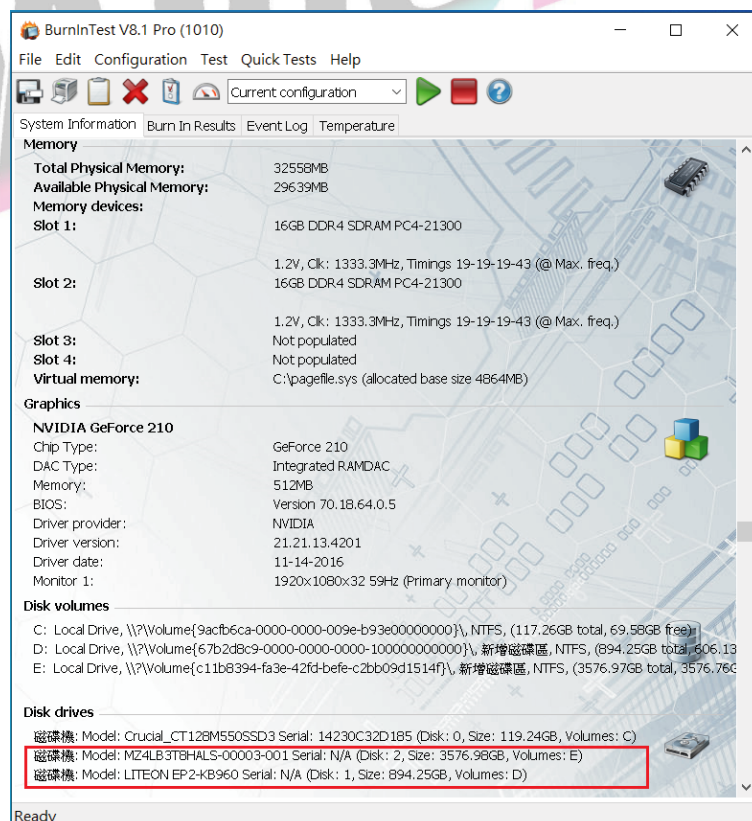


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## 3. Burn In Tests and Results

### 3.1 BurnInTest v8.1 Pro

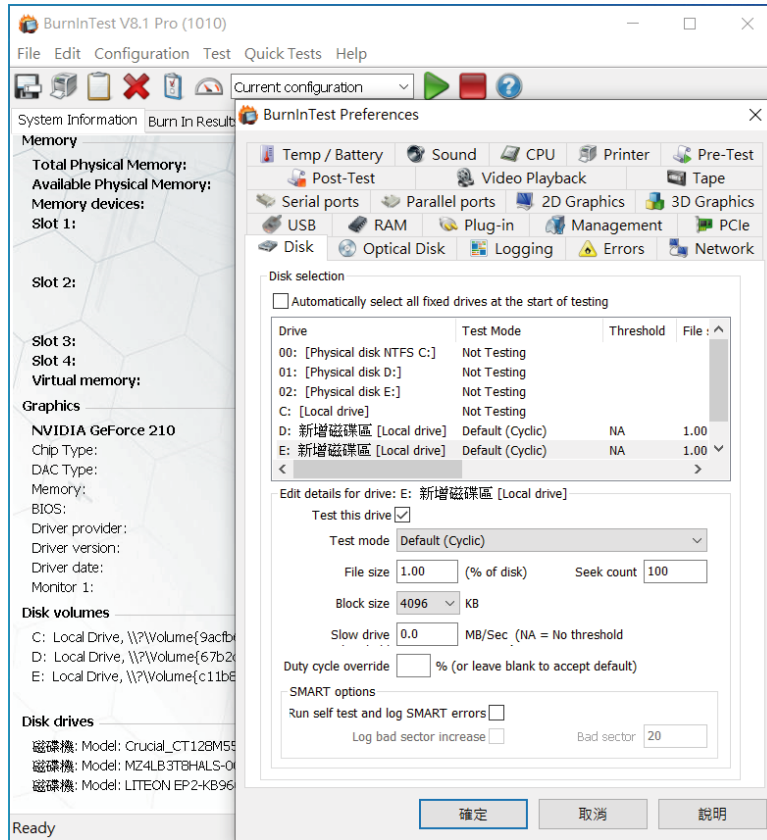
#### 3.1.1 system information as below:



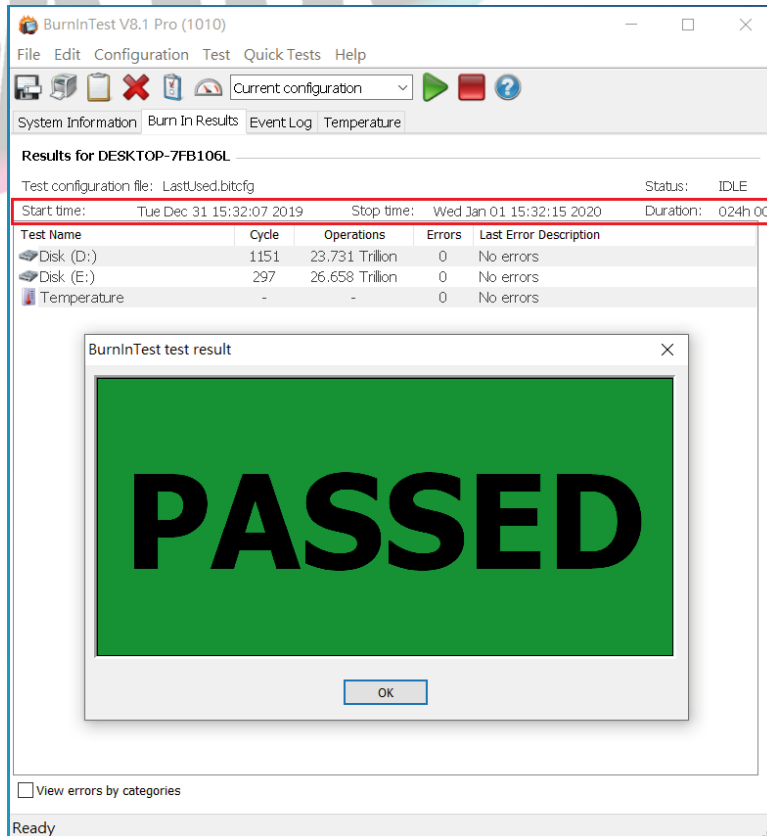


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## 3.1.2 Disk test mode (10 ways cycle test)



## 3.1.3 24-hour Burn-in test PASSED



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## 4. Summary

- 4.1 M.3 and M.2 NVMe SSD is PCI-e Gen 3 / 4 Lane Interface, I/O speed, max. to 32Gbps.
- 4.2 PC892A adapter I/O performance is based on NVMe SSD.

