



# MINERVA

PD893A OCulink(SFF-8612 8i) to M.2/M.3 Dual ports converter

---

## Performance & Burn In Test Rev 1.0

### Table of Contents

---

1. Overview
  
2. Performance Measurement Tools and Results
  - 2.1 Test Platform
  - 2.2 Test target and M.2 NVMe SSD
  - 2.3 Install Hardware
  - 2.4 BIOS & Windows 10 OS environment setup
  - 2.5 CrystalDiskMark 6.02 x64 performance test
  - 2.6 AS SSD Benchmark 2.0.6 performance test
  - 2.7 ATTO Disk Benchamrk 3.05 performance test
  - 2.8 AnvilBenchmark\_V110\_B337 Benchmark performance test
  
3. Burn In Tests and Results
  - 3.1 BurnInTestv8.1 Pro burn in test
  
4. Summary

# PD893A Rev1.0 Converter Card

## 1. Overview

This adapter has built-in OCulink(SFF-8612 8i) connector and M.2 M-key connector dual ports, which can be inserted into M.2 NVMe SSD. It is designed for use by supporting PCIe Gen 3 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: PE0805 PCIe x8 to OCulink 8i Adapter  
Cable: SFF-8611(OCulink 8i) to SFF-8611(OCulink 8i) Cable  
Adapter: PD893A SFF-8612 8i to M.2/M.3 Adapter dual ports  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: PD893A adapter and M.2 **960GB** & M.2 **512GB** NVMe SSD



# PD893A Rev1.0 Converter Card

## 2.3 Install Hardware

First inserts the M.3 and M.2 SSD into the PD893A riser card M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). To connect the PD893A adapter to the PCIe to OCulink 8i AIC card using the **MIC80-7701 Cable**, and Plugs PE0805 AIC 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.2 NVMe SSD , formatted to NTFS Mode. Don't install any program.

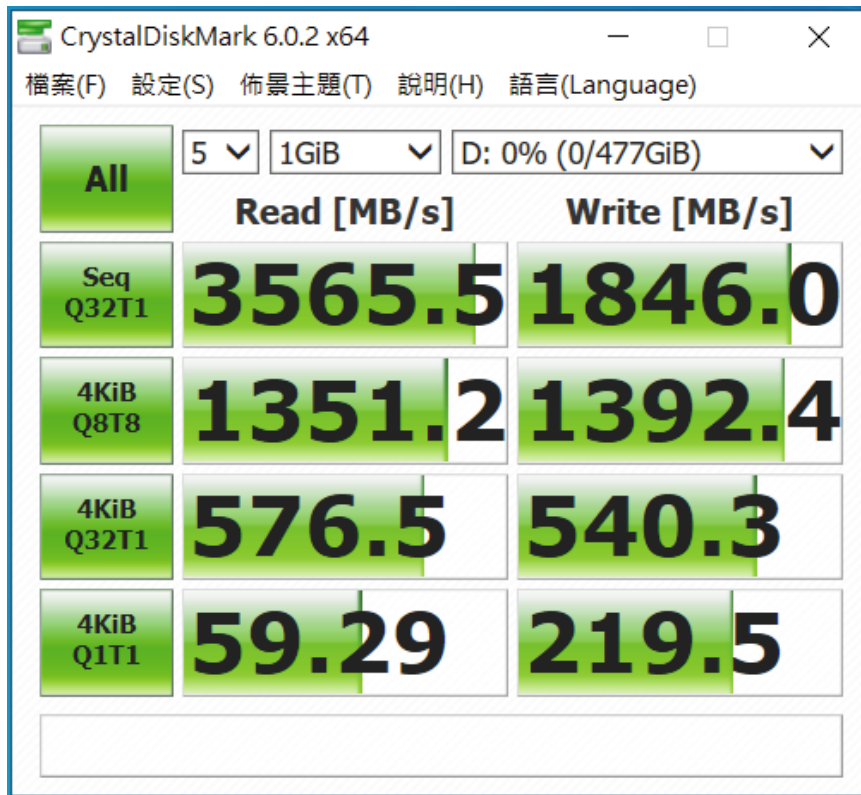


# PD893A Rev1.0 Converter Card

## 2.5 CrystalDiskMark 6.0.2 x64 performance test

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

2.5.1 **M.2 NVMe Samsung PM961 / 512GB** in Drive D: performance as below:



2.5.2 **M.2 NVMe LiteNo/960GB** in Drive E: performance as below:

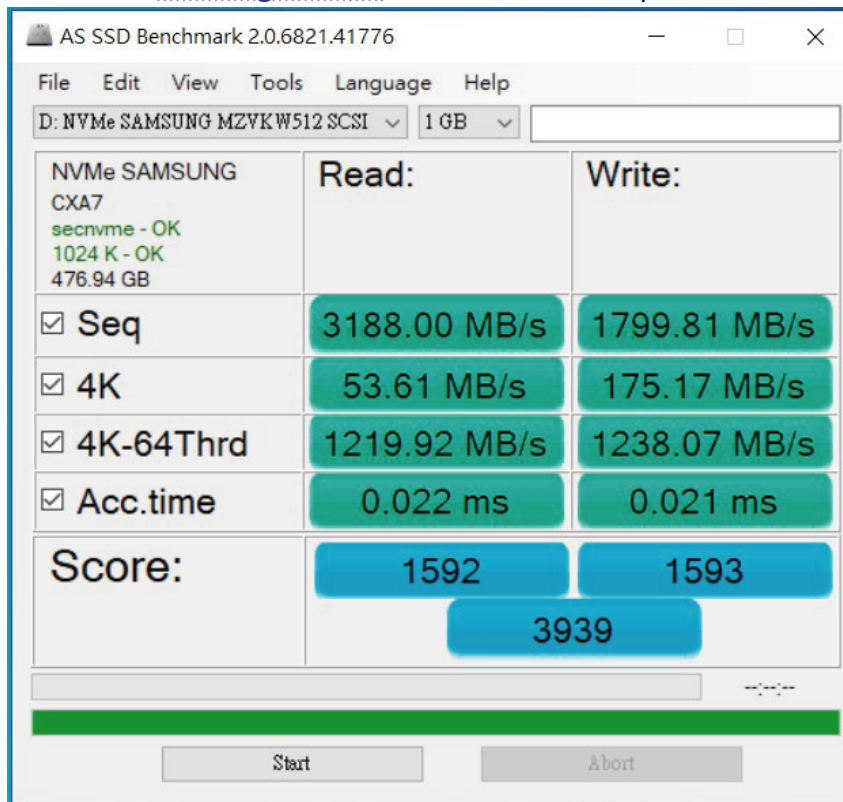


# PD893A Rev1.0 Converter Card

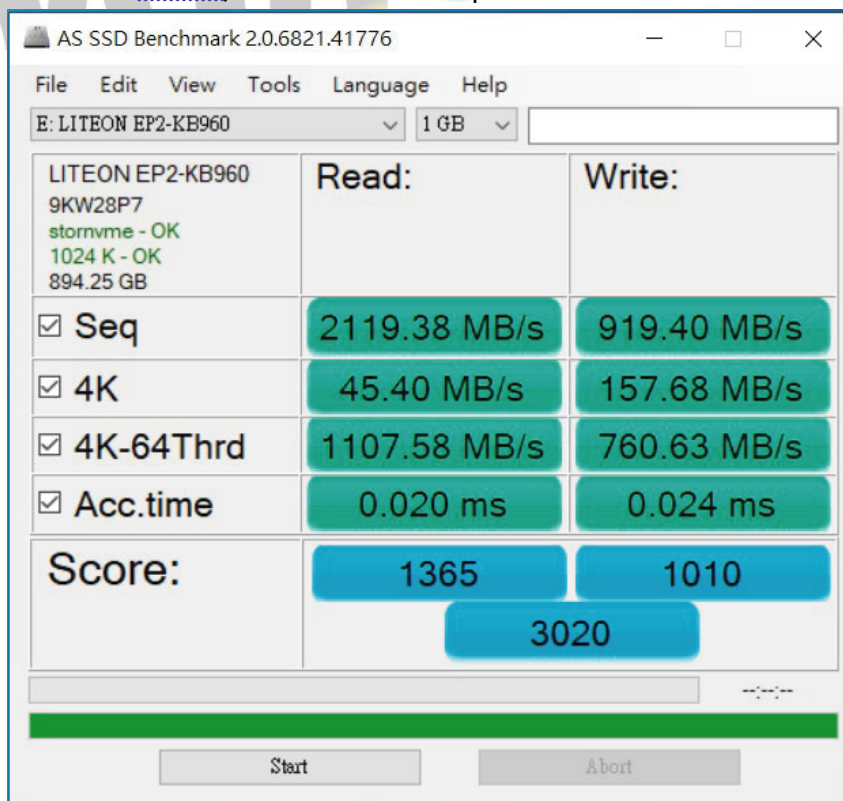
## 2.6 AS SSD Benchmark 1.9 performance test

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

2.6.1 **M.2 NVMe Samsung PM961 / 512GB** in Drive D: performance as below:



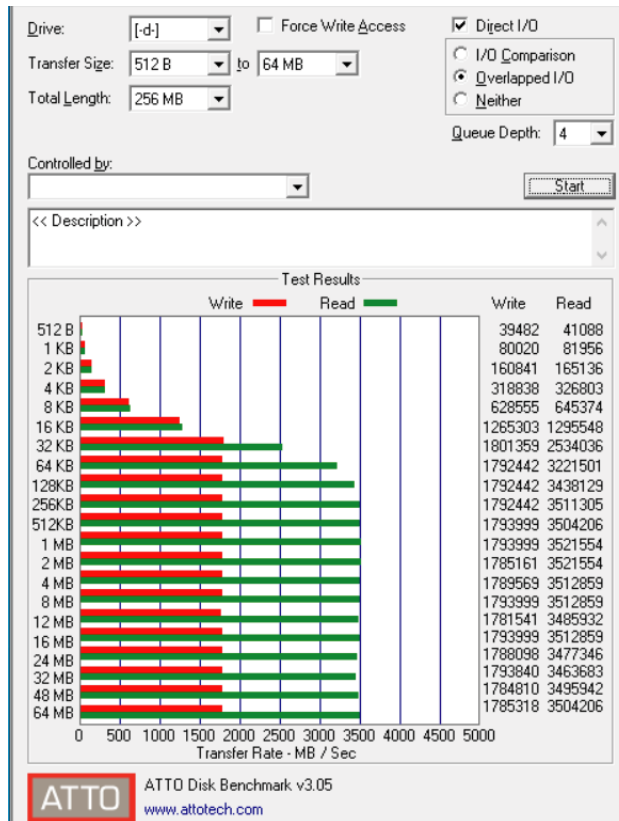
2.6.2 **M.2 NVMe LiteNo/960GB** in Drive E: performance as below:



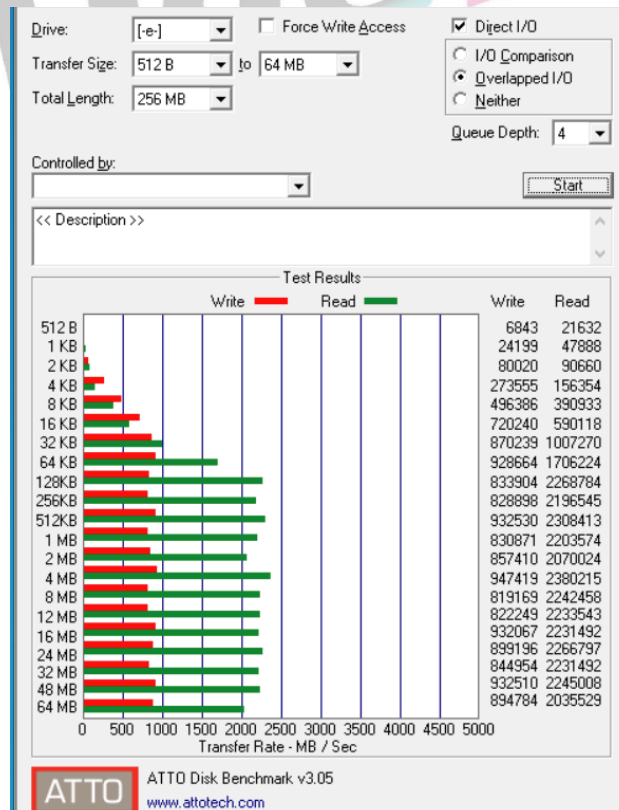
# PD893A Rev1.0 Converter Card

## 2.7 ATTO Disk Benchmark 3.05 performance test

### 2.7.1 M.2 NVMe Samsung PM961 / 512GB in Drive D: performance as below:



### 2.7.2 M.2 NVMe LiteNo/960GB in Drive E: performance as below:





# PD893A Rev1.0 Converter Card

## 2.8 AnvilBenchmark\_V110\_B337

### 2.8.1 M.2 NVMe Samsung PM961/ 512GB in Drive D: performance as below:



### 2.8.2 M.2 NVMe LiteNo/960GB in Drive E: performance as below:

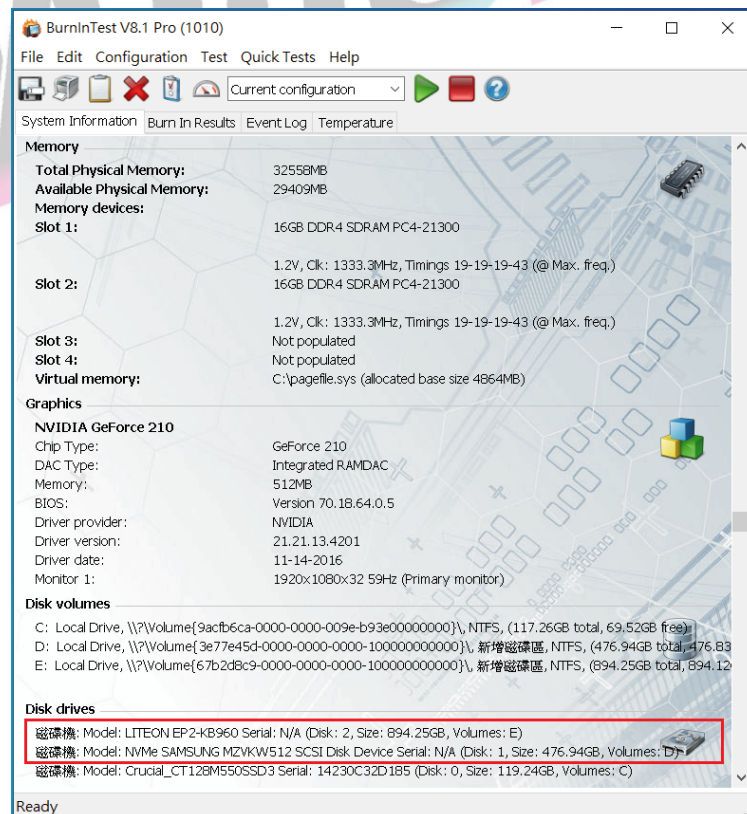


# PD893A Rev1.0 Converter Card

## 3. Burn In Tests and Results

### 3.1 BurnInTest v8.1 Pro

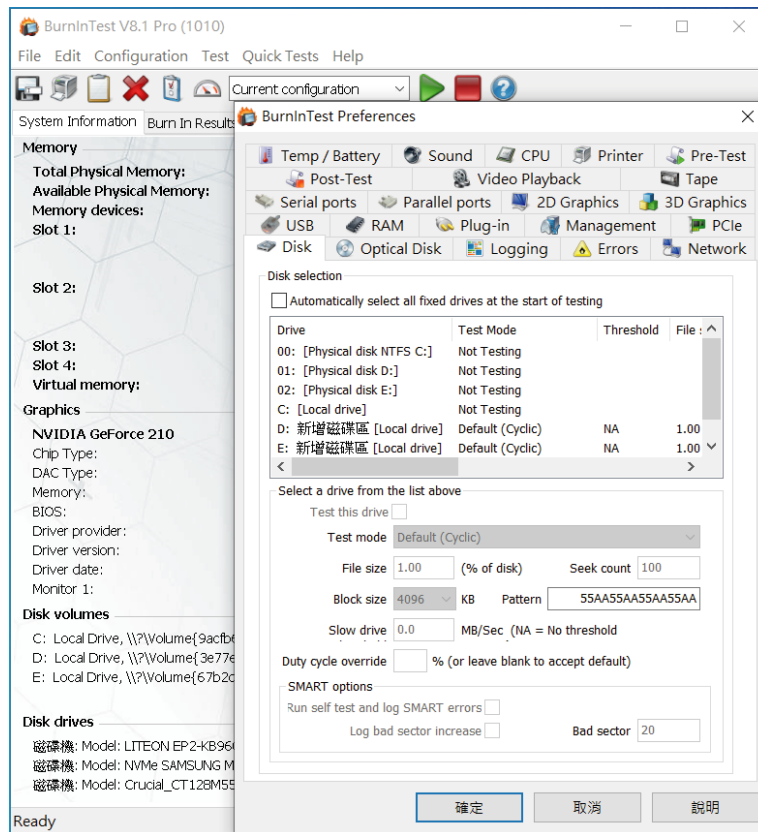
#### 3.1.1 system information as below:



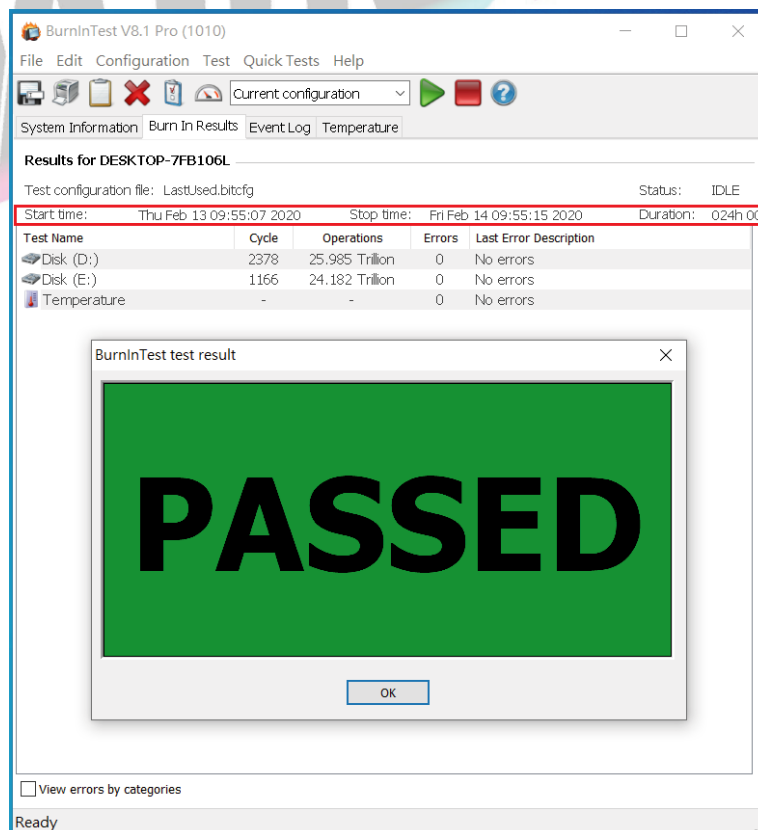


# PD893A Rev1.0 Converter Card

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



## 3.1.3 24-hour Burn-in test PASSED



## 4. Summary

- 4.1 M.2 NVMe SSD is PCI-e Gen 3 / 4 Lane Interface, I/O speed, max. to 32Gbps.
- 4.2 PD893A adapter I/O performance is based on NVMe SSD.

