



# MINERVA

PC802A SFF-8654 8 Lanes to M.2/M.3 NVMe converter Card

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## Performance & Burn In Test Rev 1.0

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# PC802A Rev1.0 Converter Card

## 1. Overview

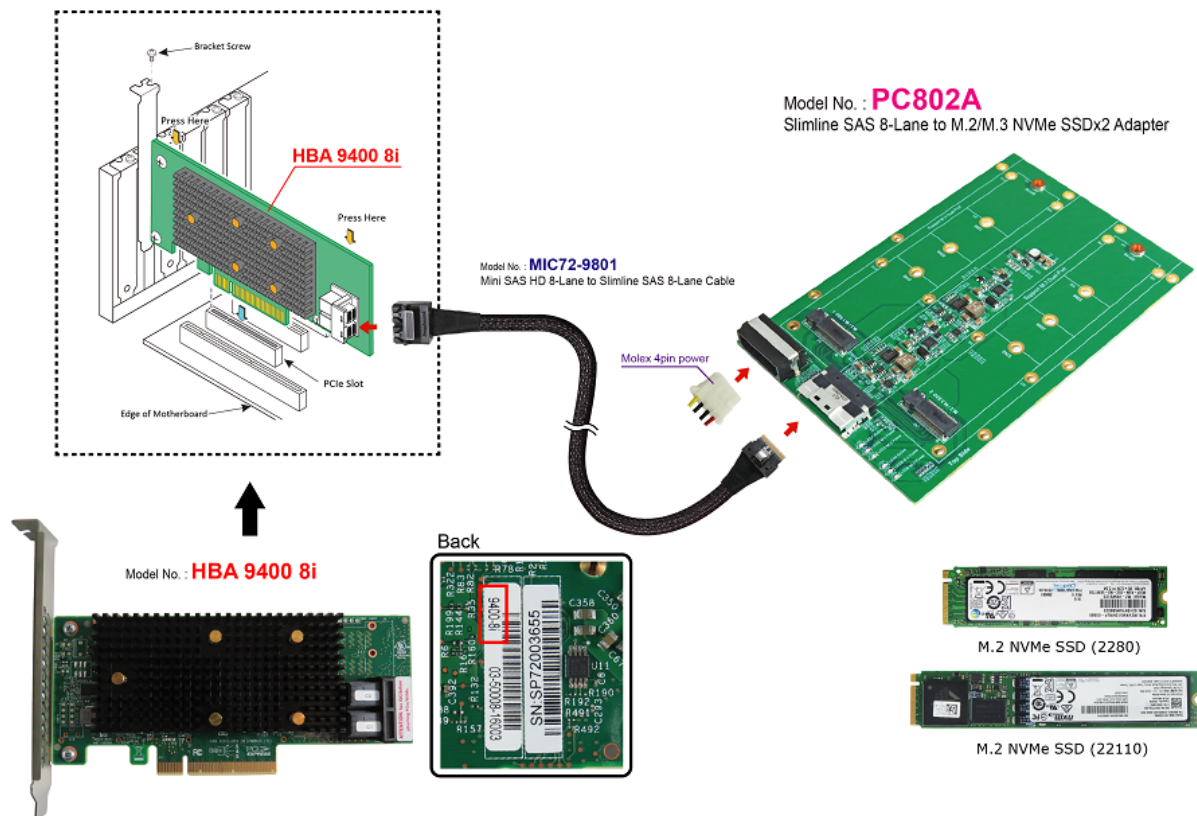
This riser card has built-in SFF-8654 8X connector and M.2 M-key connector, which can be inserted into M.2 or M.3 NVMe SSD. It is designed for use by Broadcom MegaRAID and HBA series, and can be set as needed for independent drive, or merge into RAID mode.

## 2. Tools and Results of Performance Measurement

### 2.1 Test Platform

M/B : GIGABYTE **Z170X UD5 TH**  
CPU : Intel **i5-6500**, 3.2GHz/ 6M Cache/ LGA1150  
Memory : Kingston **KVR21N15D8/8**, **DDR4-2133MHz**, **16GB**(8GB DIMM\*2)  
ATX Power : COOLER MASTER G750M, **750W ATX**, 12V V2.2 Power Supply  
Graphic : Z170 Chipsets built-in **HD Graphics 530**  
Adapter: Broadcom HBA-9400-8i Tri-mode Storage Adapter  
Adapter: PC802A SFF-8654(Slimline SAS) 8-Lane to M.2/M.3 Adapter  
Cable: SFF-8643(MINI SAS HD) 8-Lane to SFF-8654(Slimline SAS) 8-Lane Cable  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: PC802A adapter and M.2 NVMe SSD



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### 2.3 Install Hardware

First insert the M.2 SSD into the PC802A riser card M.2 connector, then with copper nuts, and screws to fix SSDs. (Please refer to the Installation Notes). Connect the PC802A adapter to the Broadcom HBA 9400-8i AIC card, using the MIC72-9801 Cable. and Plug HBA 9400-8i AIC card into GIGABYTE Z170X UD5 TH PCIe slot.

### 2.4 BIOS & Windows 10 OS environment setup

2.4.1 Primary M.2 NVMe SSD install Windows 10 OS.

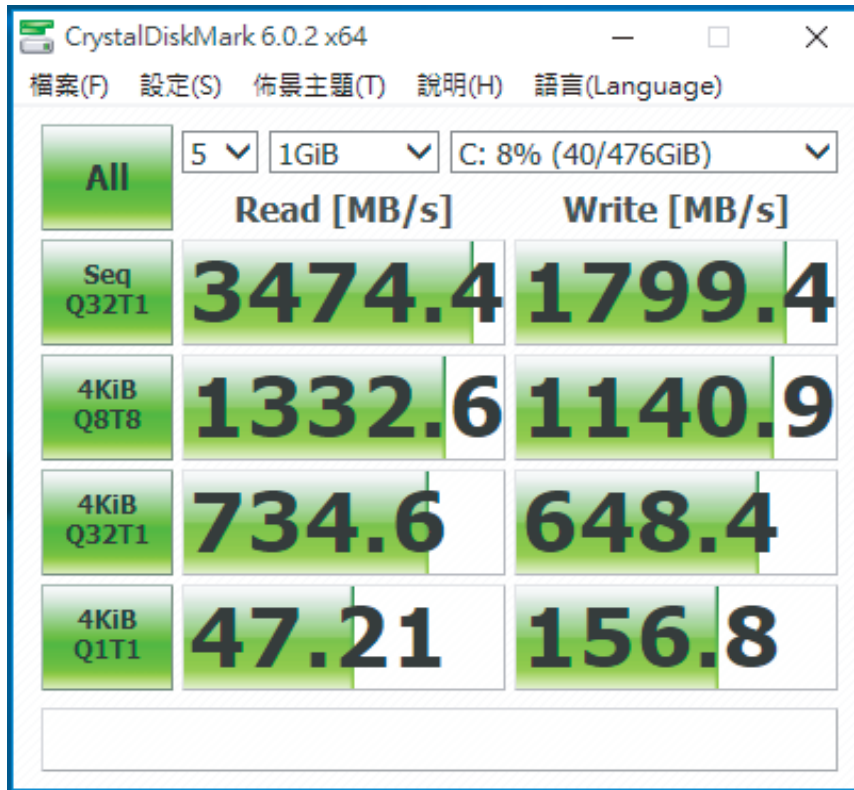
2.4.2 Secondary M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.



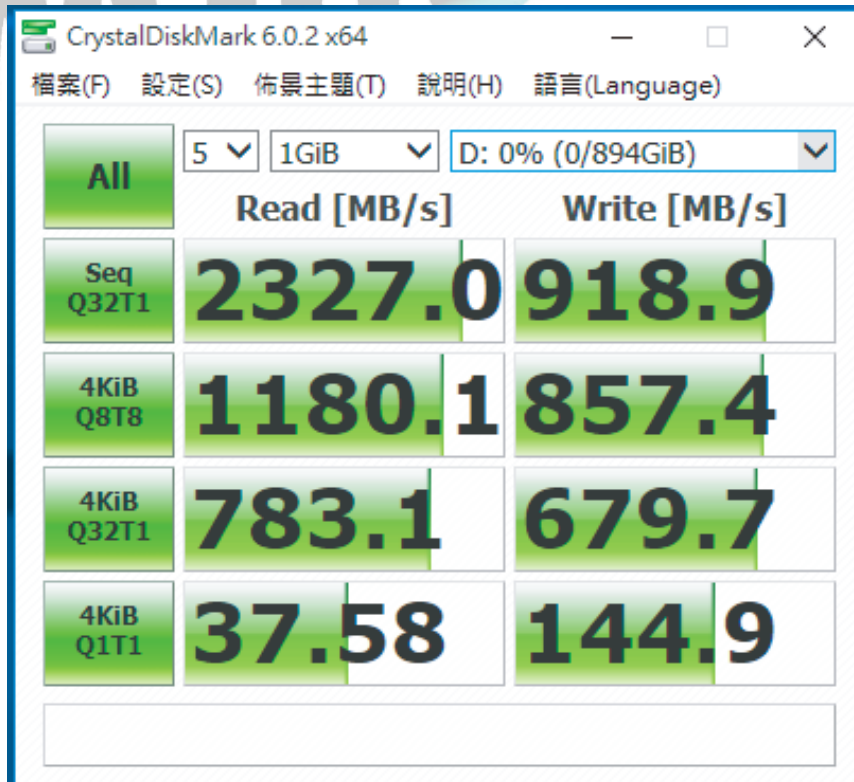
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2.5 CrystalDiskMark 6.0.2 x64 performance test  
※Benchmark (Sequential Read & Write / default = 1MB)

2.5.1 **M.2 NVMe Samsung SM961/512GB** performance as below:



2.5.2 **M.2 NVMe LITEON/1TB** performance as below:

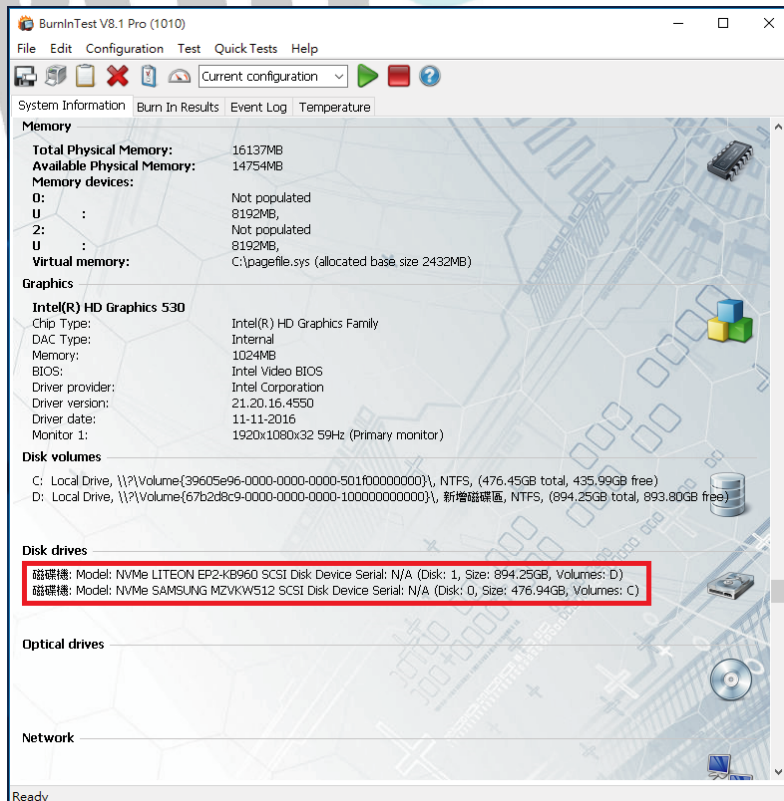
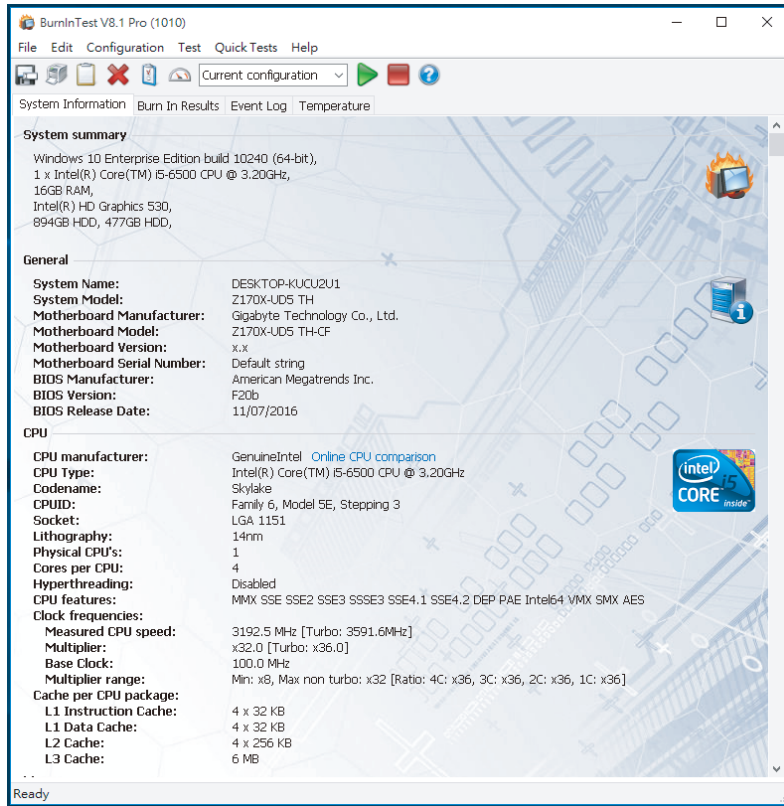


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## 3. Burn In Tests and Results

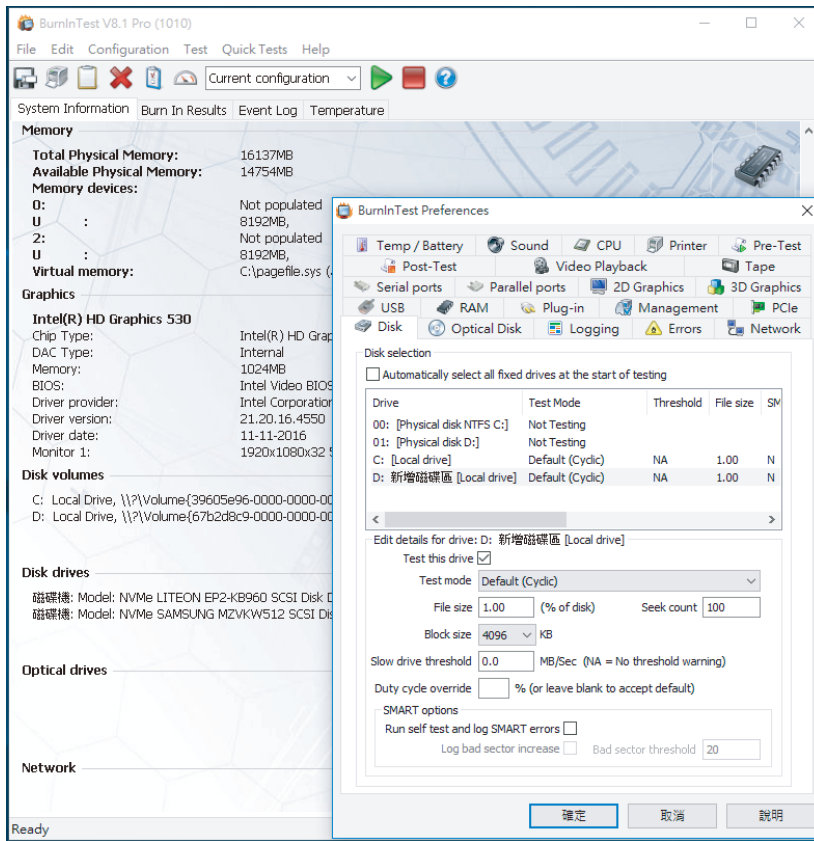
### 3.1 BurnInTest v8.1 Pro

#### 3.1.1 system information as below:

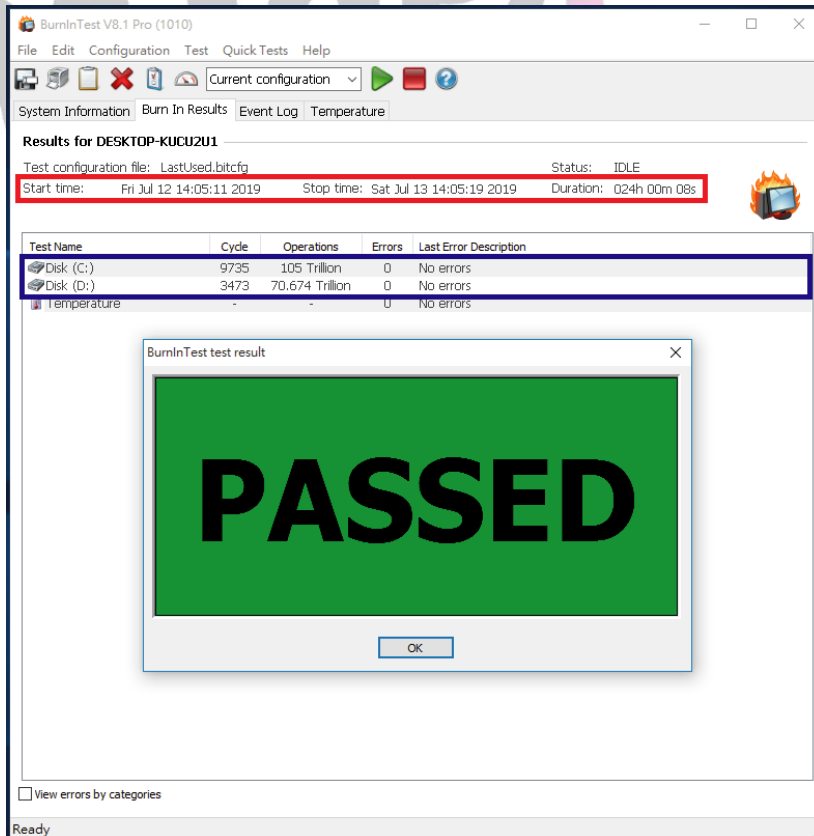


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## 3.1.2 Disk test mode (10 ways cycle test)



## 3.1.3 24-hour Burn-in test PASSED





## 4. Summary

- 4.1 M.2 NVMe SSD is PCI-e Gen 3 / 4 Lane Interface, I/O speed, max. to 32Gbps.
- 4.3 PC802A adapter I/O performance is based on M.2 NVMe SSD.

