



# MINERVA

## PA414A Converter Card

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### Performance & Burn In Test Rev. 1. 0

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## 1. Overview

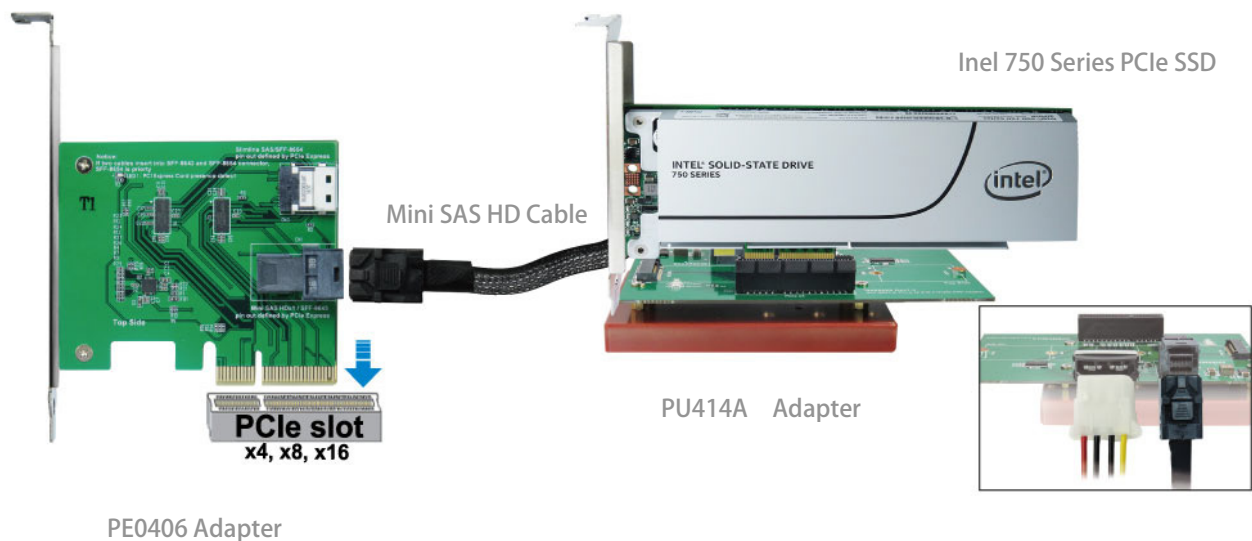
PA414A adapter, providing PCIe Gen 3 x4 slot can be PCI-e SSD converted into Mini SAS HD(SFF-8643) PCI-e Gen 3 / 4 Lanes interface.

## 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 V2.31 Power Supply  
Graphic : Z170 Chipsets built-in **HD Graphics 530**  
Adapter: PE0406 PCIe to SFF-8643 Mini SAS HD adapter  
Cable: Amphenol SFF-8643 to SFF-8643 Mini SAS HD Cable  
OS : Microsoft **Windows 8.1 64bit OS**

### 2.2. Test target: PA414A adapter & INTEL 750 SSDPEDMW400G4R5 Add-in Card



### 2.3. Install Hardware

Insert Intel PCIe SSD into PA414A converter's PCIe Gen 3 x4 slot, and then use SFF-8643 to SFF-8643 cable to connect PA414A converter to **PCI-e to SFF-8643 adapter of Z170 M/B**.

### 2.4. Windows 8.1 OS environment setup

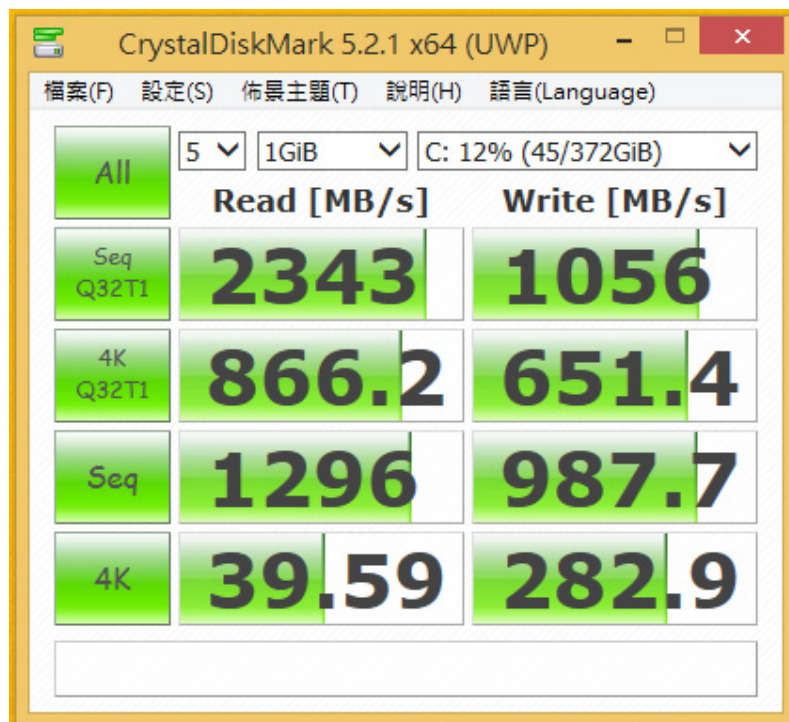
2.4.1. Install Windows 8.1 OS in Intel PCIe 750 SSD.

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## 2.5. CrystalDiskMark 5.2.1 x64 performance test

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

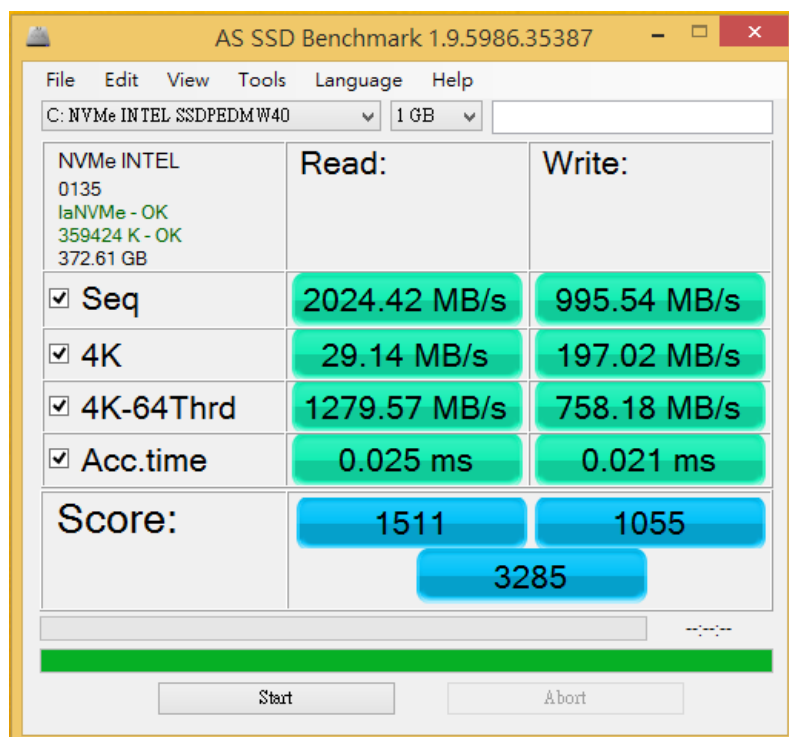
2.5.1 shows [INTEL 750 Add-in Card / 400GB](#) performance as below:



## 2.6 AS SSD Benchmark 1.9 performance test

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

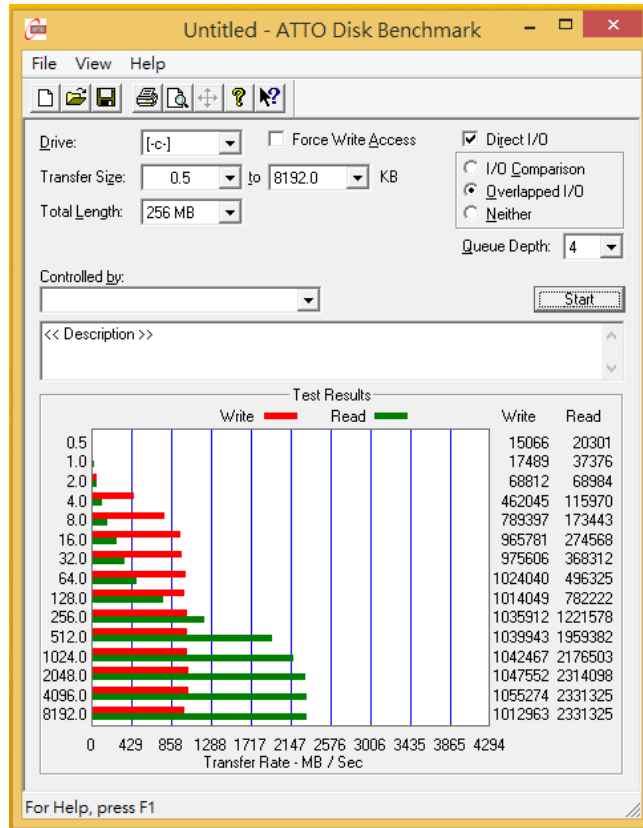
2.6.1 shows [INTEL 750 Add-in Card / 400GB](#) performance as below:



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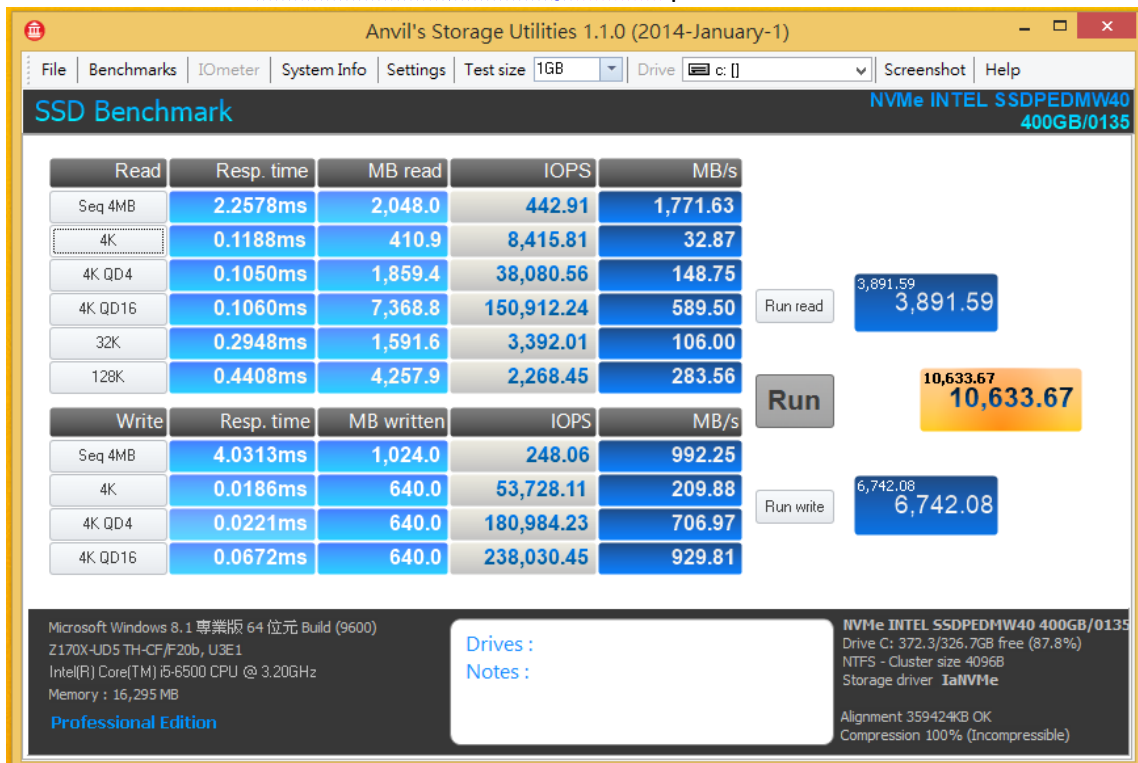
## 2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 shows **INTEL 750 Add-in Card / 400GB** performance as below:



## 2.8 AnvilBenchmark\_V110\_B337

2.8.1 shows **INTEL 750 Add-in Card / 400GB** performance as below:

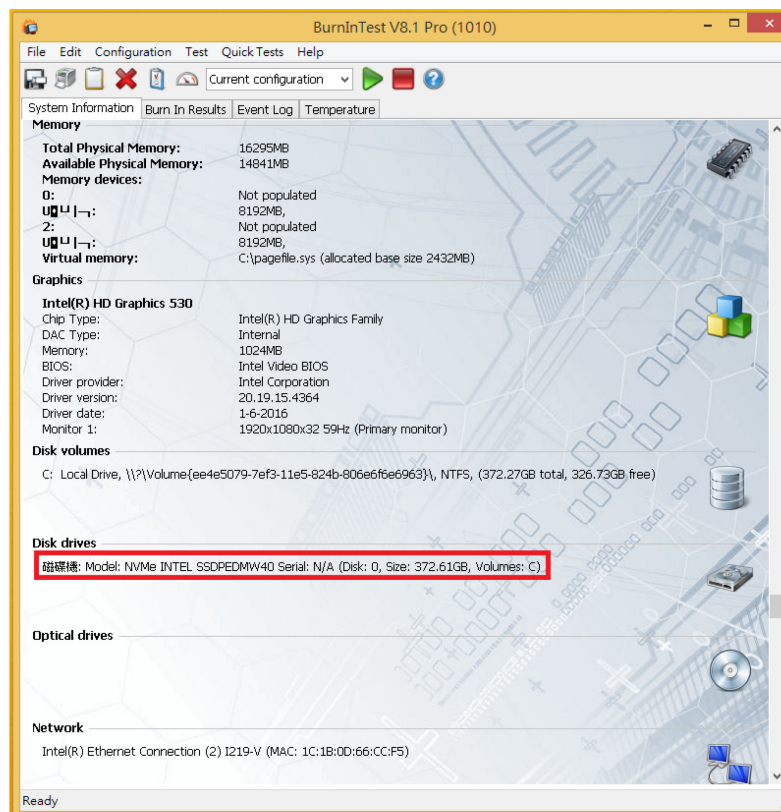
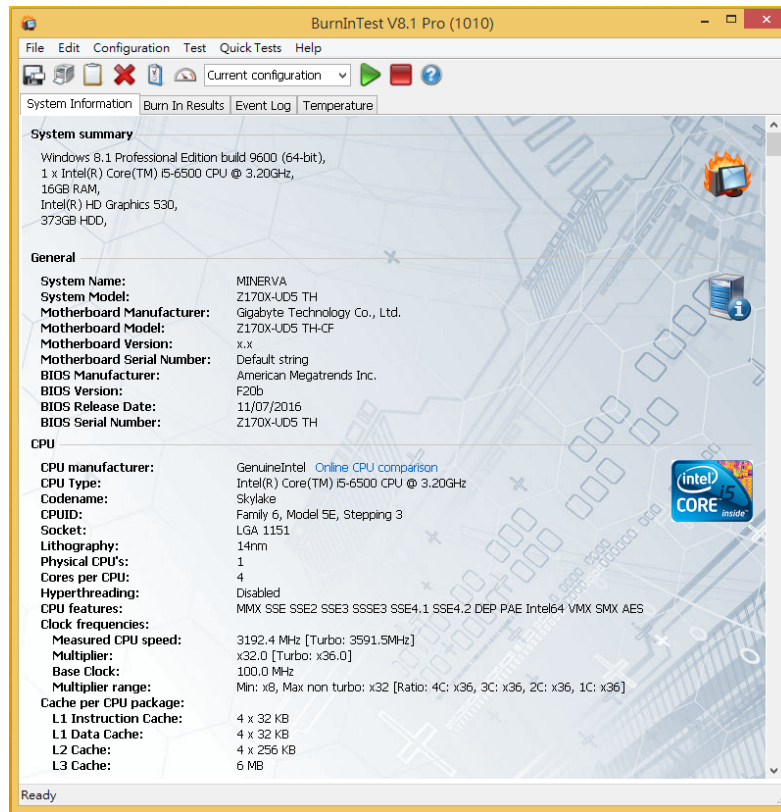


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## 3. Burn In Tests and Results

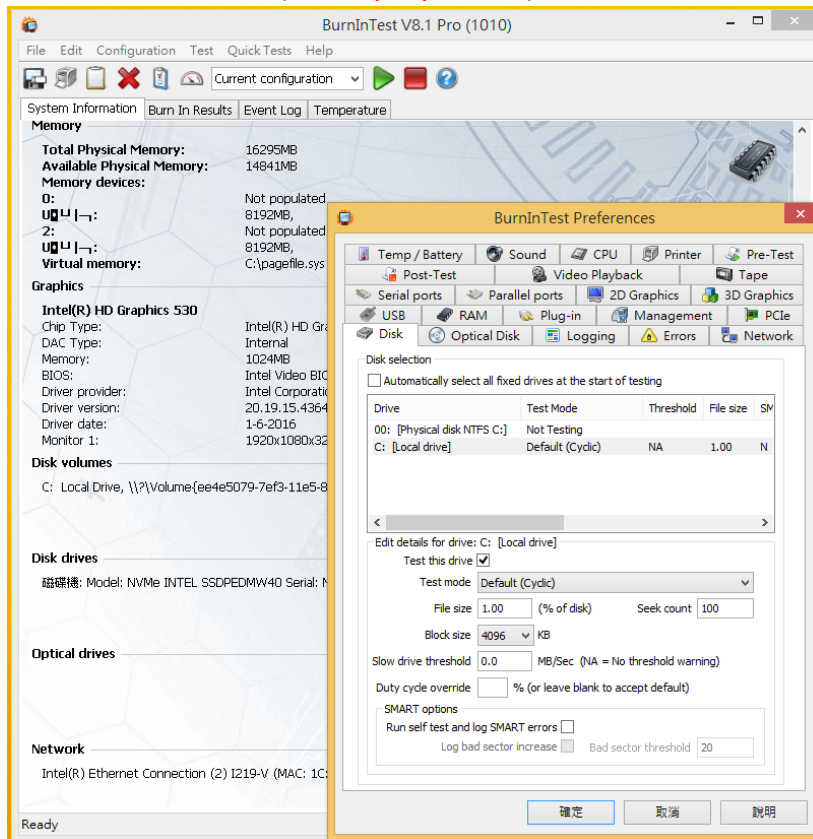
### 3.1 BurnInTest v8.1 Pro for INTEL 750 Add-in Card / 400GB

#### 3.1.1 system information as below:

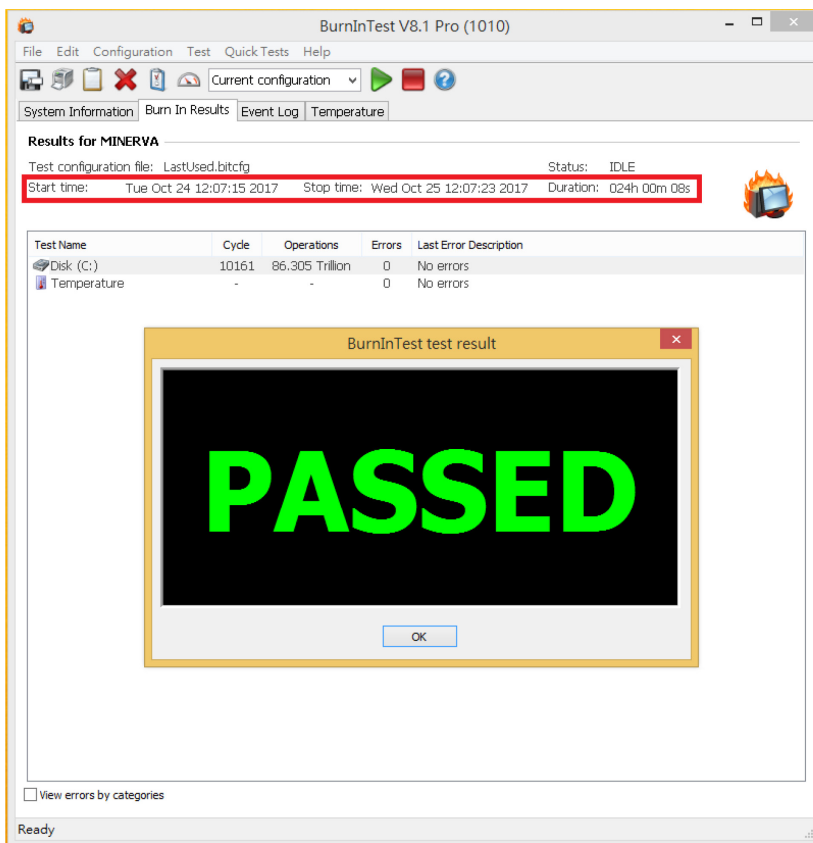


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## 3.1.2 show SSD test mode( 10 ways cycle test)



## 3.1.3 show 24-hour Burn-in test PASSED



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## 4. Summary

- 4.1 Intel PCI-e SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 32Gbps.
- 4.2 PA414A adapter I/O performance is based on Intel PCI-e 400GB SSD.