



# MINERVA

## PE0404 Converter Card

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

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## 1. Overview

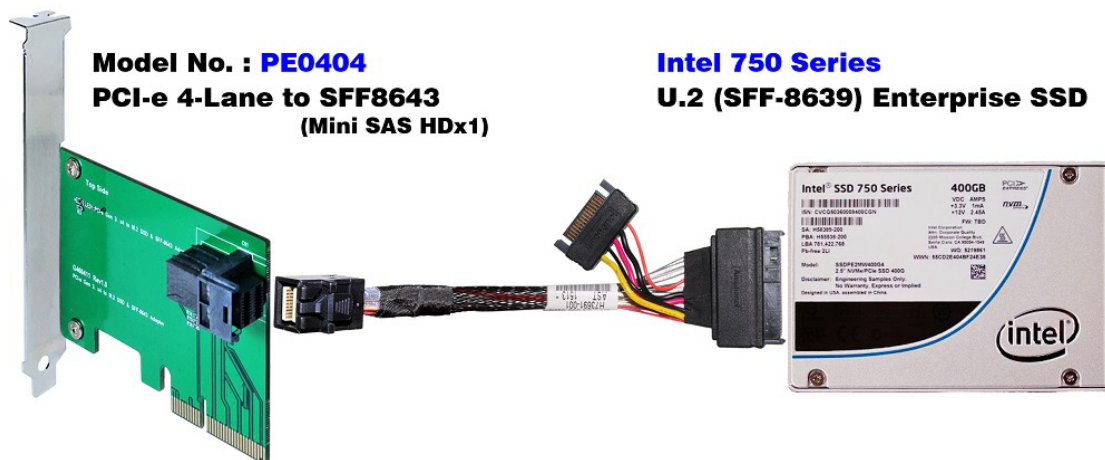
PE0404 adapter, providing SFF-8643 Mini SAS HD connector can be U.2(SFF-8639)SSD or SFF-8643 SSD converted into PCI-e Gen 3 / 4 Lanes interface.

## 2. Tools and Results of Performance Measurement

### 2.1 Test Platform

M/B : ASRock **Z97 Extreme 6**  
CPU : Intel **i5-4426**, 3.2GHz/ 6M Cache/ LGA1150  
Memory : Kingston **KVR16N1S8/4**, DDR3-1600MHz, 8G(4GB DIMM\*2)  
ATX Power : FSP RAIDER 550, **550W ATX**, 12V V2.2 Power Supply  
Graphic : Z97 Chipsets built-in **HD Graphics 4600**  
PCIe adapter: PCIe Gen 3/4 Lanes to SFF-8639 adapter  
Cable: SFF-8643 to SFF-8639 cable  
OS : Microsoft **Windows 8.1 64bit OS**

### 2.2 Test target: PE0404 adapter & [INTEL 750 U.2\(SFF-8639\) NVMe SSD/SSDPE2MW400G4](#)



### 2.3 Install Hardware

Use SFF-8643 to SFF-8639 cable to connect intel 750 SSD to PE0404 **PCI-e adapter of Z97 M/B.**

### 2.4 BIOS & Windows 8.1 OS environment setup

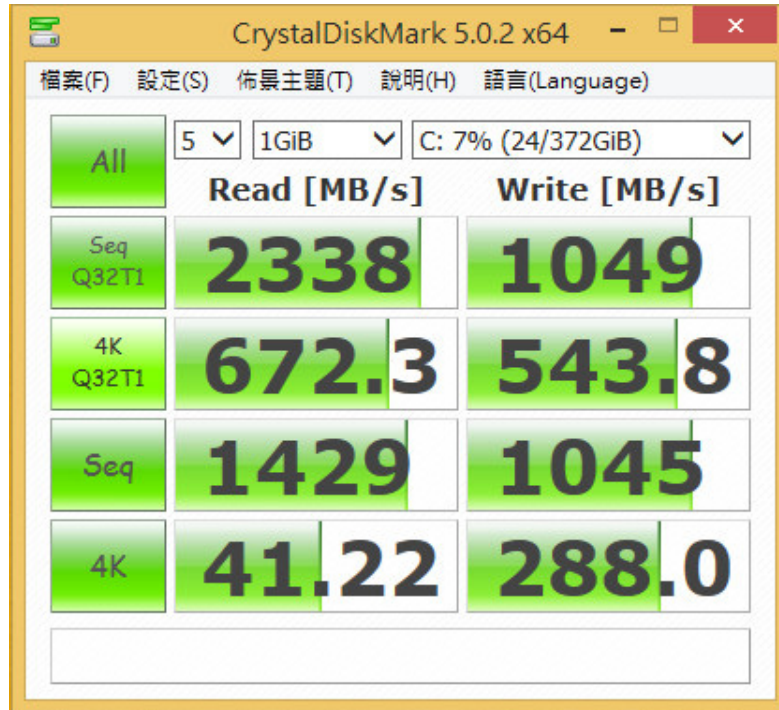
2.4.1 Install Windows 8.1 OS.

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## 2.5 CrystalDiskMark 5.0.2 x64 performance test

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

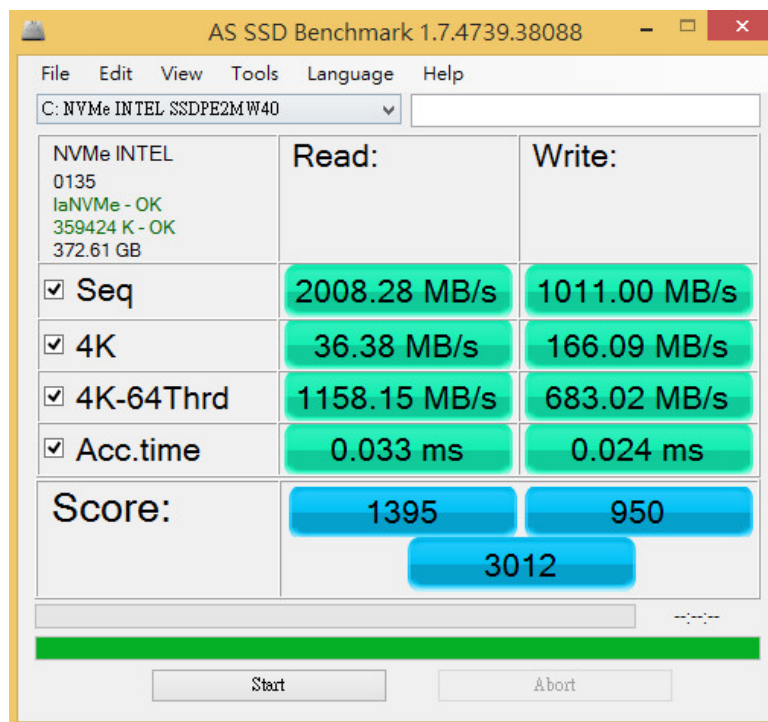
2.5.1 Used SSD(INTEL 750 / SSDPE2MW400G4)performance as below:



## 2.6 AS SSD Benchmark 1.7 performance test

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

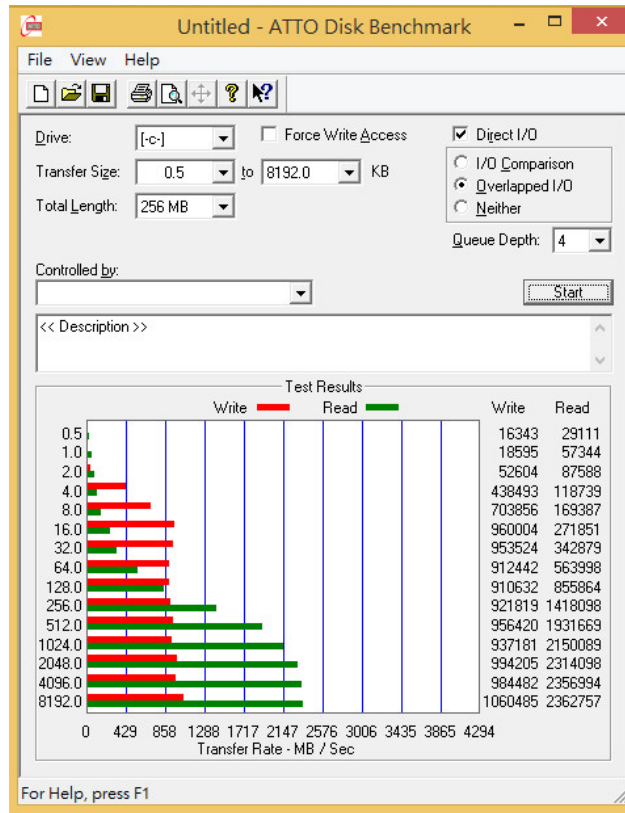
2.6.1 Used SSD(INTEL 750 / SSDPE2MW400G4)performance as below:



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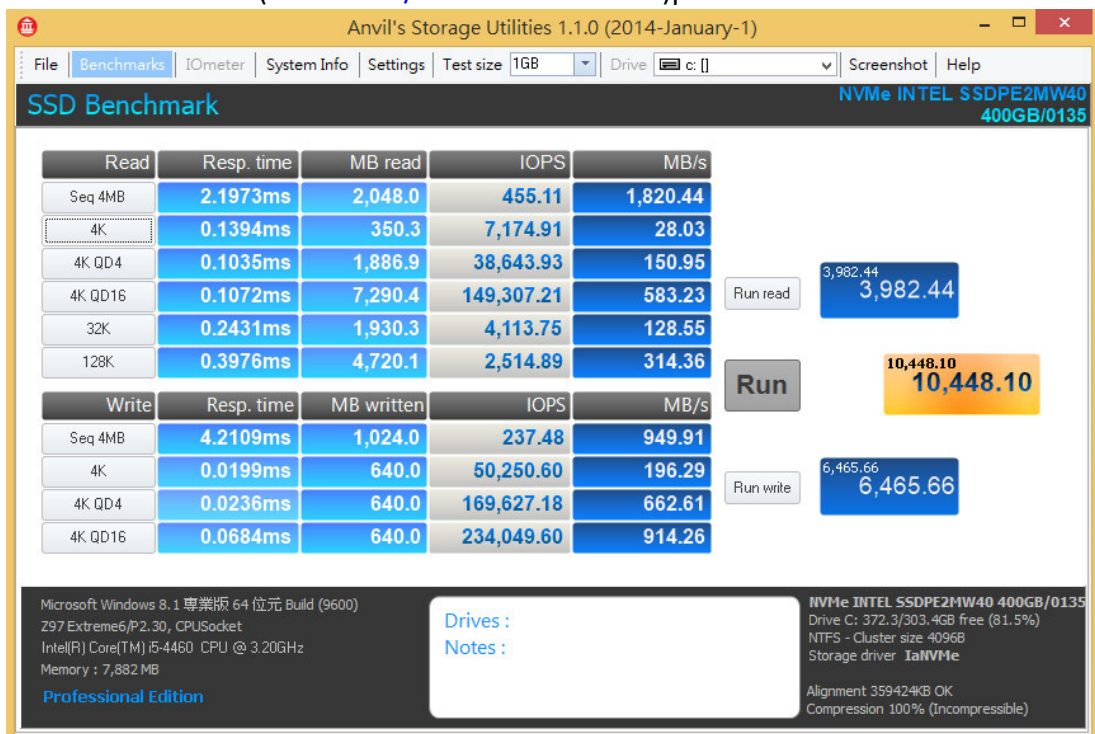
## 2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 Used SSD(INTEL 750 / SSDPE2MW400G4)performance as below:



## 2.8 AnvilBenchmark\_V110\_B337

2.8.1 Used SSD(INTEL 750 / SSDPE2MW400G4)performance as below:

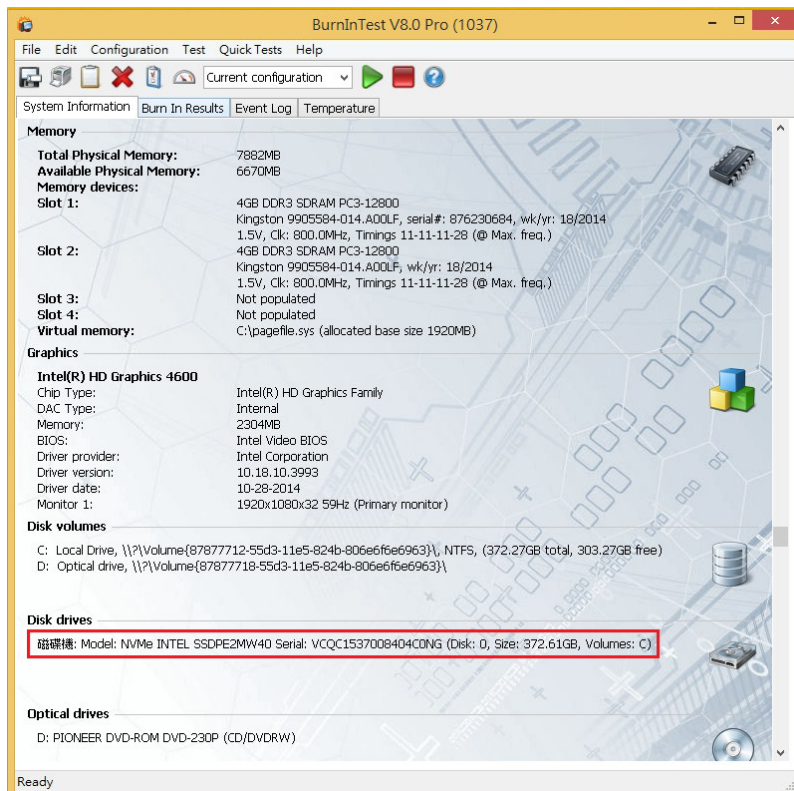
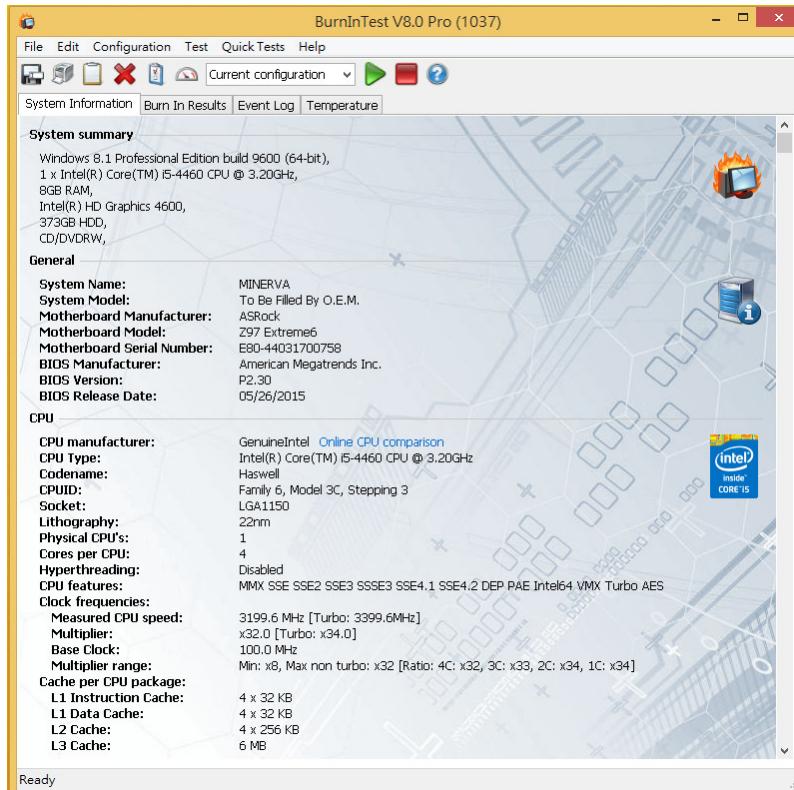


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## 3. Burn In Tests and Results

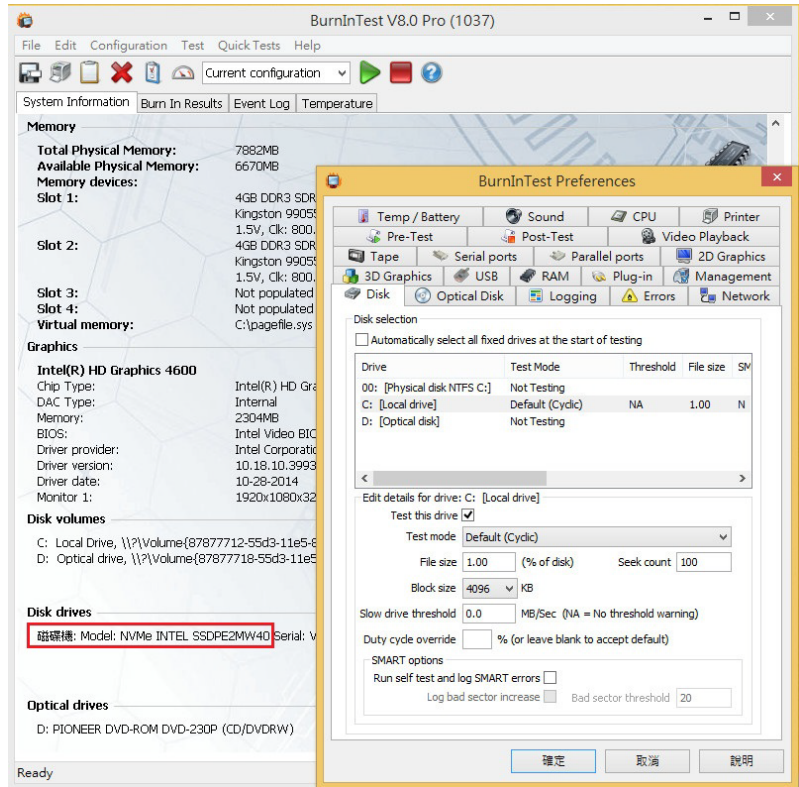
### 3.1 BurnInTest v8.0 Pro for SSD(INTEL 750 / SSDPE2MW400G4)

#### 3.1.1 **system information** as below:

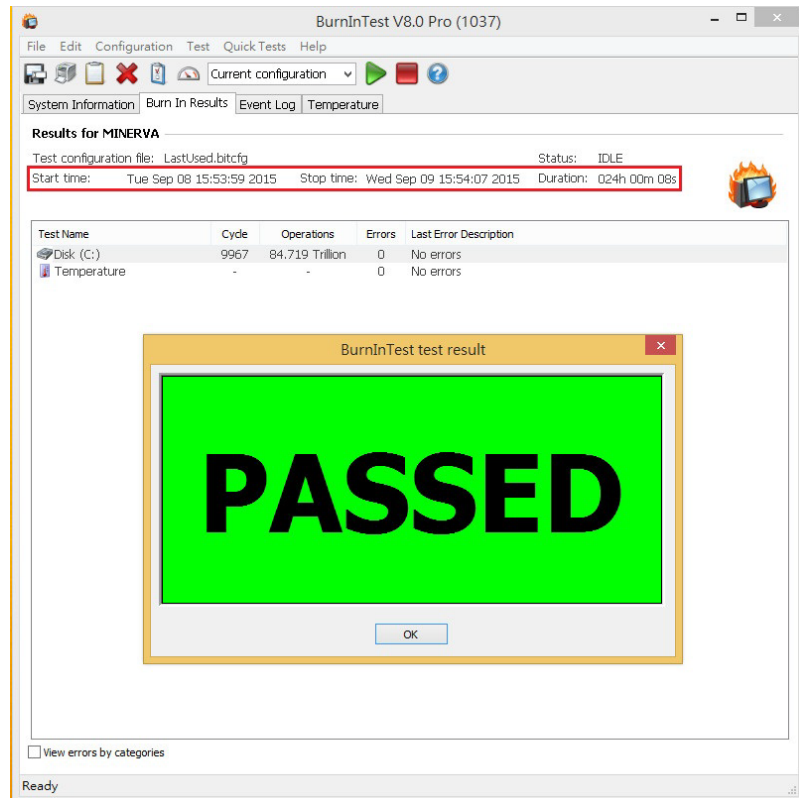


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## 3.1.2 show Disk test mode( 10 ways cycle test)



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



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## 4. Summary

- 4.1 Intel 750 U.2(SFF-8639) SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 32Gbps.
- 4.2 PE0404 adapter I/O performance is based on Intel 750 U.2(SFF-8639) SSD.