



MINERVA

PA405A Converter Card

Performance & Burn In Test Rev. 1. 0

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1. Overview

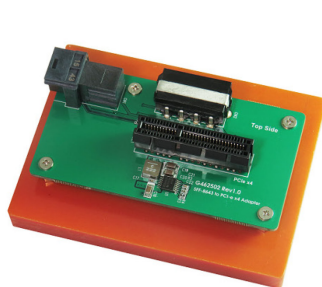
PA405A adapter, providing PCIe Gen 3 4-Lane slot can be PCIe SSD converted into SFF-8643 PCIe Gen 3 / 4 Lanes interface.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B : ASRock **Z170 Extreme 7+**
CPU : Intel **i5-6400**, 2.7GHz/ 6M Cache/ LGA1151
Memory : Kingston **KVR21N15D8/8**, DDR4-2133MHz, 16G(8GB DIMM*2)
ATX Power : FSP RAIDER 550, **550W ATX**, 12V V2.2 Power Supply
Graphic : Z170 Chipsets built-in **HD Graphics 530**
PCIe adapter: PCIe Gen 3/4 Lanes to SFF-8643 adapter
Cable: Amphenol SFF-8643 to SFF-8643 cable
OS : Microsoft **Windows 8.1 64bit OS**

2.2 Test target: PA405A adapter & [Intel 750 NVMe 400GB SSDPEDMW400G4R5 Add-in Card](#)



PA405A Adapter



Intel 750 Add-in Card



SFF-8643 Cable

2.3 Install Hardware

Insert Intel PCIe SSD into PA405A converter's PCIe Gen 3 x4 slot, and then Use SFF-8643 to SFF-8643 cable to connect PA405A converter to **PCI-e to SFF-8643 adapter of Z170 Extreme 7+ M/B.**

2.4 BIOS & Windows 8.1 OS environment setup

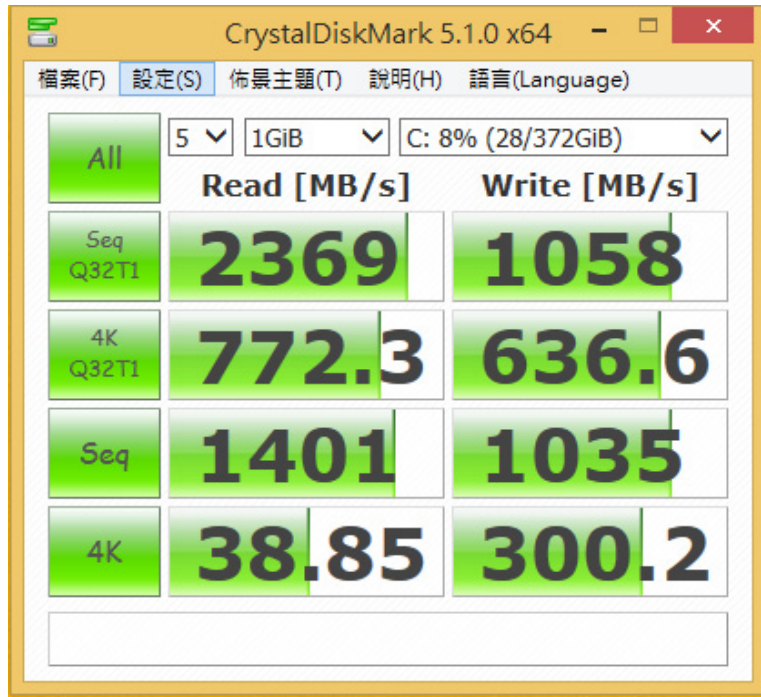
2.4.1 Install Windows 8.1 64bit OS.

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2.5 CrystalDiskMark 5.1.0 x64 performance test

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

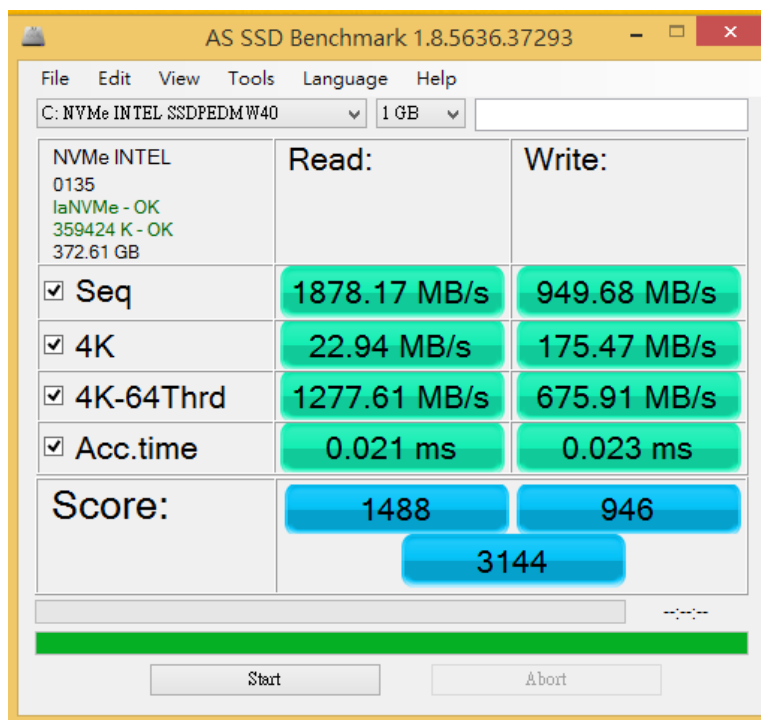
2.5.1 Used SSD([INTEL 750 SSDPEDMW400G4R5 Add-in Card](#))performance as below:



2.6 AS SSD Benchmark 1.8 performance test

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

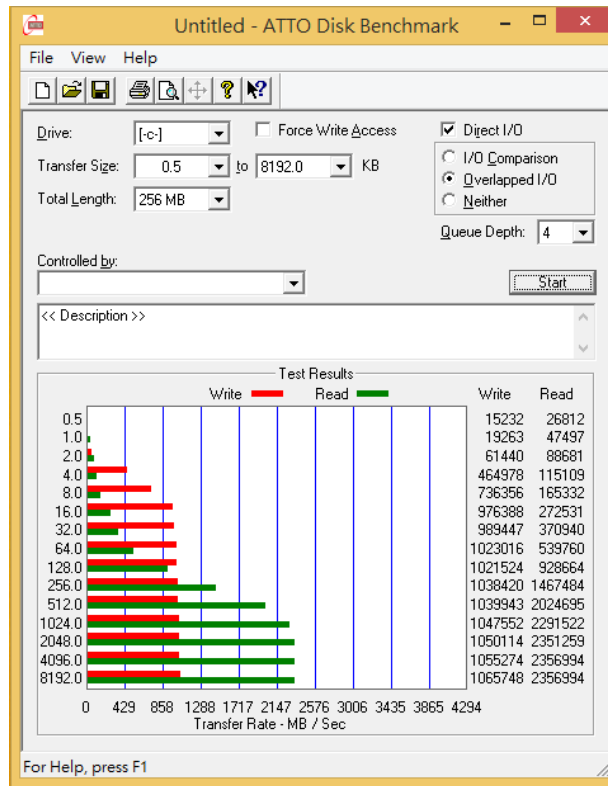
2.6.1 Used SSD([INTEL 750 SSDPEDMW400G4R5 Add-in Card](#))performance as below:



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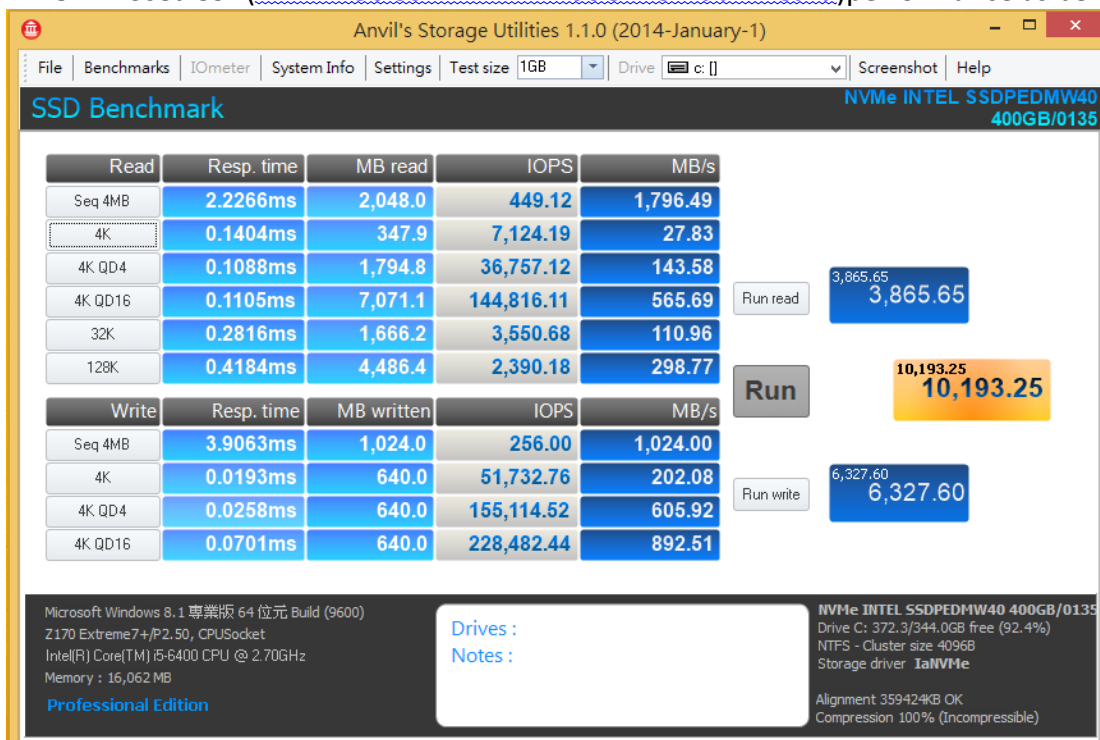
2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 Used SSD([INTEL 750 SSDPEDMW400G4R5 Add-in Card](#))performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Used SSD([INTEL 750 SSDPEDMW400G4R5 Add-in Card](#))performance as below:

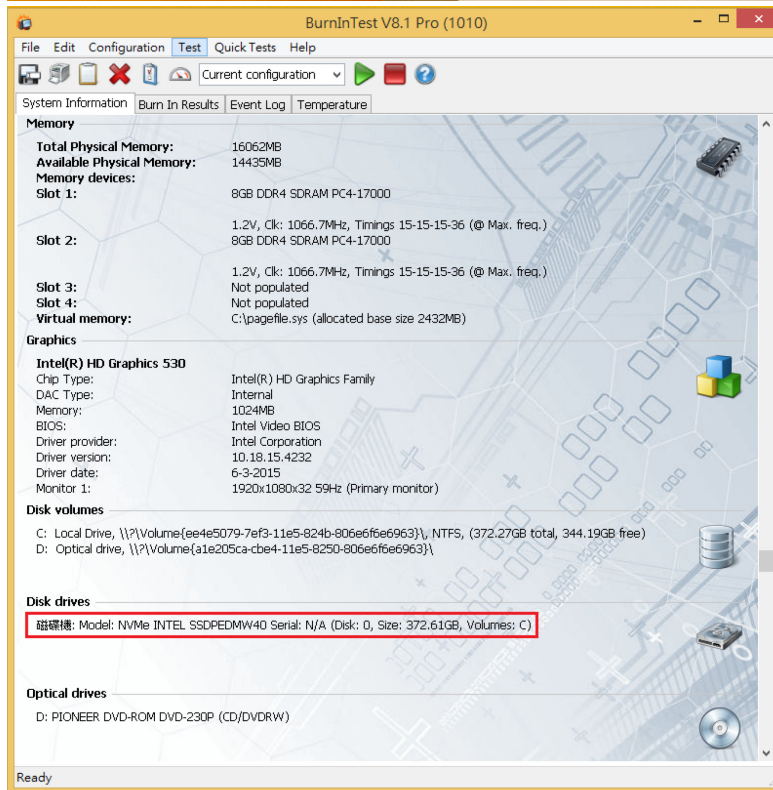
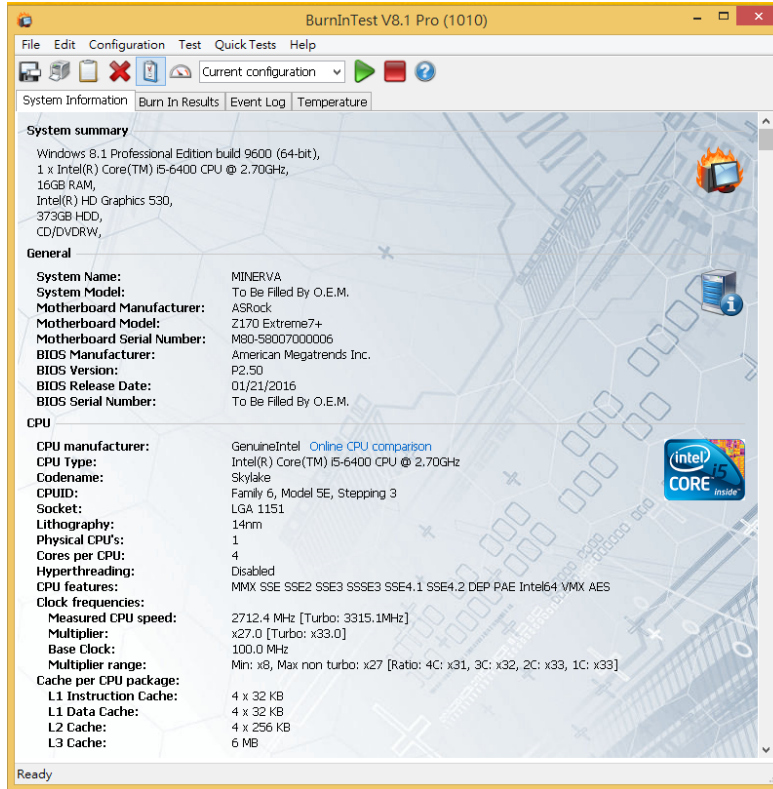


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3. Burn In Tests and Results

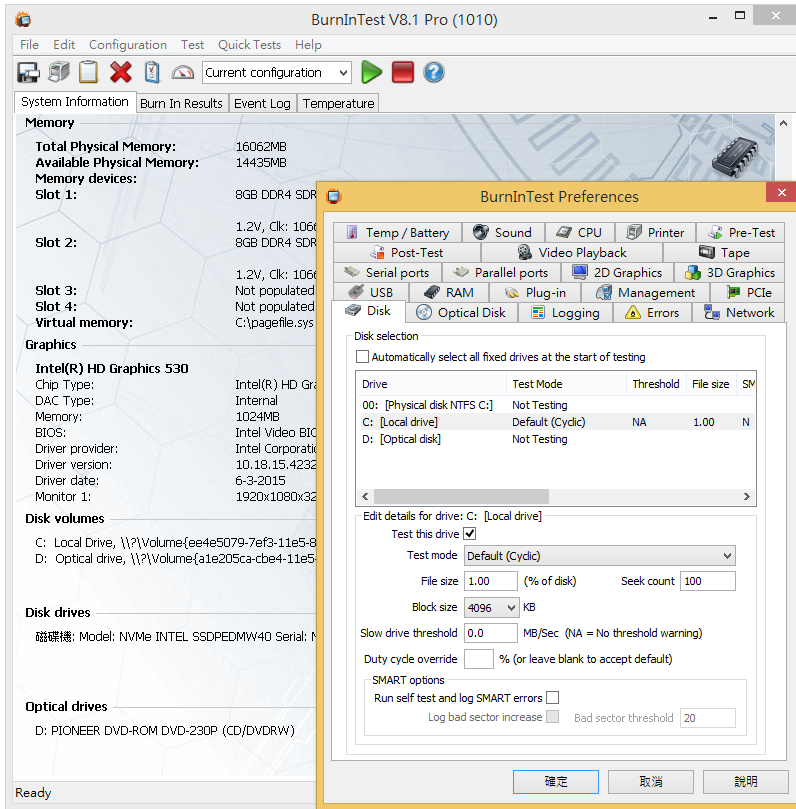
3.1 BurnInTest v8.1 Pro for SSD([INTEL 750 SSDPEDMW400G4R5 Add-in Card](#))

3.1.1 **system information** as below:

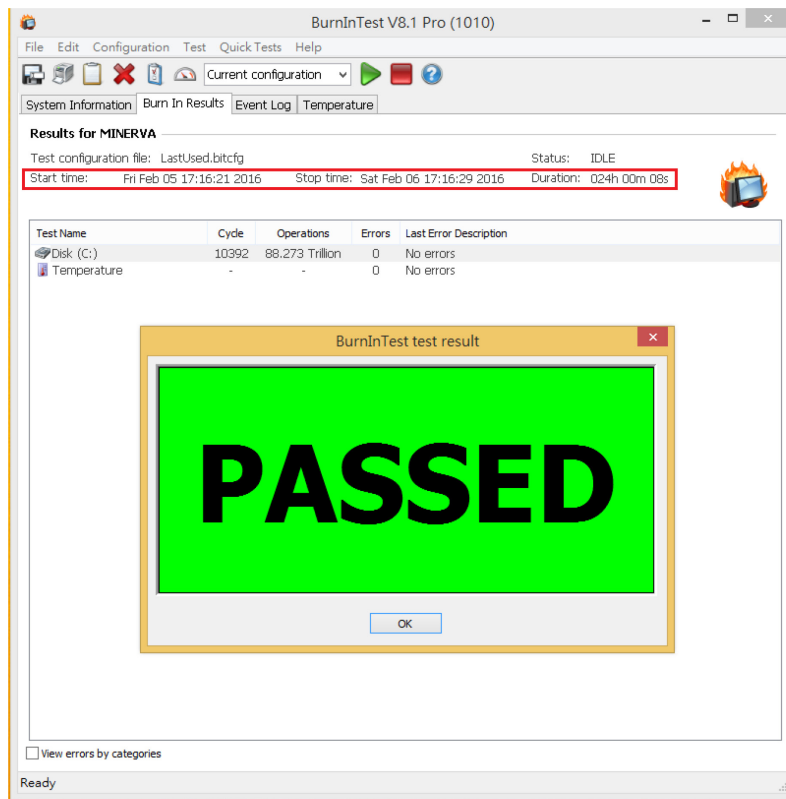


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3.1.2 show Disk test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test PASSED



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4. Summary

- 4.1 Intel PCI-e SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 32Gbps.
- 4.2 PA405A adapter I/O performance is based on Intel PCI-e NVMe 400GB SSD.