MINERVA

PU407A Converter Card

Performance & Burn In Test Rev. 1. 0

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PU407A Converter Card

1. Overview

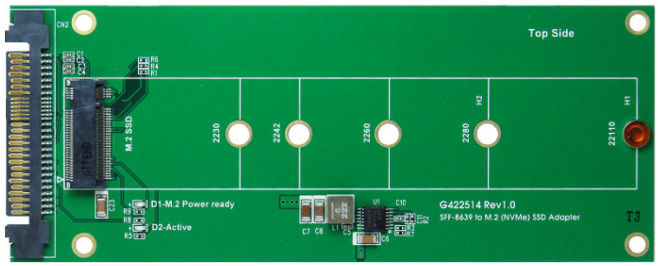
PU407A adapter, providing M.2 M-key connector can be M.2 (PCI-e I/F) SSD converted into U.2(SFF-8639), PCI-e Gen 3 / 4 Lanes interface.

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-8639 cable
OS : Microsoft **Windows 8.1 64bit OS**

2.2 Test target: PU407A adapter & SM951 256GB NVMe MZVPV256HDGL-00000



PU2407A Adapter

SM951 256GB NVMe M.2 SSD

2.3 Install Hardware

Insert M.2 SSD into PU407A converter's M.2 M-key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Use SFF-8643 to SFF-8639 cable to connect PU407A converter to **PCI-e adapter of Z170+ M/B.**

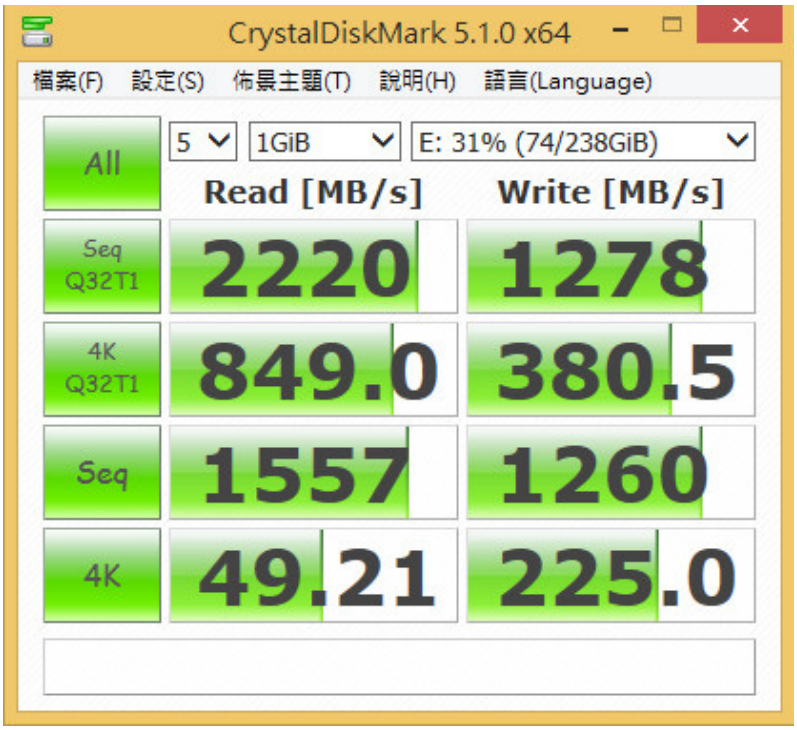
2.4 BIOS & Windows 8.1 OS environment setup

2.4.1 Install Windows 8.1 64bit OS

2.5 CrystalDiskMark 5.1.0 x64 performance test

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

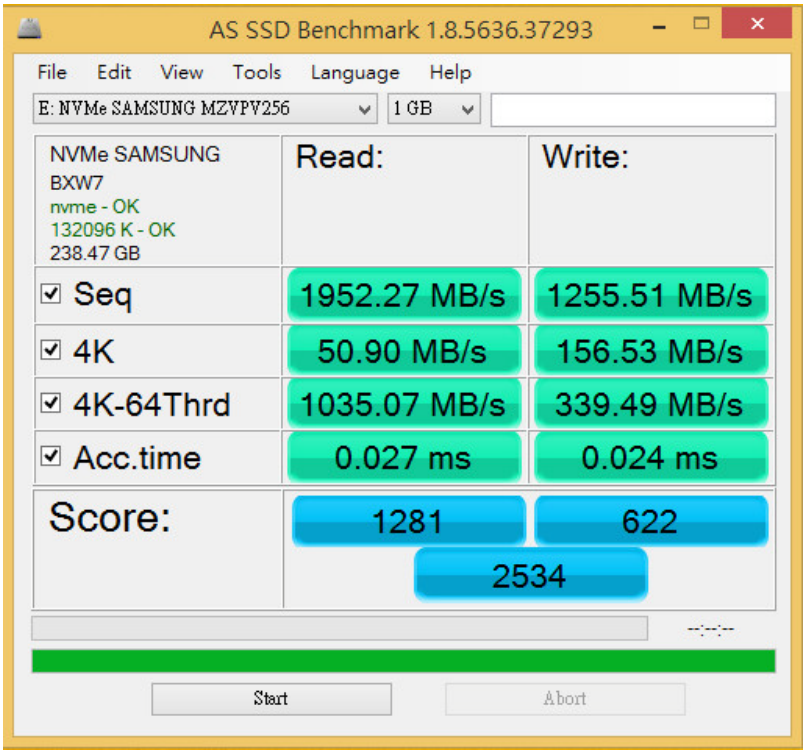
2.5.1 Used SSD(SM951 256GB NVMe MZVPV256HDGL-00000)performance as below:



2.6 AS SSD Benchmark 1.8 performance test

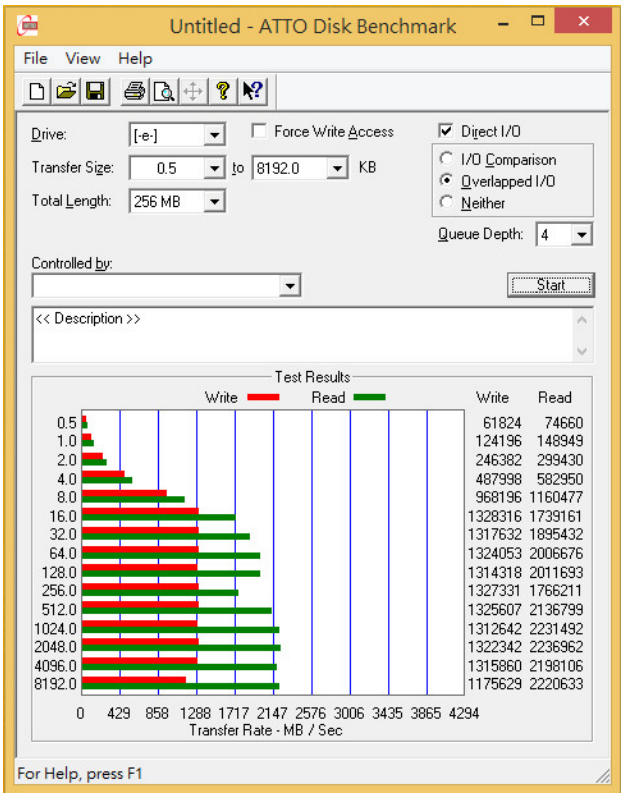
※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 Used SSD(SM951 256GB NVMe MZVPV256HDGL-0000)performance as below:



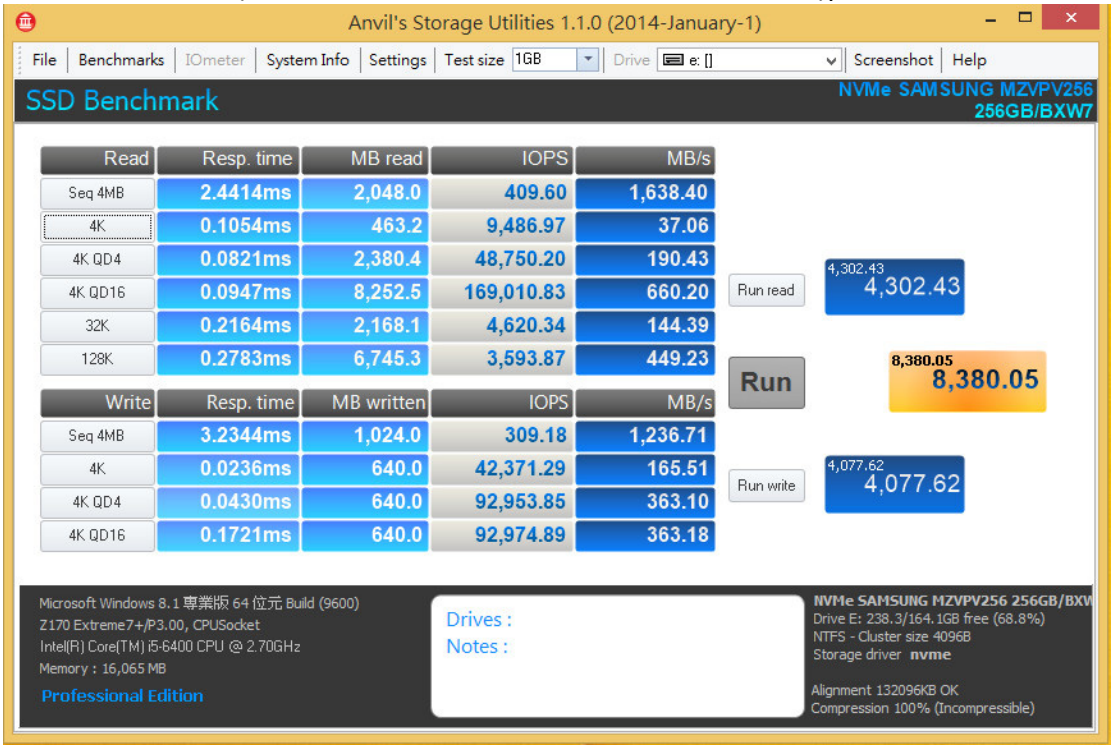
2.7 ATTO Disk Benchamrk 2.47 performance test

2.7.1 Used SSD(SM951 256GB NVMe MZVPV256HDGL-0000)performance as below:



2.8 AnvilBenchmark_V110_B337

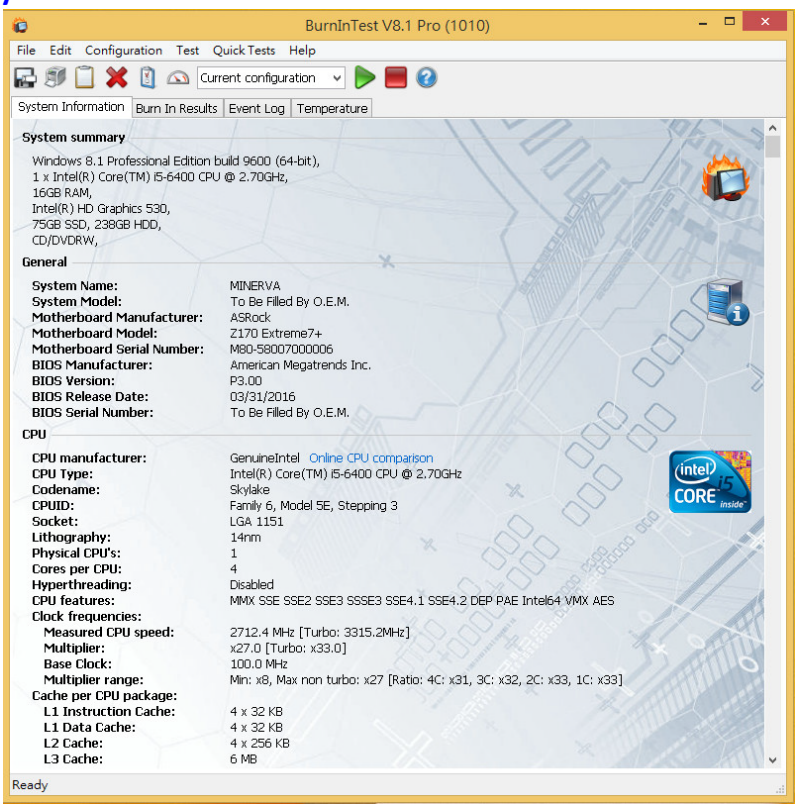
2.8.1 Used SSD(SM951 256GB NVMe MZVPV256HDGL-0000)performance as below:

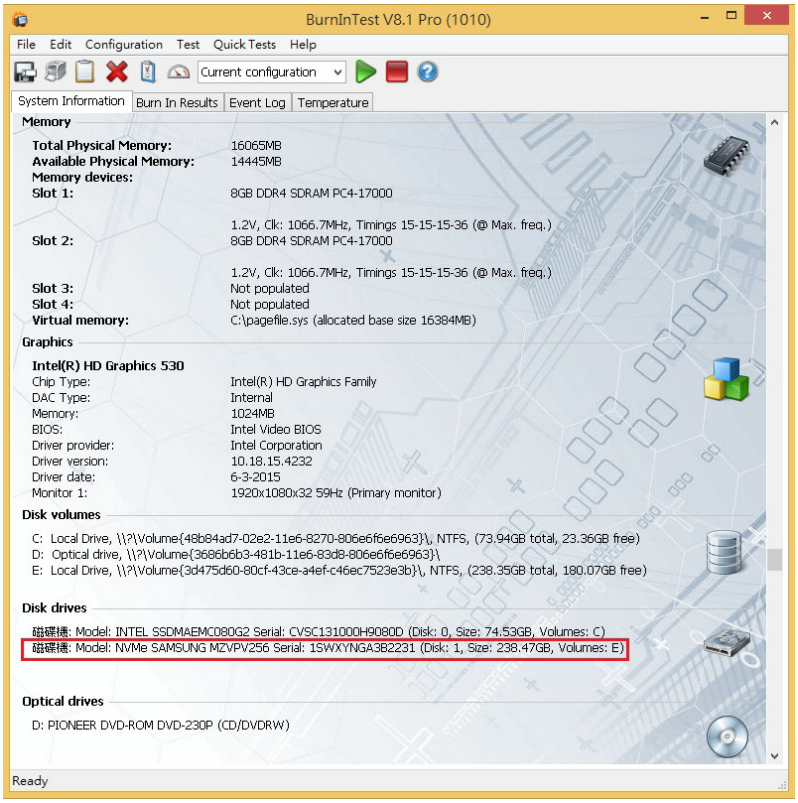


3. Burn In Tests and Results

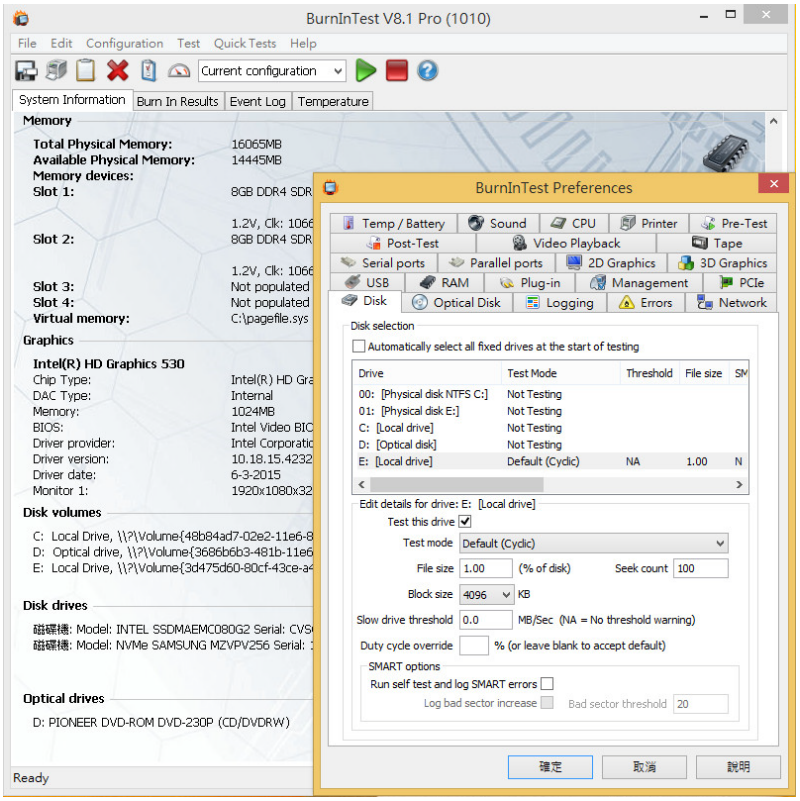
3.1 BurnInTest v8.1 Pro for SSD(SM951 256GB NVMe MZVPV256HDGL-0000)

3.1.1 **system information** as below:

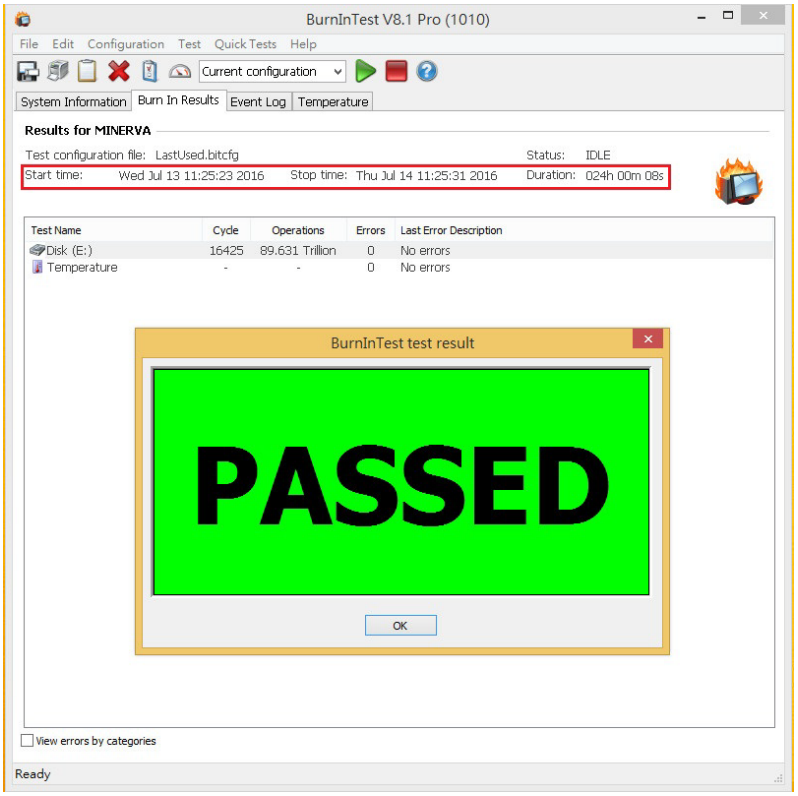




3.1.2 show Disk test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test PASSED



4. Summary

4.1 M.2 SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 32Gbps.

4.2 PU407A adapter I/O performance is based on M.2 NVMe PCI-e Gen 3 / 4 Lanes SSD.