



# MINERVA

## PE0410 Converter Card

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

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## 1. Overview

PE0410 adapter, providing SFF-8639 female connector can be PU3401F adapter+M.2 NVMe SSD converted into PCI-e Gen 3 / 4 Lanes interface with SATA power connector.

## 2. Tools and Results of Performance Measurement

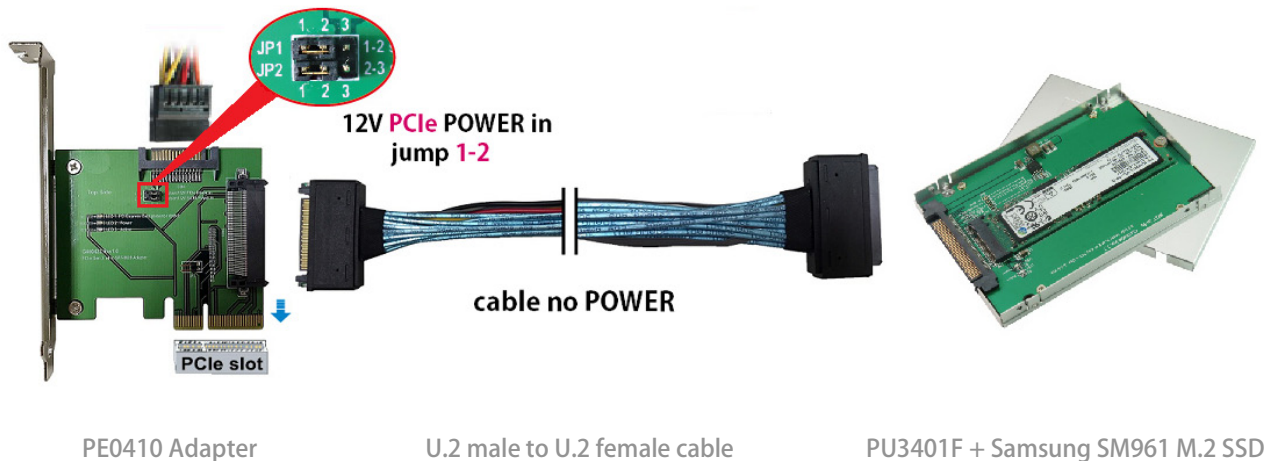
### 2.1 Test Platform

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**  
CABLE: U.2(SFF-8639) **Male** to U.2(SFF-8639) **Female** Cable  
OS : Microsoft **Windows 10 64bit OS**

### 2.2 Test target: PE0410 adapter & Samsung SM961 512GB NVMe SSD

### 2.3 Install Hardware

Insert PE0410 adapter into **PCI-e slot of Z170X UD5 TH**, and then uses cable to connect Samsung SM961 **512GB** NVMe SSD.



### 2.4 BIOS & Windows 10 OS environment setup

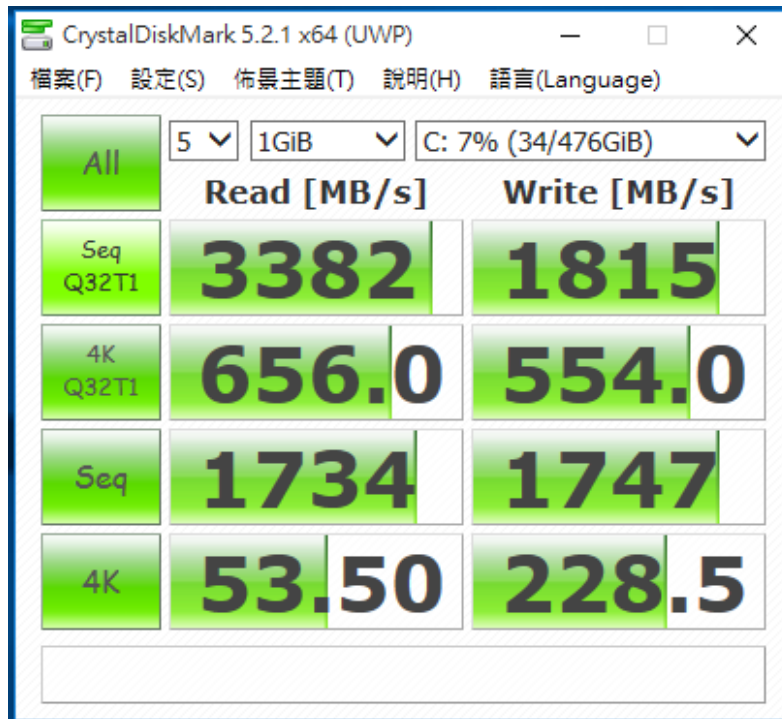
2.4.1 Install Windows 10 64bit OS into Samsung SM961 **512GB** NVMe SSD.

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## 2.5 CrystalDiskMark 5.2.1 x64 performance test

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

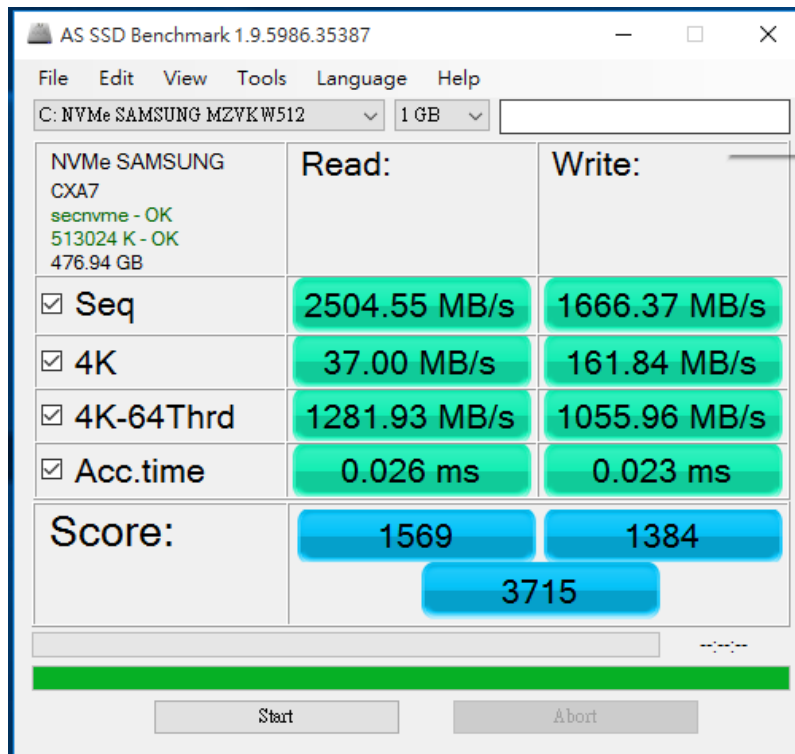
2.5.1 Show [Samsung SM961 512GB NVMe SSD](#) performance as below:



## 2.6 AS SSD Benchmark 1.9 performance test

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

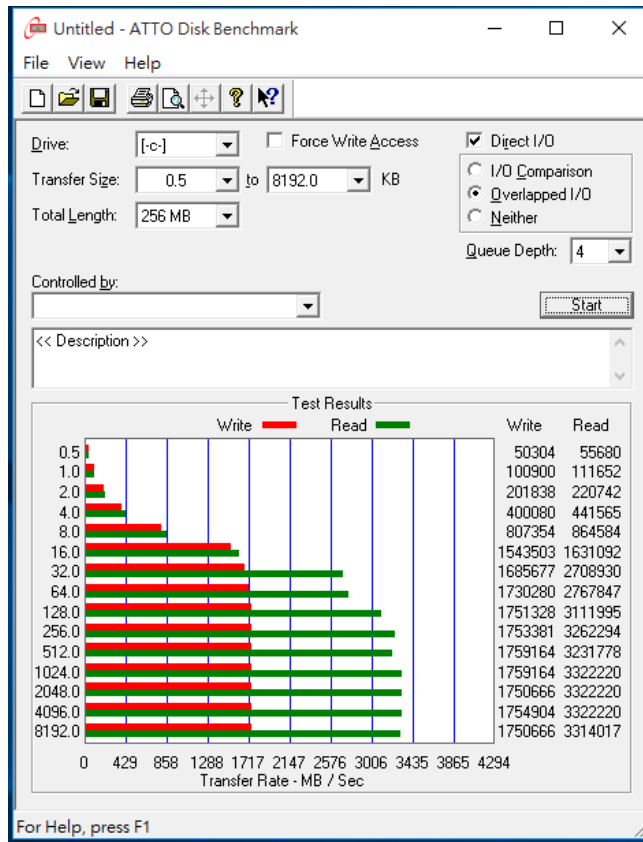
2.6.1 Show [Samsung SM961 512GB NVMe SSD](#) performance as below:



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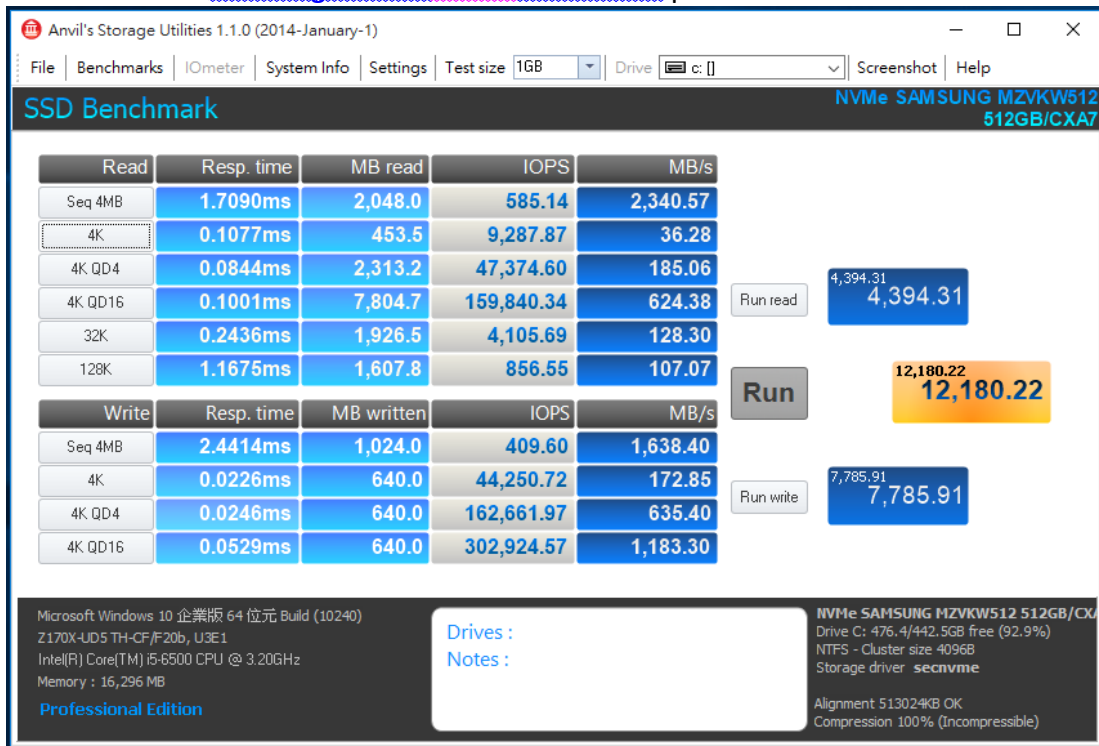
## 2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 Show [Samsung SM961 512GB NVMe SSD](#) performance as below:



## 2.8 AnvilBenchmark\_V110\_B337

2.8.1 Show [Samsung SM961 512GB NVMe SSD](#) performance as below:

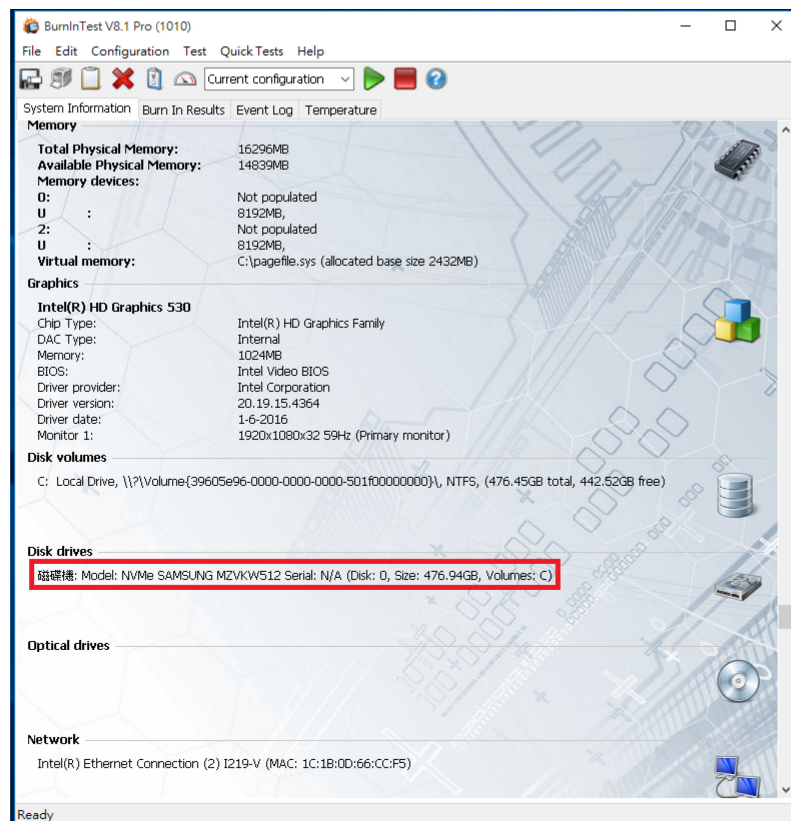
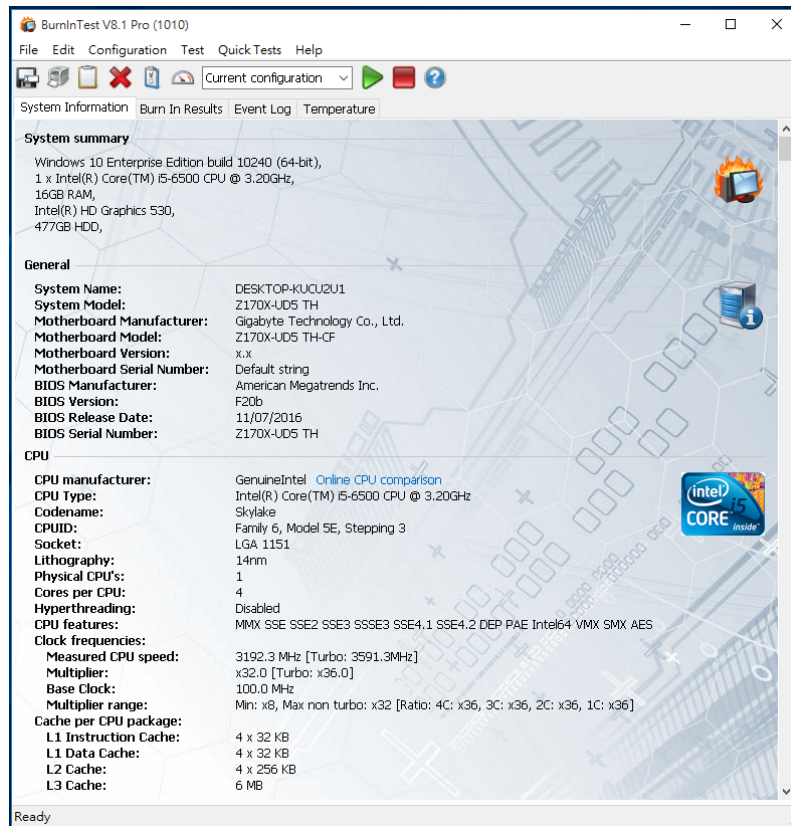


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## 3. Burn In Tests and Results

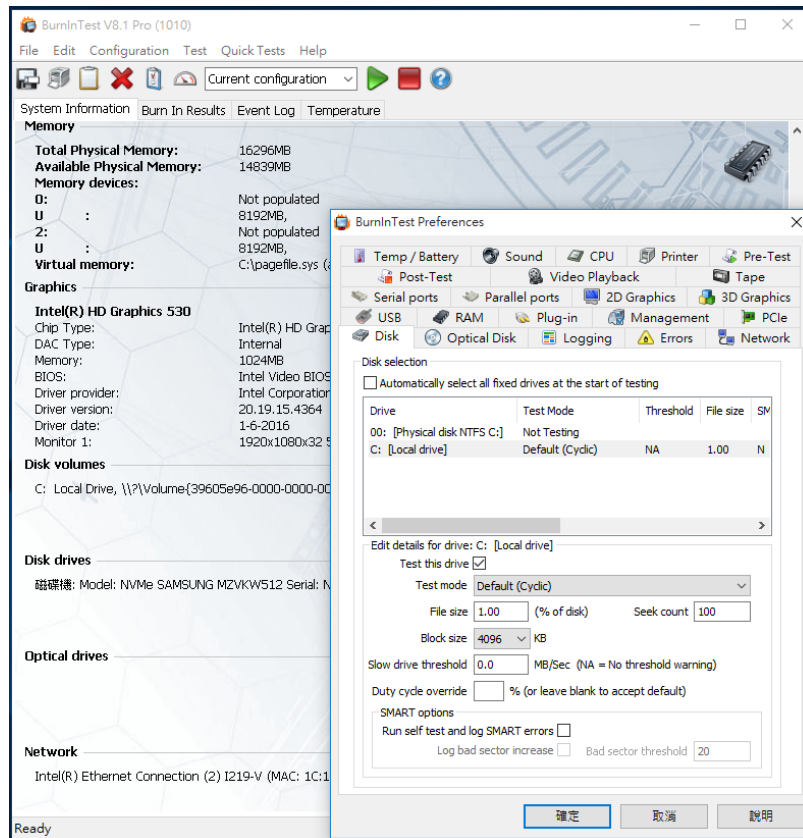
### 3.1 BurnInTest v8.1 Pro for [Samsung SM961 512GB NVMe SSD](#) SSD

#### 3.1.1 system information as below:

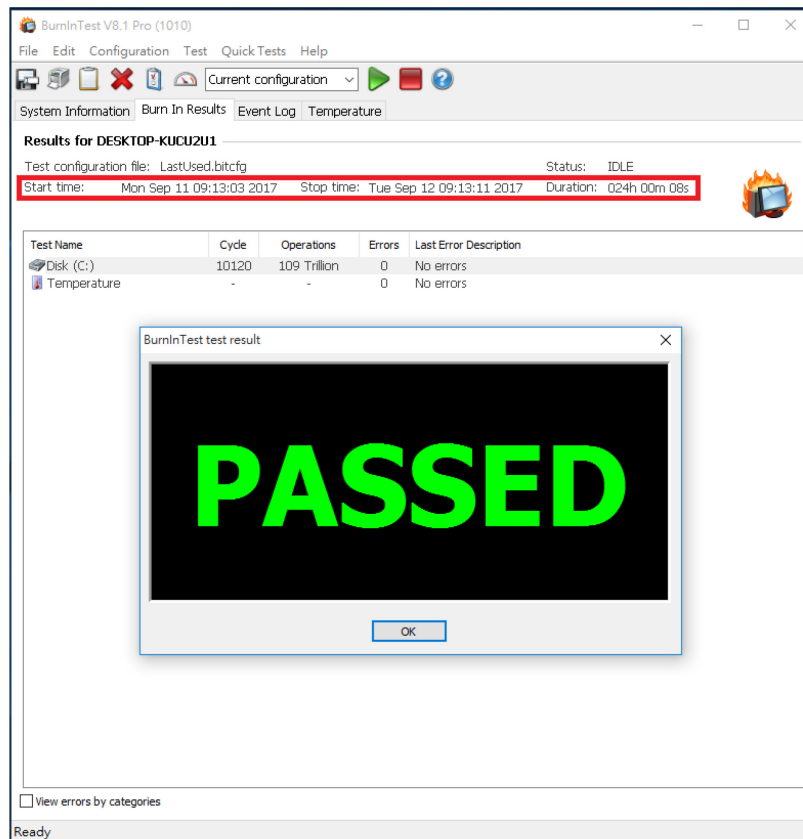


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## 3.1.2 show Disk test mode (10 ways cycle test)



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



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## 4. Summary

- 4.1 M.2 SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 4GB.
- 4.2 PE0407 adapter I/O performance is based on M.2 NVMe PCI-e Gen 3 / 4 Lanes SSD.