MINERVA
PE0407 Converter Card

Performance & Burn In Test   Rev. 1. 0

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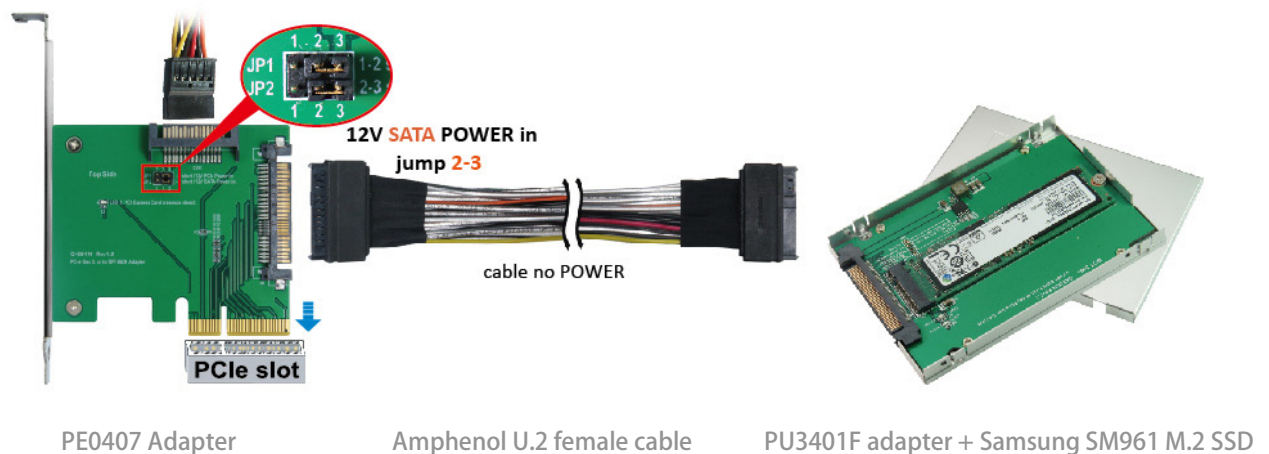
PE0407   Converter Card

1. Overview

PE0407 adapter, providing SFF-8639 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:	Amphenol U.2(SFF-8639) **Female** to U.2(SFF-8639) **Female** Cable
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: PE0407 adapter & Samsung SM961 **512GB** NVMe SSD

PE0407 Adapter   Amphenol U.2 female cable   PU3401F adapter + Samsung SM961 M.2 SSD

2.3   Install Hardware

Insert PE0407 adapter into **PCI-e slot of Z170X UD5 TH**, and then uses cable to connect Samsung SM961 **512GB** NVMe SSD.

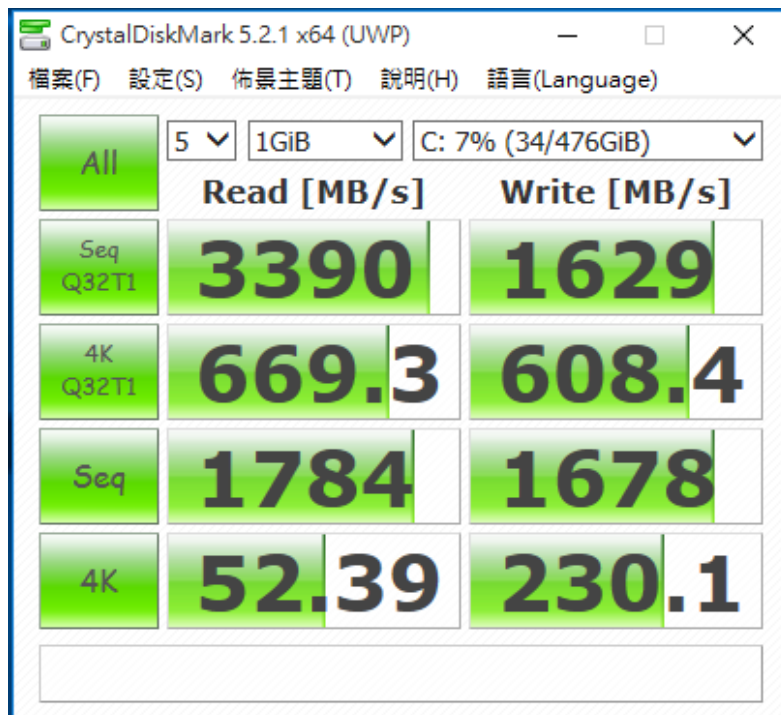### 2.4   BIOS & Windows 10 OS environment setup

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)

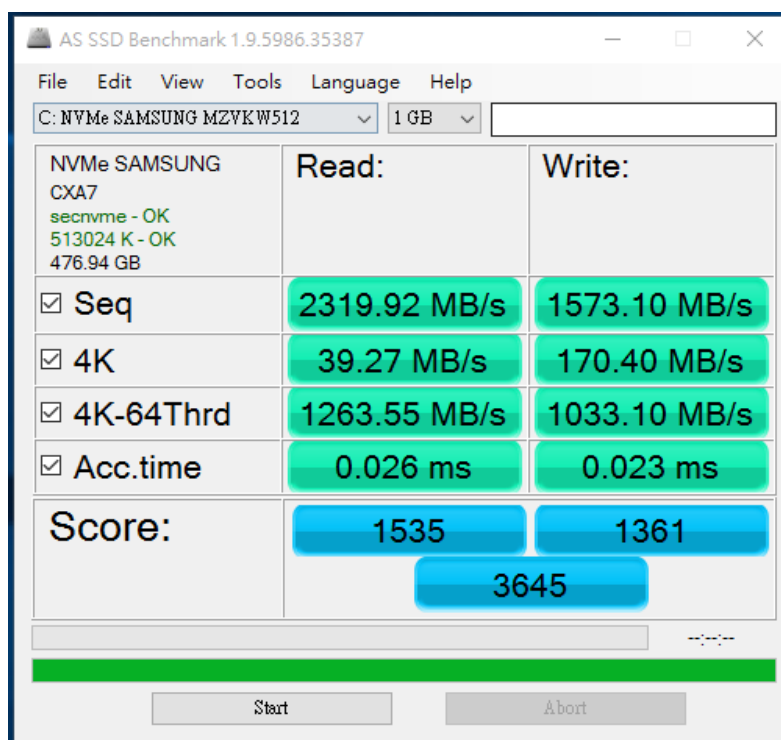2.5.1　Show Samsung SM961 512GB NVMe SSD performance as below:

2.6　AS SSD Benchmark 1.9 performance test
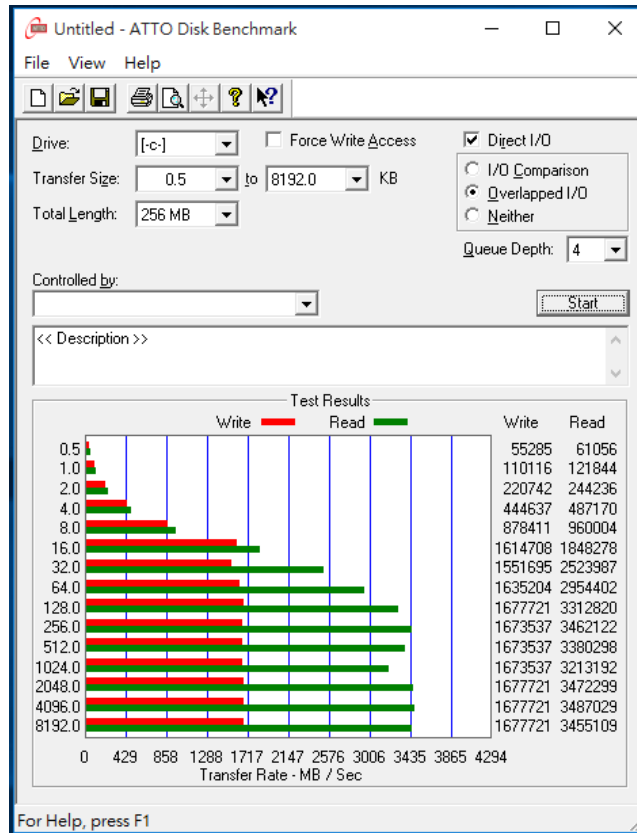※Benchmark (Read & Write by MB/s, default block size = 16MB)

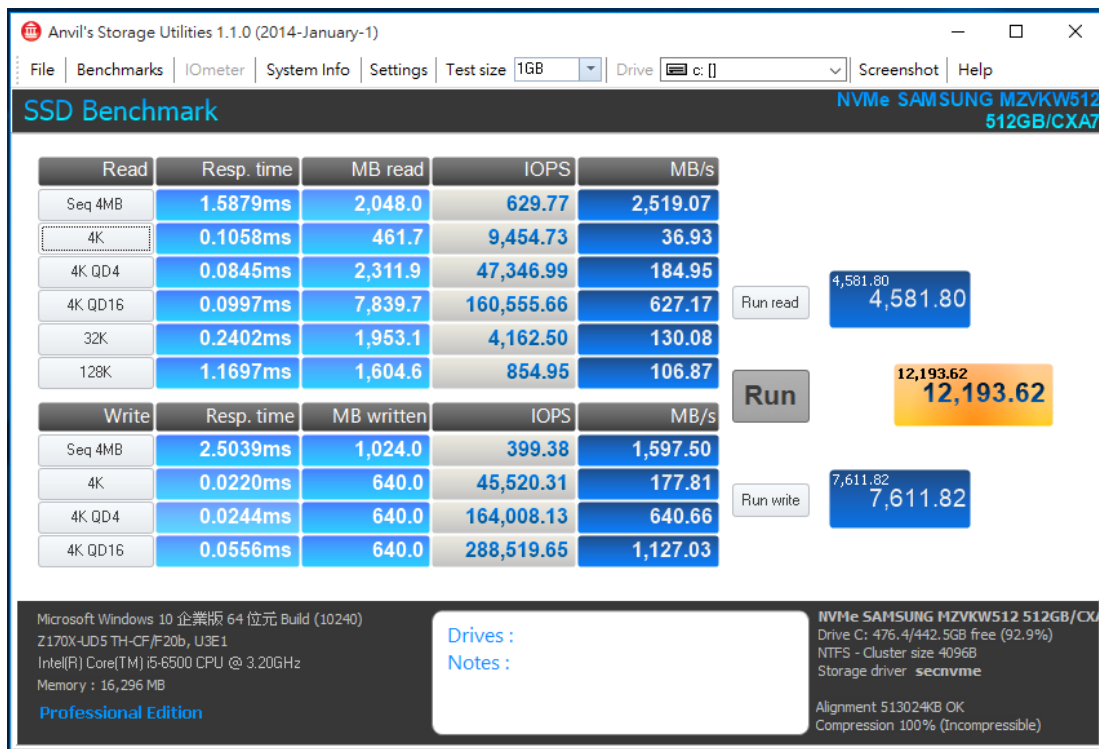2.6.1　Show Samsung SM961 512GB NVMe SSD performance as below:

2.7   ATTO Disk Benchamrk 2.47 performance test

2.7.1   Show Samsung SM961 **512GB** NVMe SSD performance as below:

2.8   AnvilBenchmark_V110_B337

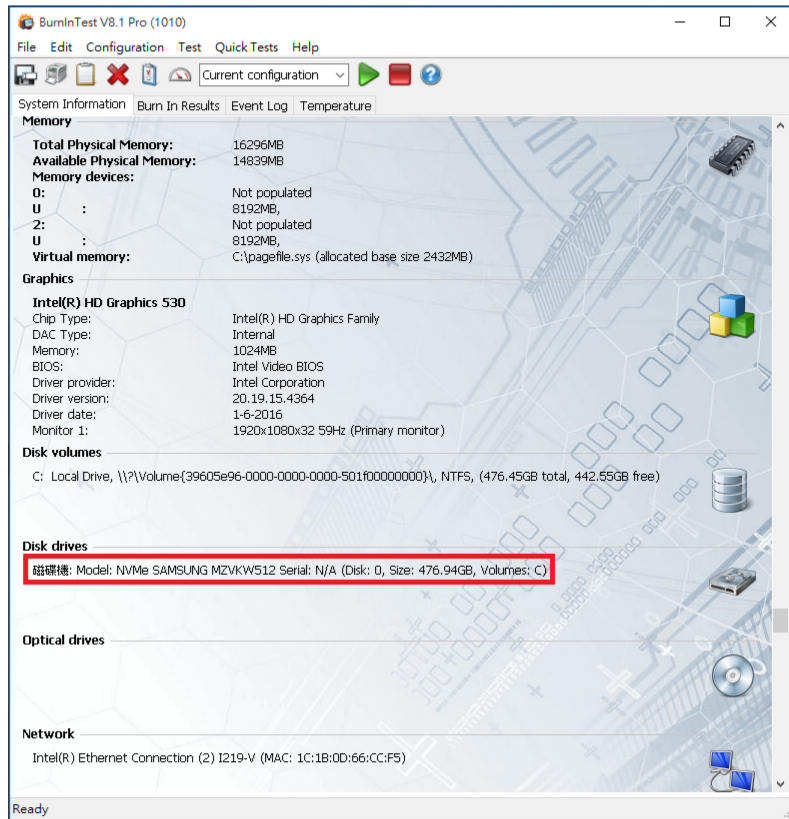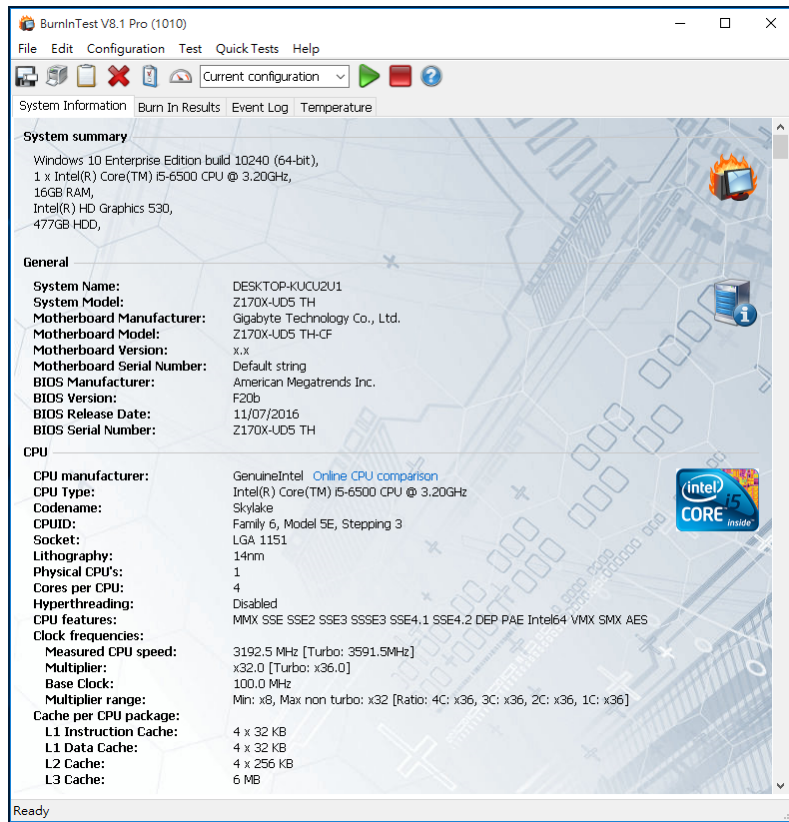2.8.1   Show Samsung SM961 **512GB** NVMe SSD performance as below:
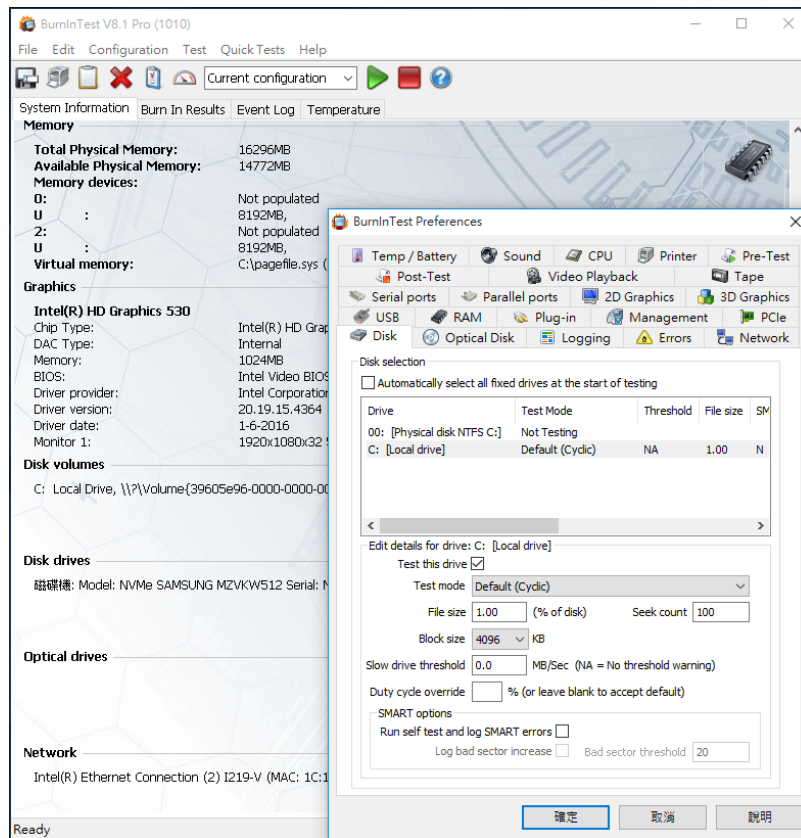
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3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro for Samsung SM961 512GB NVMe SSD **SSD**

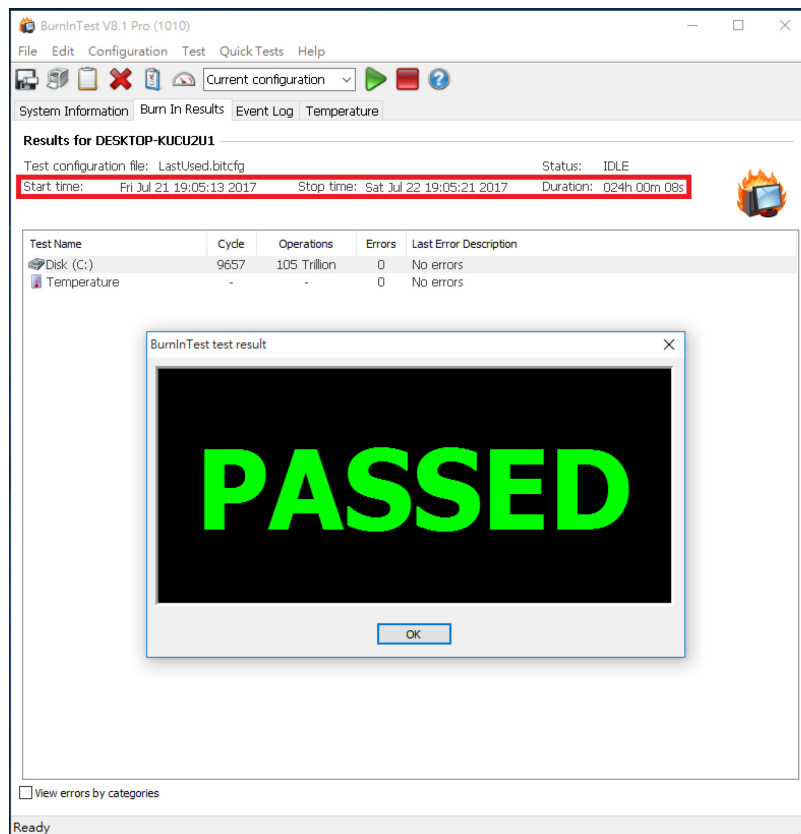#### 3.1.1 **system information** as below:

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 4GB.

4.2 PE0407 adapter I/O performance is based on M.2 NVMe PCI-e Gen 3 / 4 Lanes SSD.