MINERVA

U4227F USB3.1 Micro-B for mSATA SSD & M.2 SSD

Performance & Burn In Test Rev. 1.0

Table of Contents

U4227F USB3.1 Micro-B for mSATA SSD & M.2 SSD

1. Overview

U4227F adapter, built-in USB3.1 Micro-B connectors, provides one M.2 B-key connector and one Mini PCI-e connectors. First M.2 SSD inserts M.2 B-key connector and mSATA SSD inserts Mini PCI-e connectors, using USB A-type to Micro-B cable to connect to the host, both M.2 SSD and mSATA SSD would work simultaneous.

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 **KVR16N11S8/4,** 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**
Cable:	USB3.1 A-type to Micro-B cable
OS :	Microsoft **Windows 8.1 64bit OS**

2.2 Test target: U4227F adapter and M.2 SSD & mSATA SSD

U4227F Adapter

Crucial 128GB mSATA

LITE-ON 128GB M.2

2.3 Install Hardware

Inserts M.2 SSD, mSATA SSD to U4227F adapter's M.2 and Mini PCI-e connector, and then use the coppers and screws to fix SSDs (please refer to the installation Notes). Then this adapter through USB cable to connect to USB3.1 port of ASRock **Z97 Extreme 6.**

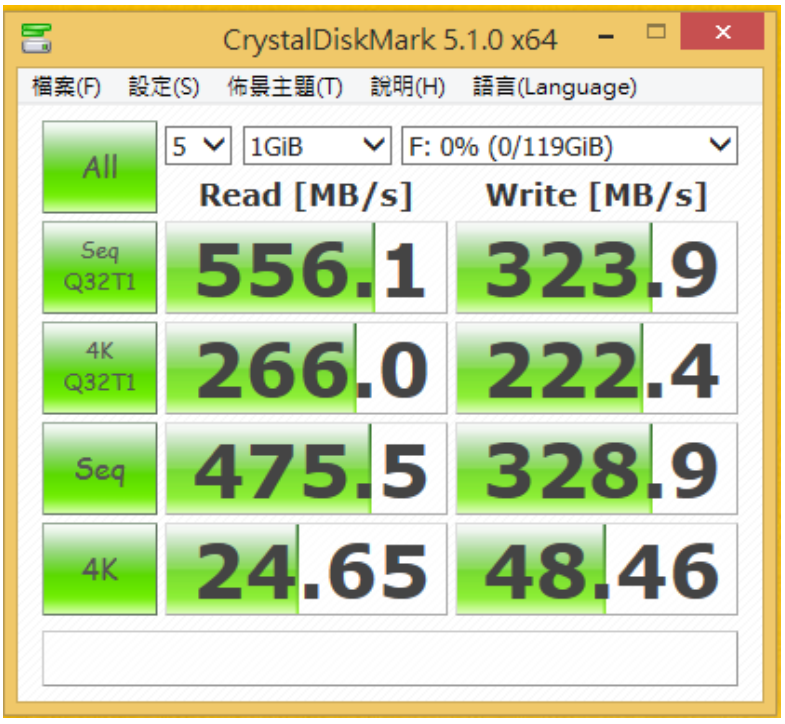
2.4 BIOS & Windows 8.1 OS environment setup

2.4.1 install Windows 8.1 64bit OS.

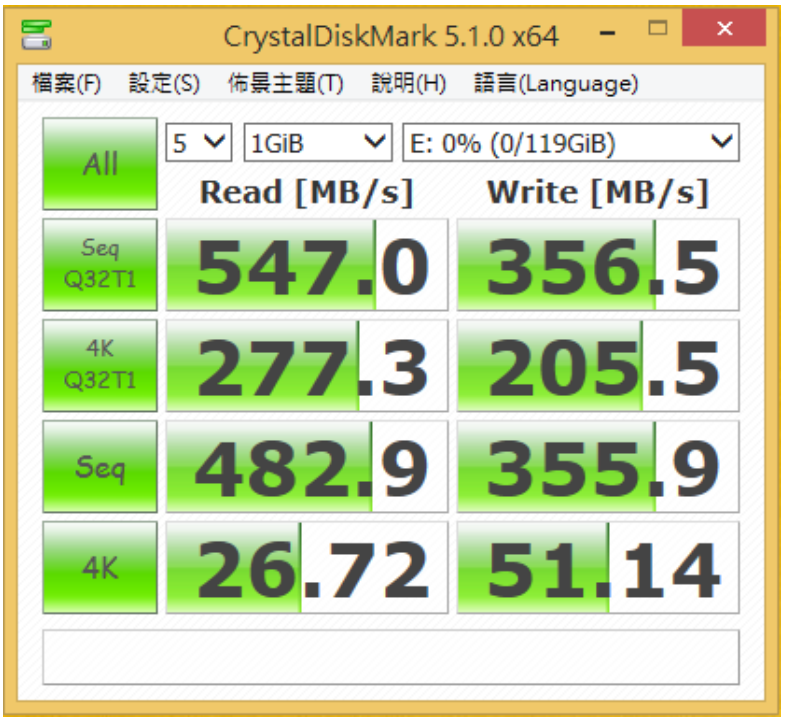
2.5 CrystalDiskMark 5.1.0 x64 performance test

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

2.5.1 Used LITE-ON 128GB(**LGT-128M6G**) performance as below:



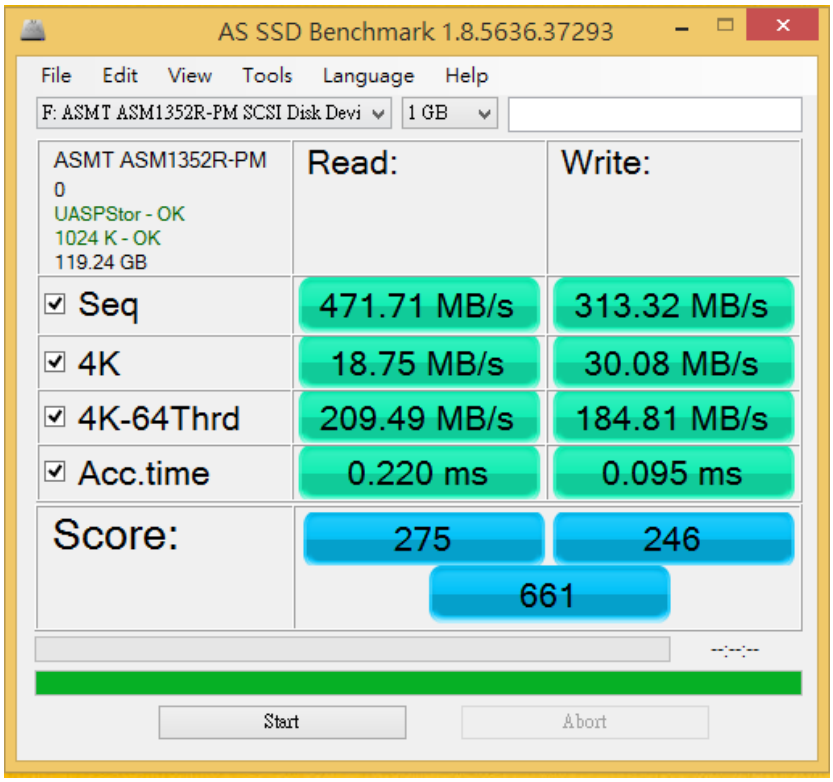
2.5.2 Used Crucial 128GB(CT-128M550SSD3) performance as below:



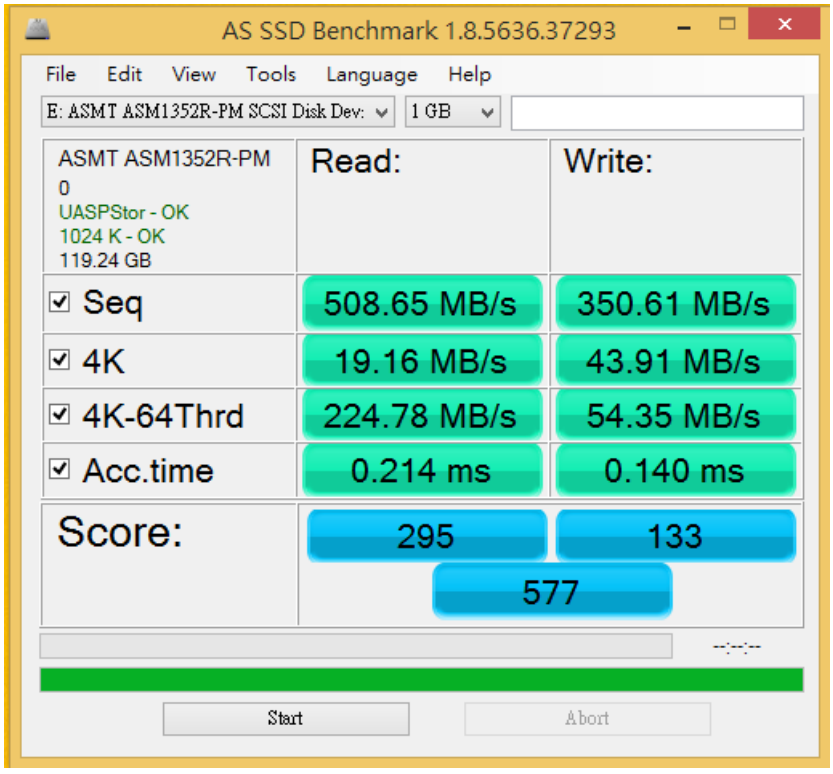
2.6 AS SSD Benchmark 1.8 performance test

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

2.6.1 Used LITE-ON 128GB(**LGT-128M6G**) performance as below:

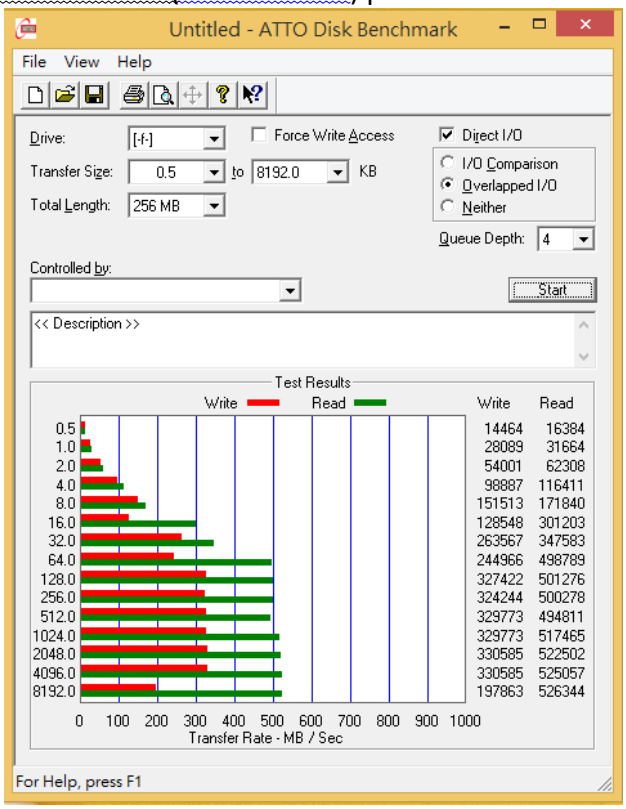


2.6.2 Used Crucial 128GB(CT-128M550SSD3) performance as below:

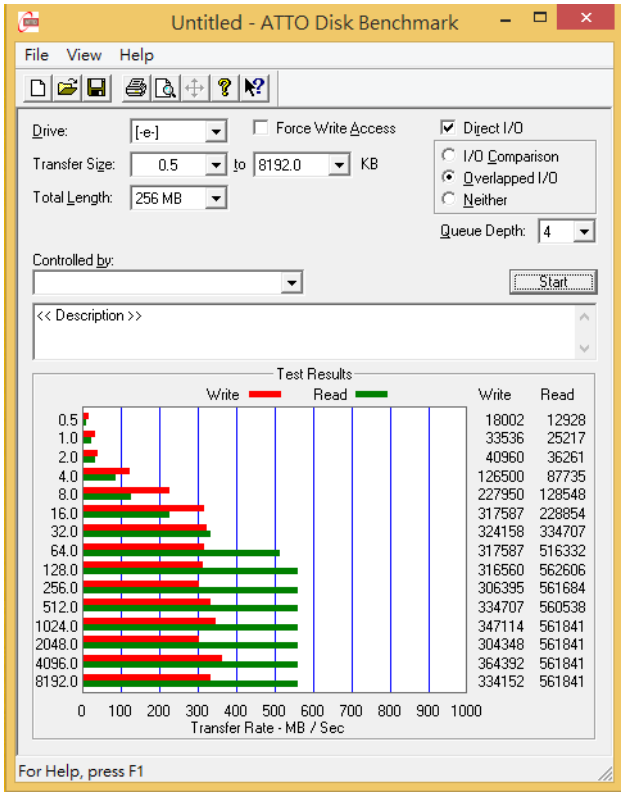


ATTO Disk Benchamrk 2.47 performance test

2.7.1 Used LITE-ON 128GB(LGT-128M6G) performance as below:

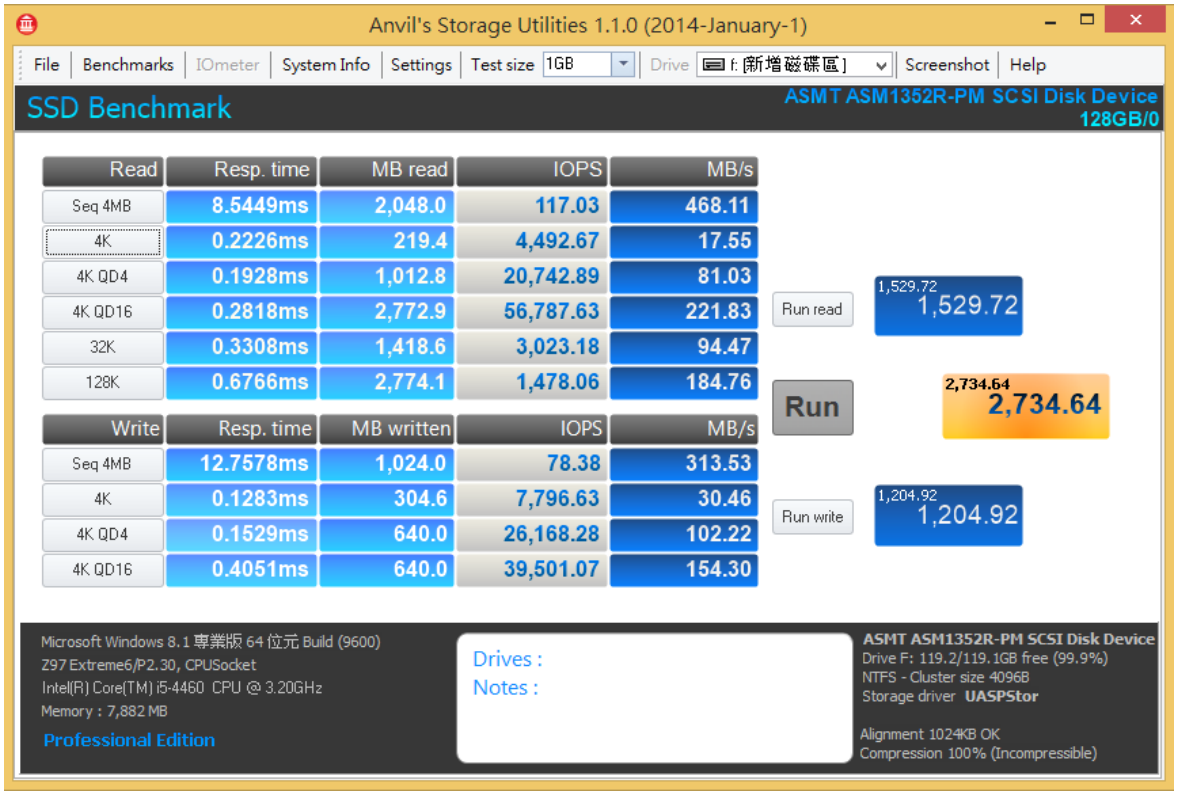


2.7.2 Used Crucial 128GB(CT-128M550SSD3) performance as below:

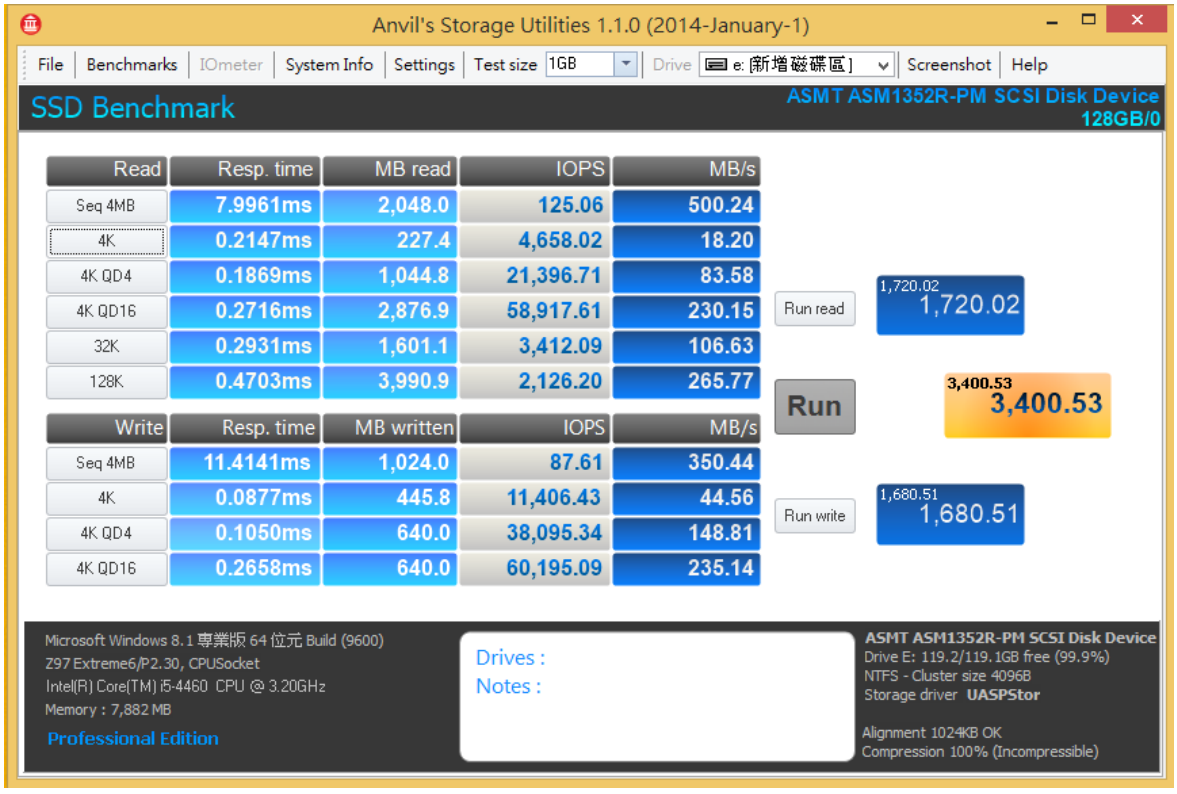


2.7 AnvilBenchmark_V110_B337

2.7.1 Used LITE-ON 128GB(LGT-128M6G) performance as below:



2.7.2 Used Crucial 128GB(CT-128M550SSD3) performance as below:

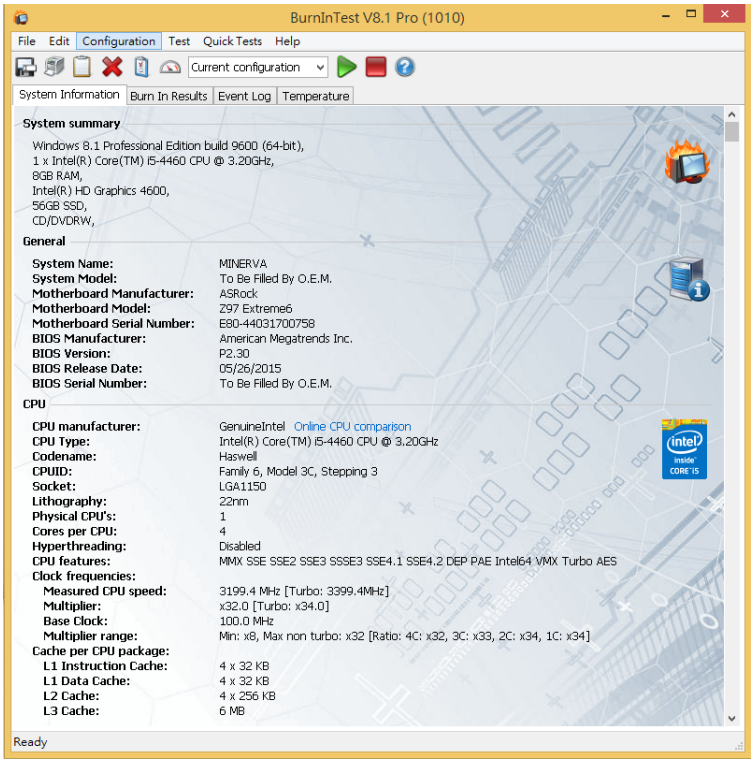


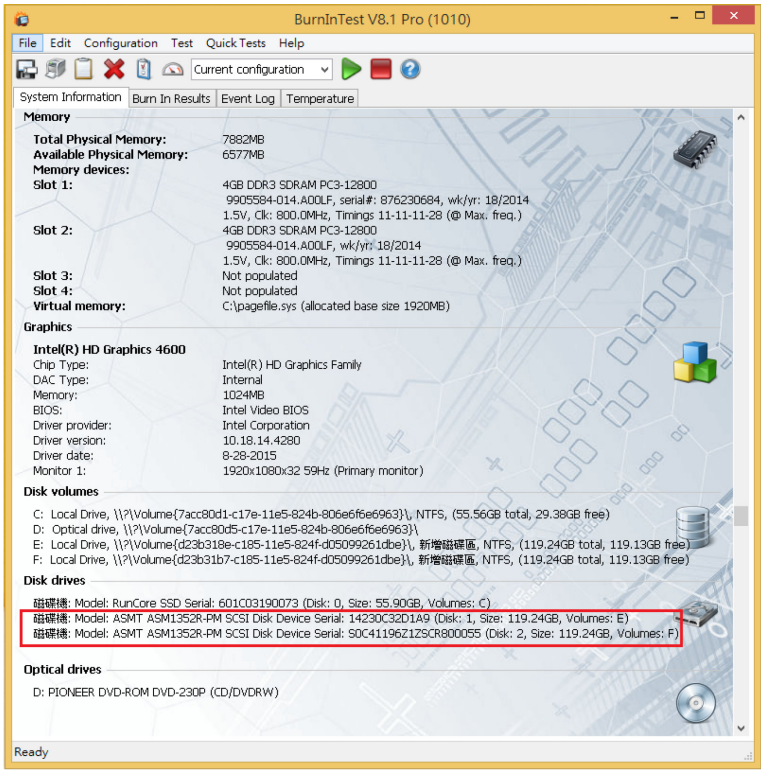
3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro

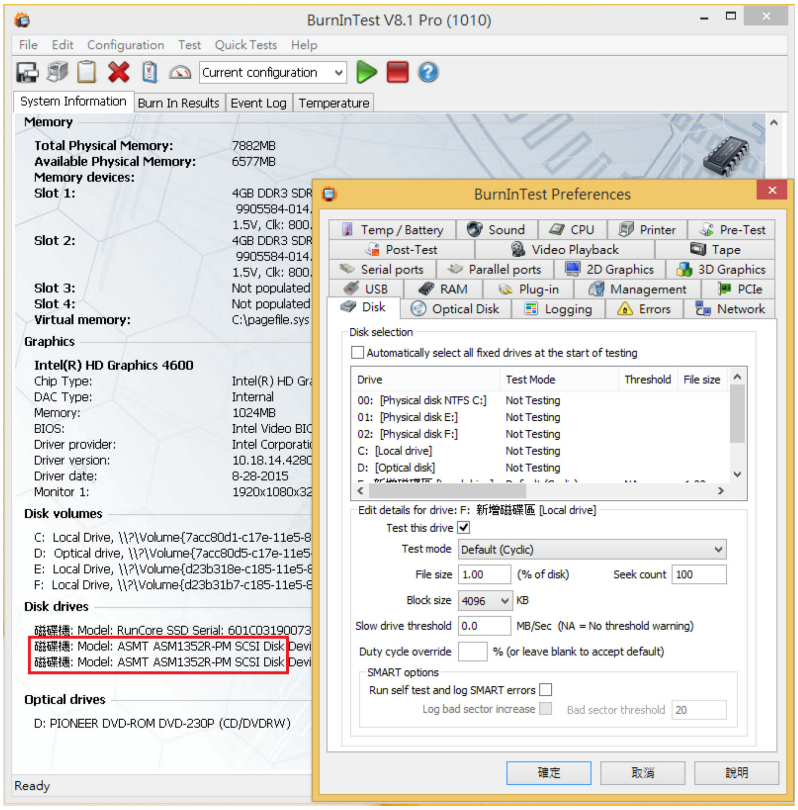
Used in LITE-ON 128GB(**LGT-128M6G**) & Crucial 128GB(CT-128M550SSD3)

3.1.1 **system information** as below:

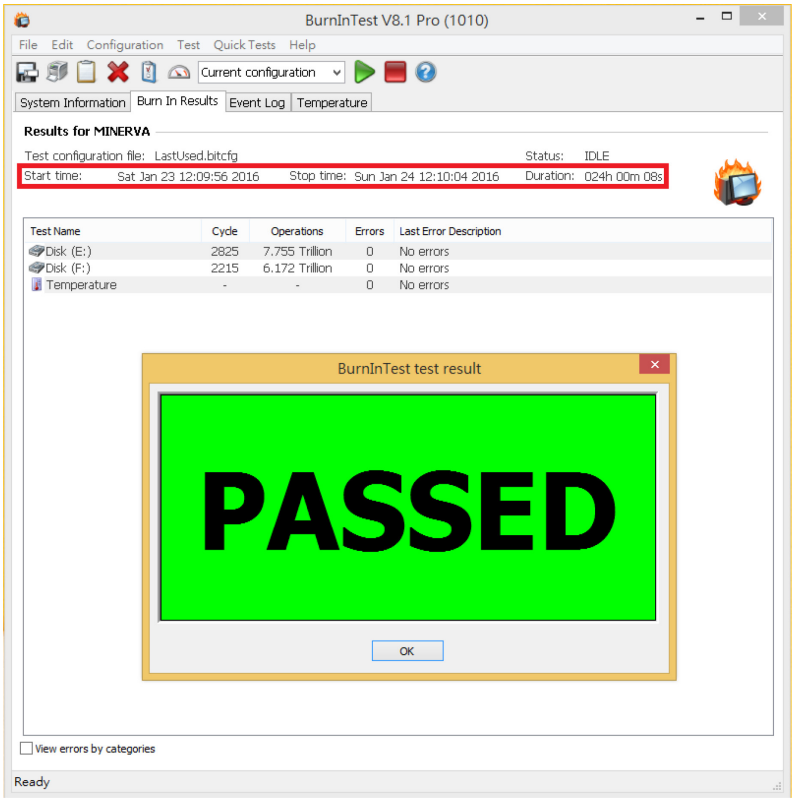




3.1.2 show Disk test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test PASSED



4. Summary

4.1 USB 3.1 is 10Gbps Interface.

4.2 SATA III is 6Gbps Interface.

4.3 M.2 SSD is SATA III Interface, I/O speed, max. to 600MB/s.

4.4 mSATA SSD is SATA III Interface, I/O speed, max. to 600MB/s.

4.4 U4227F adapter I/O performance is based on M.2 SSD or mSATA SSD.