MINERVA

U423D

Performance & Burn In Test Rev. 1.0

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4. **Summary**

U423D / USB 3.0&SATA to mSATA SSD with 2.5” Housing

1. Overview

U423D adapter card, which provides a mini PCI-e 52pin connector, can be converted into a USB 3.0 or SATA 6Gb/s standard interface. Built-in ASMedia ASM1053 controller IC to achieve the conversion of the SATA signals to USB signals.

2. Tools and Results of Performance Measurement

2.1 Test Platform -- **Acer aspire V5-571PG Notebook**

CPU : Intel Core i5-3337U (1.7Ghz/Turbo：2.6G)
Memory : **8G DDR3**
Graphic : NVIDIA Geforce 710M/2G
HDD : 750G HDD(SATA)
USB port : USB 3.0x1, USB 2.0x2
OS : Microsoft **Windows 8 OS**

2.2 Test target: (U423D adapter) and Crucial 64GB(M4-CT064M4SSD3) mSATA SSD

U423D

Adapter bottom side

USB 3.0 micro-B cable

Crucial mSATA SSD

2.3 Install Hardware

Insert Crucial 64GB(M4-CT064M4SSD3) into U423D converter’s mini PCI-e connector, and then with coppers, nuts and screws to fix mSATA SSDs. (Please refer to the Installation Notes). Connect U423D converter to USB 3.0 Port of Aspire V5-571PG.

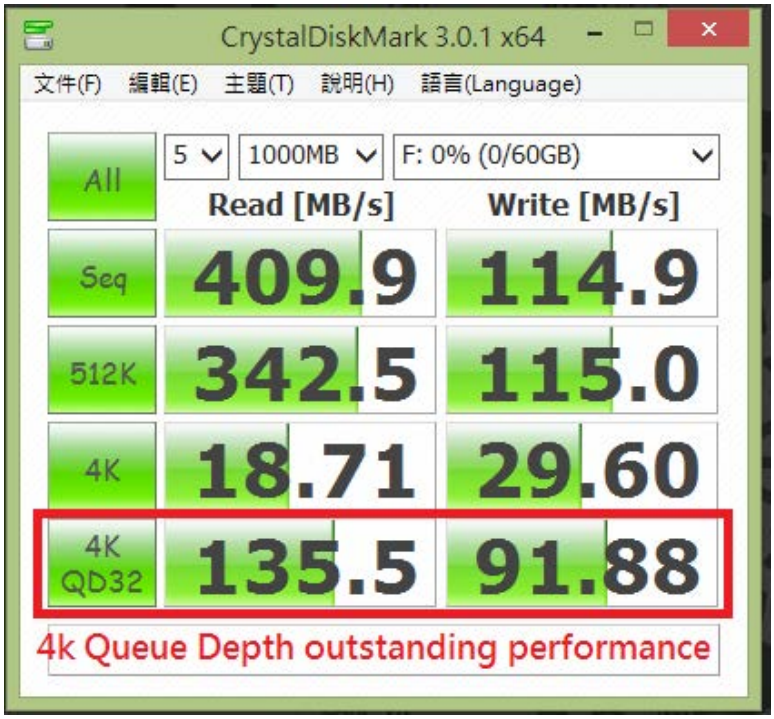
2.4 BIOS & Windows 8 OS environment setup

2.4.1 In Windows 8, formatted SSD to NTFS Mode. Don’t install any program.

2.5 CrystalDiskMark 3.0.1 x64 performance test

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

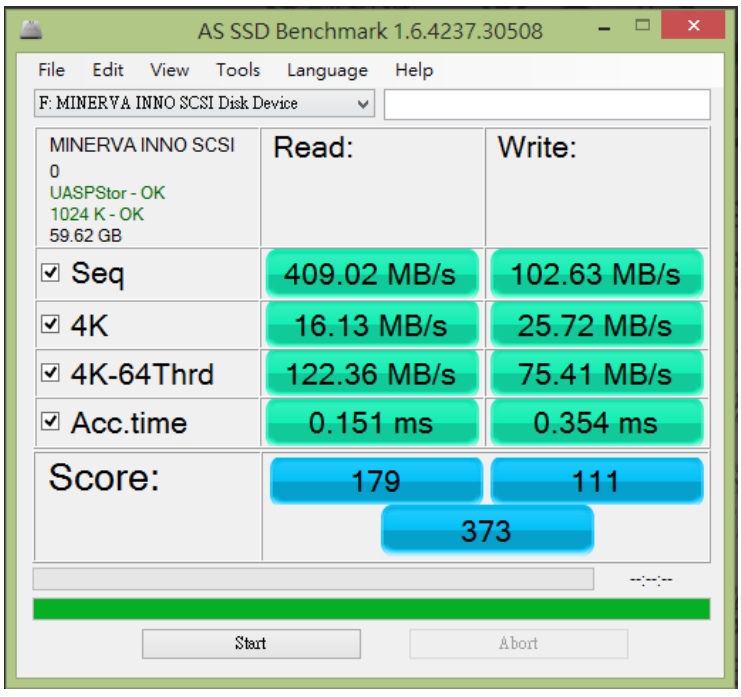
2.5.1 Used Crucial 64GB(M4-CT064M4SSD3) performance as below:



2.6 AS SSD Benchmark 1.6 performance test

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

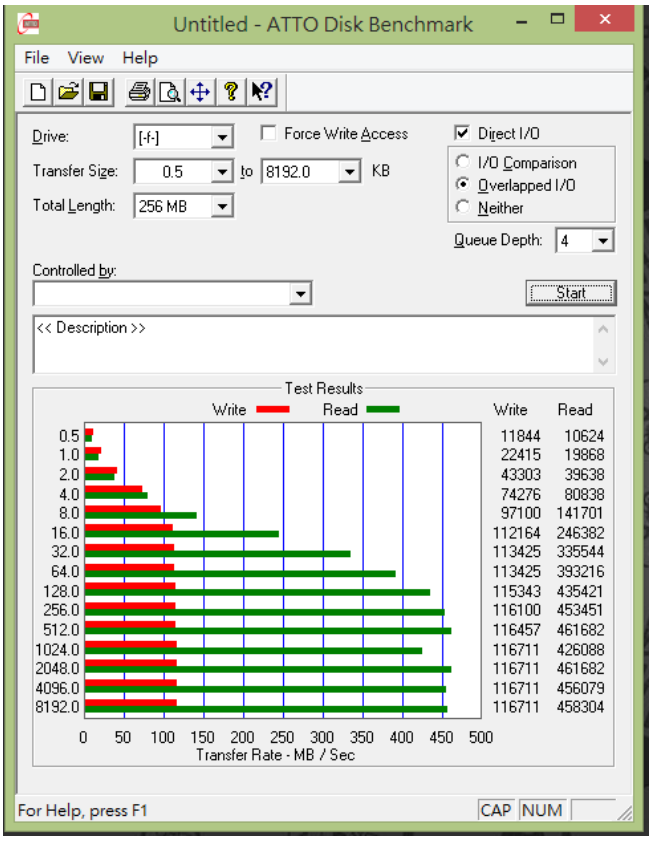
2.6.1 Used Crucial 64GB(M4-CT064M4SSD3) performance as below:



2.6.2 Used Crucial 64GB(M4-CT064M4SSD3) IOPS as below:

2.7 ATTO Disk BenchMark

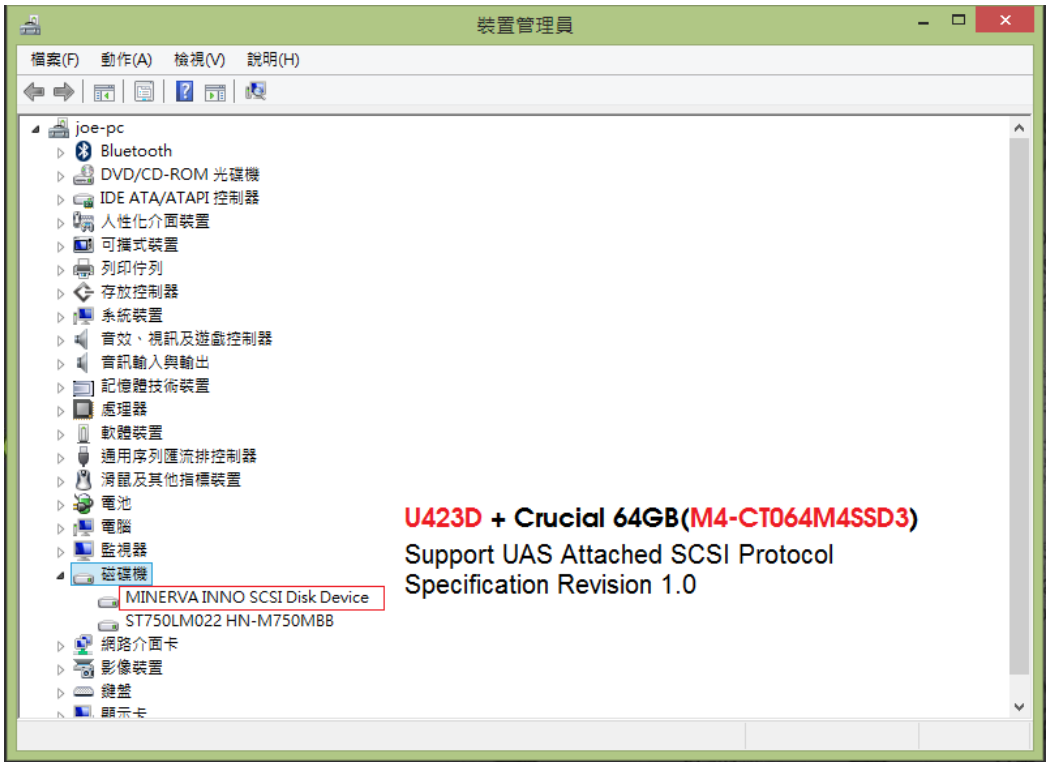
2.7.1 Used Crucial 64GB(M4-CT064M4SSD3) performance as below:



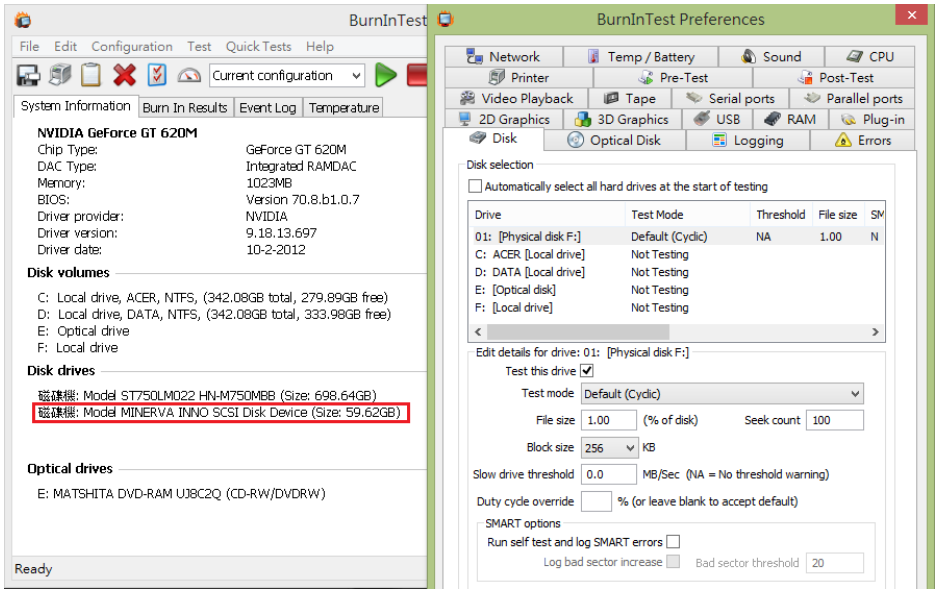
Burn In Tests and Results

3.1 BurnInTest v7.0 Pro

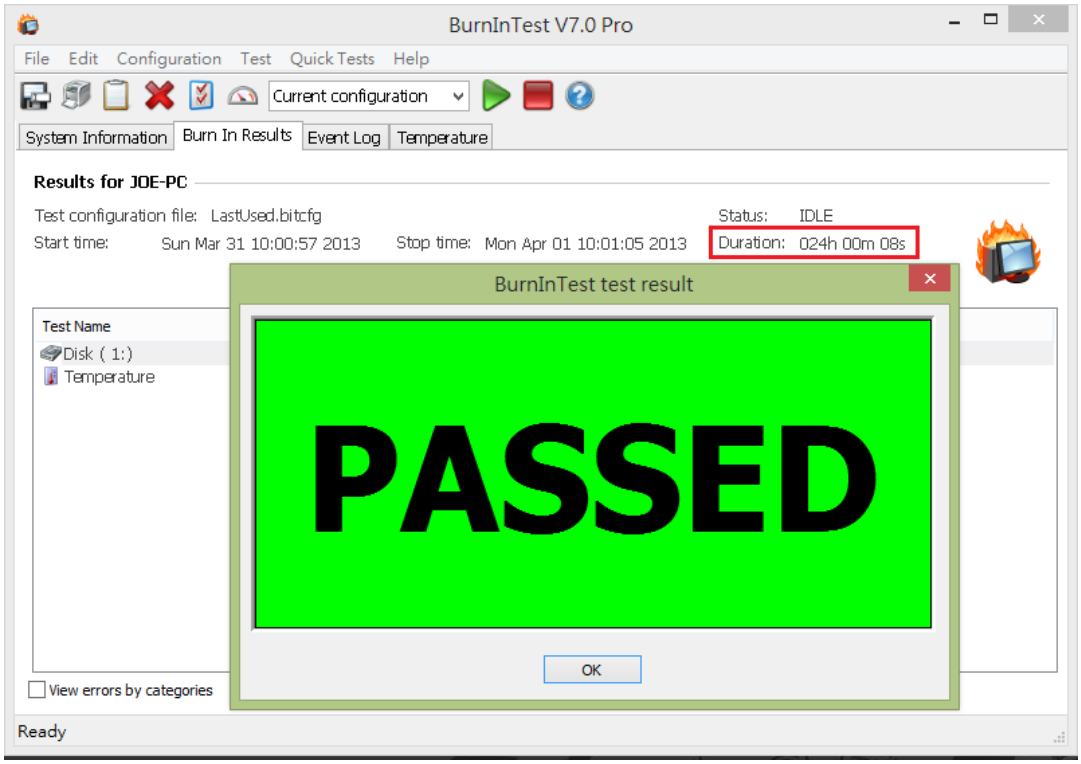
3.1.1 **system information** for Crucial 64GB(M4-CT064M4SSD3) as below:



3.1.2 show Disk test mode(default cyclic -- 10 ways cycle test)



3.1.3 show Crucial 64GB(M4-CT064M4SSD3) 24-hour Burn-in test PASSED



4. Summary

U423D convert, following USB 3.0 Standard, Current spec I/O speed, max. to 5Gb/s.
U423 Adapter support UAS Attached SCSI Protocol Specification Revision 1.0
I/O performance of U423D adapter is based on mSATA SSD