



## Performance & Burn In Test Rev. 1.0

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# **U423D / USB 3.0&SATA to mSATA SSD with 2.5" Housing**

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## **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.

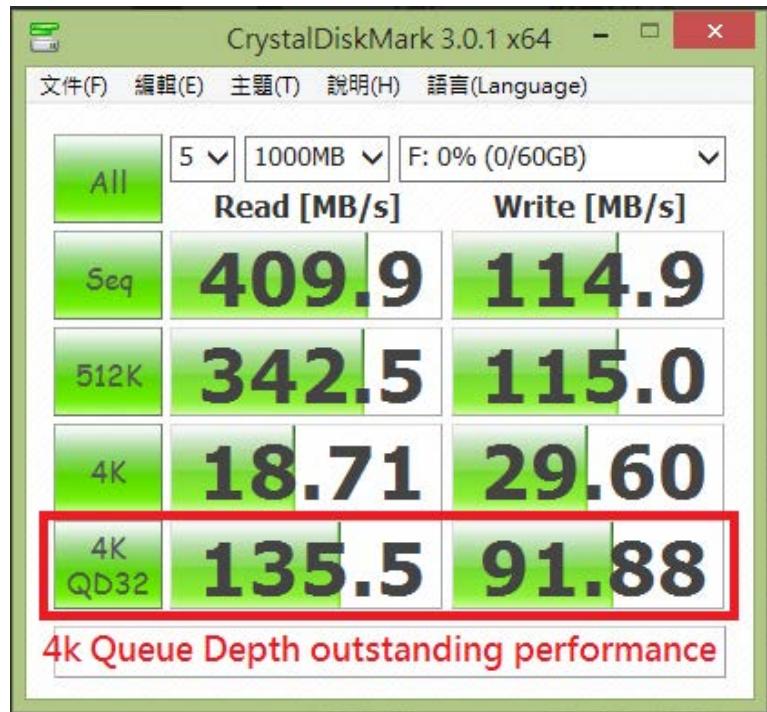
# U423D / USB 3.0&SATA to mSATA SSD with 2.5" Housing

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## 2.5 CrystalDiskMark 3.0.1 x64 performance test

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

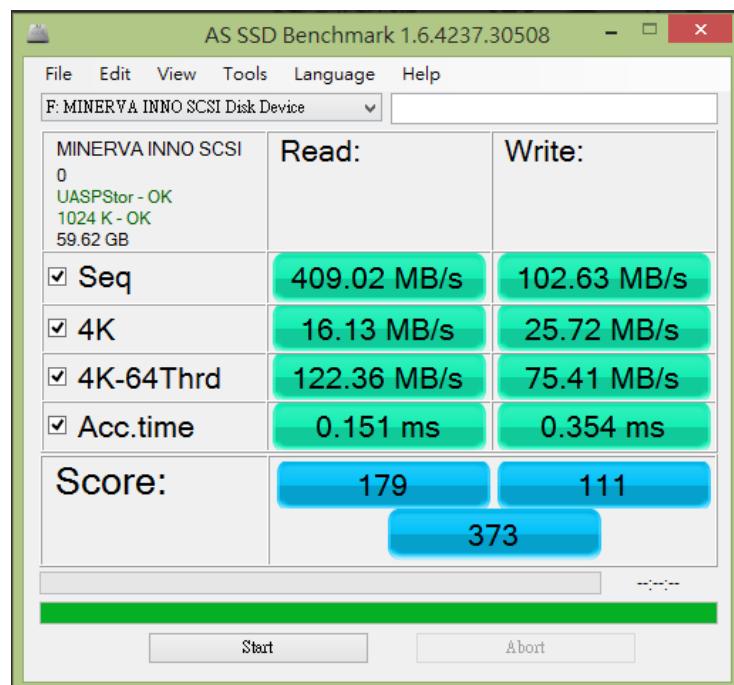
2.5.1 Used Crucial 64GB([M4-CT064M4SSD3](#)) performance as below:



## 2.6 AS SSD Benchmark 1.6 performance test

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

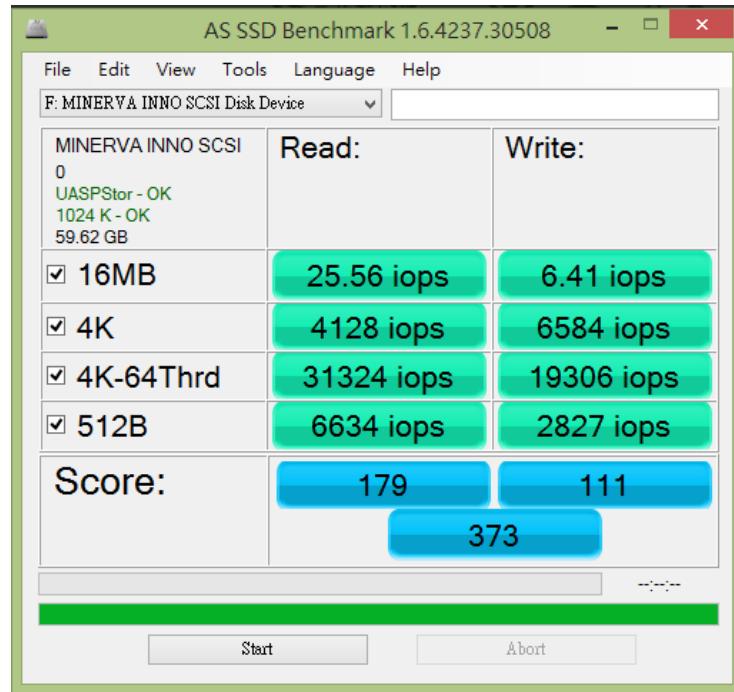
2.6.1 Used Crucial 64GB([M4-CT064M4SSD3](#)) performance as below:



# **U423D / USB 3.0&SATA to mSATA SSD with 2.5" Housing**

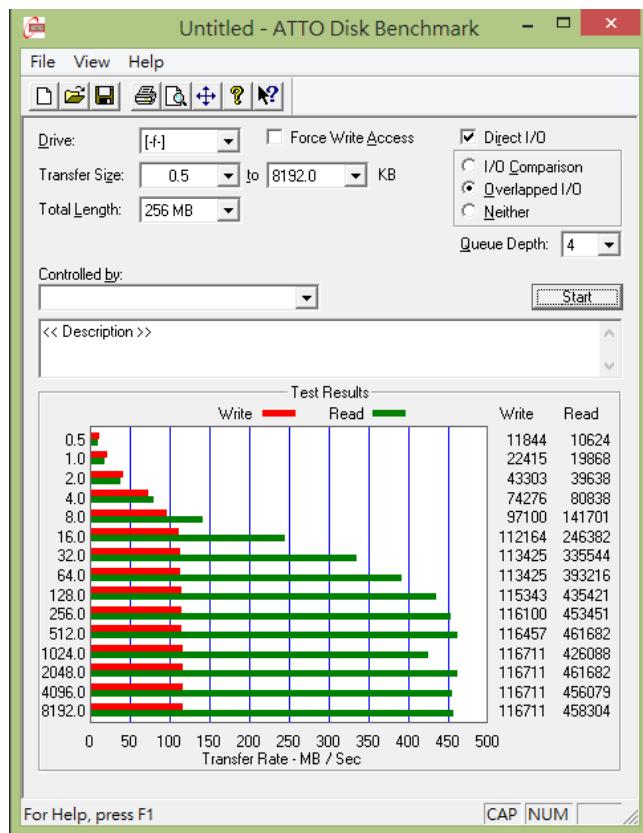
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2.6.2 Used Crucial 64GB([M4-CT064M4SSD3](#)) IOPS as below:



## **2.7 ATTO Disk BenchMark**

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

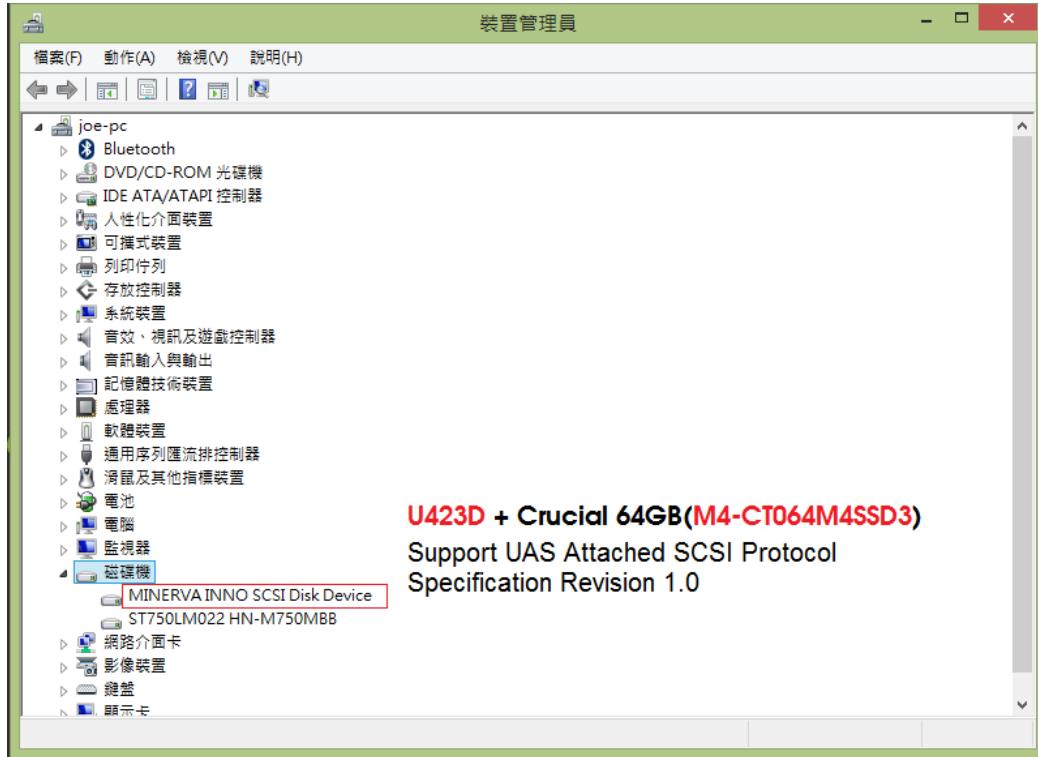


# U423D / USB 3.0&SATA to mSATA SSD with 2.5" Housing

## 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)

The screenshot shows the BurnInTest application interface. On the left, the 'System Information' tab is active, displaying details about the NVIDIA GeForce GT 620M graphics card and disk volumes. The 'Disk volumes' section lists drives C, D, E, and F, with drives C and D being local drives and E and F being optical drives. On the right, the 'Burn In Results' tab is active, showing a 'Preferences' dialog box. The 'Disk' tab is selected in the preferences dialog. A table lists drives and their testing status:

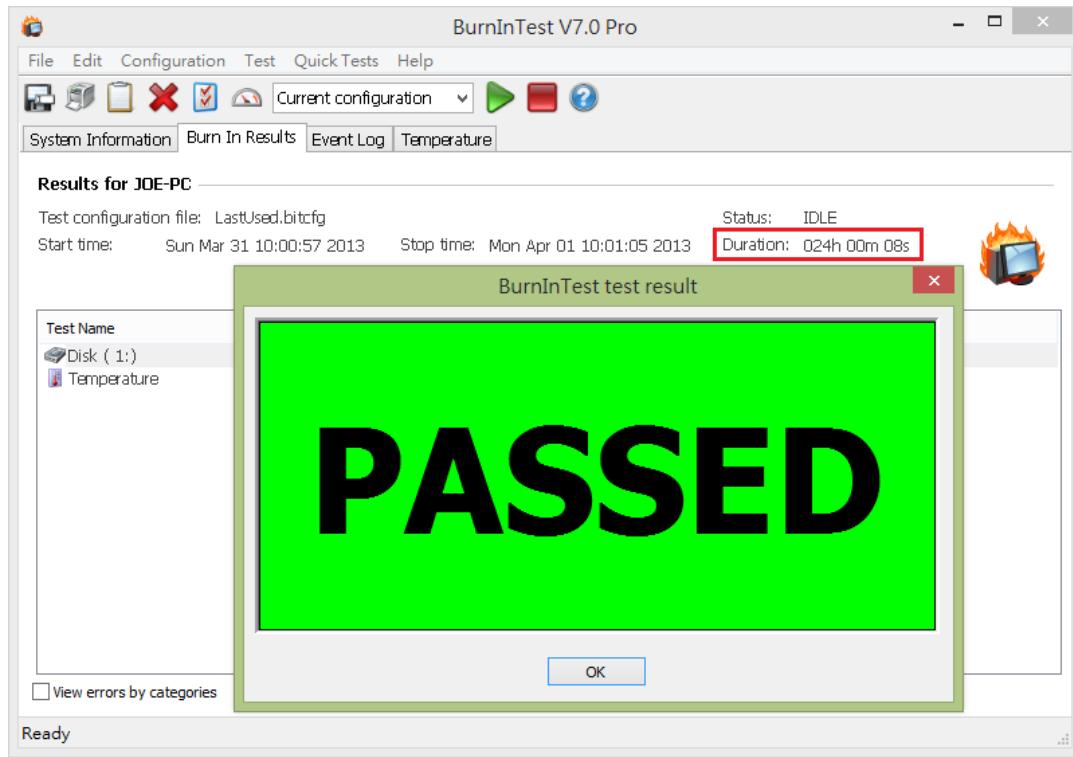
Drive	Test Mode	Threshold	File size	SM
01: [Physical disk F:]	Default (Cyclic)	NA	1.00	N
C: ACER [Local drive]	Not Testing			
D: DATA [Local drive]	Not Testing			
E: [Optical disk]	Not Testing			
F: [Local drive]	Not Testing			

Below the table, there is a 'Edit details for drive: 01: [Physical disk F:]' section with various configuration options like 'Test mode', 'File size', 'Block size', and 'Slow drive threshold'.

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## **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