



MINERVA

U6245F USB3.1 C-type to mSATA & M.2 converter

Performance & Burn In Test Rev. 1.0

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4. Summary

U6245F USB3.1 C-type for mSATA & M.2 Enclosure

1. Overview

U6245F adapter, built-in USB3.1 C-type connector, provides one M.2 B-key connector and one Mini PCI-e connectors. First M.2 SSD inserts M.2 B-key connector or mSATA SSD inserts Mini PCI-e connectors, using USB A-type to C-type cable to connect to the host, either M.2 SSD or mSATA SSD would work alternative.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B : ASUS [X99-PRO/USB3.1](#)

CPU : Intel [i7-5820K](#), 3.3GHz/ 15M Cache/ LGA2013-v3

Memory : ADATA DDR4 PC4-1700MHz, 8G(4GB DIMM*2)

ATX Power : COOLER MASTER G750M, [750W ATX](#), 12V V2.31 Power Supply

Graphic : ATI Radeon [HD Graphics 5450](#) Graphics Processor

OS : Microsoft [Windows 8.1 64bit OS](#)

2.2 Test target: U6245F adapter and M.2 SATA SSD([Samsung CM871a M.2 / 256GB](#))



U6245F Adapter



Samsung CM871a M.2 SSD

2.3 Install Hardware

Inserts M.2 SSD or mSATA SSD to U6245F 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 ASUS [X99-PRO/USB3.1](#).

2.4 BIOS & Windows 8.1 OS environment setup

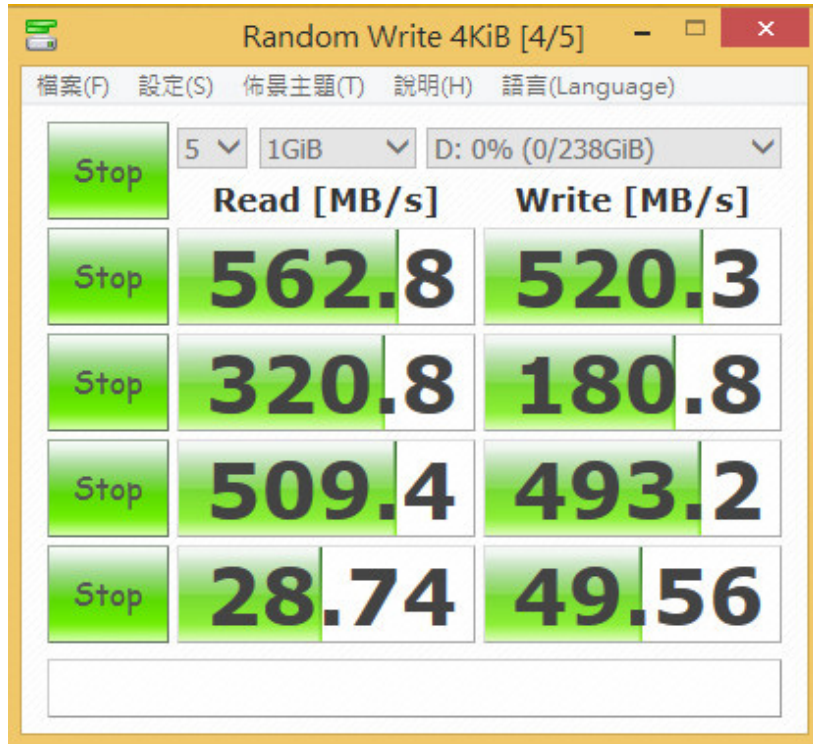
2.4.1 install Windows 8.1 64bit OS.

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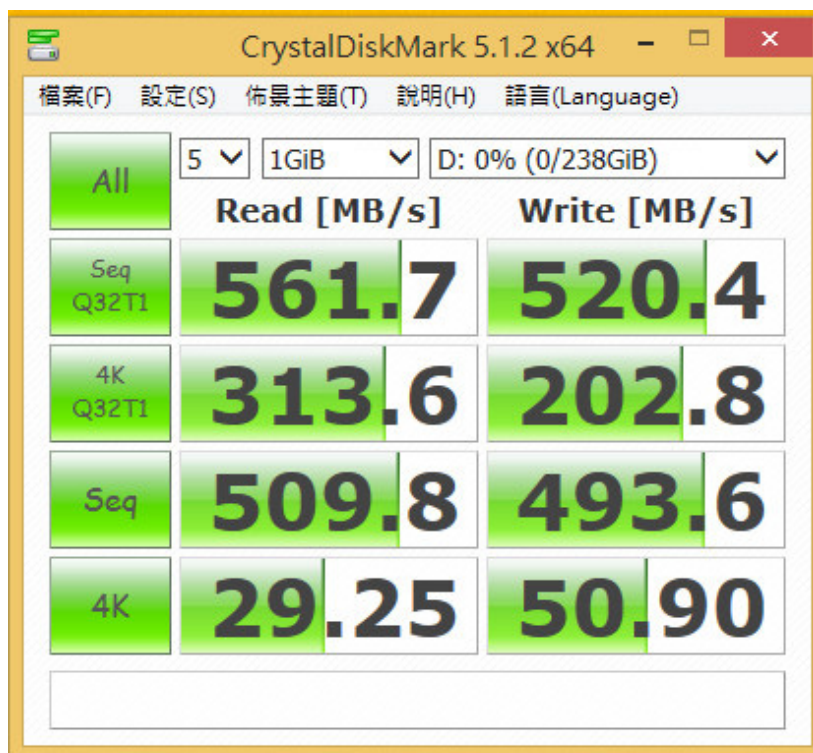
2.5 CrystalDiskMark 5.1.2 x64 performance test

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

2.5.1 Show [Samsung CM871a](#)/256GB using **C-type Plug Orientation Detection**:



2.5.2 Show [Samsung CM871a](#)/256GB using **C-type Plug Twist Detection**:

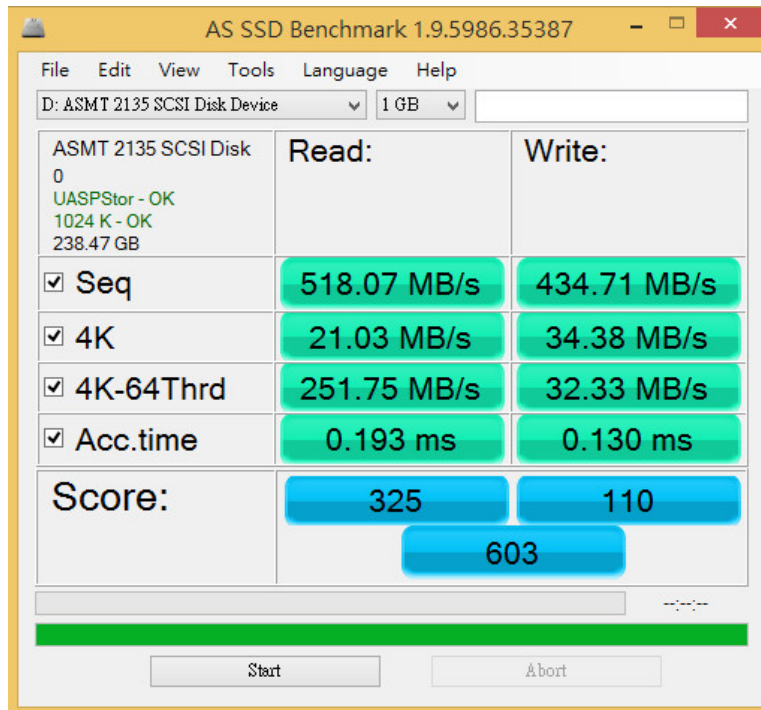


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2.6 AS SSD Benchmark 1.9 performance test

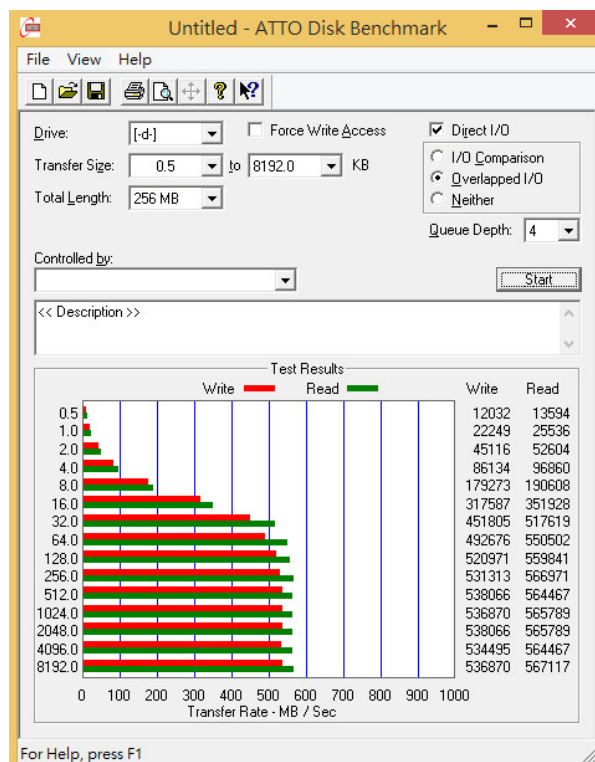
※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 Show [Samsung CM871a](#)/256GB performance as below:



2.7 ATTO Disk Benchmark 2.47 performance test

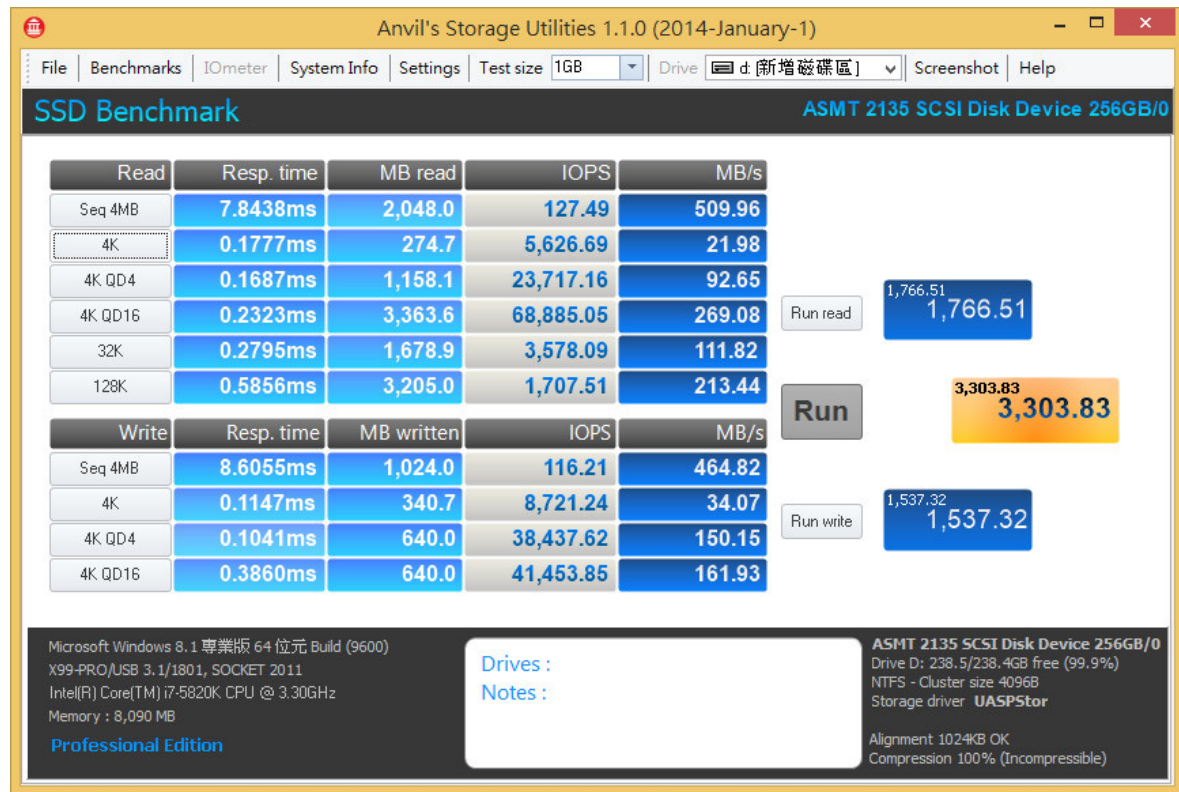
2.7.1 Show [Samsung CM871a](#)/256GB performance as below:



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2.8 AnvilBenchmark_V110_B337

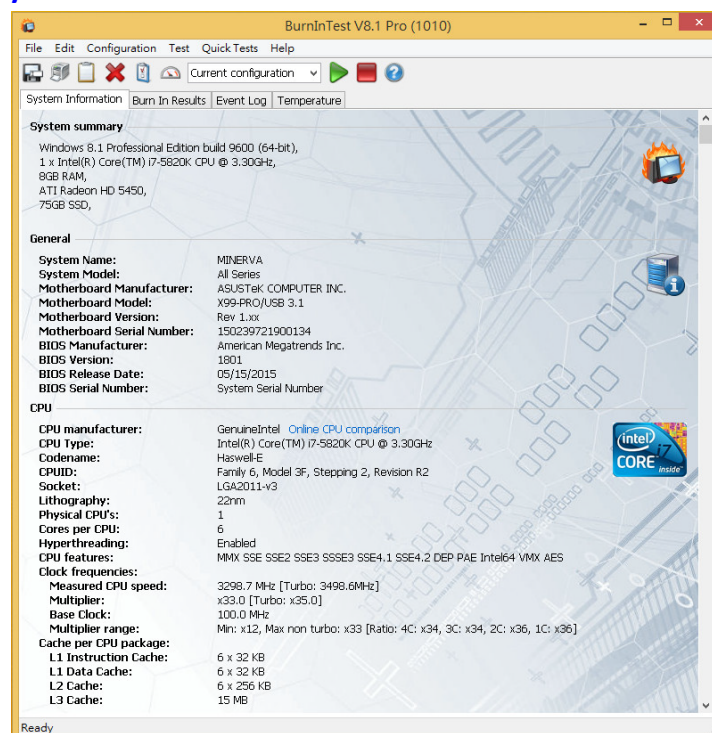
2.8.1 Show [Samsung CM871a](#)/256GB performance as below:



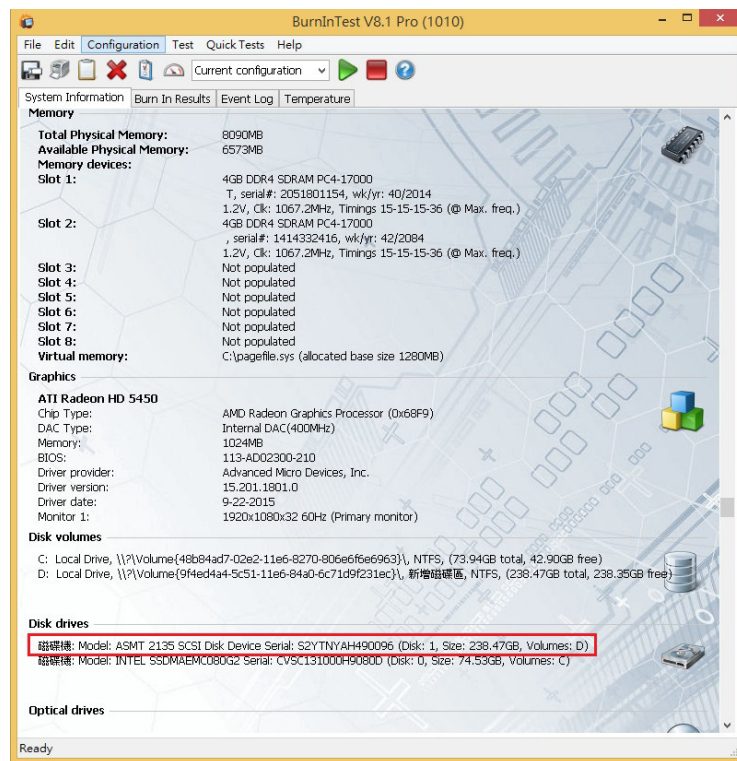
3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro

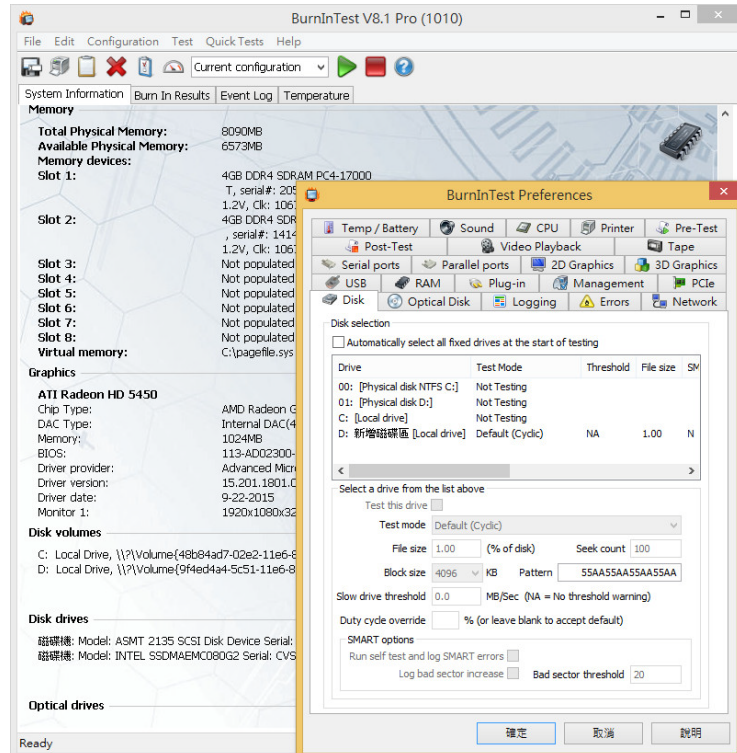
3.1.1 [system information](#) as below:



U6245F USB3.1 C-type for mSATA & M.2 Enclosure

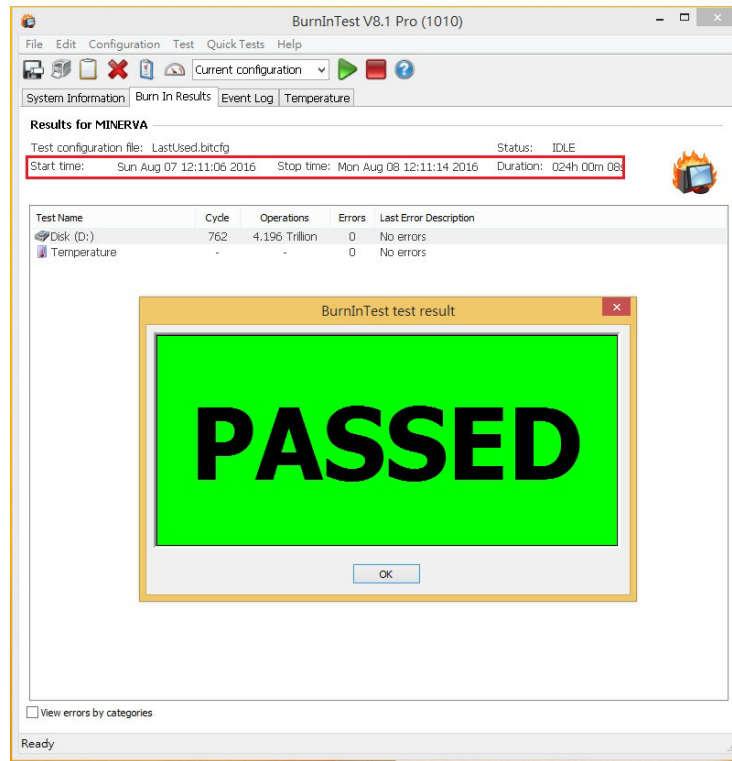


3.1.2 show Disk test mode(10 ways cycle test)



U6245F USB3.1 C-type for mSATA & M.2 Enclosure

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 U6245F adapter I/O performance is based on M.2 SSD.