



MINERVA

USB 3.1 Gen 2 Enclosure for mSATA SSD & CFast Card with Micro-B

Performance & Burn In Test Rev. 1.0

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4. Summary

USB 3.1 Gen 2 Micro-B for mSATA SSD & CFast Card Enclosure

1. Overview

U4275F enclosure, built-in USB3.1 Micro-B connectors, provides one Mini PCI-e connector and one CFast Card connector. First mSATA SSD inserts into Mini PCI-e connector or CFast Card inserts into CFast connector, using USB type-C to Micro-B cable to connect to the host, mSATA SSD or CFast Card, can only one work, mSATA SSD would be priority.

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**, **16G**(8GB DIMM*2)
ATX Power : COOLER MASTER G750M, **750W ATX**, 12V V2.2 Power Supply
Graphic : Z170 Chipsets built-in **HD Graphics 530**
Cable : type-C to Micro-B cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: U4275F enclosure and mSATA SSD



U4275F Adapter



USB C type to micro B cable



Crucial 128GB mSATA

2.3 Install Hardware

Inserts mSATA SSD into U4275F enclosure's Mini PCI-e connector, and use the coppers and screws to fix SSDs (please refer to the installation Notes). Then this enclosure through USB cable to connect to USB3.1 port of type-C GIGABYTE **Z170X UD5 TH**

2.4 BIOS & Windows 10 OS environment setup

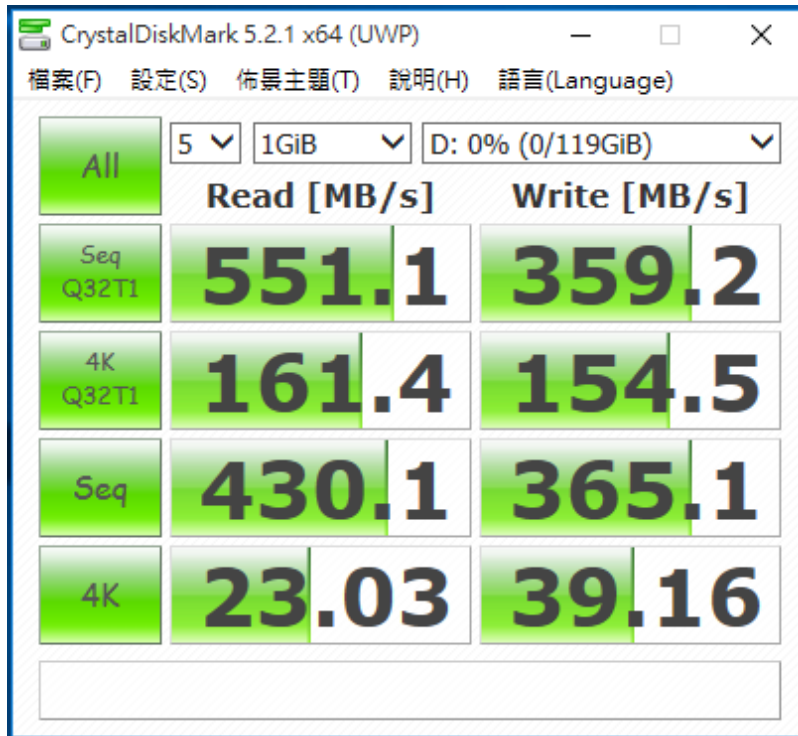
- 2.4.1 install Windows 10 64bit OS.
- 2.4.2 U4275F enclosure formatted NTFS.

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2.5 CrystalDiskMark 5.2.1 x64 performance test

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

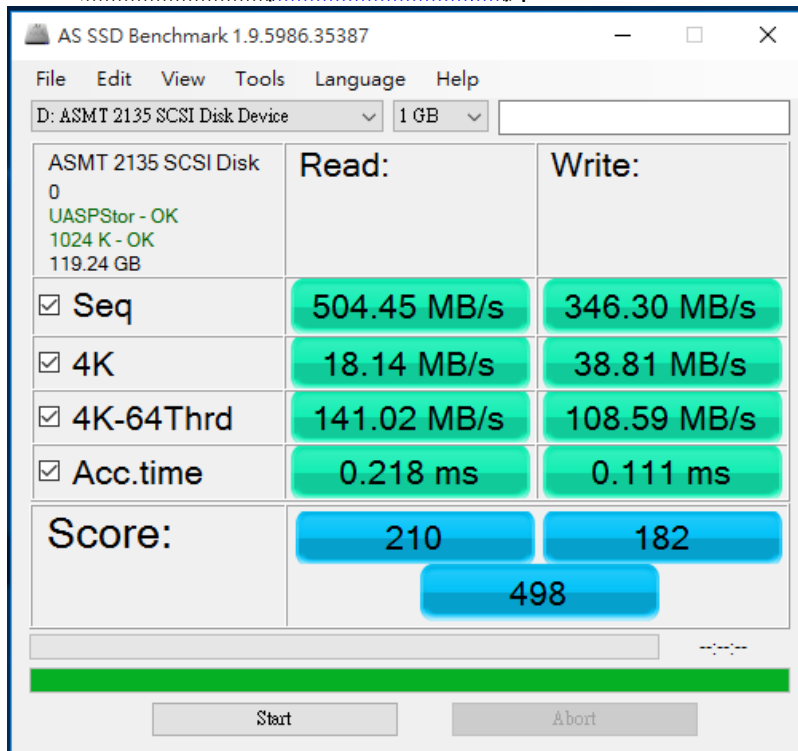
2.5.1 show Crucial 128GB(CT-128M550SSD3) performance as below:



2.6 AS SSD Benchmark 1.9 performance test

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

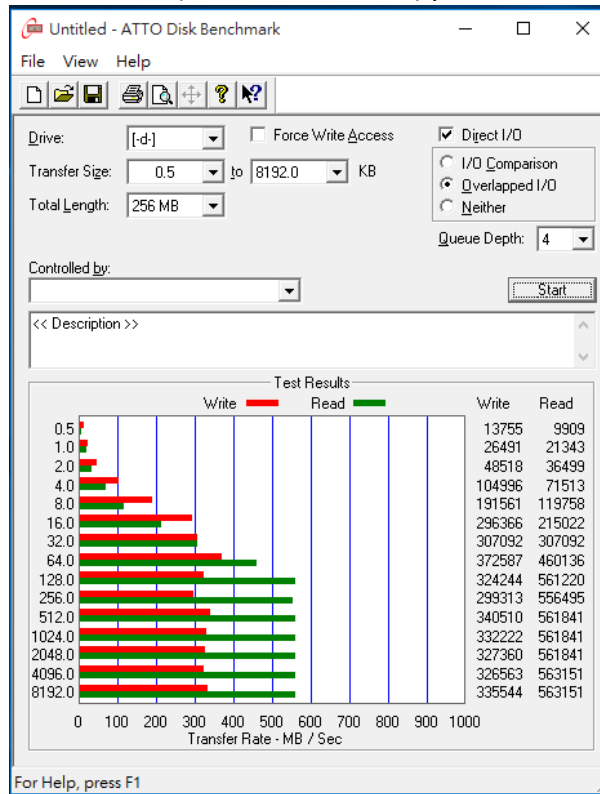
2.6.1 show Crucial 128GB(CT-128M550SSD3) performance as below:



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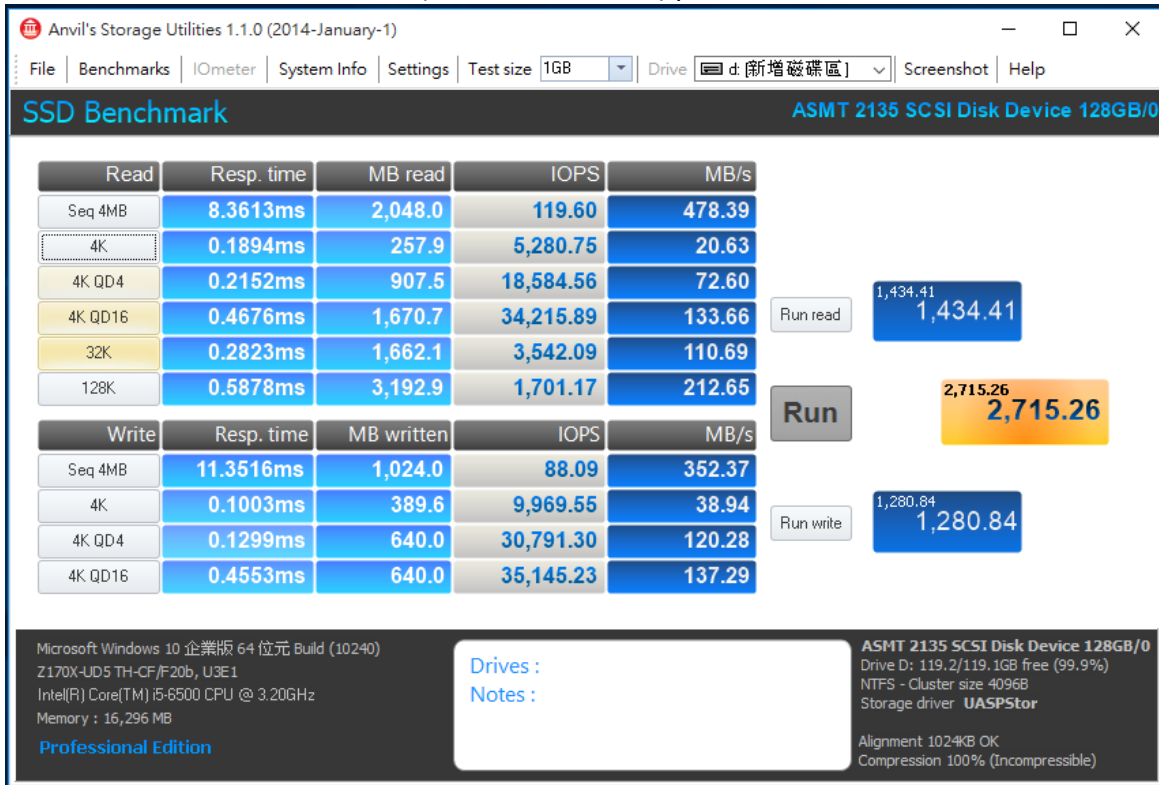
2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 show Crucial 128GB(CT-128M550SSD3) performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 show Crucial 128GB(CT-128M550SSD3) performance as below:

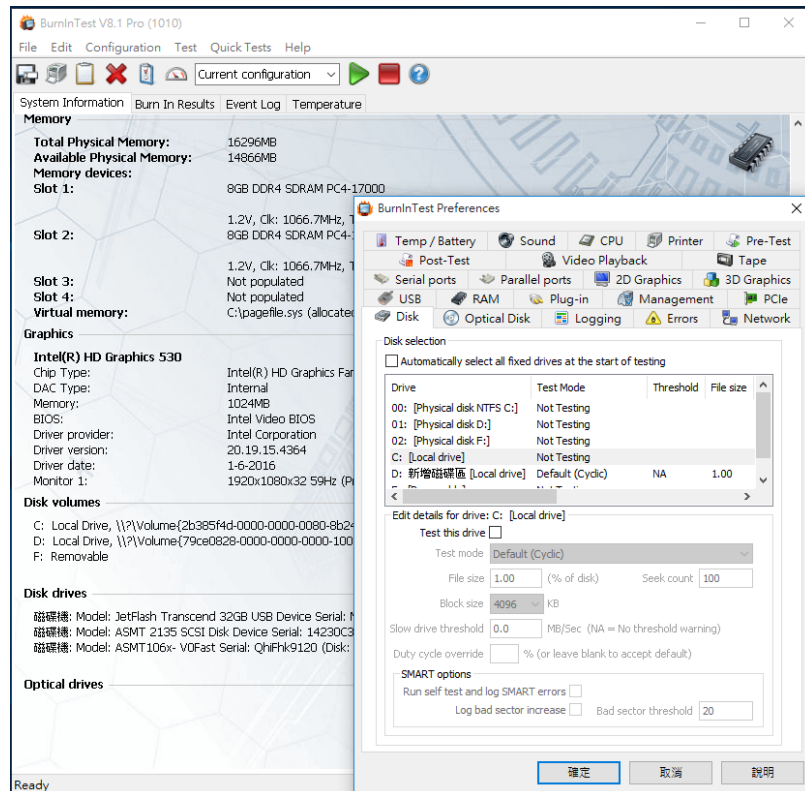
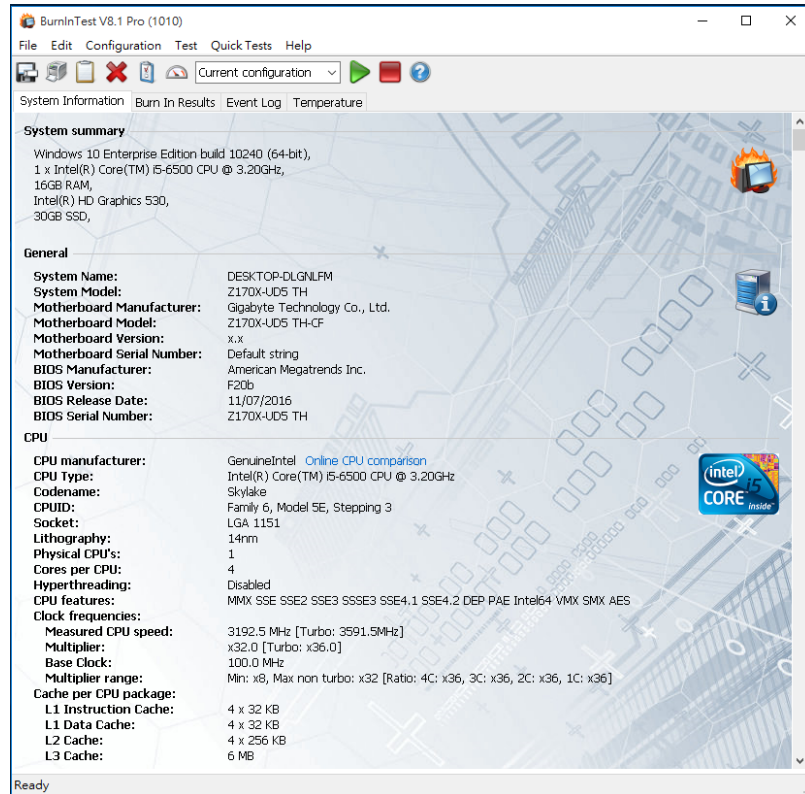


USB 3.1 Gen 2 Micro-B for mSATA SSD & CFast Card Enclosure

3. Burn In Tests and Results

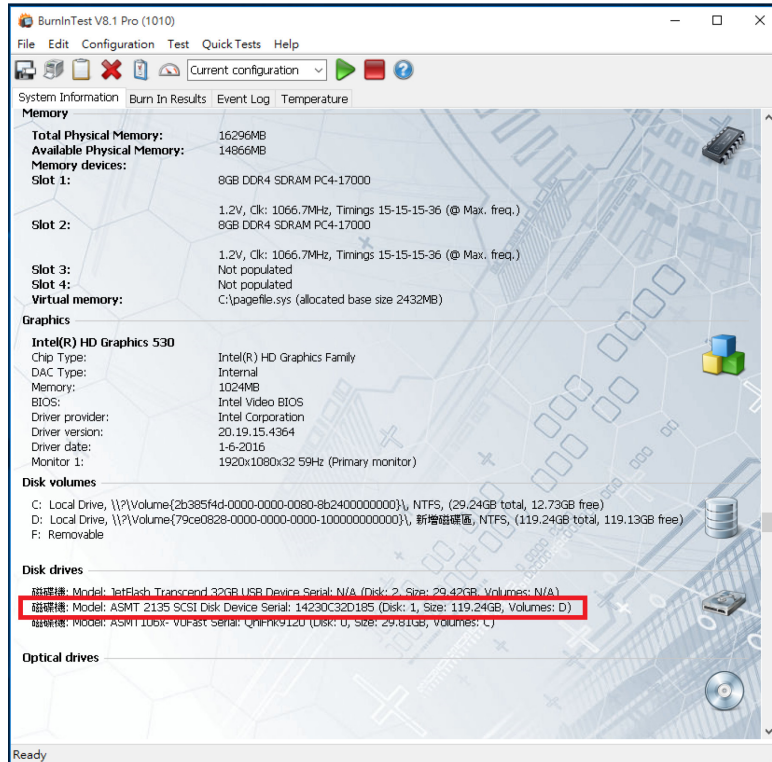
3.1 BurnInTest v8.1 Pro

3.1.1 **system information** for Crucial 128GB(CT-128M550SSD3) as below:

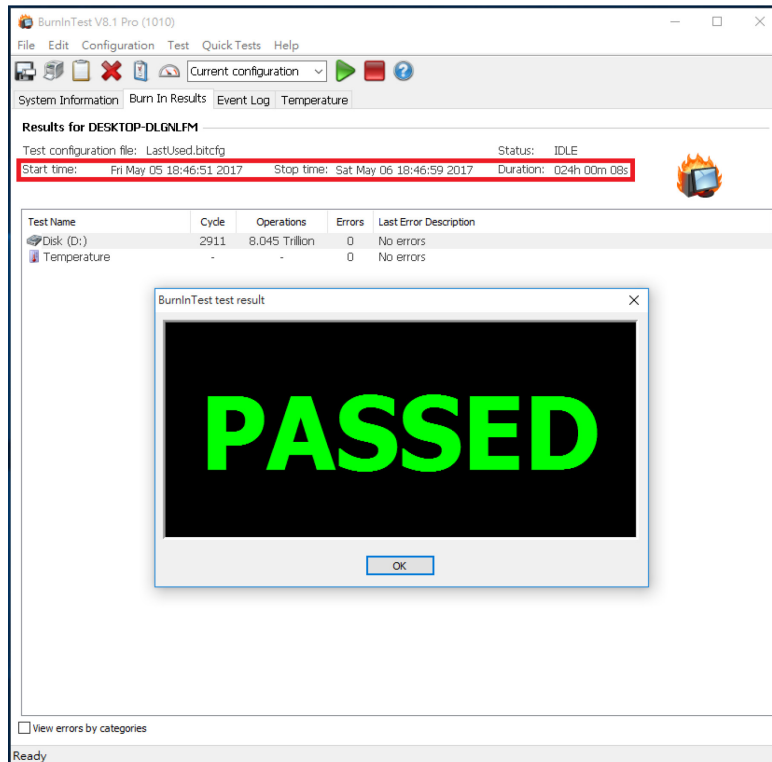


USB 3.1 Gen 2 Micro-B for mSATA SSD & CFast Card Enclosure

3.1.2 show mSATA SSD test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test for Crucial 128GB(CT-128M550SSD3) PASSED



USB 3.1 Gen 2 Micro-B for mSATA SSD & CFast Card Enclosure

4. Summary

- 4.1 USB 3.1 is 10Gbps Interface.
- 4.2 SATA III is 6Gbps Interface.
- 4.3 mSATA SSD is SATA III Interface, I/O speed, max. to 600MB/s.
- 4.4 U4275F enclosure I/O performance is based on mSATA SSD.