



MINERVA

USB 3.1 Gen 2 Enclosure for M.2 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

U4285F enclosure, built-in USB3.1 Micro-B connectors, provides one M.2 connector and one CFast Card connector. First M.2 SSD inserts into M.2 B-key connector or CFast Card inserts into CFast connector, using USB type-C to Micro-B cable to connect to the host, M.2 SSD or CFast Card can only one work, M.2 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: U4285F enclosure and M.2 SSD



U4285F Adapter



USB C type to micro B cable



Samsung CM871a M.2

2.3 Install Hardware

Inserts M.2 SSD into U4285F enclosure's M.2 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

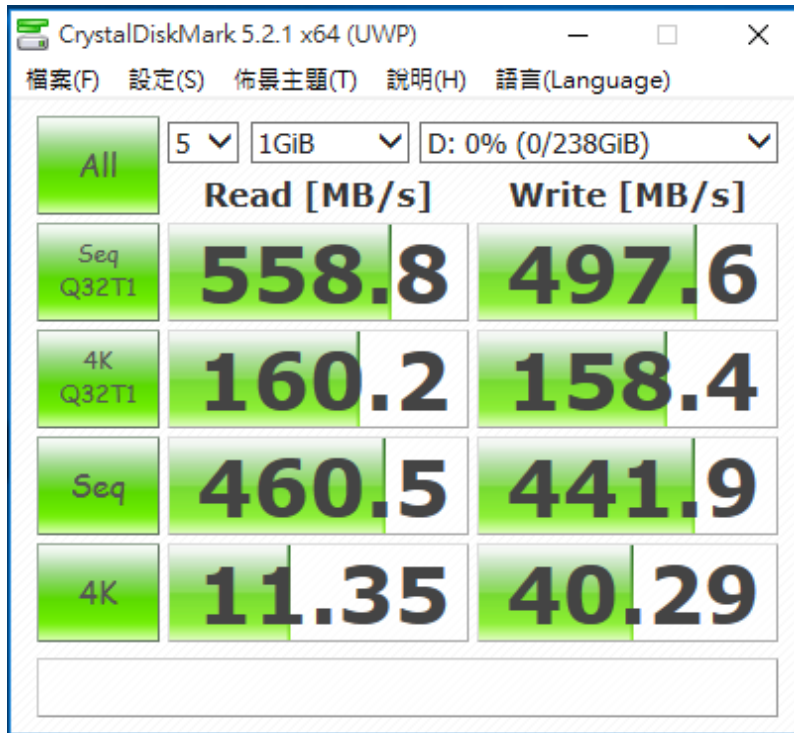
- 2.4.1 install Windows 10 64bit OS.
- 2.4.2 U4275F enclosure formatted NTFS.

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

2.5 CrystalDiskMark 5.2.1 x64 performance test

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

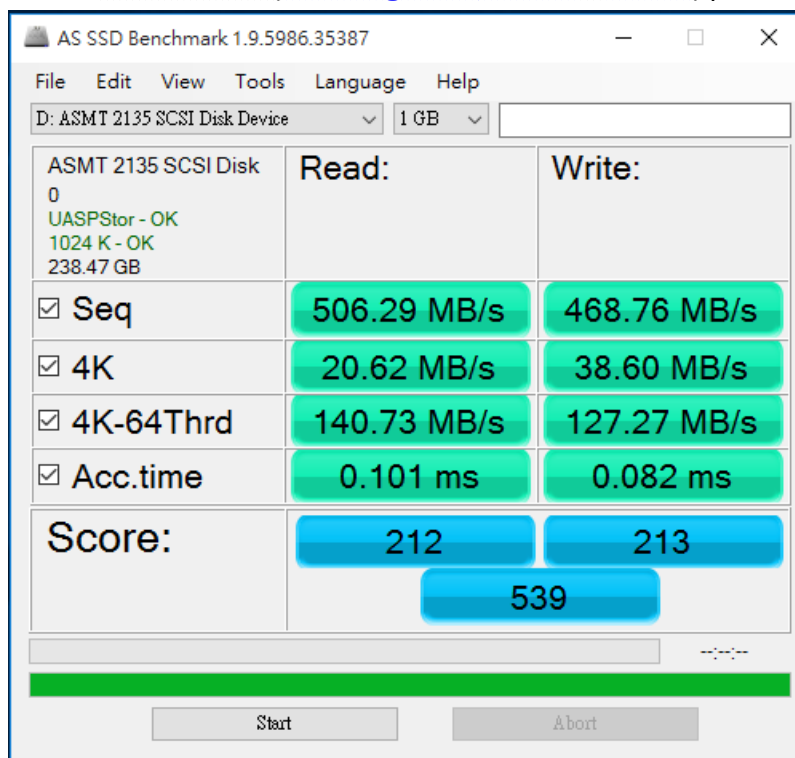
2.5.1 show M.2 SATA SSD([Samsung CM871a M.2 / 256GB](#)) performance as below:



2.6 AS SSD Benchmark 1.9 performance test

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

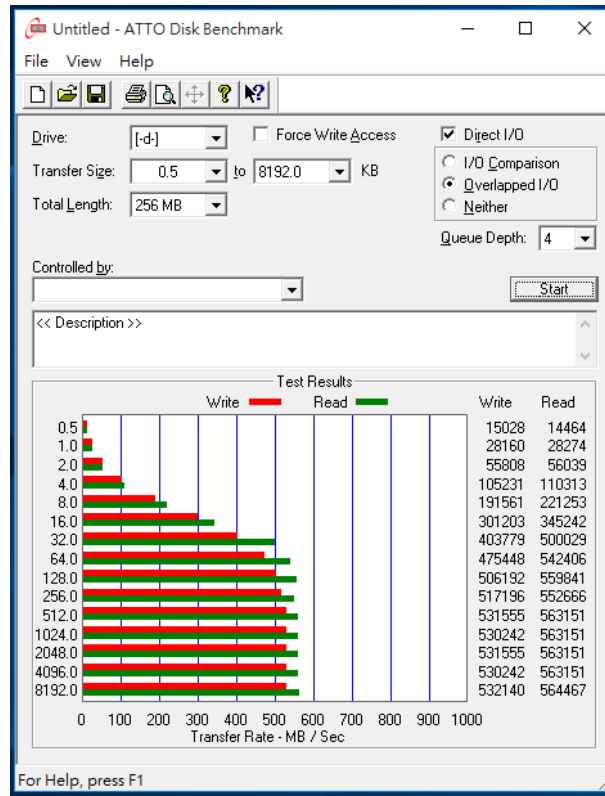
2.6.1 show M.2 SATA SSD([Samsung CM871a M.2 / 256GB](#)) performance as below:



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2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 show M.2 SATA SSD([Samsung CM871a M.2 / 256GB](#)) performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 show M.2 SATA SSD([Samsung CM871a M.2 / 256GB](#)) performance as below:

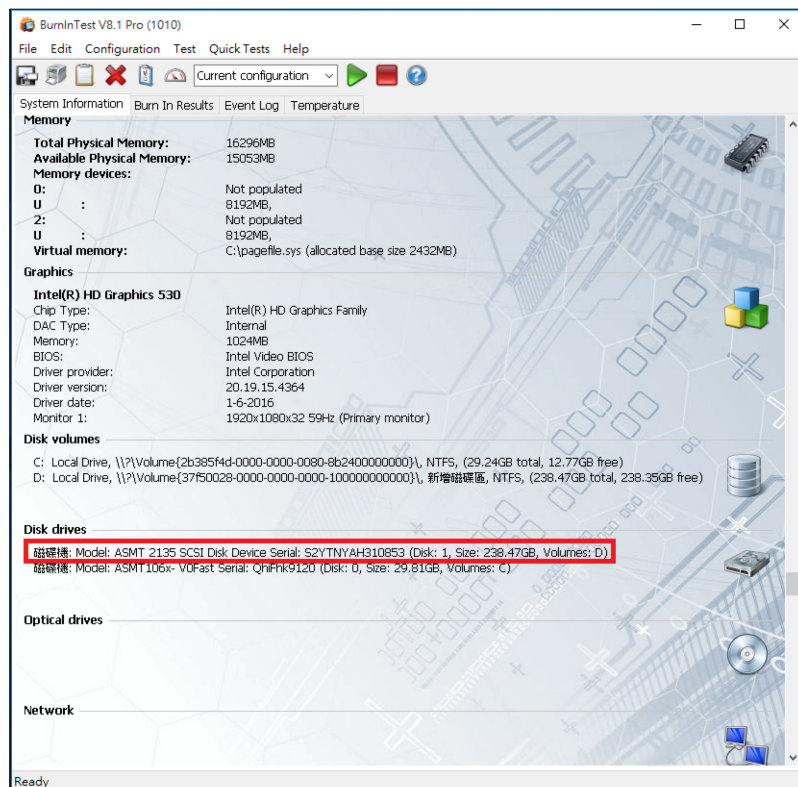
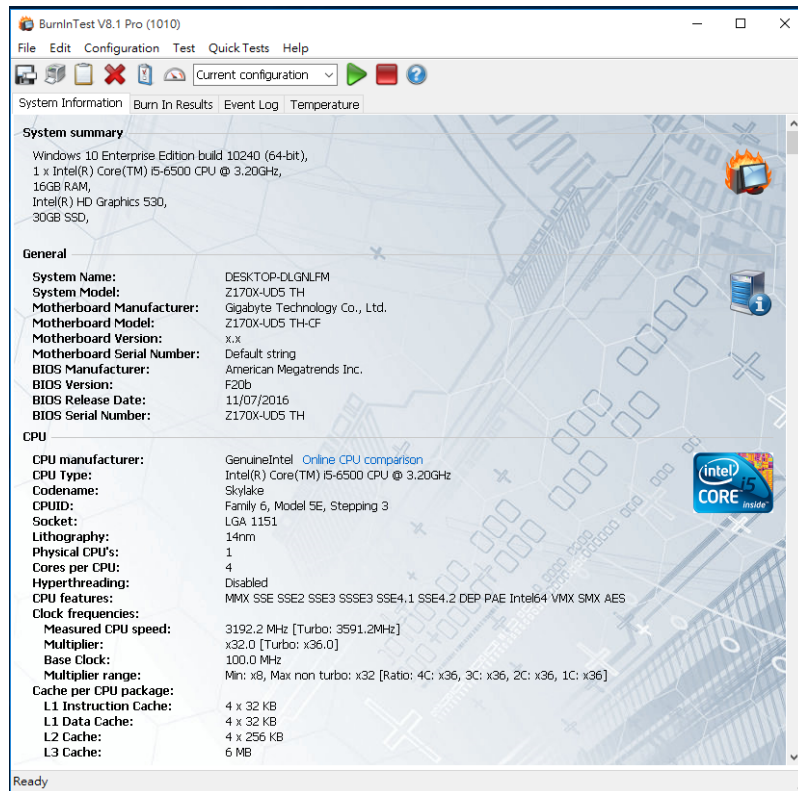


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3. Burn In Tests and Results

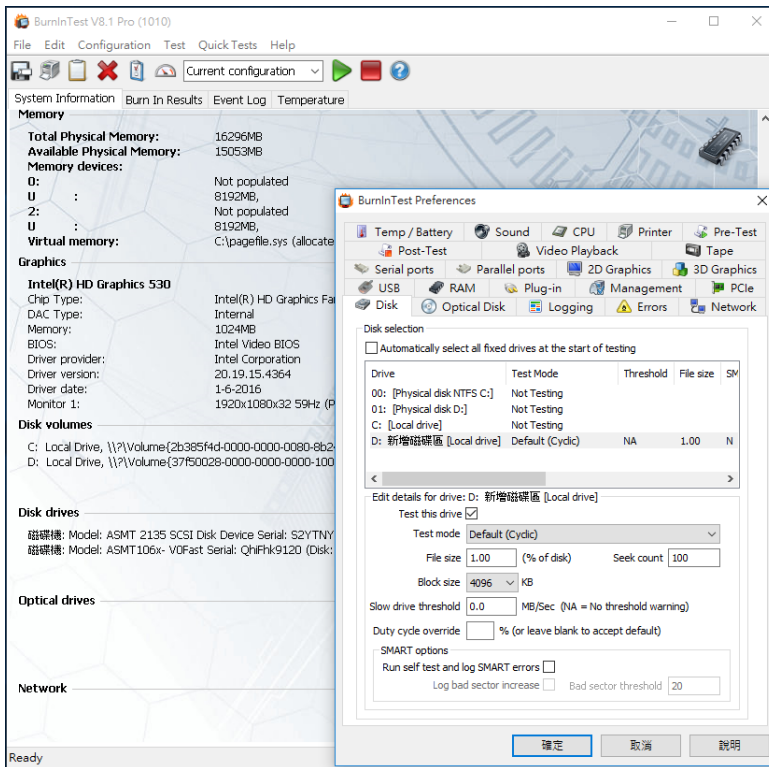
3.1 BurnInTest v8.1 Pro

3.1.1 system information for Samsung CM871a M.2 / 256GB as below:

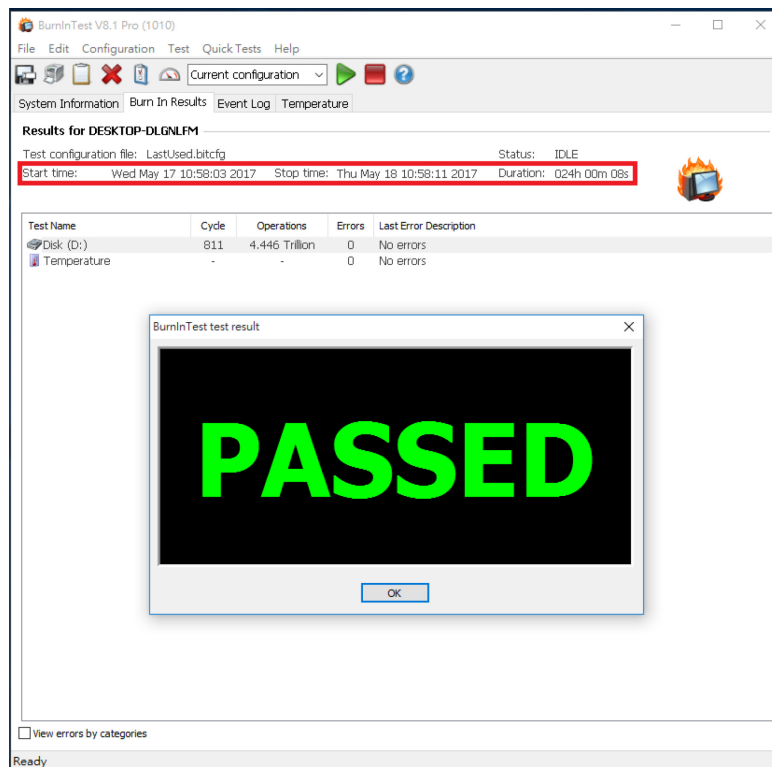


USB 3.1 Gen 2 Micro-B for mSATA SSD & CFast Card Enclosure

3.1.2 show M.2 SSD test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test for [Samsung CM871a M.2 / 256GB](#) 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 M.2 SSD is SATA III Interface, I/O speed, max. to 600MB/s.
- 4.4 U4285F enclosure I/O performance is based on M.2 SSD.