



MINERVA

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

Performance & Burn In Test Rev. 1.0

Table of Contents

1. Overview

2. Performance Measurement Tools and Results

2.1 Test Platform

2.2 Test target and Used M.2 SATA SSD

2.3 Install Hardware

2.4 BIOS & Windows 10 OS environment setup

2.5 CrystalDiskMark 3.0.2 x64 performance test

2.6 AS SSD Benchmark 1.9 performance test

2.7 ATTO Disk Benchamrk 2.47 performance test

2.8 AnvilBenchmark_V110_B337 Benchmark performance test

3. Burn In Tests and Results

3.1 BurnInTestv8.1 Pro burn in test

4. Summary

USB 3.1 Gen 2 Micro-B for M.2 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 CFast 128GB(Trancend [TS128GCFX600](#))



U4285F Adapter



USB C type to micro B cable



Transcend CFast 128GB

2.3 Install Hardware

Insert CFast Card into U4285F enclosure's CFast connector. 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

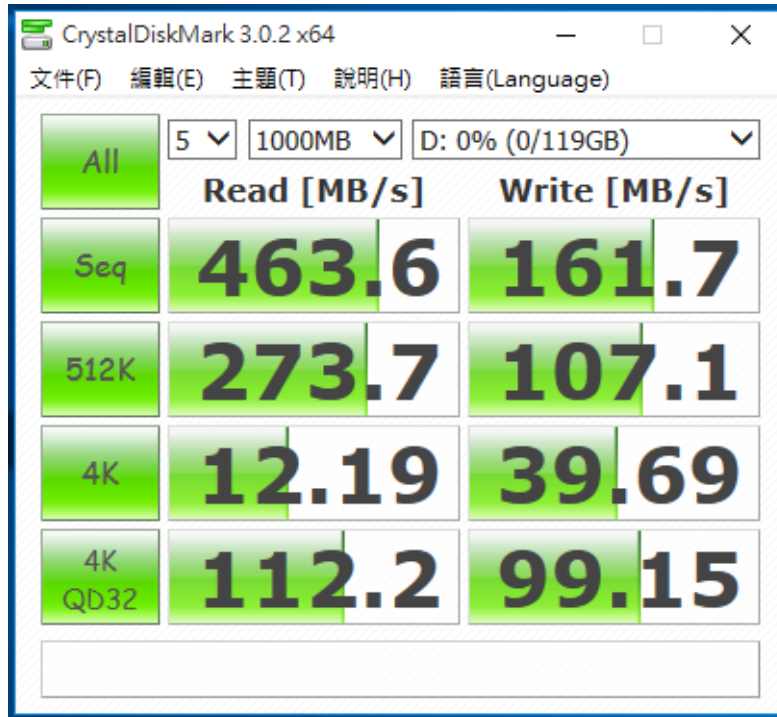
- 2.4.1 install Windows 10 64bit OS.
- 2.4.2 U4285F enclosure formatted NTFS.

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

2.5 CrystalDiskMark 3.0.2 x64 performance test

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

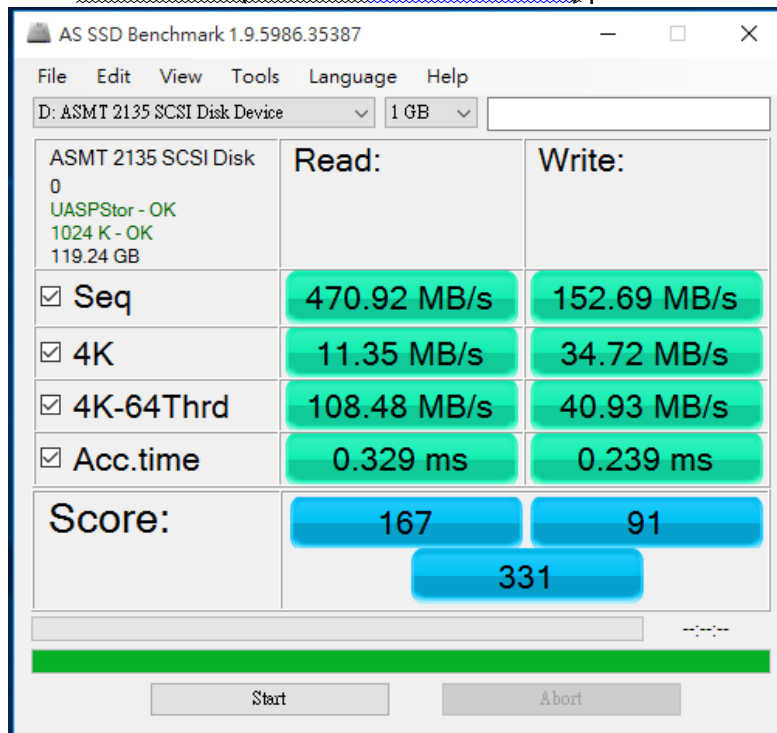
2.5.1 show CFast 128GB(Trancend [TS128GCFX600](#)) performance as below:



2.6 AS SSD Benchmark 1.9 performance test

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

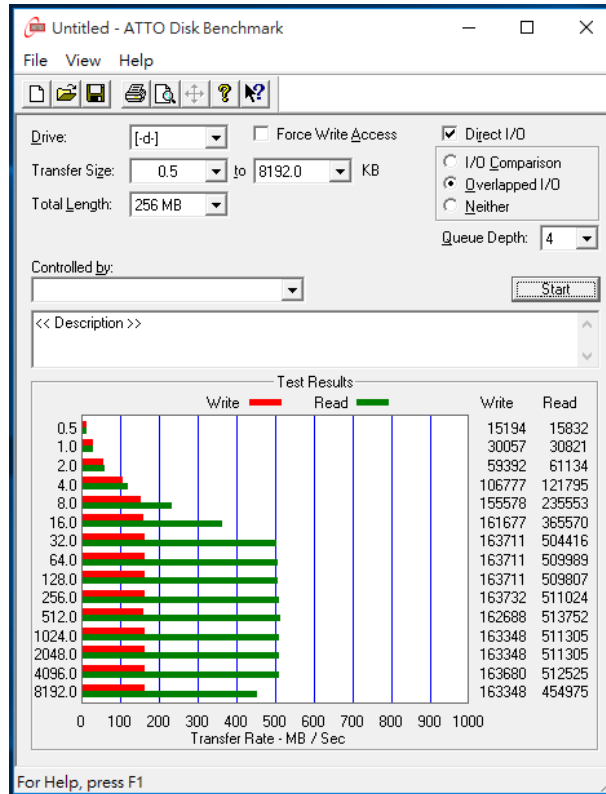
2.6.1 show CFast 128GB(Trancend [TS128GCFX600](#)) performance as below:



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

2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 show CFast 128GB(Trancend [TS128GCFX600](#)) performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 show CFast 128GB(Trancend [TS128GCFX600](#)) performance as below:

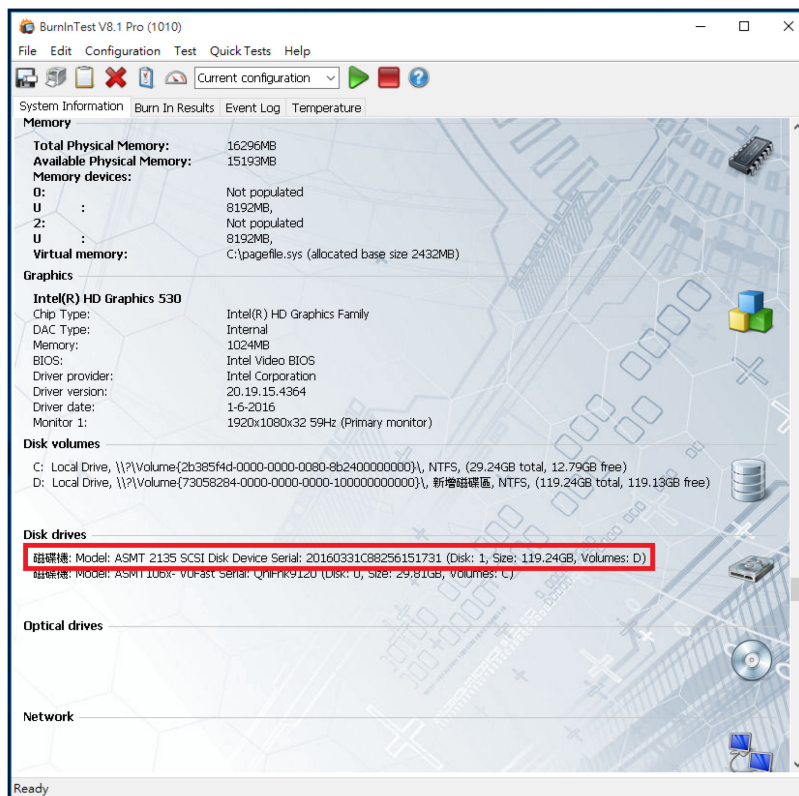
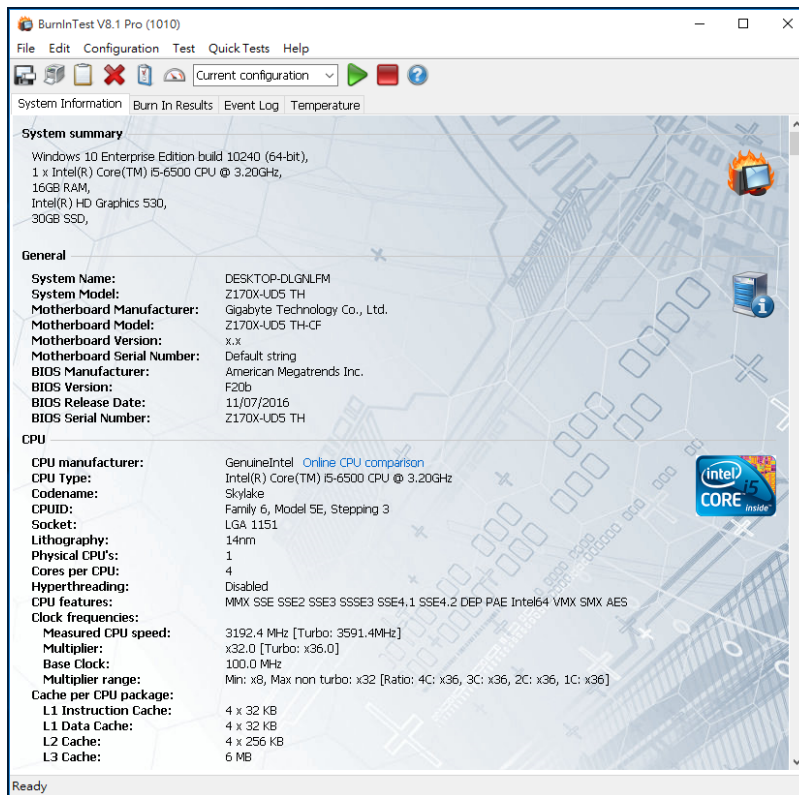


USB 3.1 Gen 2 Micro-B for M.2 SSD & CFast Card Enclosure

3. Burn In Tests and Results

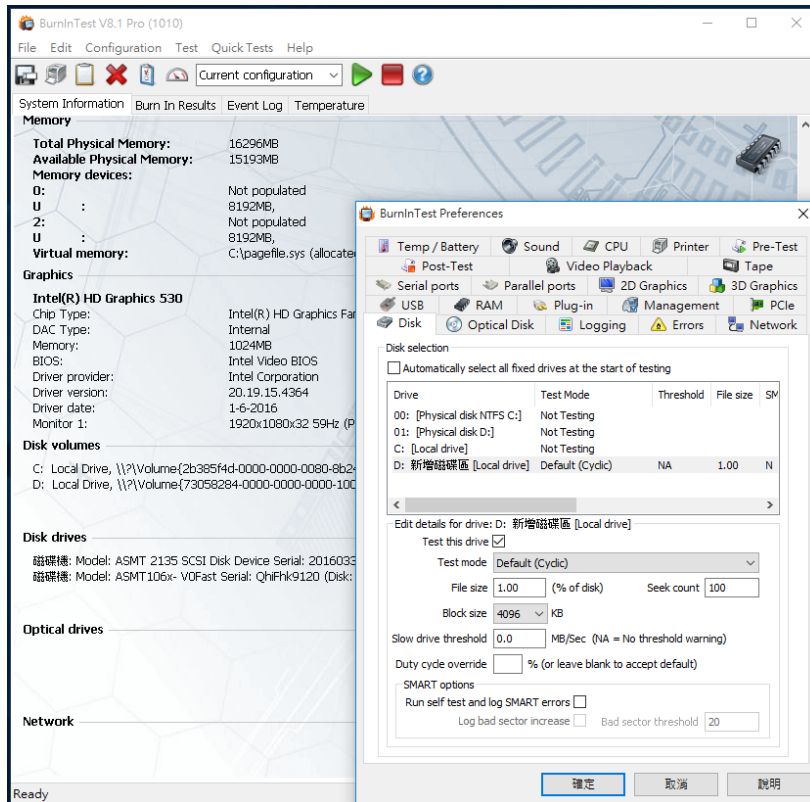
3.1 BurnInTest v8.1 Pro

3.1.1 **system information** for CFast 128GB(Trancend [TS128GCFX600](#)) as below:

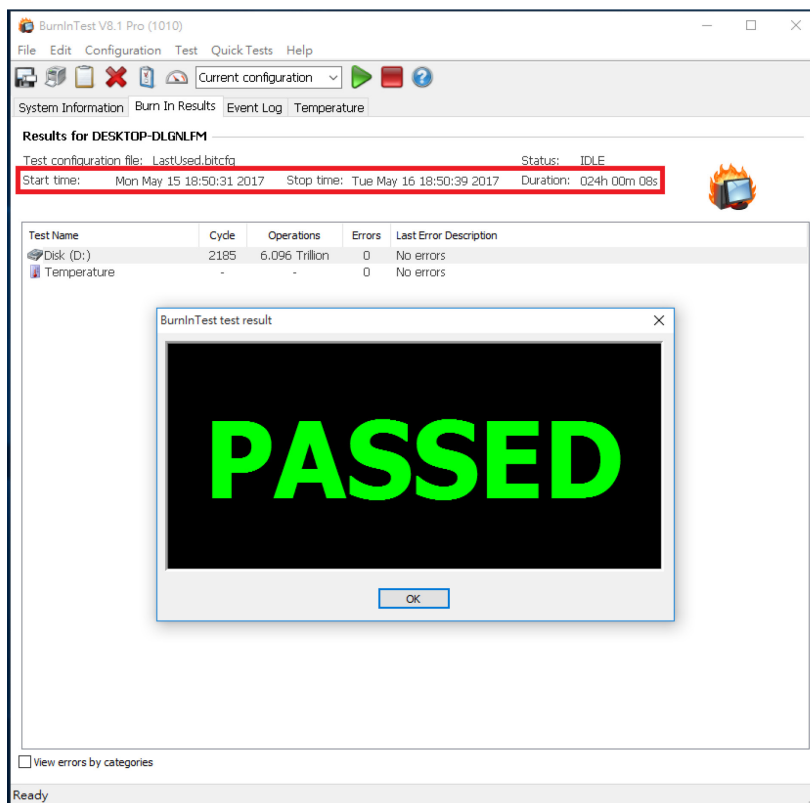


USB 3.1 Gen 2 Micro-B for M.2 SSD & CFast Card Enclosure

3.1.2 show CFast Card test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test for CFast 128GB(Trancend TS128GCFX600) PASSED



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

4. Summary

- 4.1 USB 3.1 is 10Gbps Interface.
- 4.2 SATA III is 6Gbps Interface.
- 4.3 CFast Card is SATA III Interface, I/O speed, max. to 600MB/s.
- 4.4 U4285F enclosure I/O performance is based on mSATA SSD.