MINERVA

USB 3.1 Gen 2 for M.2 SATA SSD with USB type-A Enclosure

Performance & Burn In Test Rev. 1.0

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USB 3.1 Gen 2 Type-A for M.2 SSD Enclosure

1. Overview

U9115P Enclosure, built-in USB3.1 Type-A connector, provides one M.2 B-key connector. First inserts M.2 SSD into M.2 B-key connector and assembly PCBA into enclosure, then plug U9115P into USB 3.1 type-A female connector of the host.

2. Tools and Results of Performance Measurement

2.1 Test Platform:

M/B : ASRock **Z170 Extreme 7+**
CPU : Intel **i5-6400,** 2.7GHz/ 6M Cache/ LGA1151
Memory : Kingston **KVR21N15D8/8,** DDR4-2133MHz, 16G(8GB DIMM*2)
ATX Power : FSP RAIDER 550**, 550W ATX**, 12V V2.2 Power Supply
Graphic : Z170 Chipsets built-in **HD Graphics 530**
OS : Microsoft **Windows 8.1 64bit OS**

2.2 Test target: U9115P enclosure and LITE-ON 128GB(**LGT-128M6G**).

U9115P Enclosure

LITE-ON LGT-128M6G

2.3 Install Hardware

Inserts M.2 SSD into U9115P adapter's M.2 connector, and use the coppers and screws to fix SSDs (please refer to the installation Notes). Then U9115P plugs into USB3.1 port of ASRock **Z170 Extreme 7+.**

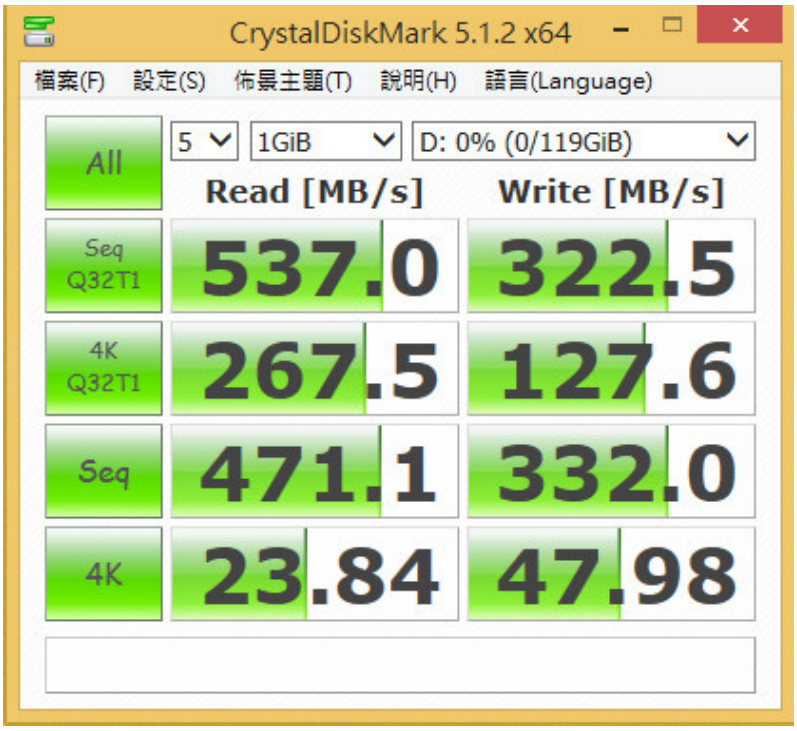
2.4 BIOS & Windows 8.1 OS environment setup

2.4.1 install Windows 8.1 64bit OS.

2.5 CrystalDiskMark 5.1.2 x64 performance test

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

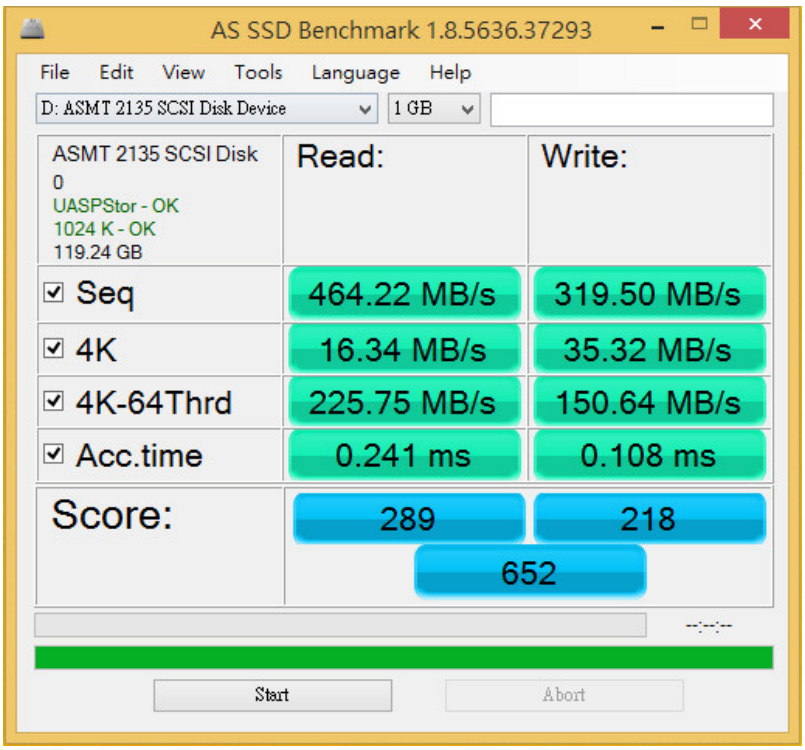
2.5.1 show LITE-ON 128GB(**LGT-128M6G**) performance as below:



2.6 AS SSD Benchmark 1.8 performance test

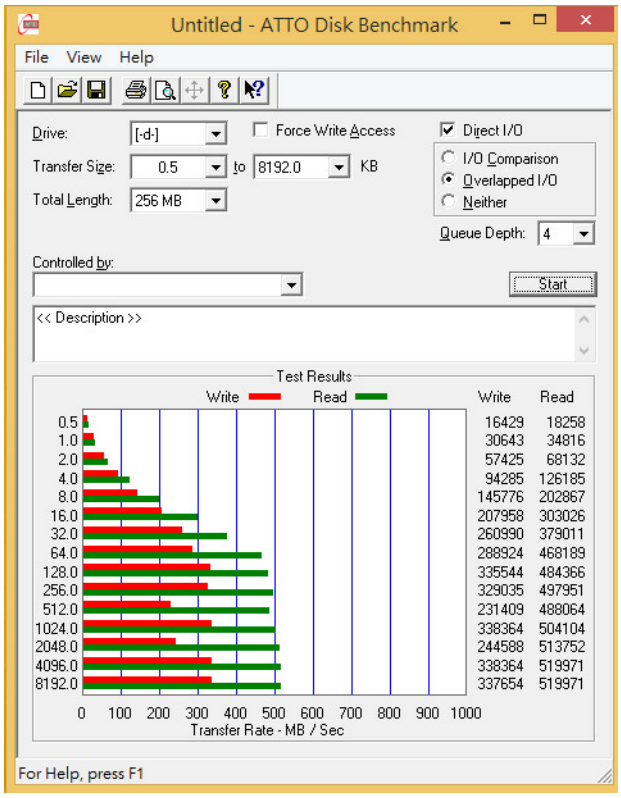
※Benchmark (Read & Write by MB/s, default block size = 16MB)

2.6.1 show LITE-ON 128GB(**LGT-128M6G**) performance as below:



2.7 ATTO Disk Benchamrk 2.47 performance test

2.7.1 show LITE-ON 128GB(LGT-128M6G) performance as below:



2.8 AnvilBenchmark_V110_B337

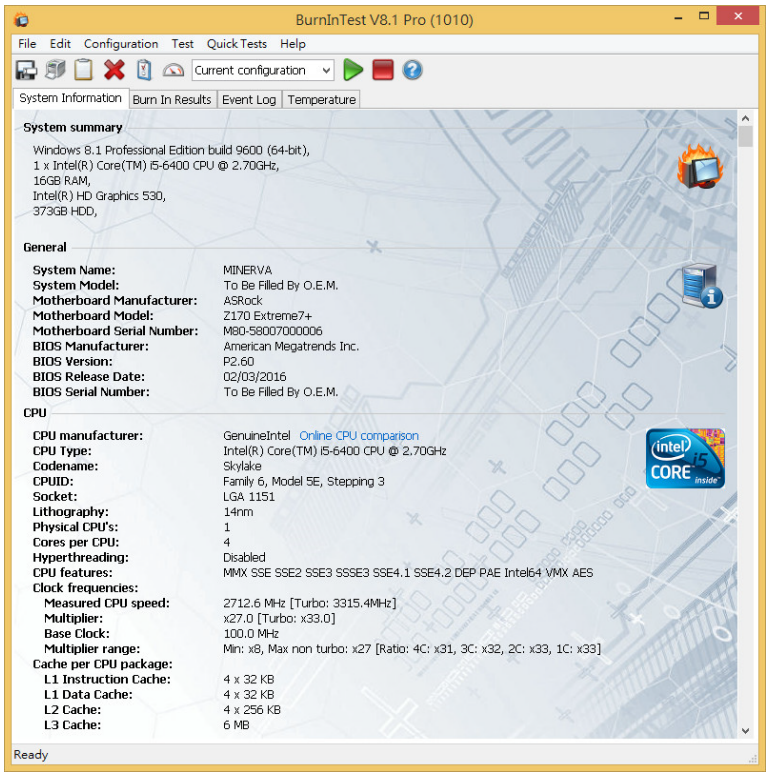
2.8.1 show LITE-ON 128GB(LGT-128M6G) performance as below:

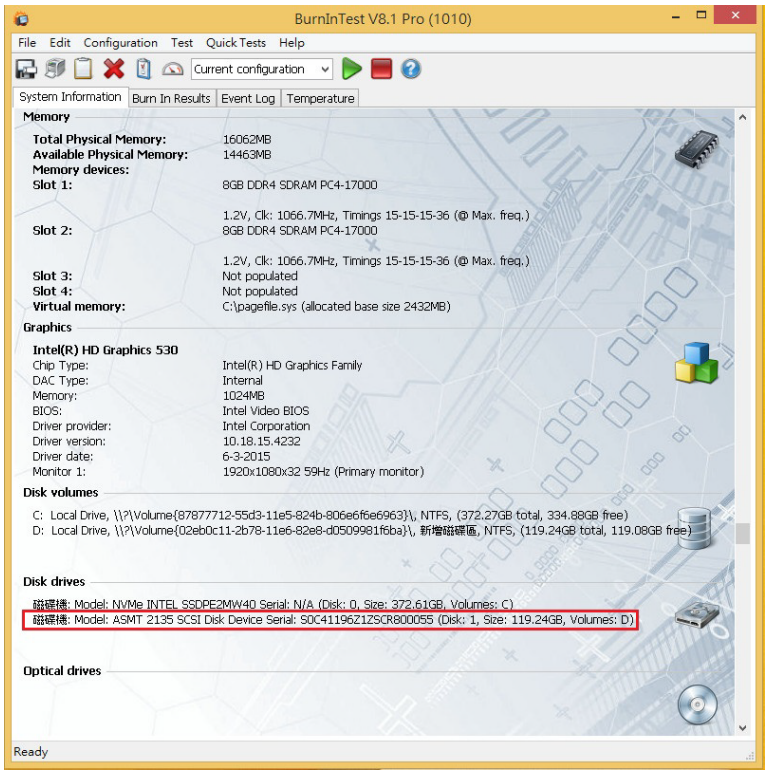
3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro

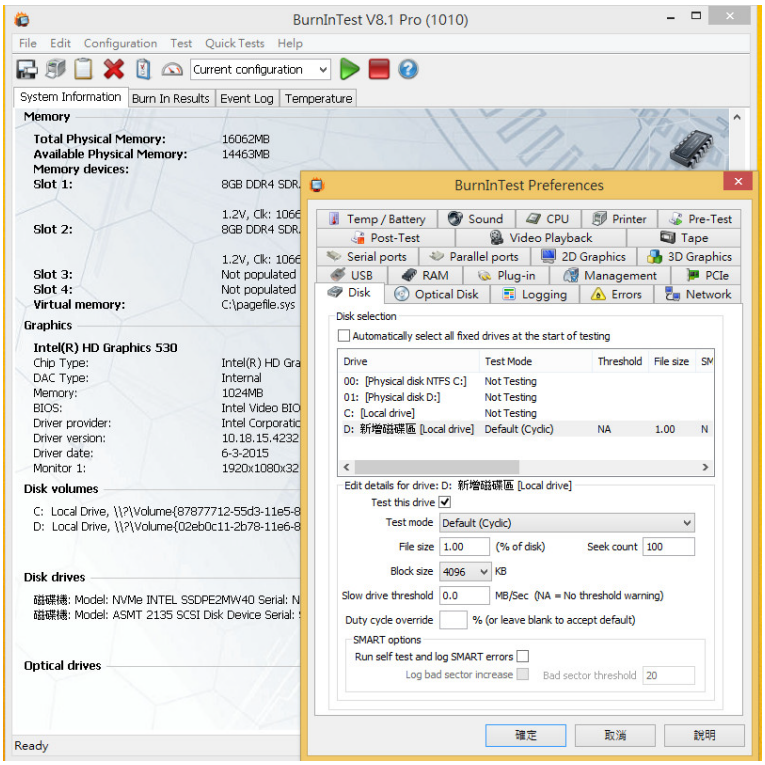
show LITE-ON 128GB(**LGT-128M6G**)

3.1.1 **system information** as below:

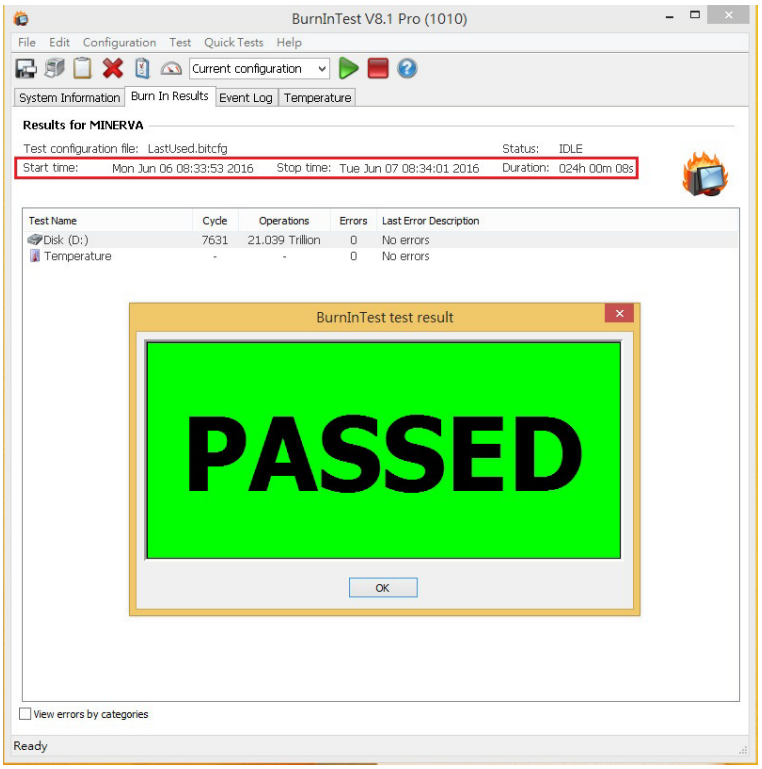




3.1.2 show Disk test mode(10 ways cycle test)



3.1.3 show 24-hour Burn-in test for LITE-ON 128GB(LGT-128M6G) PASSED



4. Summary

4.1 USB 3.1 Gen 2 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 U9115P adapter I/O performance is based on M.2 SSD.