MINERVA

R2036F SATA III to M.2 NGFF 2-port RAID Card

RAID 1 Mode Performance & Burn In Test   Rev. 1.0

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R2036F   SATA III TO M.2 NGFF 2-port RAID Card

1. Overview

R2036F RAID card offers SATA 3 interface, built-in 2-port M.2 67-pin B key connector can be combined M.2 NGFF SSD into a RAID 0, RAID 1, JBOD mode of operation.

2. Tools and Results of Performance Measurement

2.1   Test Platform

M/B :	ASRock **Z97 Extreme 6**
CPU :	Intel **i5-4426,** 3.2GHz/ 6M Cache/ LGA1150
Memory :	Kingston **KVR16N11S8 / 4,** DDR3-1600MHz, 8G(4GB DIMM*2)
ATX Power :	FSP RAIDER 550, **550W ATX**, 12V V2.2 Power Supply
Graphic :	Z97 Chipsets built-in **HD Graphics 4600**
OS :	Microsoft **Windows 8.1 64bit OS**

2.2   Test target: R2036F RAID Card and M.2 NGFF SSD(**LGT-128M6G**/**128GBx2**)

R2036F Adapter	R2036F + M.2 SSD	LGT-128M6G x2pcs

2.3   Install Hardware

    2.3.1   Insert M.2 SSDx2 into R2036F converter's B key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connect R2036F converter to **SATA III Port of ASRock Z97 Extreme6**.
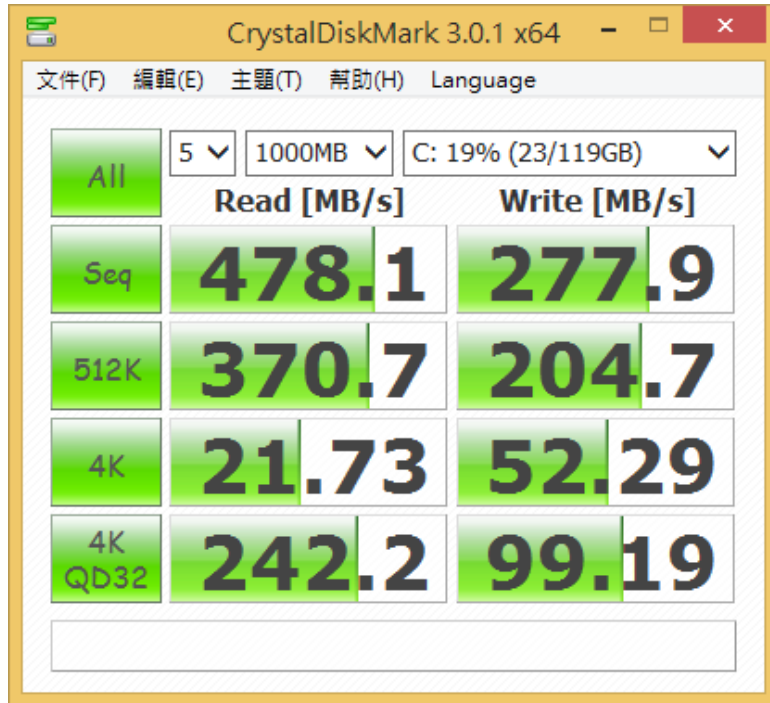
2.4   BIOS & Windows 8 OS environment setup

    2.4.1   Install Windows 8.1 x64 OS.

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2.5   CrystalDiskMark 3.0.1 x64 performance test
  ※Benchmark (Sequential Read & Write / default = 1MB)
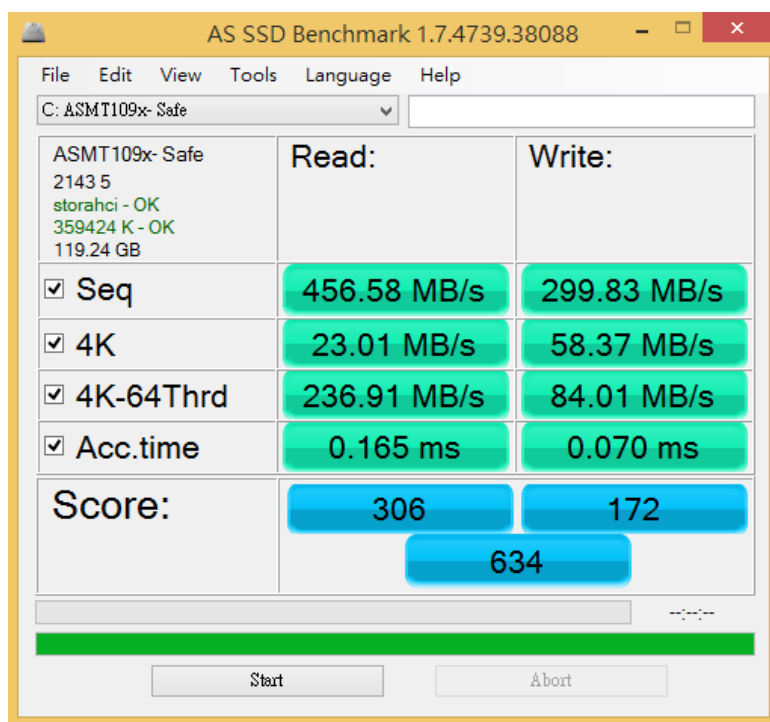 2.5.1 Used LITE-ON LGT-128M6Gx2 in **Z97 Extreme 6 RAID 1** performance as below:

2.6   AS SSD Benchmark 1.7 performance test
  ※Benchmark (Read & Write by MB/s, default block size = 16MB)
  2.6.1 Used LITE-ON LGT-128M6Gx2 in **Z97 Extreme 6 RAID 1** performance as below:

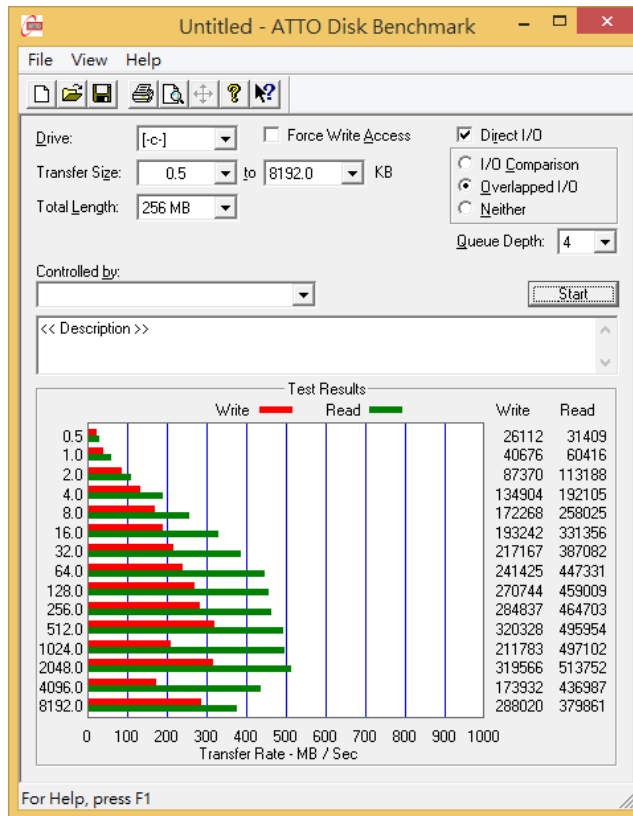# R2036F   SATA III TO M.2 NGFF 2-port RAID Card
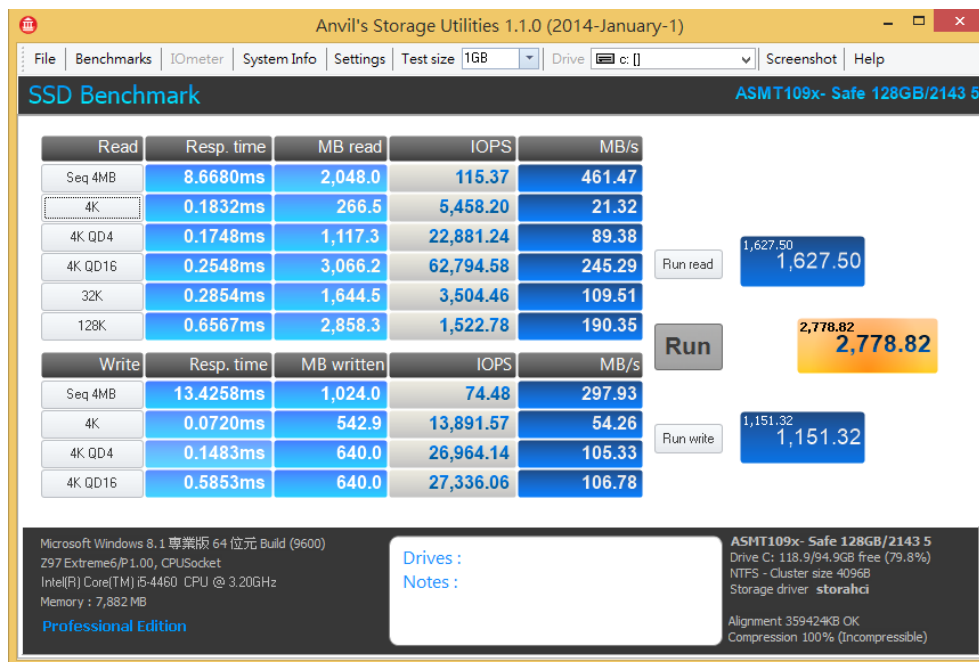
2.7   ATTO Disk Benchmark performance test

※Benchmark (Sequential Read / default block size = 8MB)

2.7.1   Used LITE-ON LGT-128M6Gx2 in **Z97 Extreme 6 RAID 1** performance as below:

2.8   AnvilBenchmark_V110_B337

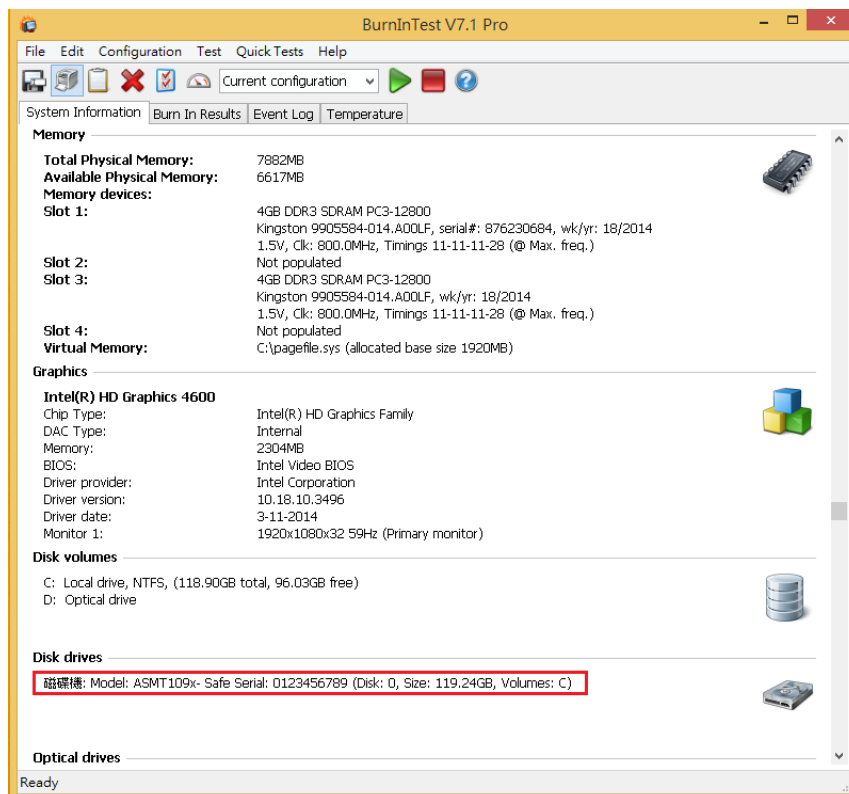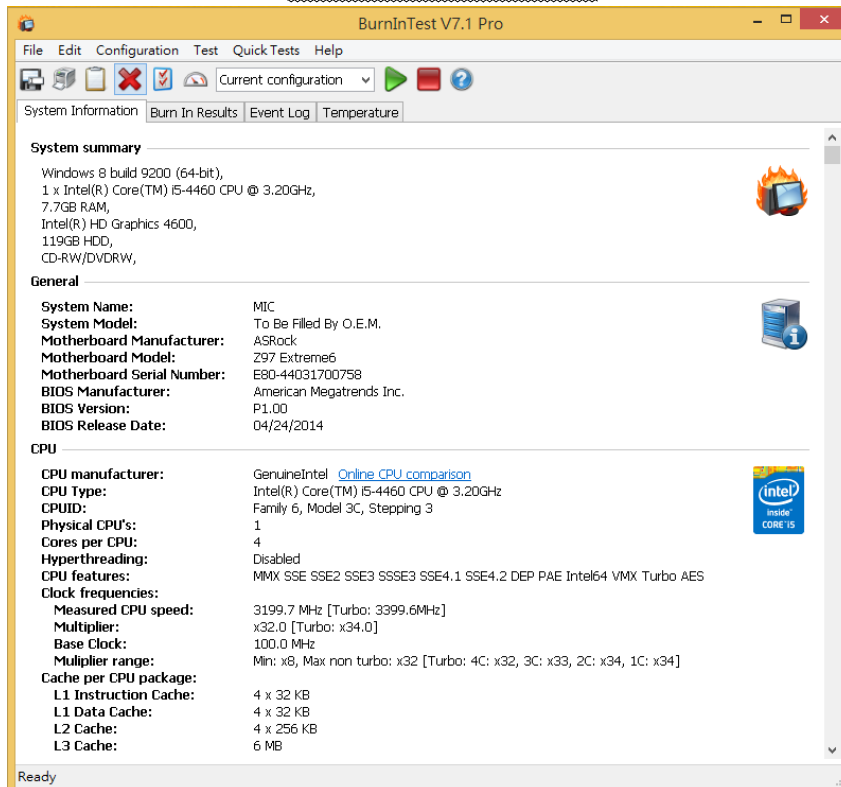### 2.8.1   Used LITE-ON LGT-128M6Gx2 in **Z97 Extreme 6 RAID 1** performance as below:

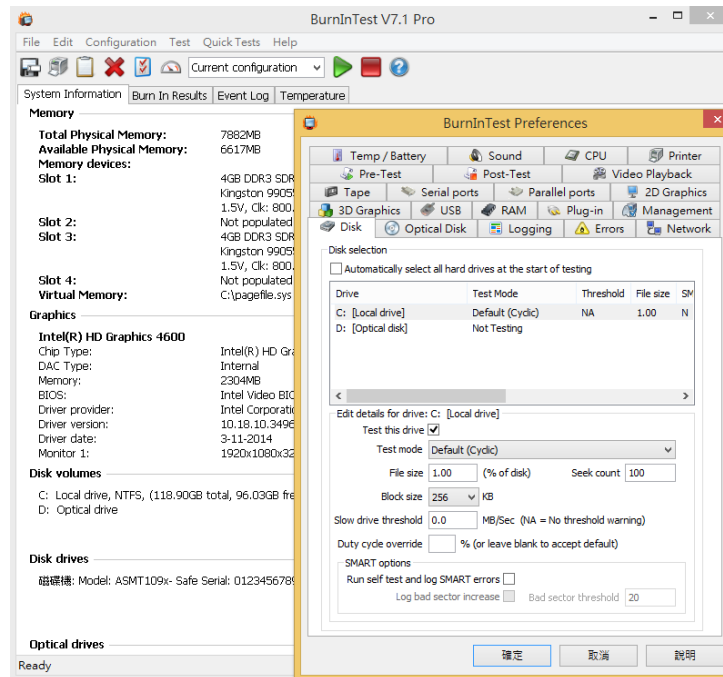# R2036F   SATA III TO M.2 NGFF 2-port RAID Card

3. Burn In Tests and Results

3.1   BurnInTest v7.1 Pro

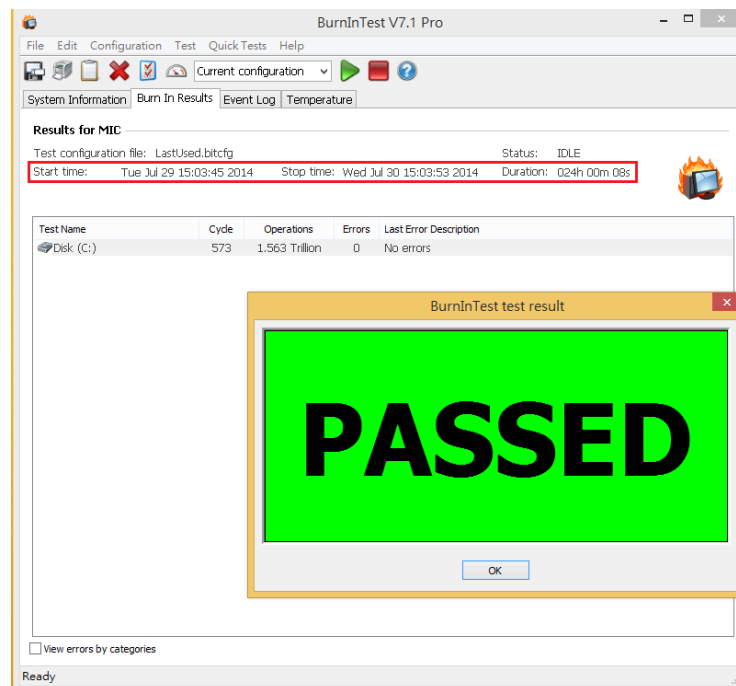#### 3.1.1   system information for LITE-ON LGT-128M6Gx2 RAID 1 as below:

3.1.2   show <u>LITE-ON LGT-128M6Gx2</u> RAID 1 test mode(default cyclic -- 10 ways cycle test)

3.1.3   show <u>LITE-ON LGT-128M6Gx2</u> RAID 1 24-hour Burn-in test PASSED

4. Summary

4.1   R2036F is SATA III Interface, I/O speed, max. to 600MB/s.

4.2   R2036F adapter I/O performance is based on M.2 SSD.