



MINERVA

PR9401 PCIe Gen 2 2-Lane RAID Card for mSATA 2-port & M.2 2-port

RAID 0 Mode Performance & Burn In Test Rev. 1.0

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4. Summary

PR9401 PCIe Gen2 x2 RAID Card

1. Overview

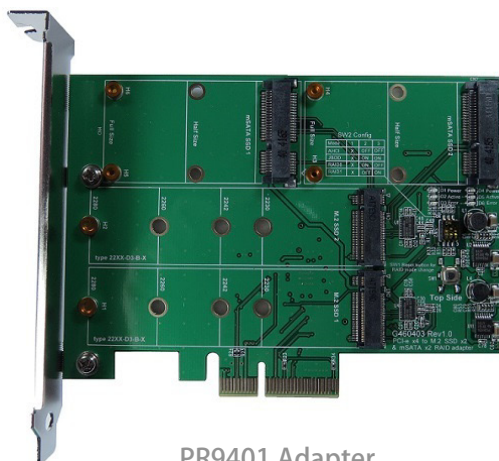
PR9401 RAID card offers PCIe Gen 2 x2 interface, built-in 2-port Mini PCI-e & 2-port M.2 B key connector can be combined mSATA SSDx2 or M.2 SSDx2 into a RAID 0, RAID 1, JBOD mode of operation.

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](#))



PR9401 Adapter



LGT-128M6G x2

2.3 Install Hardware

2.3.1 Insert M.2 SSDx2 into PR9401 RAID card 's M.2 B-key connector, and then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Plug PR9401 RAID card in **PCIe slot of ASRock Z97 Extreme6**.

2.4 BIOS & Windows 8 OS environment setup

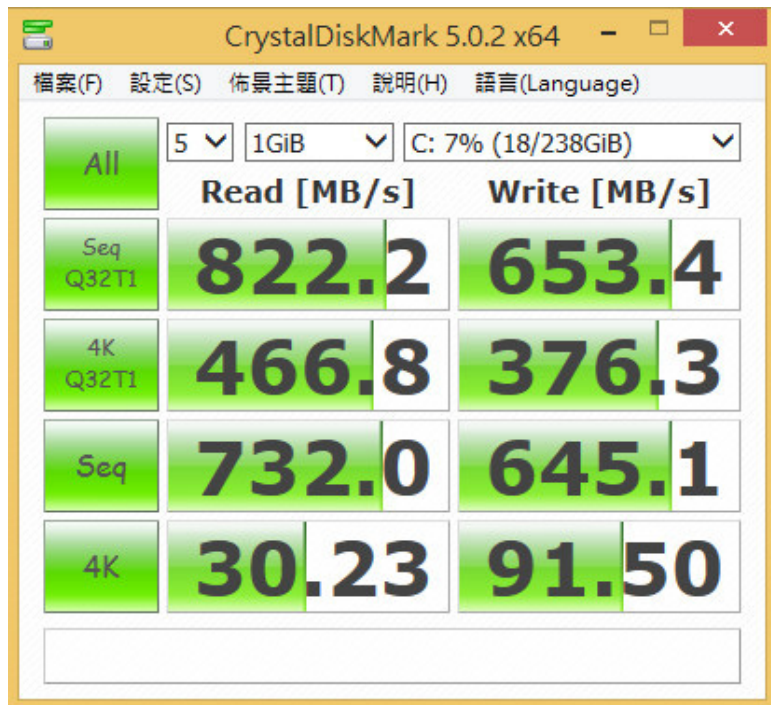
2.4.1 Install Windows 8.1 x64 OS.

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2.5 CrystalDiskMark 3.0.1 x64 performance test

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

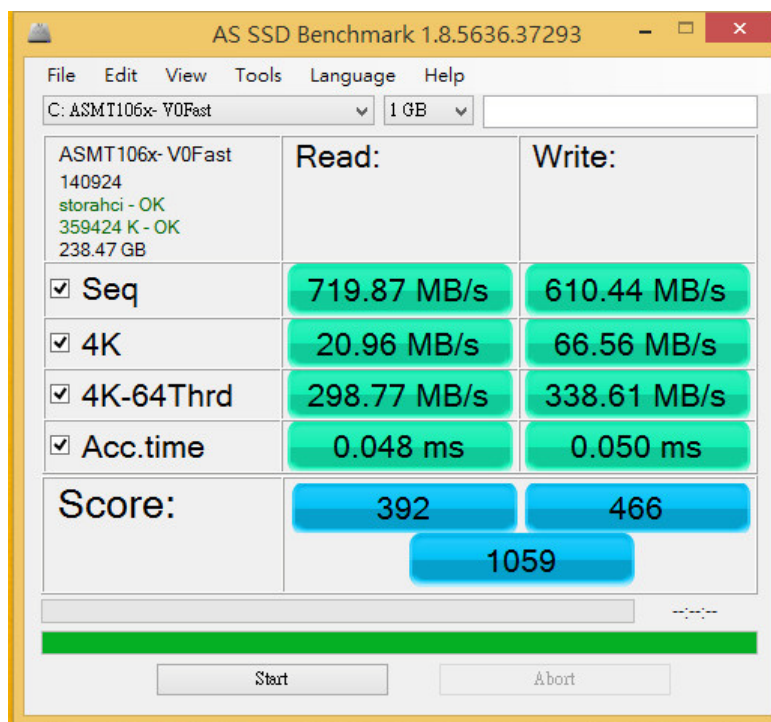
2.5.1 Used LITE-ON [LGT-128M6Gx2](#) in **Z97 Extreme 6 RAID 0** performance as below:



2.6 AS SSD Benchmark 1.8 performance test

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

2.6.1 Used LITE-ON [LGT-128M6Gx2](#) in **Z97 Extreme 6 RAID 0** performance as below:

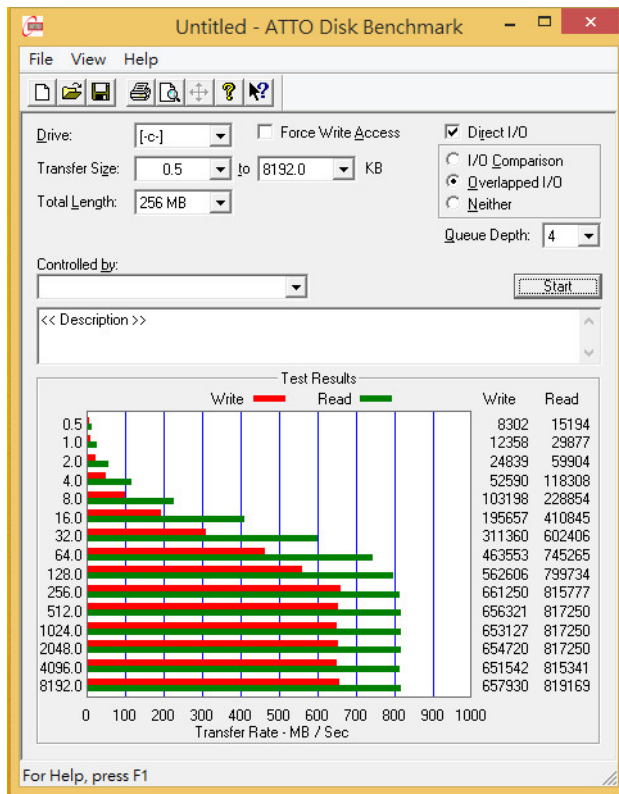


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2.7 ATTO Disk Benchmark performance test

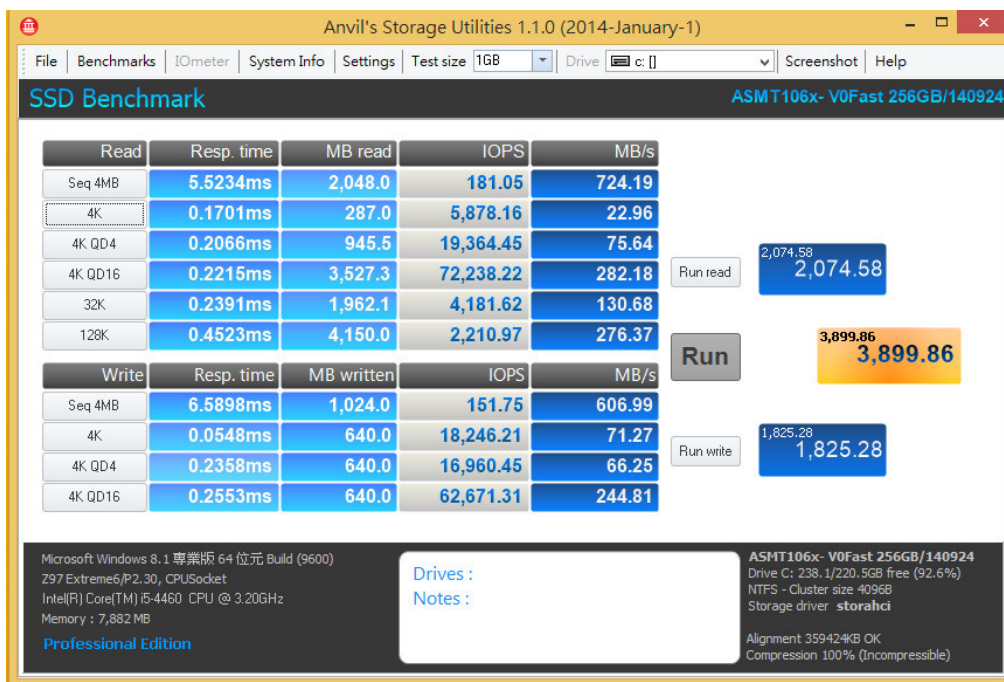
※Benchmark (Sequential Read / default block size = 8MB)

2.7.1 Used LITE-ON LGT-128M6Gx2 in Z97 Extreme 6 RAID 0 performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Used LITE-ON LGT-128M6Gx2 in Z97 Extreme 6 RAID 0 performance as below:

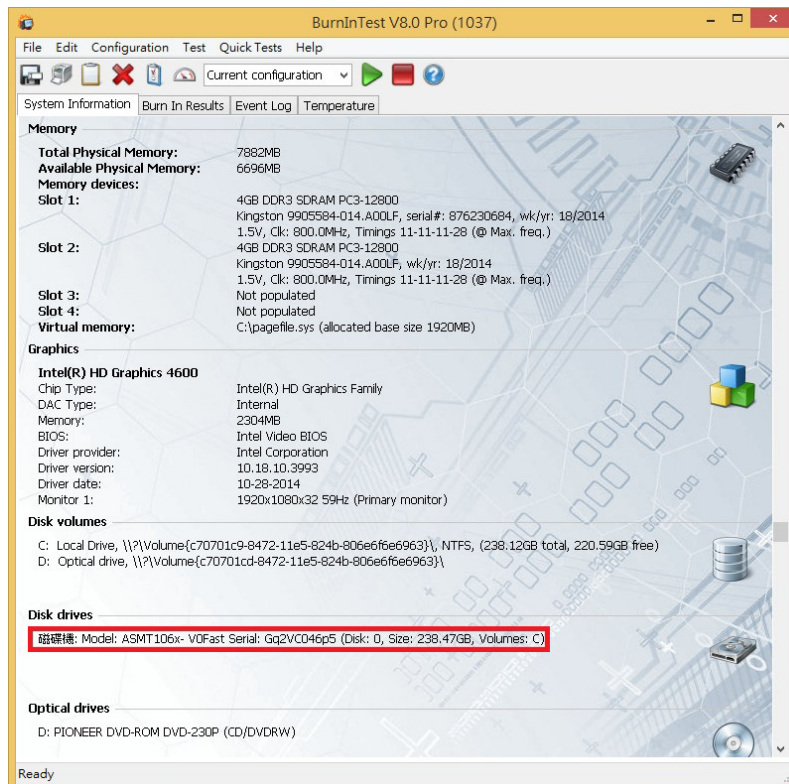
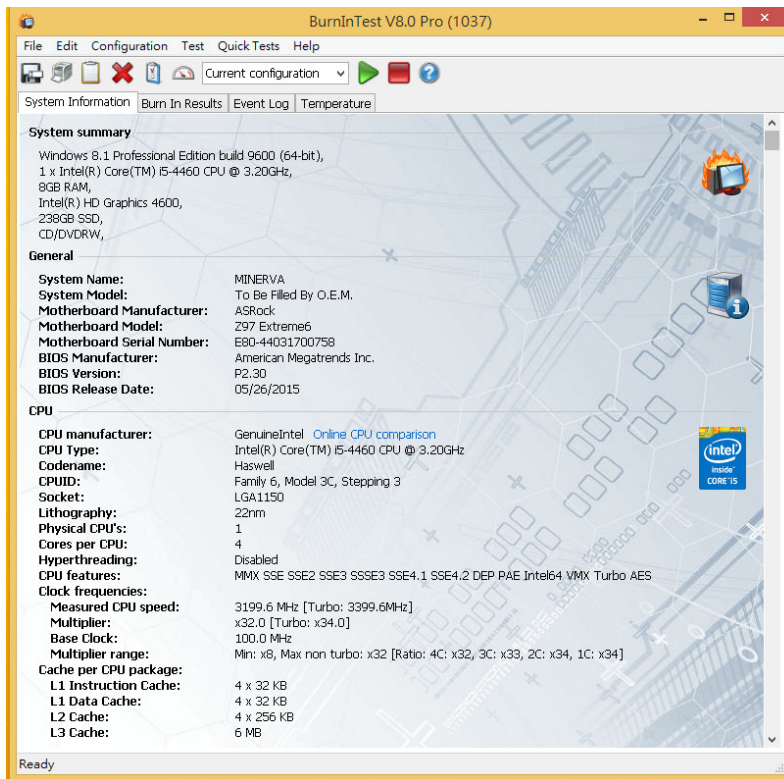


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3. Burn In Tests and Results

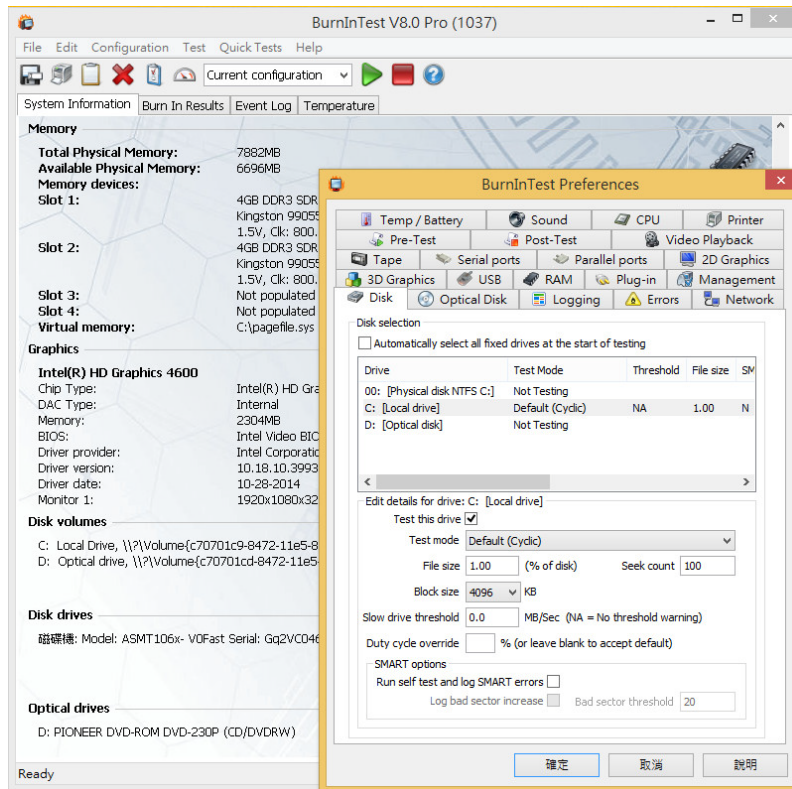
3.1 BurnInTest v7.1 Pro for LITE-ON LGT-128M6Gx2 RAID 0

3.1.1 system information as below:

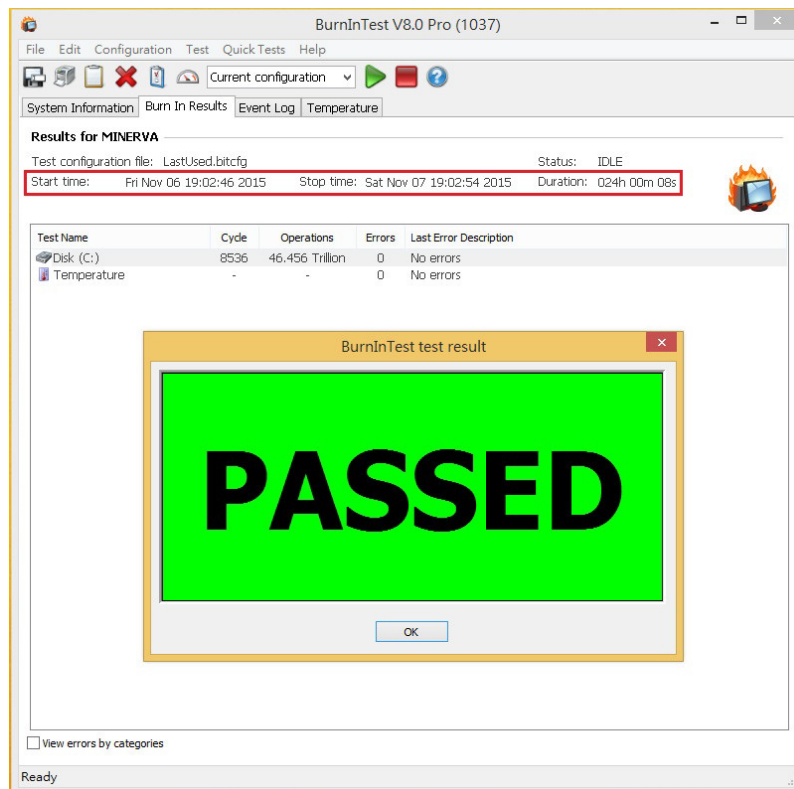


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3.1.2 show test mode(default cyclic -- 10 ways cycle test)



3.1.3 show 24-hour Burn-in test PASSED



PR9401 PCIe Gen2 x2 RAID Card

4. Summary

- 4.1 PR9401 is PCIe Gen2 2-Lane Interface, I/O speed, max. to 800MB/s.
- 4.2 PR9401 RAID card I/O performance is based on M.2 SSD.