Performance test & Burn in test	
Tested riser card	AD963FA9 -- mSATA to SATA 6Gb/s Adapter
mSATA SSD	RunCore mSATA 64GB/RCP-V-T5060-MC (SATA III -- 6Gb/s)
Test Environment	
M/B	Asus P8P67 (Intel P67 Chipsets)
CPU	Intel I5-2500, 3.3MHz/ 6G Cache/ 5GT
RAM	Kingston KVR1333D3N9K2/4G, DDR3-1333MHz,4GB(2GB DIMM* 2)
Power	TC START W500, 500W ATX,12V V2.2 Power Supplier
VGA	MSI R6700, AMD HD6700 Series
Operate System:	WIN 7 64bit OS

Suggestion:

Please use the motherboard containing native SATA 6Gb/s Port to test, which can provide more correct I/O performance. (such as Intel 6 Series chipsets or AMD 9 Series Chipsets).

If you are using a motherboard plus SATA III host bus adapter which is non-native 6Gb/s Port or SATA to PCI-e adapter to provide 6Gb/s Port, the I/O performance testing result will be very much lower than the native SATA III Port or maybe not match the mSATA SSD.

Notice:

1. mSATA SSD I/O performance -- depends on the Controller IC.
2. mSATA SSD I/O performance --depends on the NAND Flash IC.
   a. Toggle DDR mode or ONFI synchronous NAND Flash IC, will show good performance
   b. Traditional asynchronous or SDR NAND Flash IC, will show poor performance

Install:

RCP-V-T5060-MC mSATA SSD inserts to AD963FA9 adapter and fixes it with M3*3 screws, and then connect to the P67 chipset native SATA III Port (use the Asus P8P67 M/B).

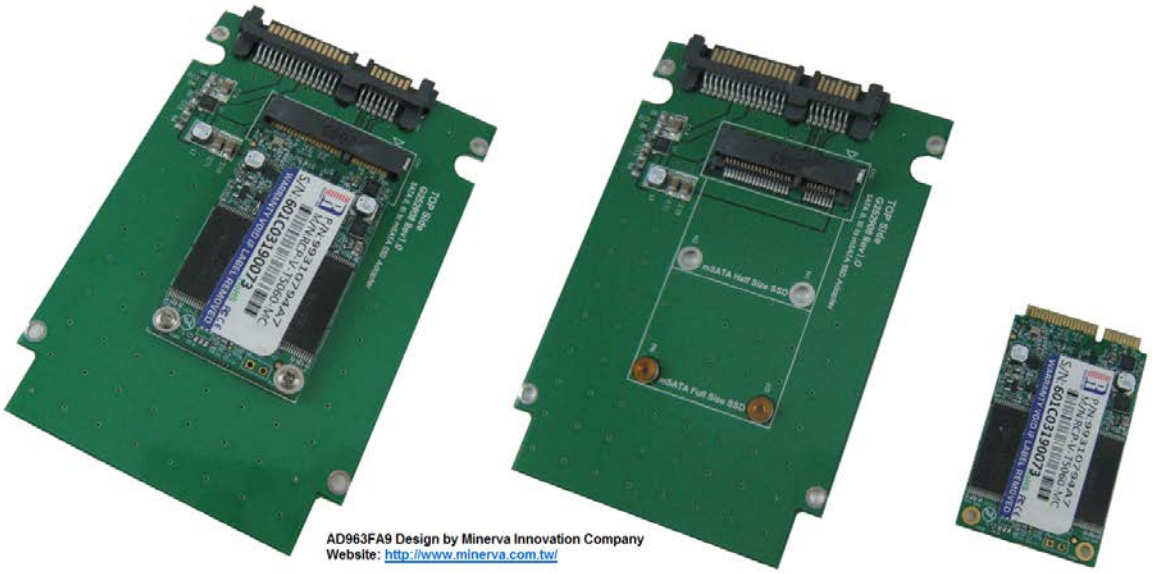
SATA III Host Controller IC : SanForce **SF-2281VB1-SDC** / NAND Flash IC : Intel **JS29F16B08CCME3**

SSD I/O performance measurements

Block sizes

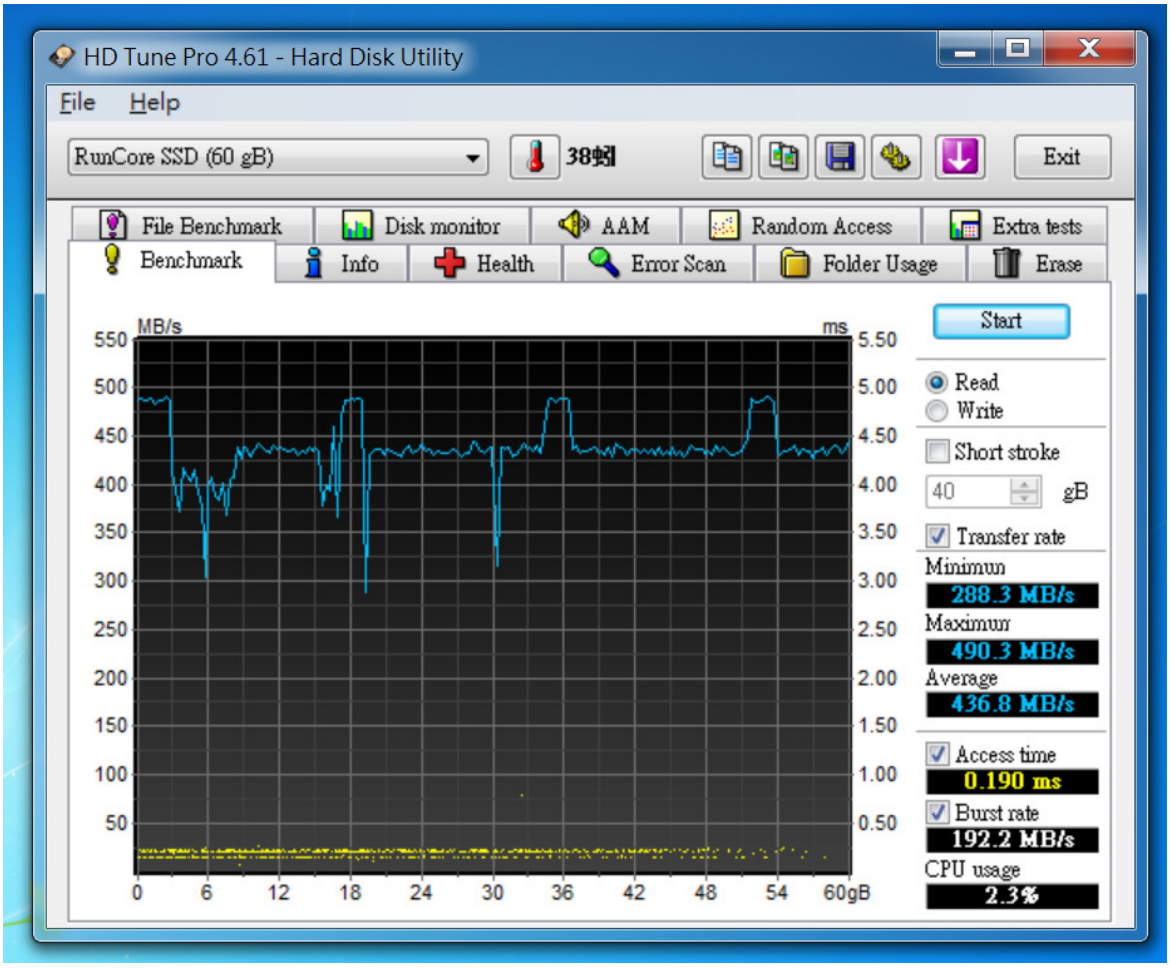
Data transfer always takes place in blocks during access to a SSD. The size of the transferred data blocks depends on features of the operating system and/or the application.

AD963FA9, and RunCore RCP-V-T5060-MC mSATA SSD assembly completed as below:

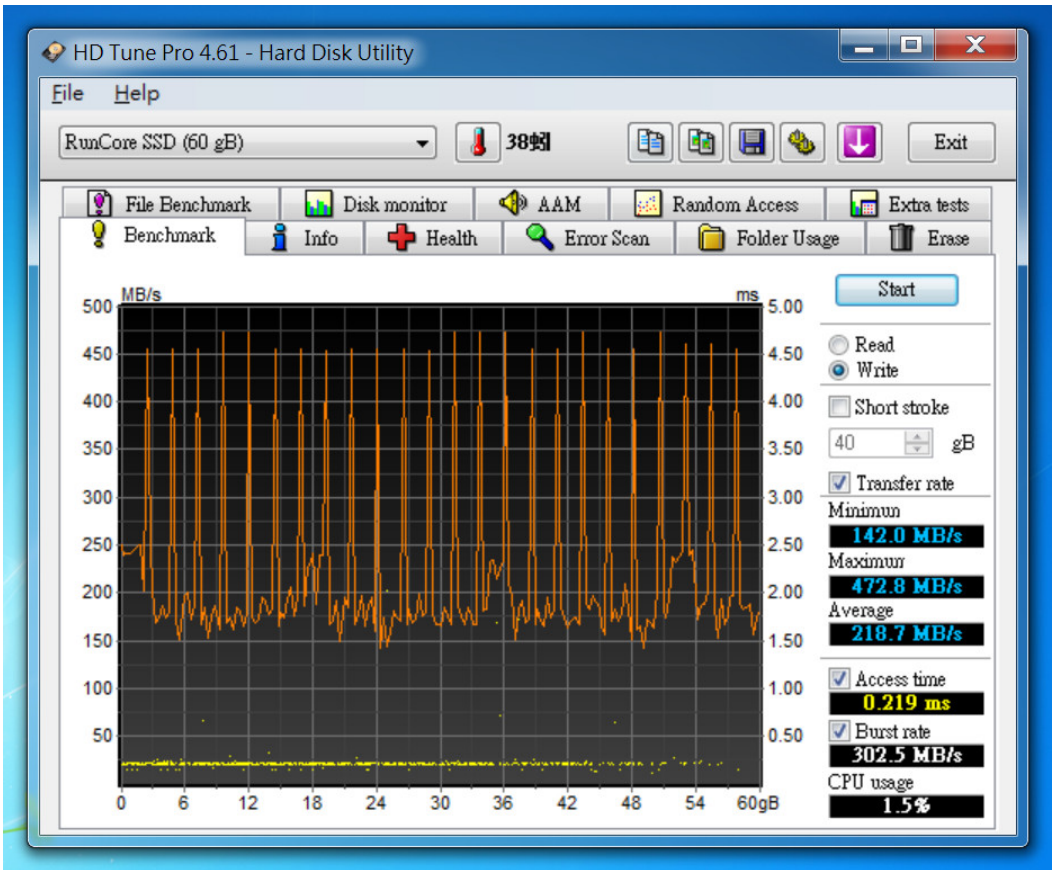


The following performance test uses HD Tune pro 4.61 original software(no partition)

※Benchmark (Sequential Read / default block size= 64KB)

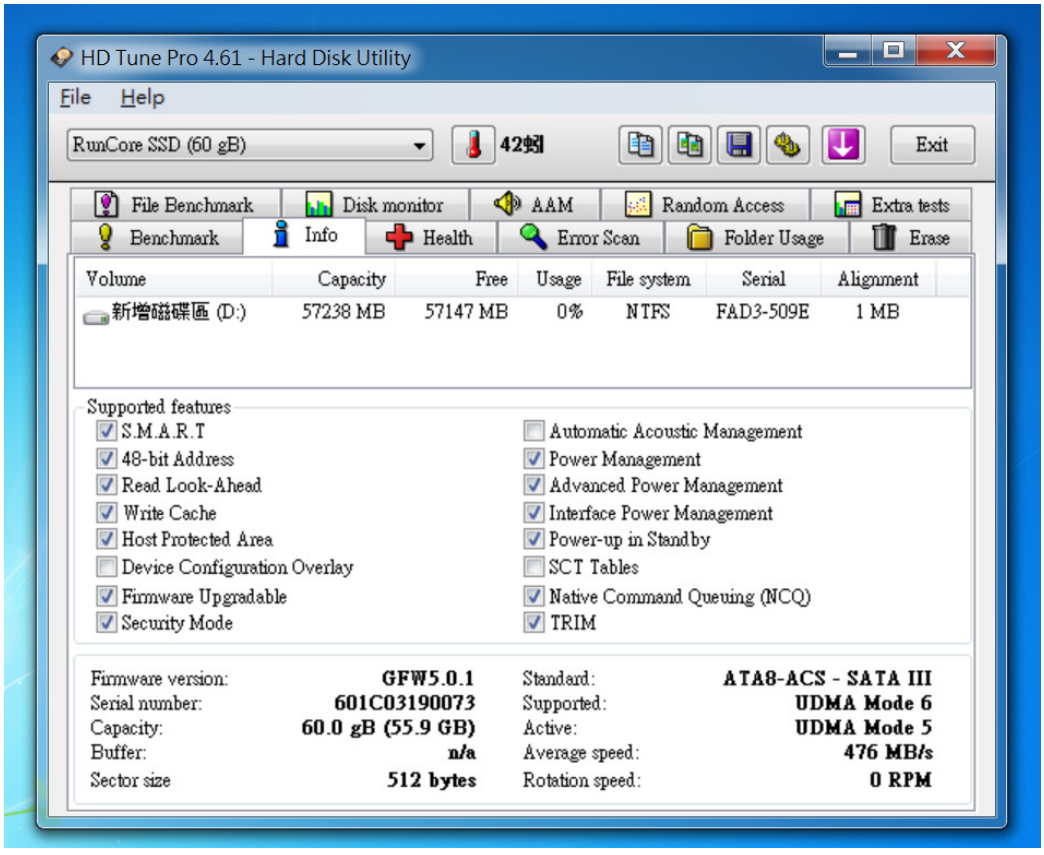


※Benchmark (Sequential Write / default block size= 64KB)

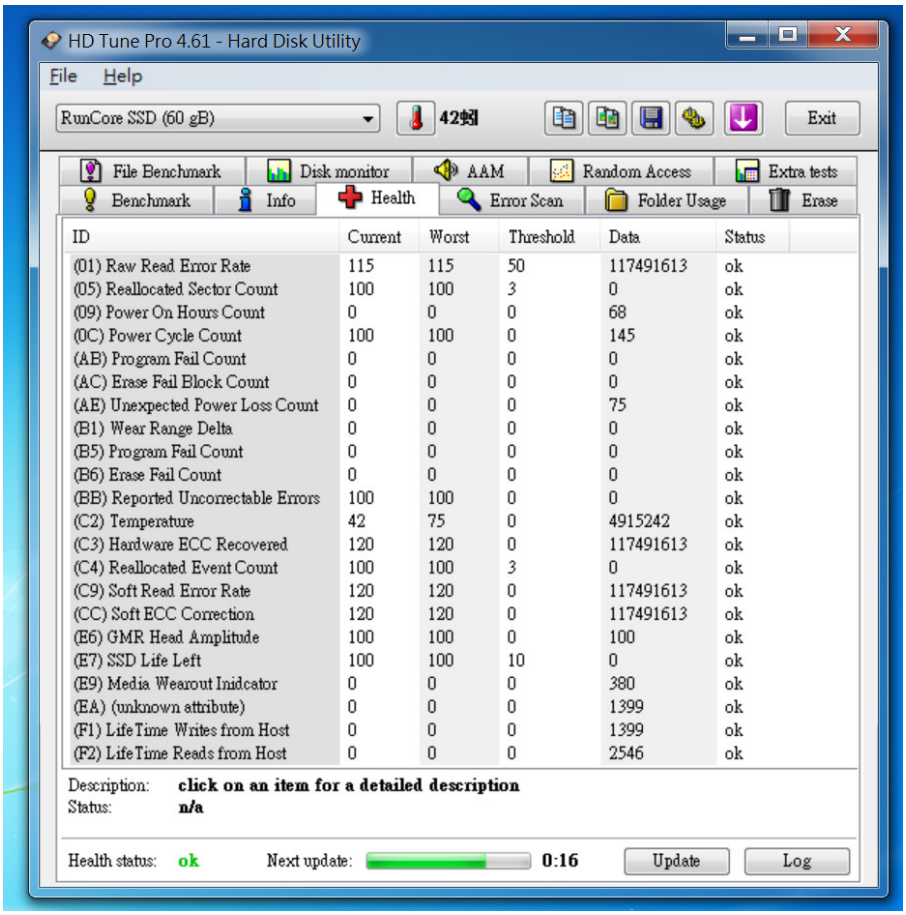


The following performance test uses HD Tune pro 4.61(partition and formatted by win 7 NTFS Type)

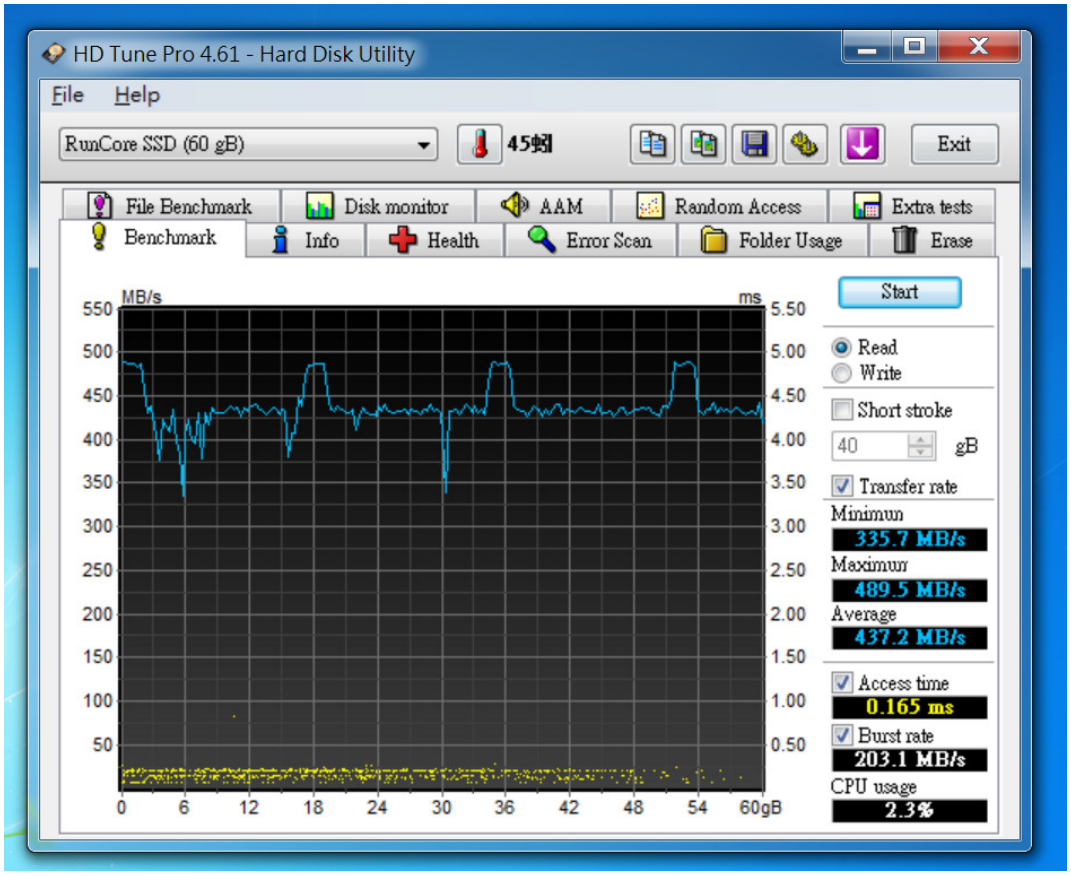
※show RCP-V-T5060-MC / 64GB mSATA SSD SATA Supported features



※show RCP-V-T5060-MC / 64GB mSATA SSD Health Status OK

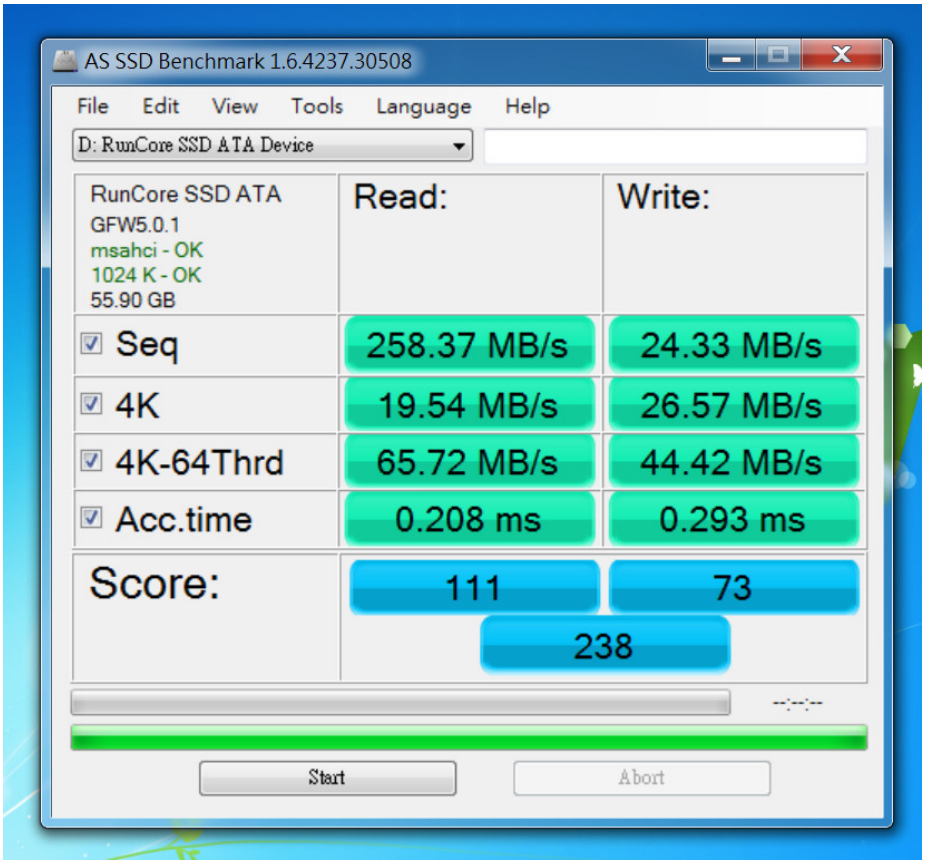


※Benchmark (Sequential Read / default block size= 64KB)



The following performance test uses AS SSD Benchmark 1.6 (partition and formatted by win 7 NTFS Type)

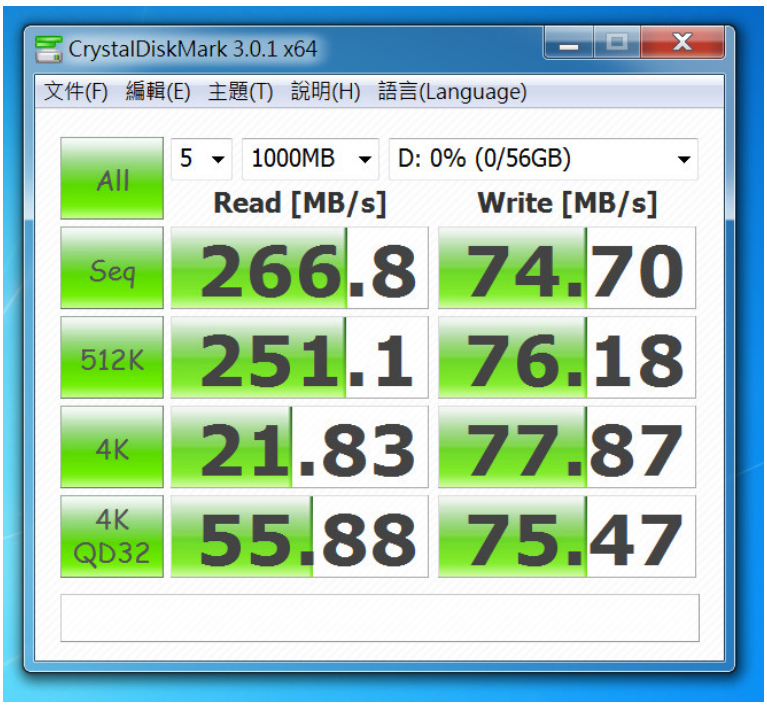
※Benchmark (Read & Write by MB/s / default block size= 16MB)



PS: using asynchronous NAND Flash IC in AS SSD performance is poor.

The following performance test uses CrystalDiskMark 3.0.1 x64 (partition and formatted by win 7 NTFS Type)

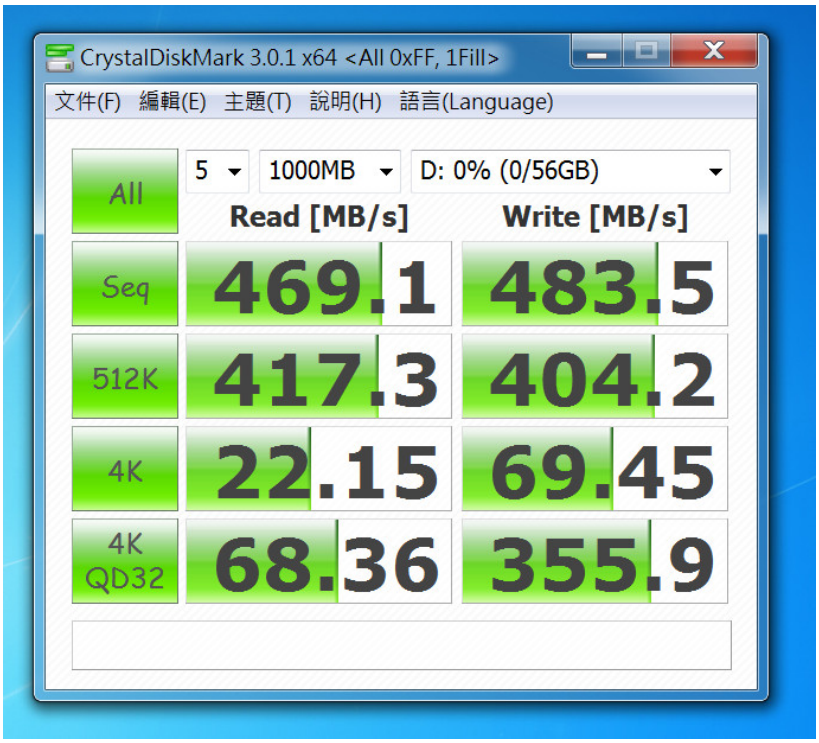
※Benchmark (Sequential Read & Wtire / default block size= 1MB)



(PS: using SanForce SF-2281VB1-SDC real-time compression feature controller, it is not supported)

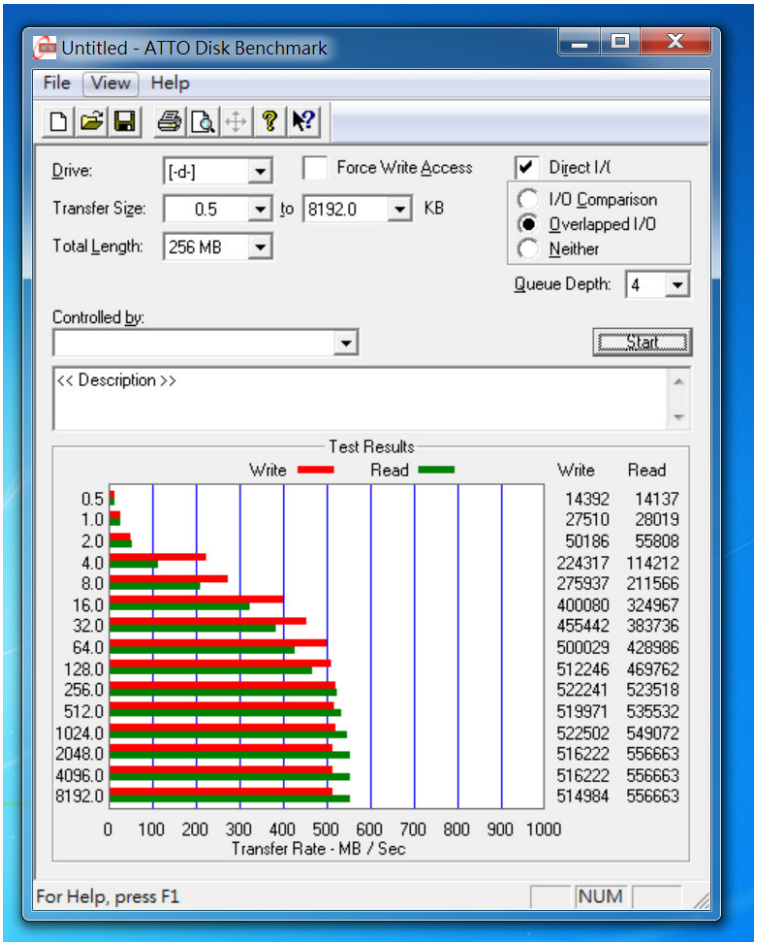
CrystalDiskMark 3.0.1 x64 default random file types so performance is poor.

※Benchmark (Sequential Read & Wtire / default block size= 1MB) –All 0Xff, 1 fill



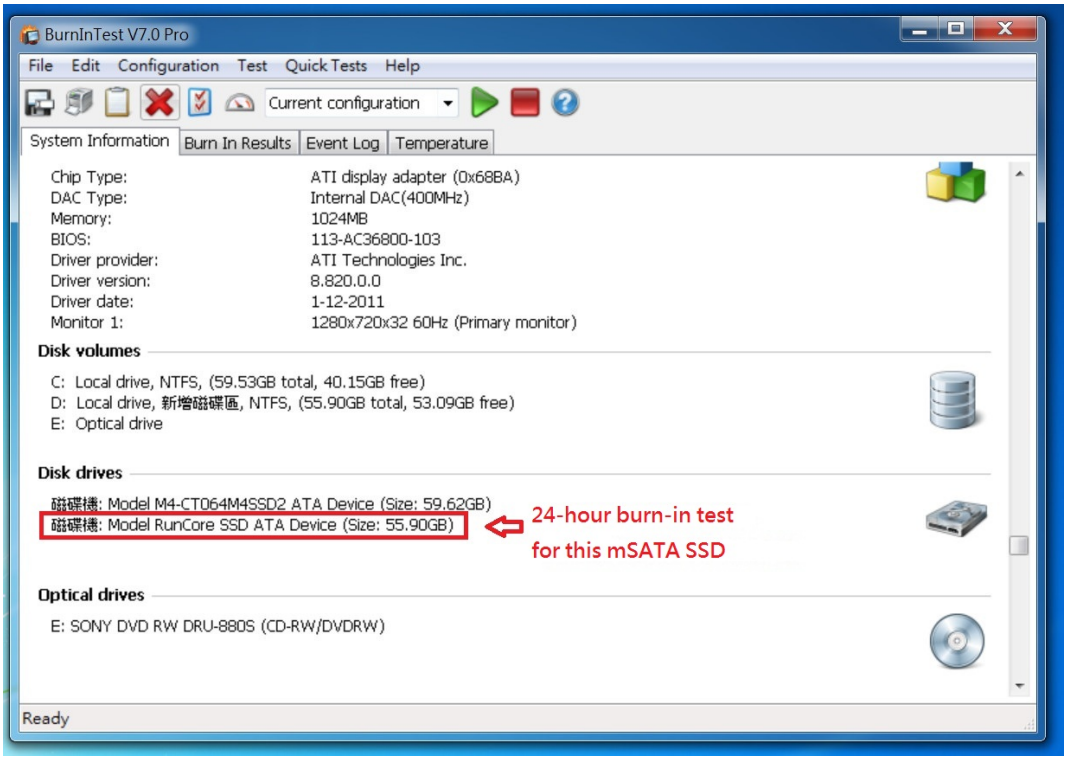
(PS: Changed to simple data types (All 0Xff, the fill), there is a good performance.)

The following performance test uses ATTO Disk BenchMark (partition and formatted by win 7 NTFS Type)

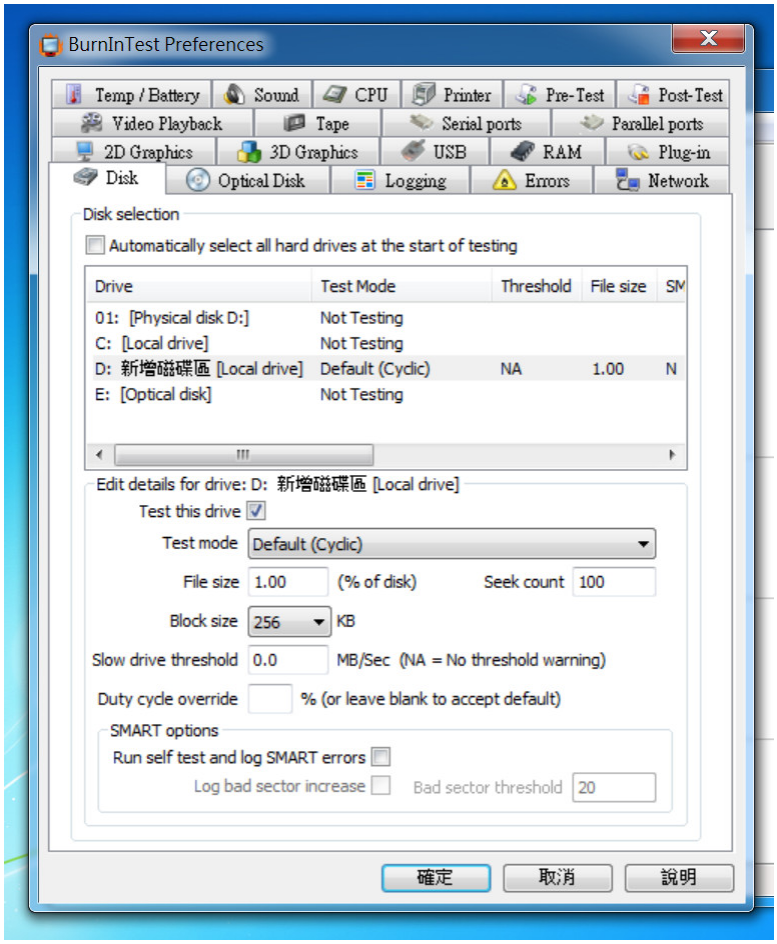


The following Burn in test uses BurnInTest v7.0 Pro (partition and formatted by win 7 NTFS Type)

※ show System information



※ show Disk test mode(default cyclic -- 10 ways cycle test)



※ show Crucial mSATA 64GB/ RCP-V-T5060-MC 24-hour Burn-in test PASSED