



MINERVA

PCIe 3.0 OCulink 4i, 100cm cable

Performance & Burn In Test Rev. 1. 0

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SFF-8612, 100cm Cable

1. Overview

The OCulink cable can be compliant with PCIe 3.0 Spec.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B : GIGABYTE **X570S AORUS MASTER**
CPU : AMD **Ryzen 7, 3700X 8-Core**
Memory : Kingston **KVR26N19D8/16, DDR4-2666MHz, 32GB**(16GB DIMM*2)
ATX Power : COOLER MASTER G750M, **750W ATX**, 12V V2.2 Power Supply
AIC: PE2404 M.2 PCIe 3.0 to OCulink 4i
Adapter: PD426A OCulink to M.2 PCIe 3.0 Adapter
Cable: SFF-8611 4i Male to Male, **100cm** Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: PE2404 adapter, PD246A adapter & M.2 **Samsung SM961 512GB NVMe SSD**



MB : GIGABYTE X570 AORUS MASTER



SFF-8612, 100cm Cable

2.3 Install Hardware

Inserts PE2404 adapter into **X570S AORUS MASTER's** M.2 M-key connector and then using OCulink cable, one side inserts into PE2404 adapter and another side inserts into PD426A adapter's Oculink connector. The PD426A adapter inserts into M.2 NVMe SSD.

2.4 BIOS & Windows 10 OS environment setup

- 2.4.1 Primary SATA SSD installed Windows 10 OS.
- 2.4.2 M.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.



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2.5 CrystalDiskMark 8.0 x64 performance test

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

2.5.1 [Samsung SM961 512GB NVMe SSD](#) performance as below:

	Read (MB/s)	Write (MB/s)
SEQ1M Q8T1	3567.20	1764.80
SEQ1M Q1T1	3075.03	1755.85
RND4K Q32T1	576.06	478.49
RND4K Q1T1	57.66	200.87

2.6 AS SSD Benchmark 2.0.7 performance test

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

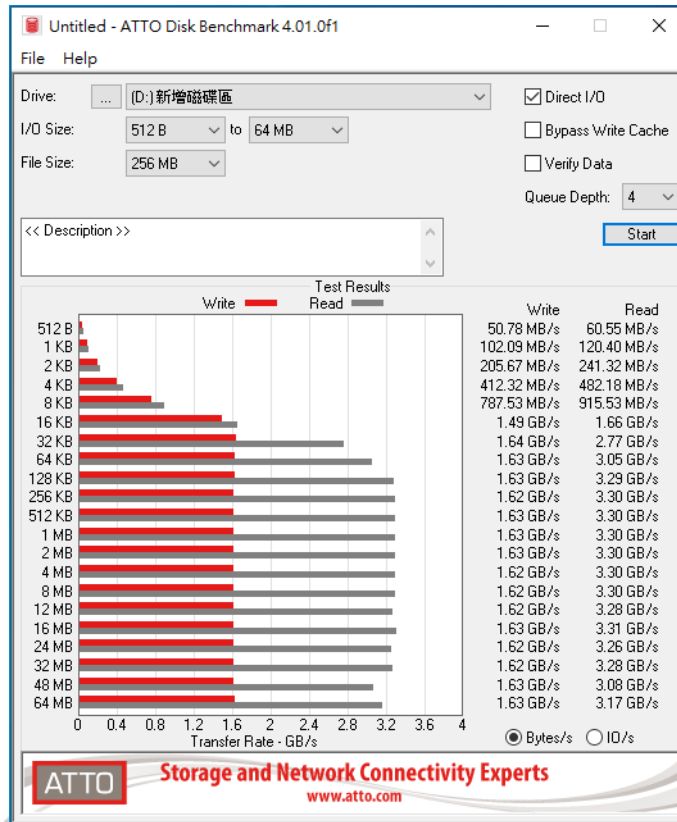
2.6.1 [Samsung SM961 512GB NVMe SSD](#) performance as below:

	Read:	Write:
Seq	3153.71 MB/s	1755.05 MB/s
4K	54.92 MB/s	190.67 MB/s
4K-64Thrd	1189.67 MB/s	1086.74 MB/s
Acc.time	0.020 ms	0.019 ms
Score:	1560	1453
	3750	

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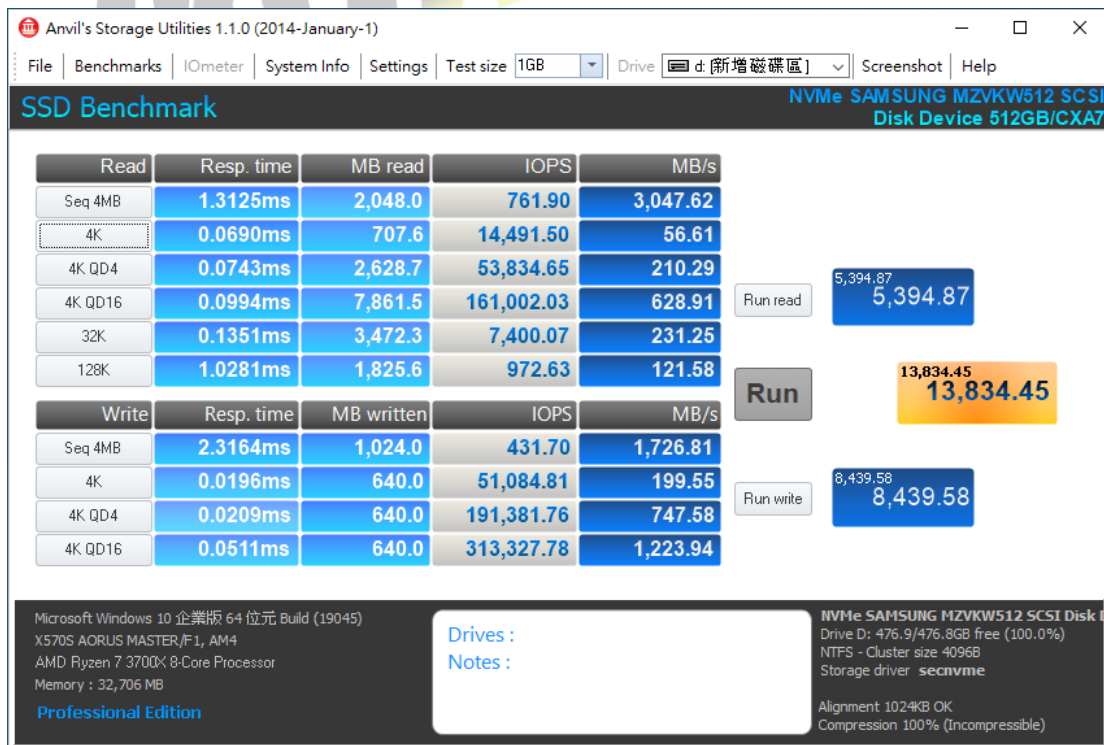
2.7 ATTO Disk Benchmark 4.01 performance test

2.7.1 Samsung SM961 512GB NVMe SSD performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 Samsung SM961 512GB NVMe SSD performance as below:

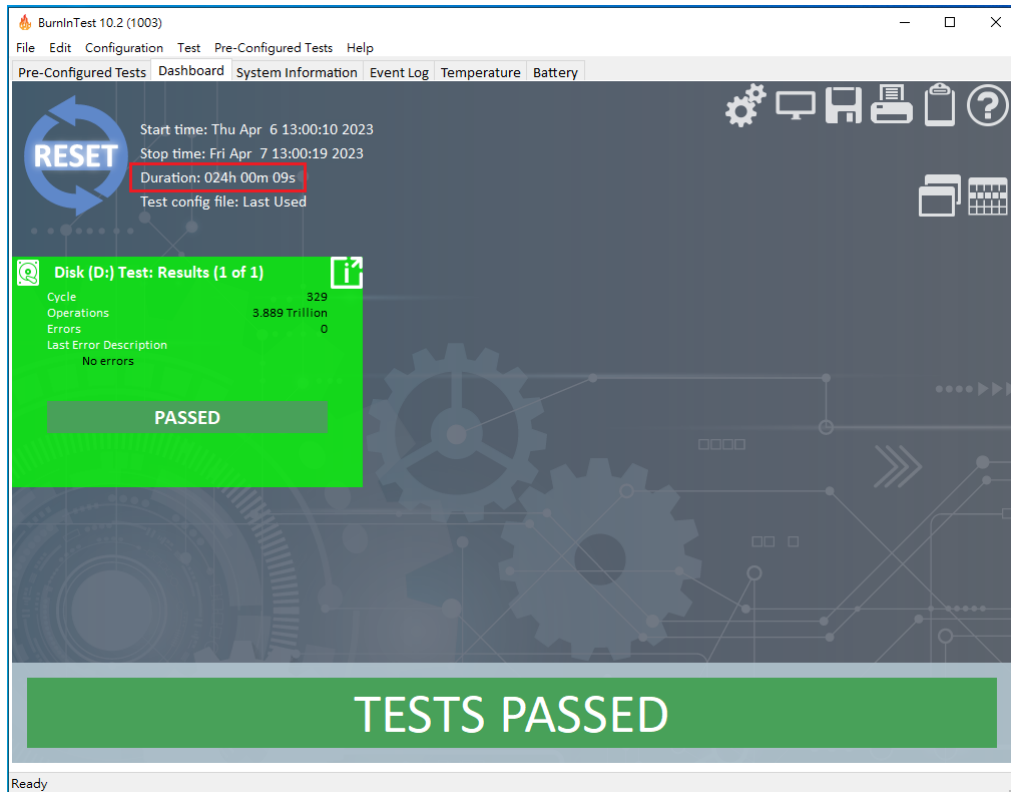


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3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro for [Samsung SM961 512GB NVMe SSD](#)

3.3.1 24-hour Burn-in test **PASSED**



4. Summary

4.1 M.2 NVMe SSD is PCI-e Gen 3 / 4 Lanes Interface, I/O speed, max. to 32Gbps.

4.2 OCulink cable performance is based on M.2 NVMe SSD.