MINERVA

GDC72-9101 MINI SAS HD 8X to MINI SAS HD 4X/x2 Y-Cable, 100cm

Performance & Burn In Test   Rev 1.0

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PCIe 4.0 SFF-8673 8X to SFF-8673 4X/x2 Y-Cable, 100cm
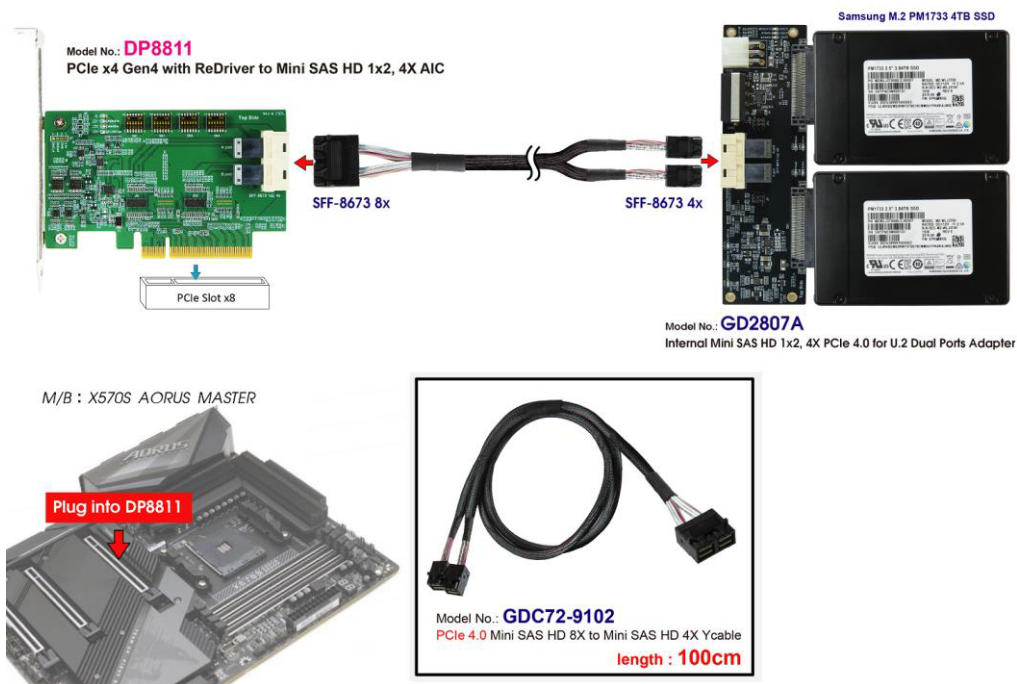
1. Overview

The cable is compliant with PCIe 4.0 spec with x8 link width and supports PCIe 4.0 common clock mode. The PCIe PERST#, SMBus, WAKE#, CLKREQ# signals connect to Mini SAS HD 1x2, 4X(SFF-8673) sideband pins.

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
Add in Card: DP8811 PCIe x8 with ReDriver to Mini SAS HD 1x2, 4X(SFF-8673) AIC
Cable: PCIe Gen4 SFF-8673 8X to SFF-8673 4X/x2 Y-Cable, **100cm**
Adapter: GD2807A Mini SAS HD 1x2, 4X(SFF-8673) to U.2 dual port adapter
OS :   Microsoft **Windows 10 64bit OS**

2.2 Test target: **GDC72-9102** Cable with GD2807A adapter, Samsung U.2 NVMe SSD/ **4TB**

2.3 Install Hardware

First inserts the U.2 SSD into the GD2807A U.2 connector and connects to the DP8811 PCIe x8 with ReDriver to Mini SAS HD 1x2, 4X(SFF-8673) AIC using the **GDC72-9102, 100cm cable**, and Plugs DP8811 AIC into PCIe x16 Slot of GIGABYTE **X570S AORUS MASTER**.

2.4 BIOS & Windows 10 OS environment setup

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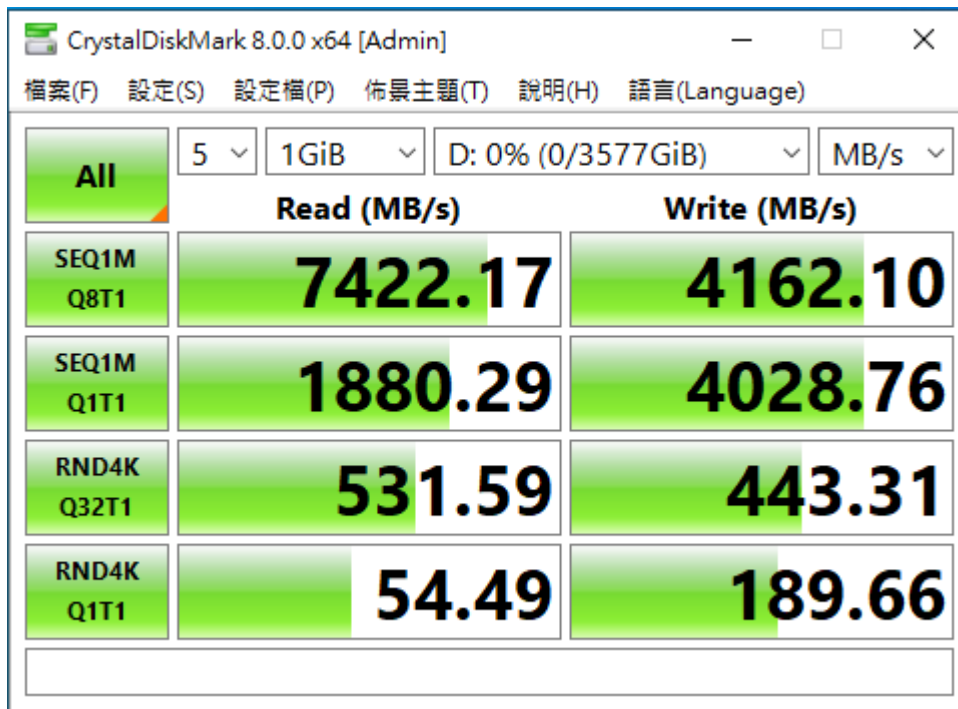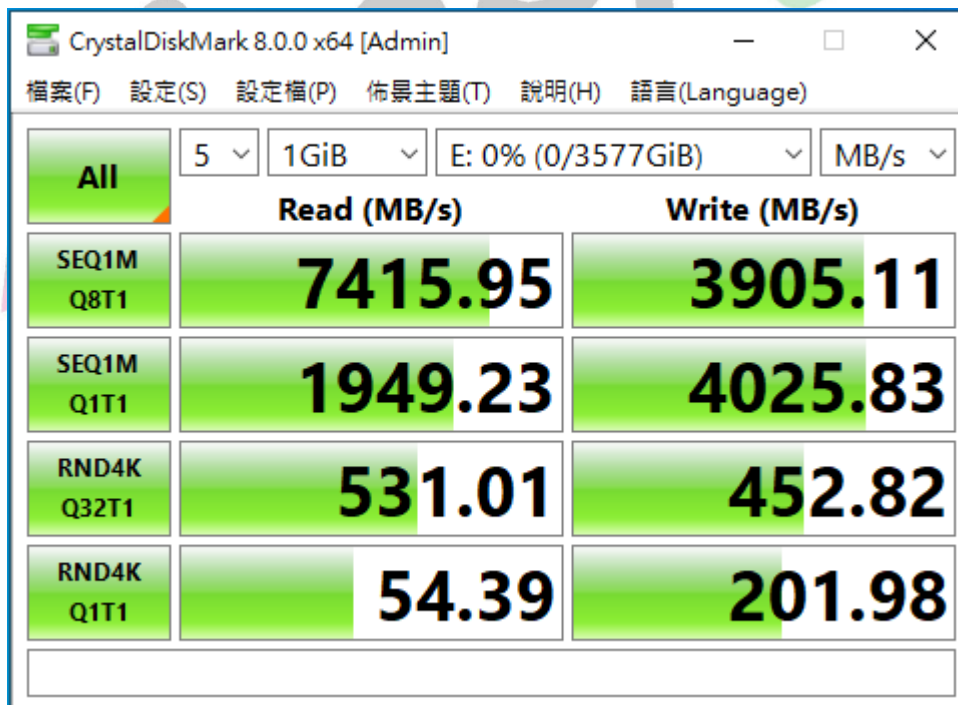2.4.2 U.2 NVMe SSD, formatted to NTFS Mode. Don't install any program.

2.5   CrystalDiskMark 8.0.0 x64 performance test

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

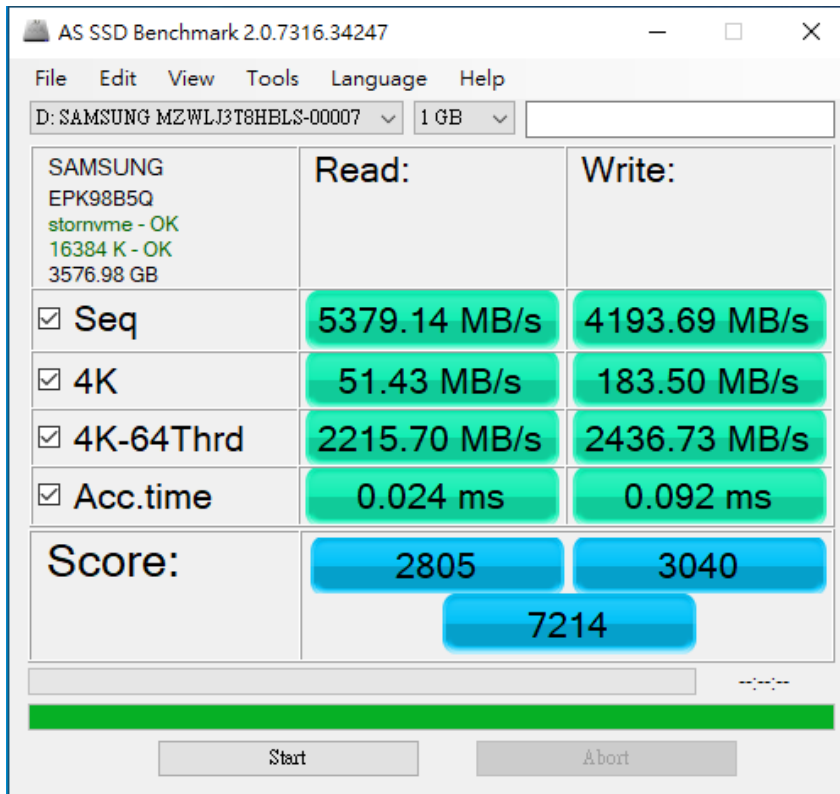2.5.1   SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive D:** performance as below:

CrystalDiskMark 8.0.0 x64 [Admin]		
5 / 1GiB / D: 0% (0/3577GiB) / MB/s	Read (MB/s)	Write (MB/s)
SEQ1M Q8T1	7422.17	4162.10
SEQ1M Q1T1	1880.29	4028.76
RND4K Q32T1	531.59	443.31
RND4K Q1T1	54.49	189.66

2.5.2   SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive E:** performance as below:

| CrystalDiskMark 8.0.0 x64 [Admin]		
5 / 1GiB / E: 0% (0/3577GiB) / MB/s	Read (MB/s)	Write (MB/s)
SEQ1M Q8T1	7415.95	3905.11
SEQ1M Q1T1	1949.23	4025.83
RND4K Q32T1	531.01	452.82
RND4K Q1T1	54.39	201.98

2.6   AS SSD Benchmark 2.0 performance test

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

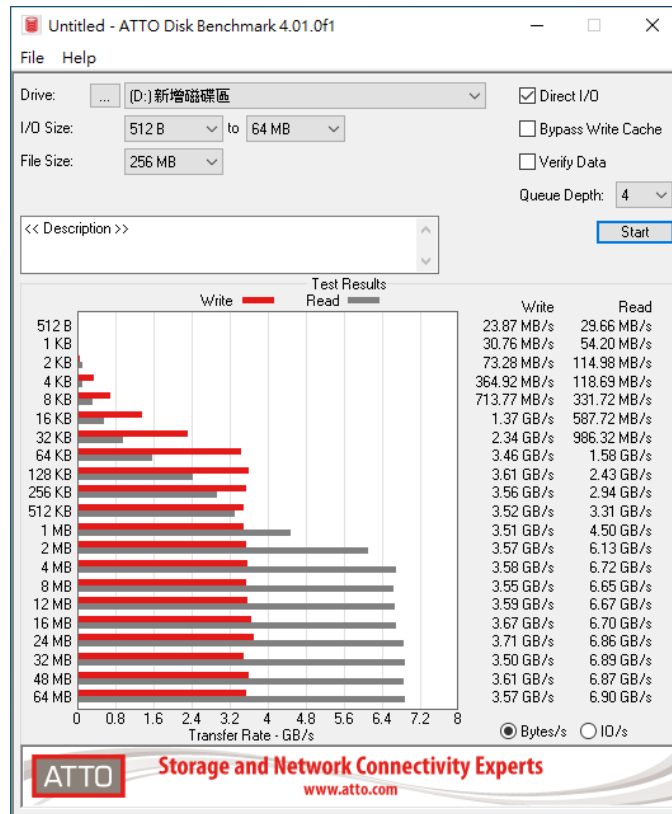2.6.1   SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive D:** performance as below:

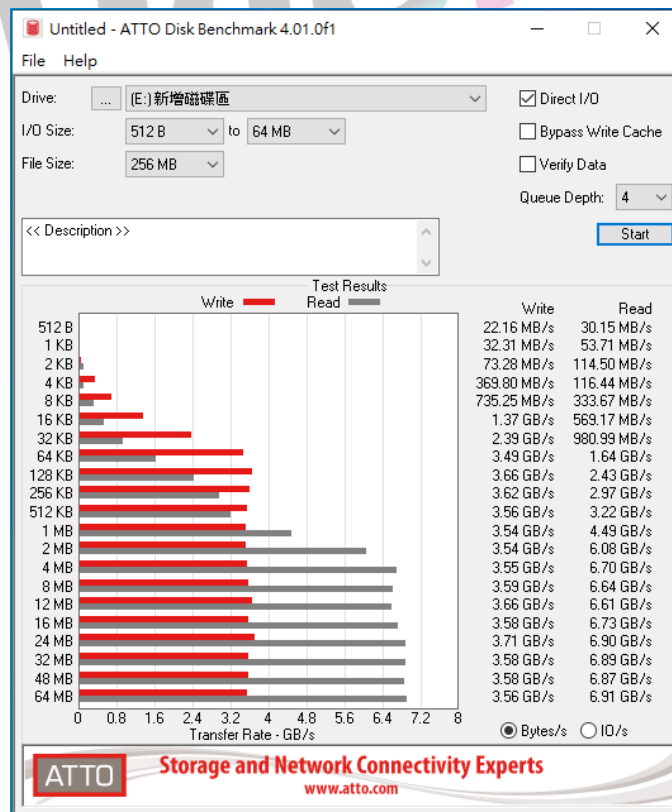2.6.2   SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive E:** performance as below:
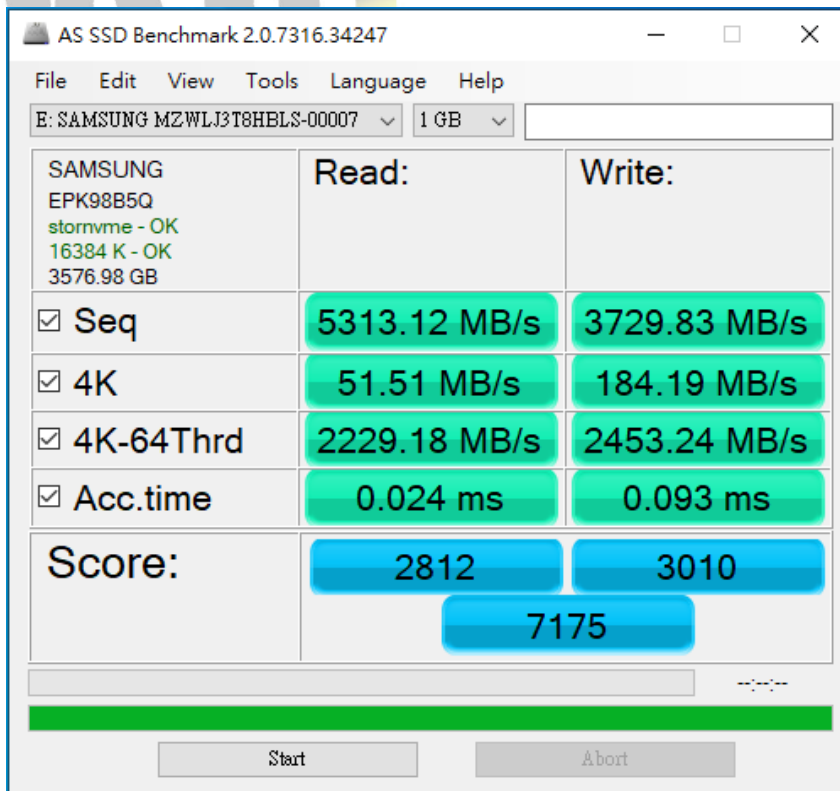
2.7 ATTO Disk Benchamrk 4.01 performance test

2.7.1 SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive D:** performance as below:

2.7.2 SAMSUNG PM1733 U.2 NVMe SSD/ **4TB in Drive E:** performance as below:
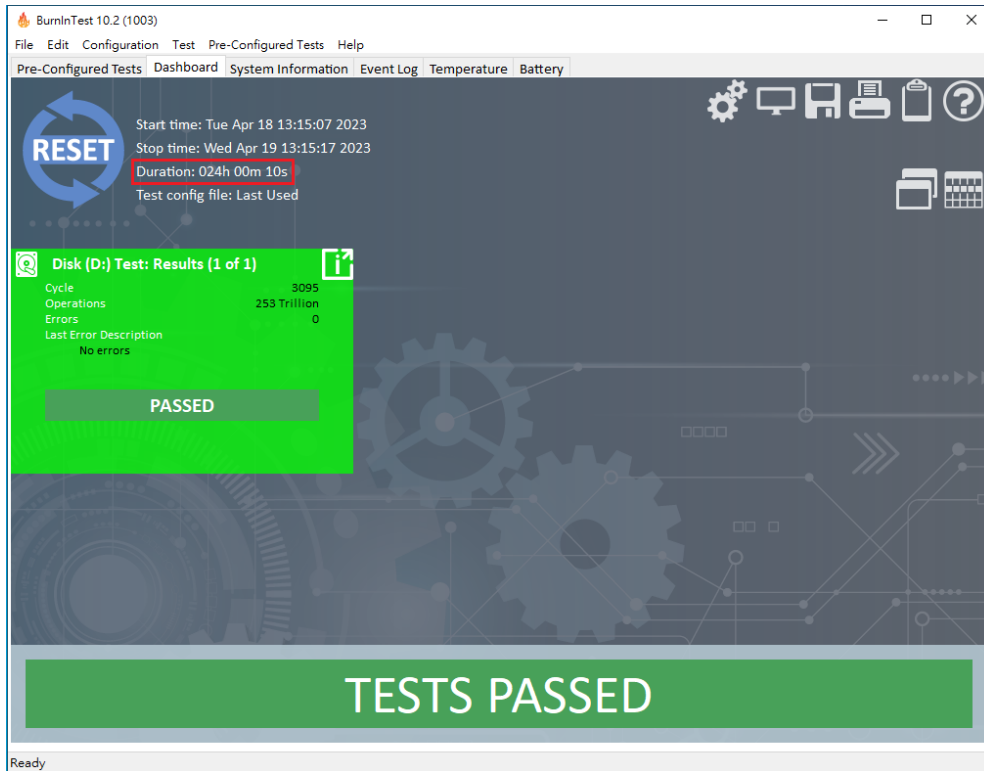
2.8 AnvilBenchmark_V110_B337

2.8.1 SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive D:** performance as below:

2.8.2 SAMSUNG PM1733 U.2 NVMe SSD/ **4TB** in **Drive E:** performance as below:
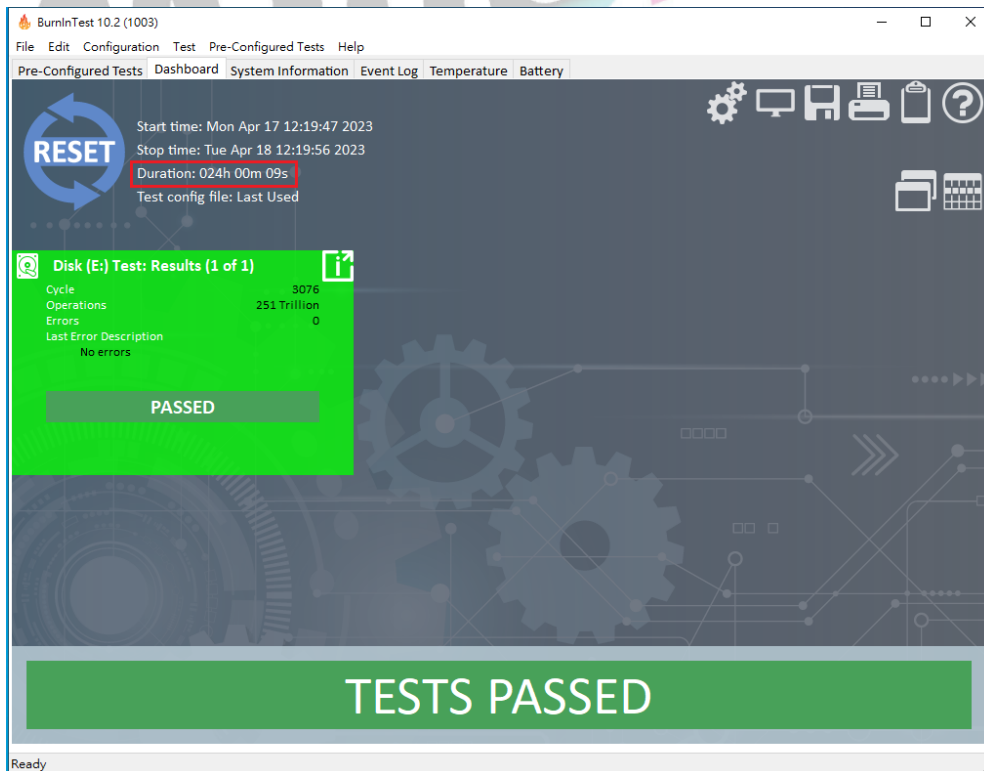
3. Burn In Tests and Results

3.1 BurnInTest v10.2 Pro

3.1.1 24-hour Burn-in test PASSED in **Drive D:** performance as below:

3.1.2 24-hour Burn-in test PASSED in **Drive E:** performance as below:

4. <u>Summary</u>

    4.1   U.2 NVMe SSD is PCIe 4.0 / 4 Lanes Interface, I/O speed, max. to 64Gbps.

    4.2   GDC72-9102 I/O performance is based on U.2 NVMe SSD.