



MINERVA

GD3404G PCIe 4.0 SFF-8612 4i OCulink for U.2 NVMe SSD Adapter

Performance & Burn In Test Rev. 1. 0

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4. Summary

GD3404G Converter Card

1. Overview

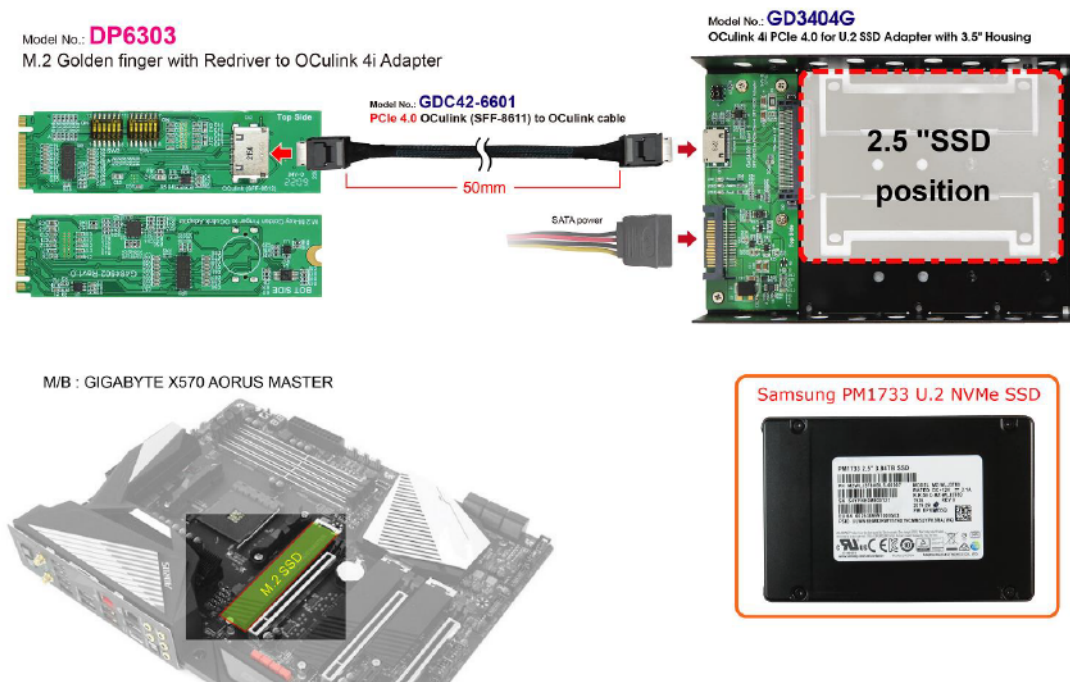
This adapter supports PCIe 4.0, 16GT / s high-speed transmission, and provides U.2 NVMe SSD to OCulink 4i conversion. It may put 2.5" SSD into 3.5" standard H.D.D. enclosure.

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
Host: DP6303 M.2 PCIe 4.0 with ReDriver to OCulink 4i
Adapter: GD3404G SFF-8612 4i to U.2 Storage Adapter
Cable: SFF-8611 4i to SFF-8611 4i, 50cm Cable
OS : Microsoft **Windows 10 64bit OS**

2.2 Test target: GD3404G adapter and **Samsung PM1733 U.2 NVMe 4TB SSD**



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2.3 Install Hardware

Insert U.2 SSD into GD3404G converter's U.2 female connector. Connect GD3404G to DP6303 adapter(M.2 PCIe 4.0 with ReDriver to OCulink 4i), using SFF-8611 to SFF-8611 cable, plugs DP6303 adapter into **PCI-e slot of GIGABYTE X570S AORUS MASTER.**

2.4 BIOS & Windows 10 OS environment setup

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



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2.5 CrystalDiskMark 8.0.0 x64 performance test

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

2.5.1 [Samsung PM1733 U.2 NVMe 4TB](#) SSD performance as below:

All	5	1GiB	D: 0% (1/3577GiB)	MB/s
	Read (MB/s)		Write (MB/s)	
SEQ1M Q8T1	7415.75		3885.48	
SEQ1M Q1T1	1945.95		4016.02	
RND4K Q32T1	537.04		454.68	
RND4K Q1T1	54.43		190.90	

2.6 AS SSD Benchmark 2.0.7 performance test

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

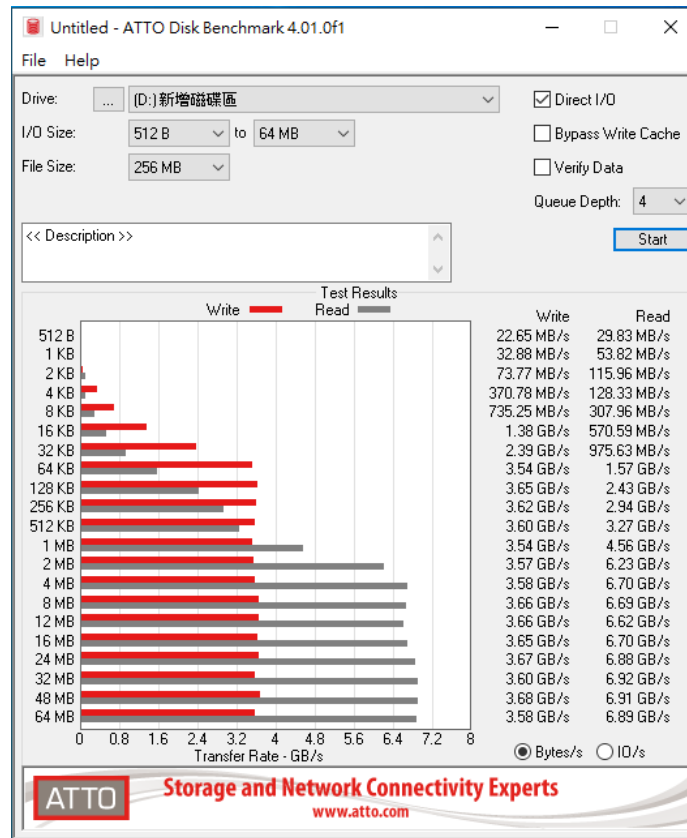
2.6.1 [Samsung PM1733 U.2 NVMe 4TB](#) SSD performance as below:

SAMSUNG EPK98B5Q stornvme - OK 16384 K - OK 3576.98 GB	Read:	Write:
<input checked="" type="checkbox"/> Seq	5350.82 MB/s	4155.93 MB/s
<input checked="" type="checkbox"/> 4K	51.89 MB/s	184.47 MB/s
<input checked="" type="checkbox"/> 4K-64Thrd	2222.40 MB/s	2412.90 MB/s
<input checked="" type="checkbox"/> Acc.time	0.024 ms	0.090 ms
Score:	2809	3013
	7193	

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2.7 ATTO Disk Benchmark 4.0.1 performance test

2.7.1 [Samsung PM1733 U.2 NVMe 4TB](#) SSD performance as below:



2.8 AnvilBenchmark_V110_B337

2.8.1 [Samsung PM1733 U.2 NVMe 4TB](#) SSD performance as below:

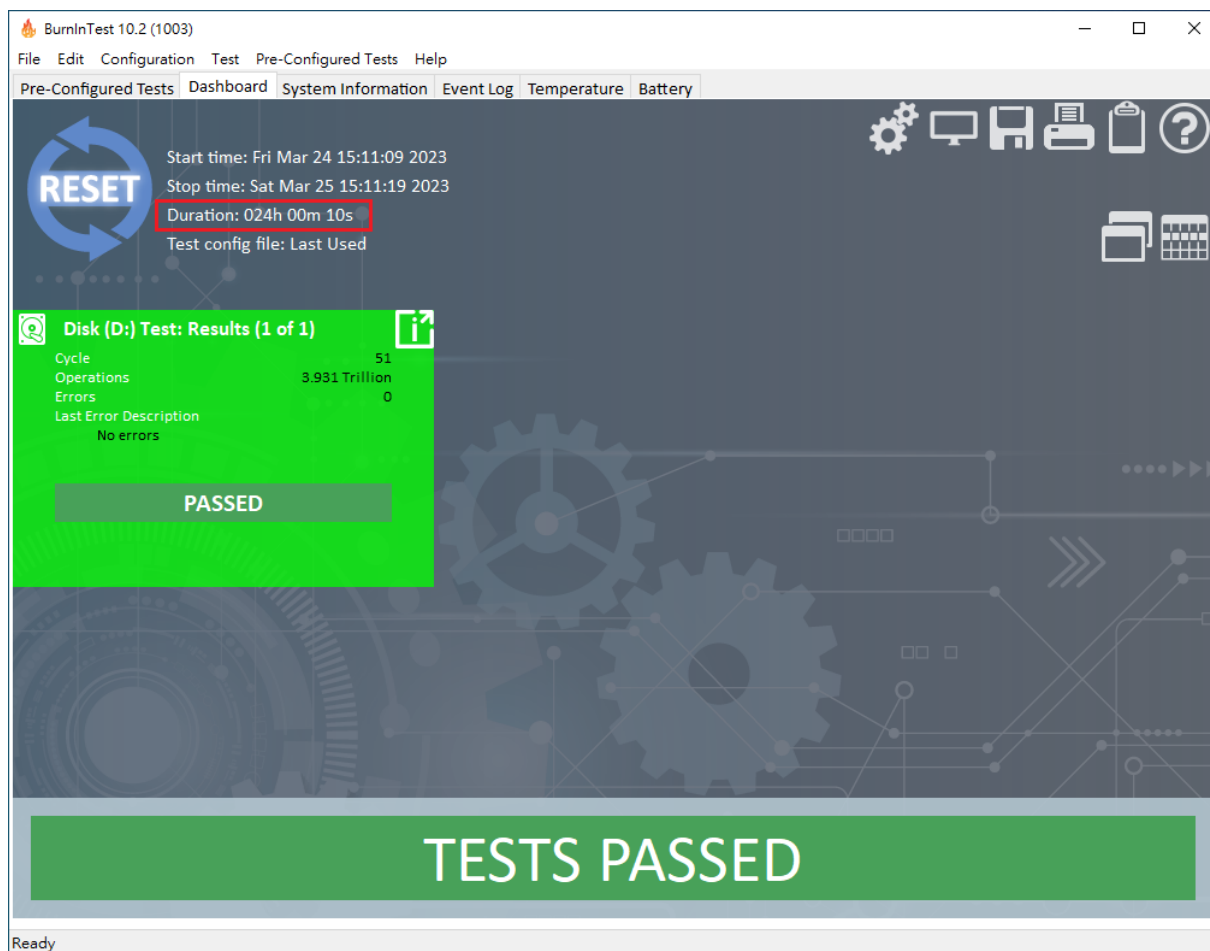


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3. Burn In Tests and Results

3.1 BurnInTest v8.1 Pro for [Samsung PM1733 U.2 NVMe 4TB SSD](#)

3.1.1 24-hour Burn-in test **PASSED**



4. Summary

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

4.2 GD3404G adapter I/O performance is based on PCIe 4.0 U.2 NVMe SSD.