MINERVA

GD1407A U.3 PCIe Gen 4,16GT/s to EDSFF(Gen-Z) 1C Adapter

Performance & Burn In Test   Rev. 1. 1

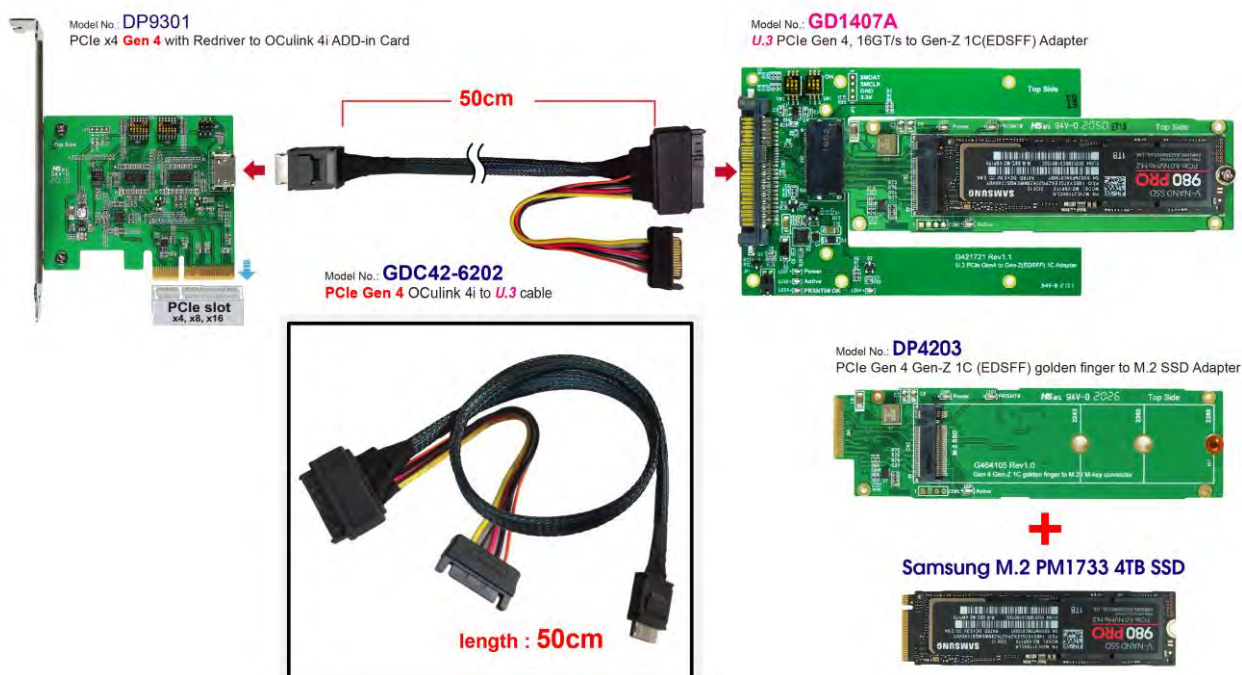## Table of Contents

1. Overview

This adapter supports PCIe Gen 4, 16GT/s high-speed transmission, and provides Gen-Z 1C NVMe SSD to U.2 conversion.

2. Tools and Results of Performance Measurement

2.1 Test Platform

M/B :	GIGABYTE **X570 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:	DP9301 PCIe x4 to OCulink 4i Add-In Card
Adapter:	GD1407A U.3 to Gen-Z 1C Storage Adapter
Adapter:	DP4203 Gen-Z 1C to M.2 Storage Adapter
Cable:	SFF-8611 4i to U.3 Cable, 50cm
OS :	Microsoft **Windows 10 64bit OS**

2.2 Test target: GD1407A adapter, DP4203 adapter and M.2 NVMe 1TB SSD

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2.3 Install Hardware

Insert DP4203 adapter(with M.2 NVMe SSD) into GD1407A converter's Gen-Z 1C female connector. Connect GD1407A to DP9301 AIC(PCIe x4 Gen 4 to Oculink 4i) using SFF-8611 to U.3 cable, plugs DP9301 adapter into **PCIe slot of** GIGABYTE **X570 AORUS MASTER.**

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 8.0.0 x64 performance test
  ※Benchmark (Sequential Read & Write / default = 1MB)
  2.5.1　　Samsung 980 PRO M.2 SSD/ 1TB performance as below:

2.6 AS SSD Benchmark 2.0.7 performance test
  ※Benchmark (Read & Write by MB/s, default block size = 16MB)
  2.6.1　　Samsung 980 PRO M.2 SSD/ 1TB performance as below:

2.7 ATTO Disk Benchamrk 4.0.1 performance test

2.7.1 Samsung **980 PRO M.2 SSD**/ **1TB** performance as below:

2.8 AnvilBenchmark_V110_B337
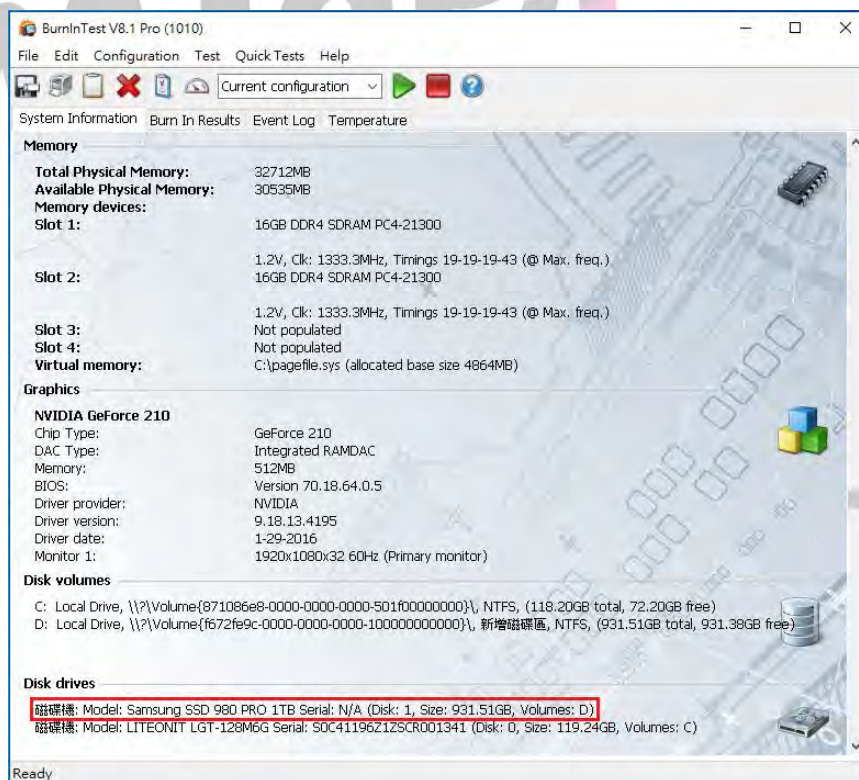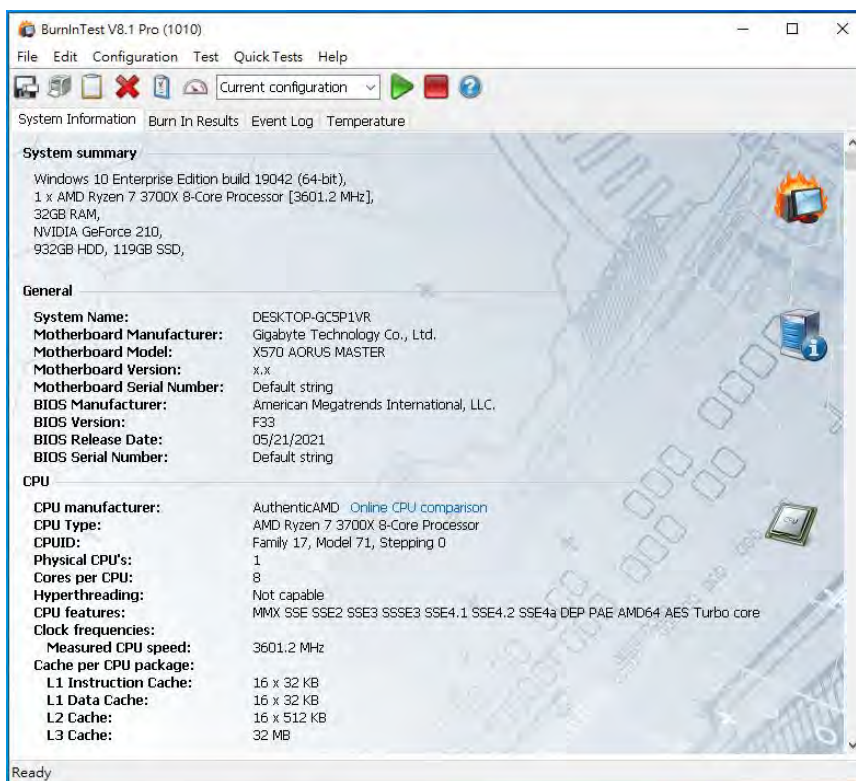
2.8.1 Samsung **980 PRO M.2 SSD**/ **1TB** performance as below:
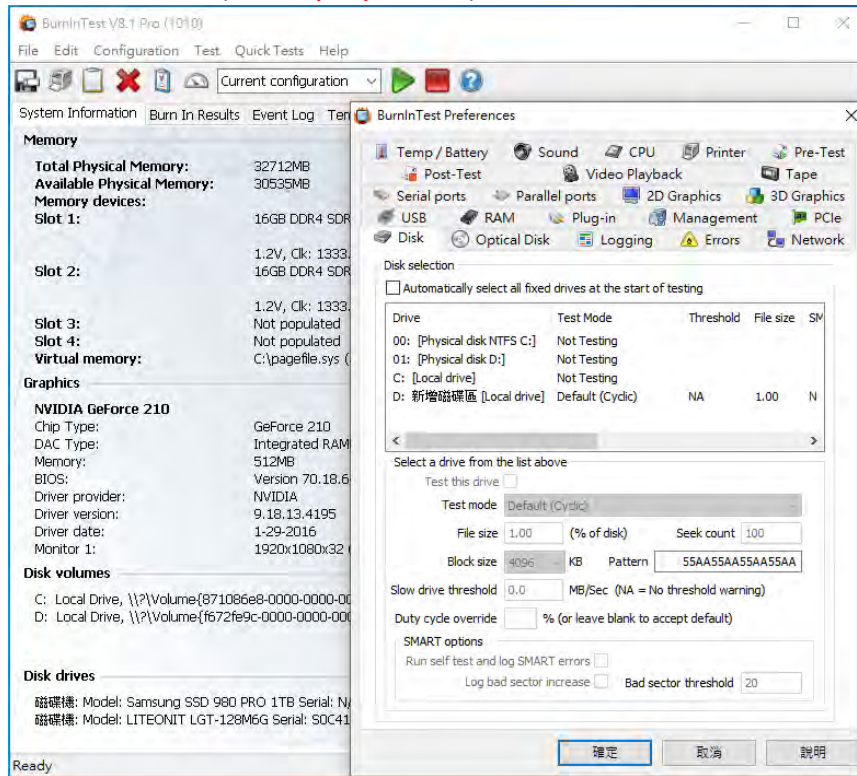
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3. **Burn In Tests and Results**

   3.1   BurnInTest v8.1 Pro for GIGABYTE **M.2 Gen4(GP-ASM2NE6100TTTD)**/ **512B** SSD
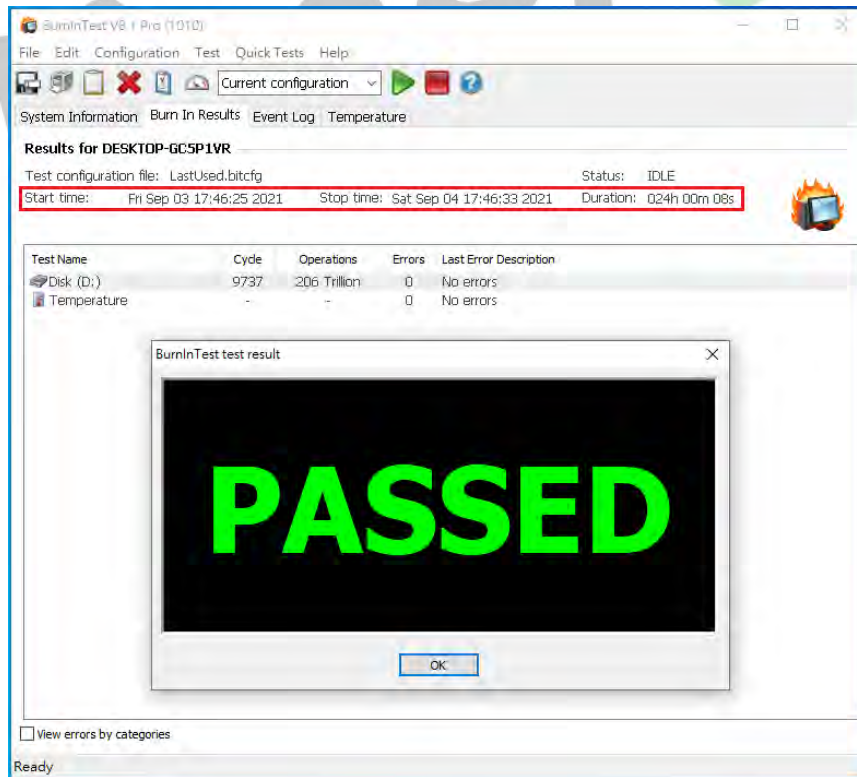
   3.1.1   **system information** as below:

3.1.2   Disk test mode(10 ways cycle test)

3.1.2   24-hour Burn-in test PASSED

4. Summary

4.1 DP4203 with M.2 SSD is simulated as EDSFF 1C SSD

4.2 M.2 SSD is PCIe Gen 4 / 4 Lanes Interface, I/O speed, max. to 64Gbps.

4.2 GD1407A adapter I/O performance is based on M.2 NVMe SSD.