



# MINERVA

## BU285F / Rev1.0 SATA Express Converter Card

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### Performance & Burn In Test Rev. 1.0

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# BU285F SATA Express to mSATA & M.2 Converter Card

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## 1. Overview

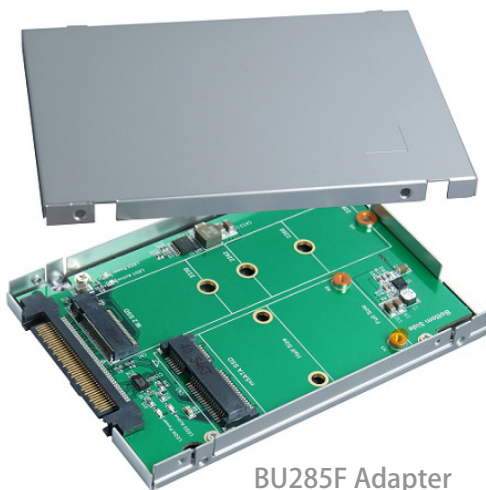
BU285F adapter built-in SFF-8639 connector, provide a port **M.2 M-key** connector, a port **Mini PCIe** connector. First M.2 SATA SSD inserts M.2 M-key connector, and inserts mSATA SSD into Mini PCIe connector, use SATA Express cable to connect BU285F to SATA Express port of ASRock **Z170 Extreme 7+**. The system would show two drives.

## 2. Tools and Results of Performance Measurement

### 2.1 Test Platform

M/B : ASRock **Z170 Extreme 7+**  
CPU : Intel **i5-6400**, 2.7GHz/ 6M Cache/ LGA1151  
Memory : Kingston **KVR21N15D8/8**, DDR4-2133MHz, **16G**(8GB DIMM\*2)  
ATX Power : FSP RAIDER 550, **550W ATX**, 12V V2.2 Power Supply  
Graphic : Z170 Chipsets built-in **HD Graphics 530**  
Cable: SATA Express cable  
OS : Microsoft **Windows 8.1 64bit OS**

### 2.2 Test target: BU285F adapter and mSATA , M.2 SATA SSD



BU285F Adapter



Crucial 128GB mSATA



LITE-ON 128GB M.2

### 2.3 Install Hardware

Insert M.2 SATA SSD into BU285F converter's M.2 connector, and insert mSATA SSD into BU285F converter's mini PCIe connector , then with coppers, and screws to fix SSDs. (Please refer to the Installation Notes). Connect BU285F converter to **SATA Express port** of ASRock **Z170 Extreme 7+**.

### 2.4 BIOS & Windows 8.1 OS environment setup

2.4.1 M.2 SATA SSD install Windows 8.1 64bit OS,

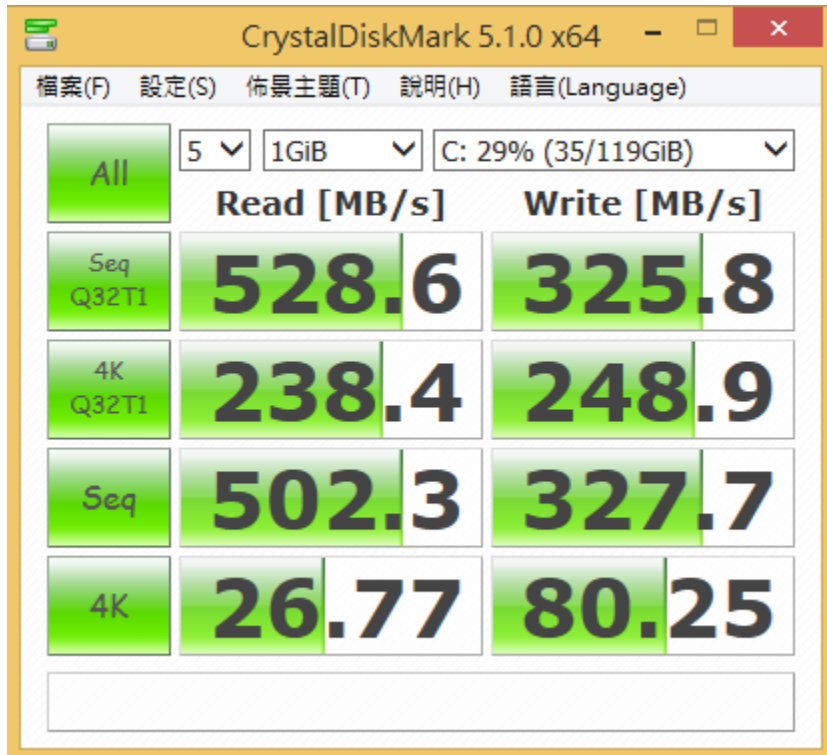
2.4.2 mSATA SSD formatted SSD to NTFS Mode. Don't install any program.

# BU285F SATA Express to mSATA & M.2 Converter Card

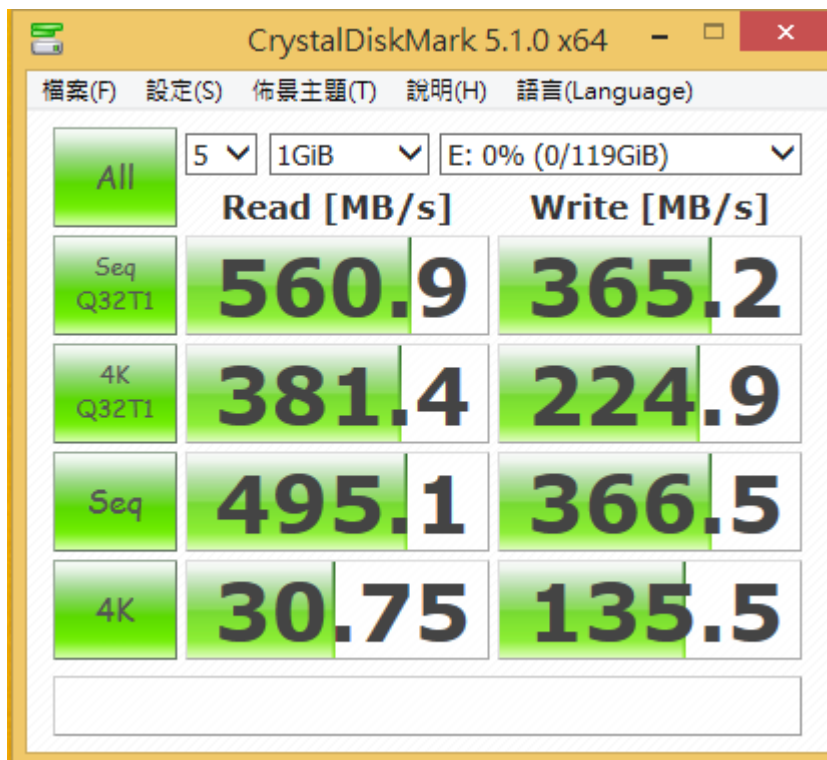
## 2.5 CrystalDiskMark 5.1.0 x64 performance test

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

2.5.1 show **LITE-ON LGT-128M6G/128G with** WIN 8.1 OS performance as below:



2.5.2 show mSATA 128G(**CT-128M550SSD3 without** WIN 8.1 OS performance :

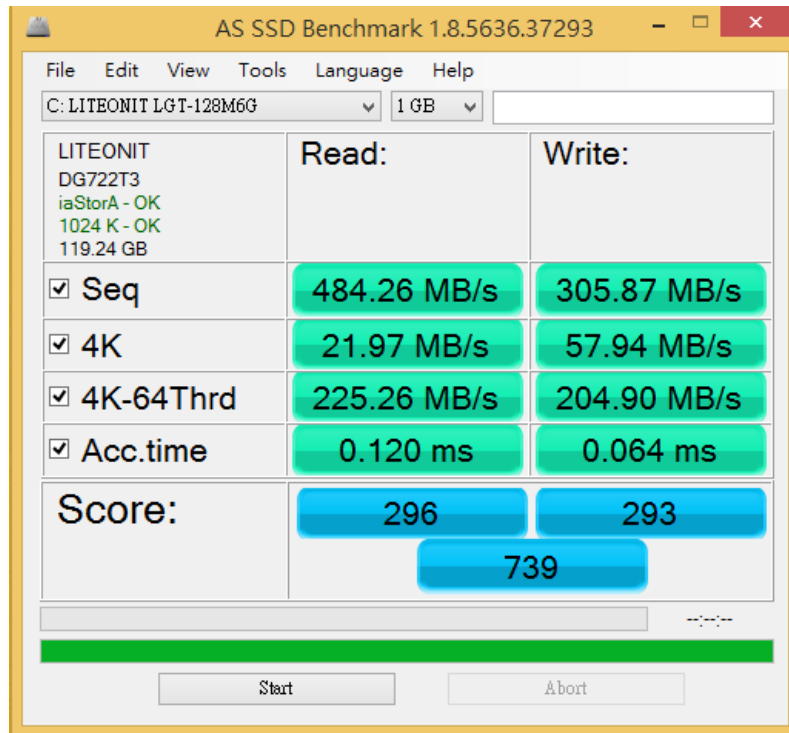


# BU285F SATA Express to mSATA & M.2 Converter Card

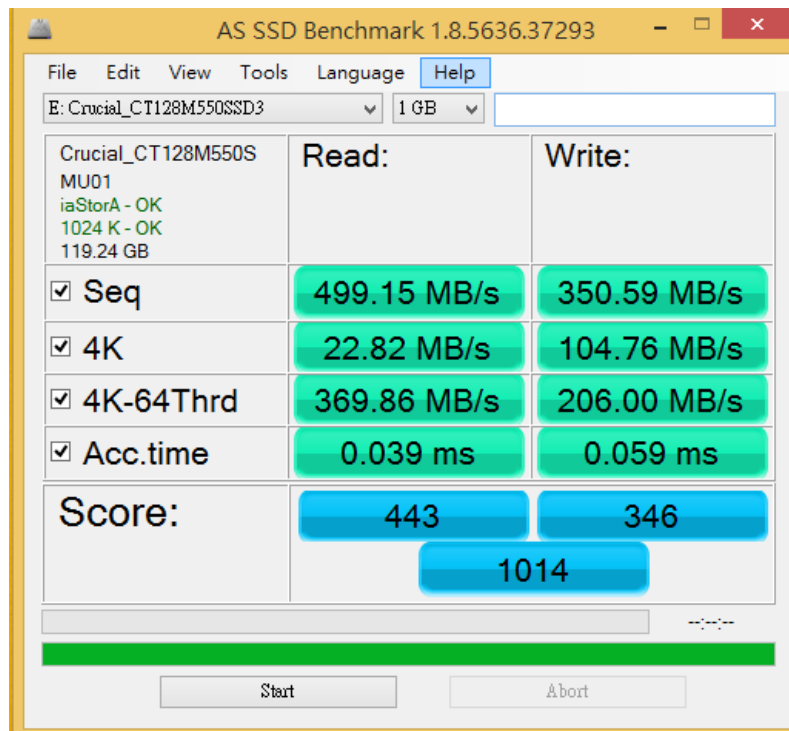
## 2.6 AS SSD Benchmark 1.8 performance test

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

2.6.1 show LITE-ON LGT-128M6G/128G with WIN 8.1 OS performance as below:



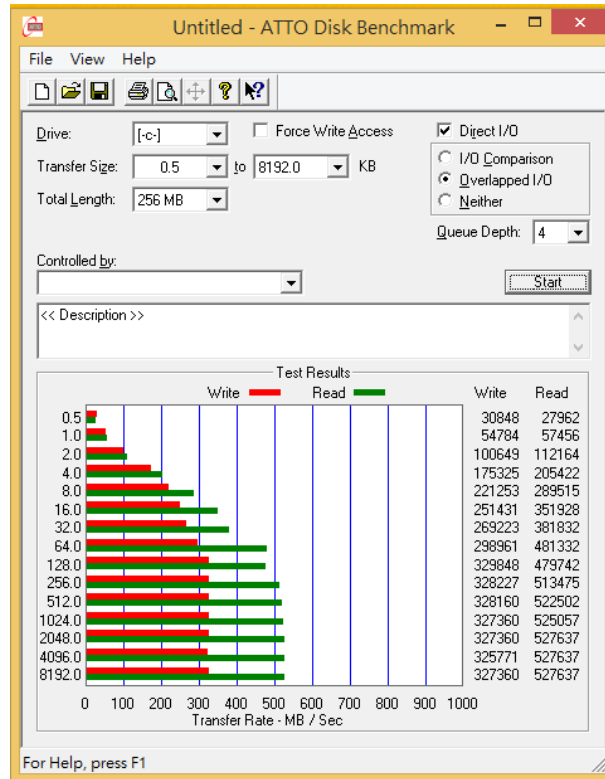
2.6.2 show mSATA 128G(CT-128M550SSD3) without WIN 8.1 OS performance :



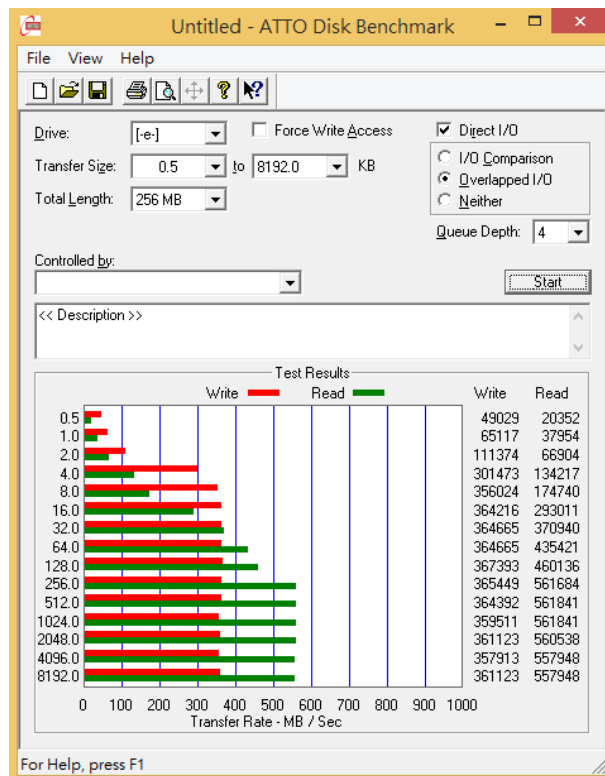
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## 2.7 ATTO Disk Benchmark 2.47 performance test

2.7.1 show LITE-ON LGT-128M6G/128G with WIN 8.1 OS performance as below:



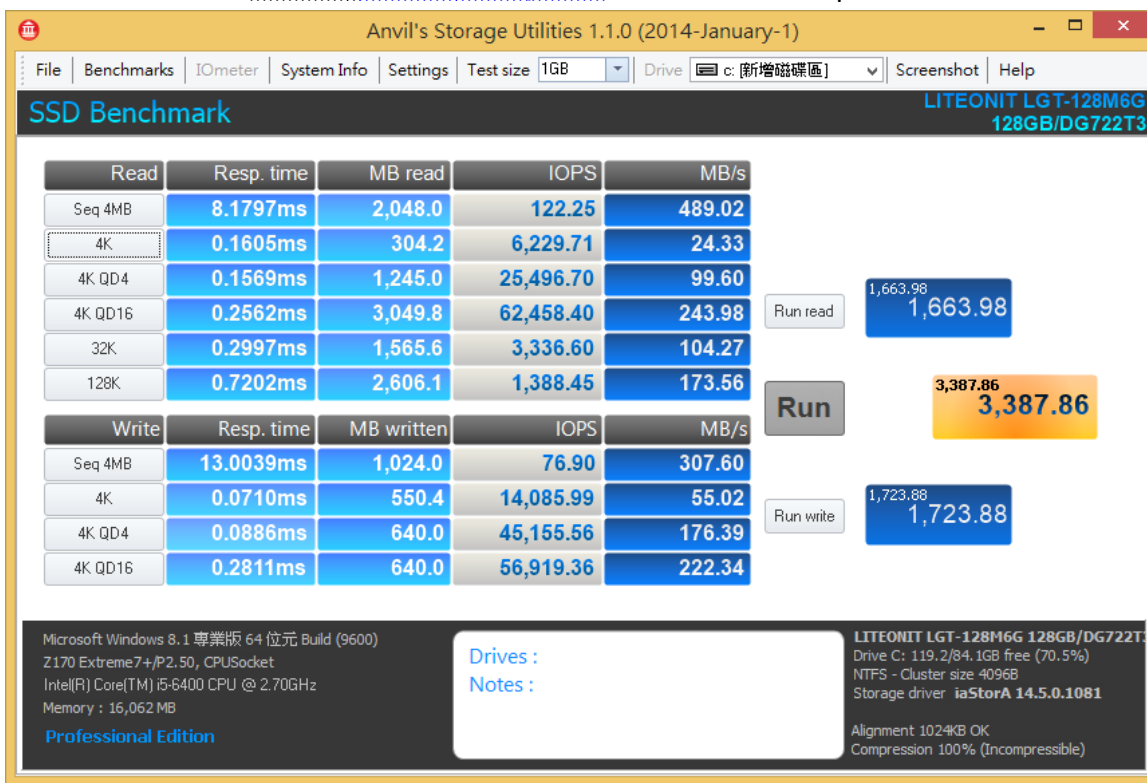
2.7.2 show mSATA 128G(CT-128M550SSD3) without WIN 8.1 OS performance :



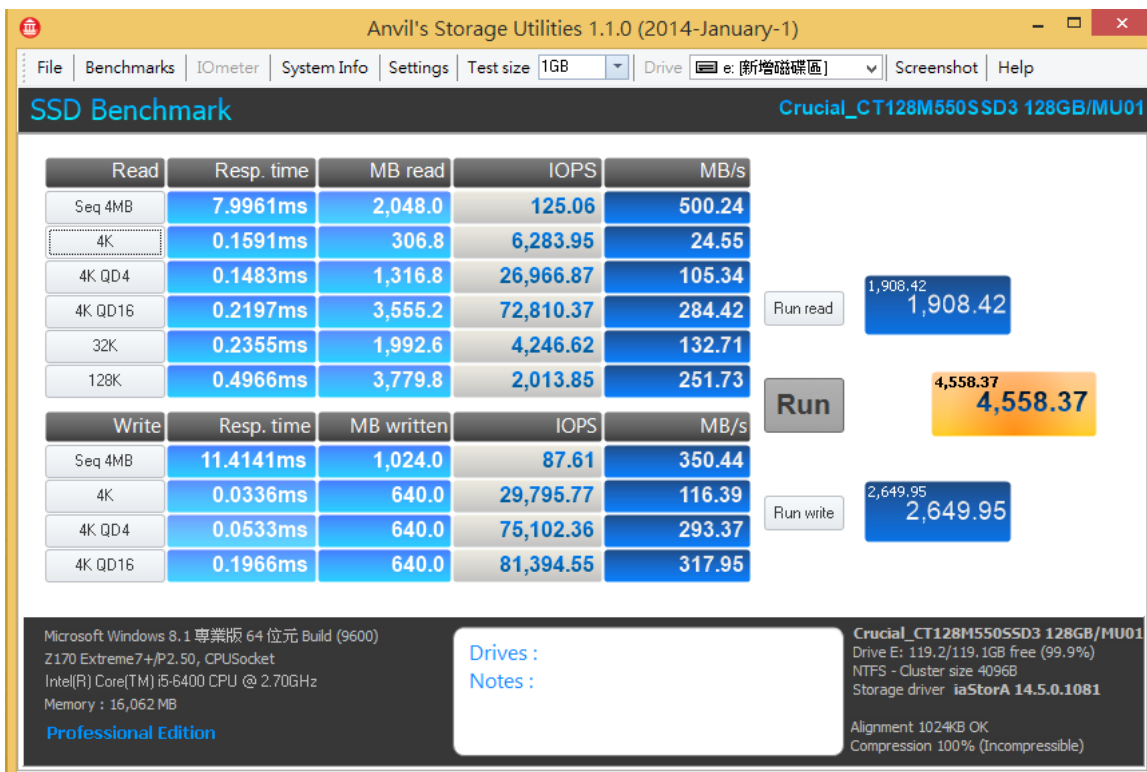
# BU285F SATA Express to mSATA & M.2 Converter Card

## 2.8 AnvilBenchmark\_V110\_B337

2.8.1 show LITE-ON LGT-128M6G/128G with WIN 8.1 OS performance as below:



2.8.2 show mSATA 128G(CT-128M550SSD3) without WIN 8.1 OS performance :



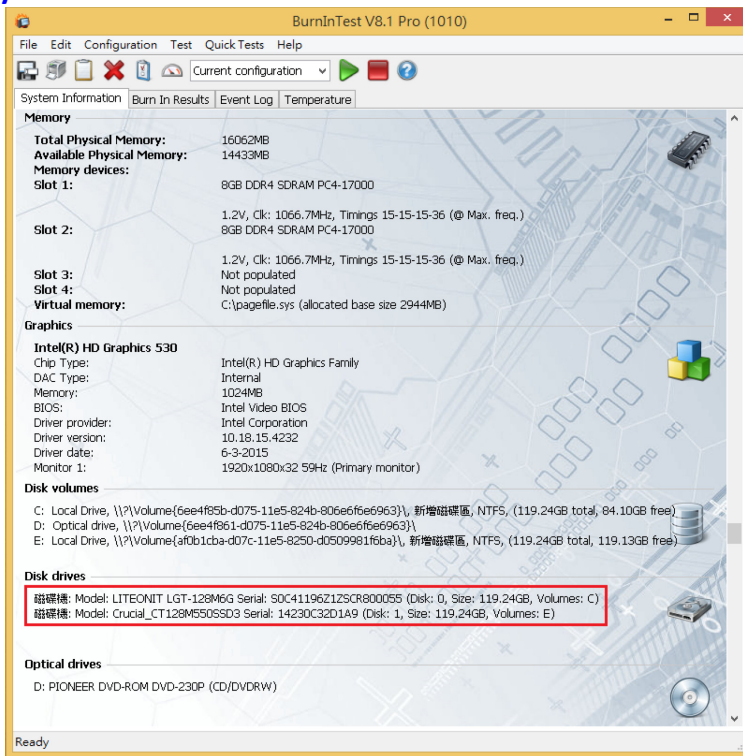
# BU285F SATA Express to mSATA & M.2 Converter Card

## 3. Burn In Tests and Results

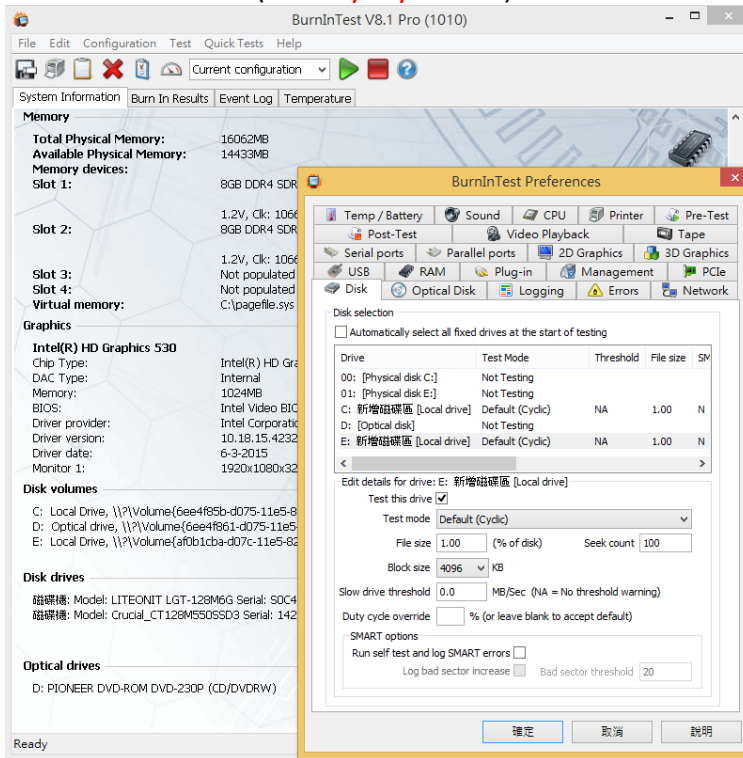
### 3.1 BurnInTest v8.1 Pro

show LITE-ON 128GB(LGT-128M6G) & mSATA 128G(CT-128M550SSD3)

#### 3.1.1 system information as below:

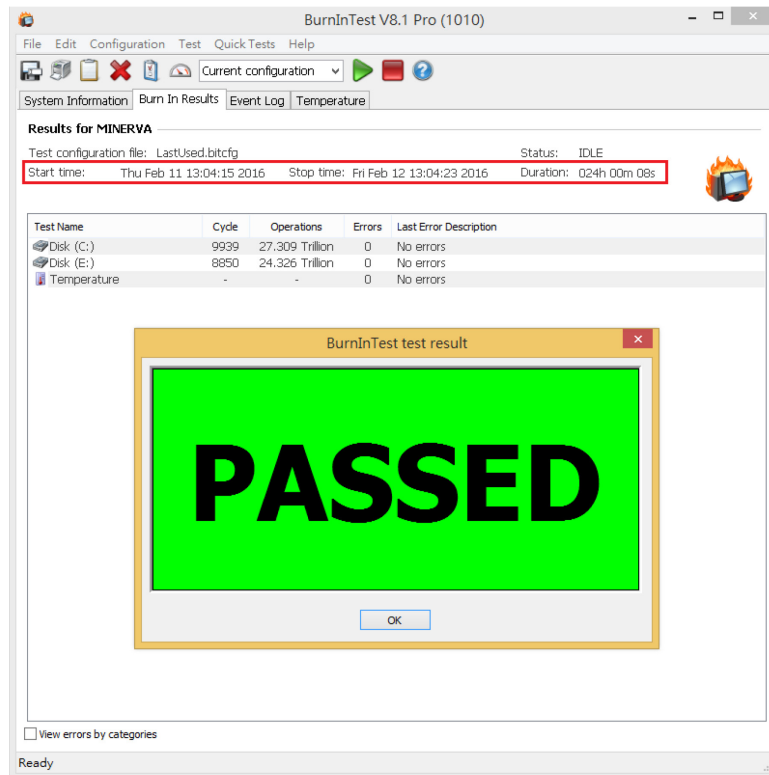


#### 3.1.2 show Disk test mode (10 ways cycle test)



# BU285F SATA Express to mSATA & M.2 Converter Card

## 3.1.3 show 24-hour Burn-in test **PASSED**



## 4. Summary

- 4.1 M.2(SATA I/F) SSD is SATA III Interface, I/O speed, max. to 600MB/s.
- 4.2 mSATA SSD is SATA III Interface, I/O speed, max. to 600MB/s.
- 4.3 BU285F adapter I/O performance is based on M.2 or mSATA SSD.