

**Product Qualification**

**--- Compatibility Test ---**

**Product Name:** SM220-300B 8GB

**Firmware Version:** SFDN003E

**Controller:** Jmicron JM60D

**Qualification:** Qual all

**Test Result:** PASS

APPROVAL					
QT	Date	Signature	Approved by	Date	Signature
Alex Lin	2017/01/12	Alex Lin	Danny Chen	2017/01/12	Danny Chen

Table Of Content

**SUMMARY RESULT ..... 3**

**A. Function Test With M/B : ASUS Z170-A ..... 4**

    1. Basic Function Test ..... 4

    2. Format Test..... 4

    3. Burn In Test ..... 4

    4. Test Result ..... 4

**B. Function Test With M/B : Avalue EMX QM77-A1R ..... 5**

    1. Basic Function Test ..... 5

    2. Test Result ..... 5

**C. Performance Test With M/B : Gigabyte GA-Z77X-D3H..... 6**

**D. Performance Test With M/B : Asus Maximus VI Hero ..... 7**

**E. Platform Compatibility Test..... 8**

**F. Additional Qualification: ..... 9**

    1. Environmental ..... 9

    2. Certification..... 9



## SUMMARY RESULT

		PC1	PC2	PC3	PC4						
Testing Product		SM220-300B 8GB									
System		Windows Emb. 8.1 Industry Pro	Fedora kernel 3.3.4 -5 fc17 / Windows Emb. 8.1 Industry Pro								
M/B	Name	Z170-A	QM77-A1R								
	Vendor	ASUS	Avalue EMX								
	Chipset	Intel Z170	Intel QM77								
	Interface	SATA III	SATA III								
	BIOS	1302	V1.1.0								
<b>Test Result</b>											
Basic Function Test		V	V								
Burn In Test	Comp32	V	--								
	PassMark Burn In Test Pro V8.0	V	--								
	PassMark Burn In Test Pro V3.0.1007	--	--								
Warm Boot Test		--	--								
Cold Boot Test		--	--								
		--	--								
		--	--								
<b>Install System Test</b>											
	Windows Emb. 7 Standard	Windows Emb. 8 Standard	Windows Emb. 8.1 Industry	Windows 10	Fedora kernel 3.3.4 -5 fc17	Ubuntu kernel 3.13.0 -32	Red Hat kernel 2.6.32 -431.e16				
Result	--	--	--	--	--	--	--				
<b>Remark:</b>						Test Result — PASS					

## A. Function Test With M/B : ASUS Z170-A

<b>Testing Product</b>	SM220-300B 8GB	<b>Testing Engineer</b>	Alex Lin
<b>Testing Environment</b>	M/B: ASUS Z170-A	Chipset: Intel Z170 Interface: SATA III	BIOS: 1302

### 1. Basic Function Test

	Copy	Delete	Restart	Compare	Suspend (S3)	Hibernate (S4)	LED
Windows Emb. 8.1 Industry Pro	V	V	V	V	V	V	V

### 2. Format Test

	FAT32	NTFS
Windows Emb. 8.1 Industry Pro	7.44GB	7.45GB

### 3. Burn In Test

	Comp32 15 hours	Burn In Test V8.0 Pro 168 hours
Windows Emb. 8.1 Industry Pro	V	V

### 4. Test Result

Pass

**B. Function Test With M/B : Avalue EMX QM77-A1R**

<b>Testing Product</b>	SM220-300B 8GB	<b>Testing Engineer</b>	Alex Lin
<b>Testing Environment</b>	<b>M/B:</b> Avalue EMX QM77-A1R	<b>Chipset:</b> Intel QM77 <b>Interface:</b> SATA III	<b>BIOS:</b> V1.1.0

1. Basic Function Test

	Copy	Delete	Restart	Compare	Suspend (S3)	Hibernate (S4)	LED
Fedora kernel 3.3.4 -5 fc17	V	V	V	V	V	V	V

2. Test Result

Pass
------

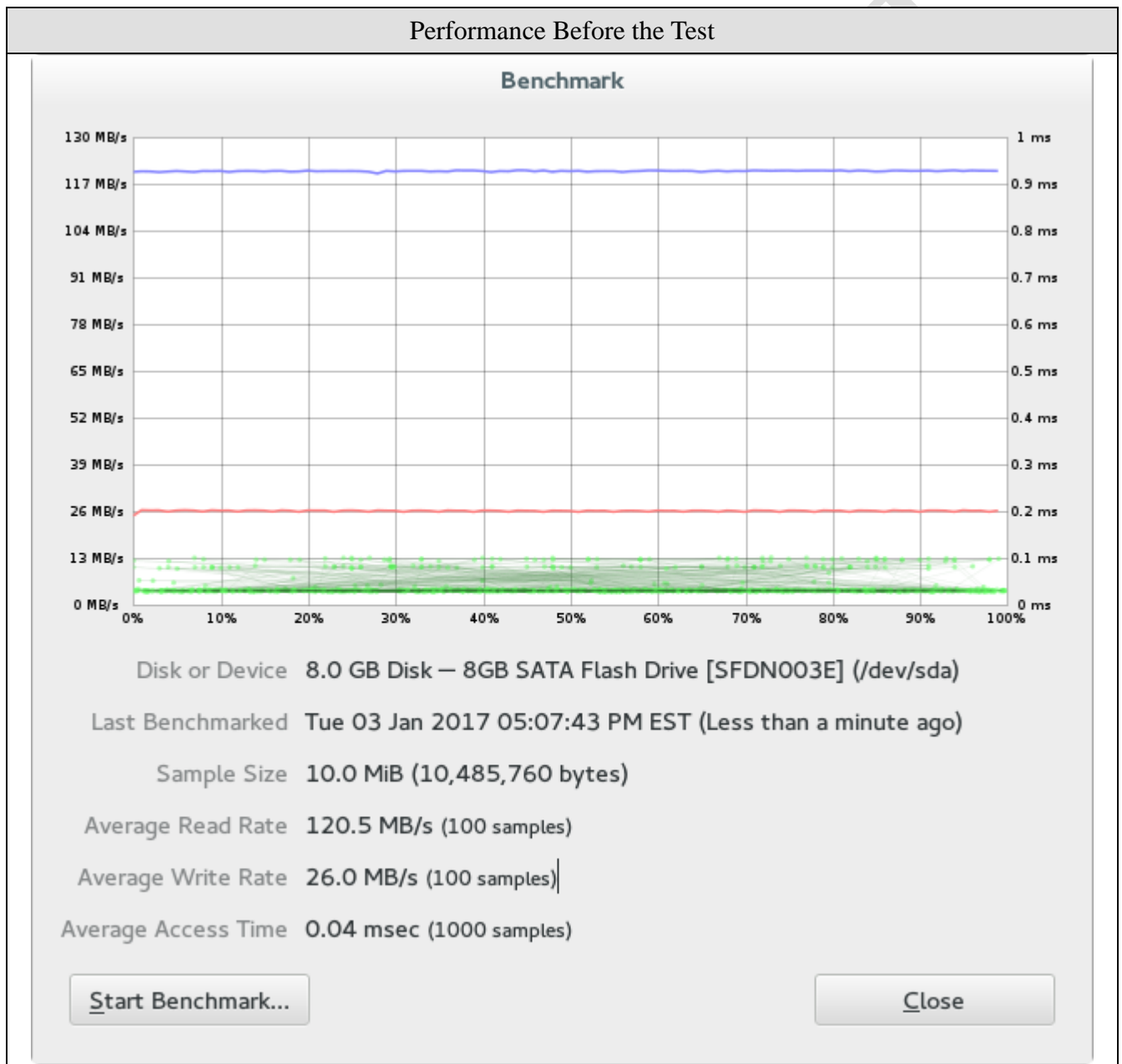
## C. Performance Test With M/B : Gigabyte GA-Z77X-D3H

<b>Testing Product</b>	SM220-300B 8GB	<b>Testing Engineer</b>	Alex Lin
<b>Testing Environment</b>	M/B: Gigabyte GA-Z77X-D3H	Chipset: Intel Z77 Interface: SATA III	BIOS: F16
<b>Testing Software</b>	CrystalMark 3.0.2		

Performance Before the Test	Performance After the Test																														
<table border="1"> <thead> <tr> <th></th> <th>Read [MB/s]</th> <th>Write [MB/s]</th> </tr> </thead> <tbody> <tr> <td>Seq</td> <td>119.6</td> <td>25.29</td> </tr> <tr> <td>512K</td> <td>119.3</td> <td>25.09</td> </tr> <tr> <td>4K</td> <td>42.47</td> <td>3.182</td> </tr> <tr> <td>4K QD32</td> <td>56.26</td> <td>3.237</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	119.6	25.29	512K	119.3	25.09	4K	42.47	3.182	4K QD32	56.26	3.237	<table border="1"> <thead> <tr> <th></th> <th>Read [MB/s]</th> <th>Write [MB/s]</th> </tr> </thead> <tbody> <tr> <td>Seq</td> <td>120.1</td> <td>25.27</td> </tr> <tr> <td>512K</td> <td>120.1</td> <td>25.13</td> </tr> <tr> <td>4K</td> <td>42.32</td> <td>3.185</td> </tr> <tr> <td>4K QD32</td> <td>56.39</td> <td>3.231</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	120.1	25.27	512K	120.1	25.13	4K	42.32	3.185	4K QD32	56.39	3.231
	Read [MB/s]	Write [MB/s]																													
Seq	119.6	25.29																													
512K	119.3	25.09																													
4K	42.47	3.182																													
4K QD32	56.26	3.237																													
	Read [MB/s]	Write [MB/s]																													
Seq	120.1	25.27																													
512K	120.1	25.13																													
4K	42.32	3.185																													
4K QD32	56.39	3.231																													

D. Performance Test With M/B : Asus Maximus VI Hero

Testing Product	SM220-300B 8GB	Testing Engineer	Alex Lin
Testing Environment	M/B: ASUS Maximus VI Hero	Chipset: Intel Z87 Interface: SATA III	BIOS: 0224
Testing Software	Ubuntu 14.10 Benchmark		



**E. Platform Compatibility Test**

Platform	Chipset	M/B	Interface	System	Result
PC1	Intel Z68	Asus P8Z68-M Pro	SATA III	Win8.1	V
PC2	Intel Z77	Gigabyte IVB	SATA III	Win8.1	V
PC3	Intel Z87	Asus Maximus VI Hero	SATA III	Win8.1	V
PC4	Intel Z77	GA-Z77X-D3H	SATA III	Win8.1	V
PC5	Intel QM77	Avalue EMX QM77-A1R	SATA III	Win8.1	V
PC6	AMD 790FX	Asus M4A79T Deluxe	SATA III	Win8.1	V
PC7	AMD 790GX	Asus M4A78T-E	SATA III	Win8.1	V
PC8	AMD A88X	Asus A88XM-A	SATA III	Win8.1	V

Apacer

**F. Additional Qualification:**

1. Environmental

- 1. RoHS Standard 2011/65/EU , 2015/863/EU
- 2. Other Environmental Standard EC/1907/2006
- 3. WEEE (By Product) 2012/19/EU
- 4. Battery Standard N/A
- 5. Packing Standard 94/62/EC
- 6. Others N/A

2. Certification

- 1.  CE No. \_\_\_\_\_
- 2.  FCC No. \_\_\_\_\_
- 3.  BSMI No. \_\_\_\_\_
- 4.  VCCC No. \_\_\_\_\_
- 5.  C-tick No. \_\_\_\_\_
- 6.  Other \_\_\_\_\_