

Product Qualification

--- Compatibility Test ---

Product Name: SM220-300B 32GB
Firmware Version: SFDN003E
Qualification: Qual all
Test Result: PASS

APPROVAL					
QT	Date	Signature	Approved by	Date	Signature
Alex Lin	2017/01/06	Alex Lin	Danny Chen	2017/01/06	Danny Chen

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SUMMARY RESULT

		PC1	PC2	PC3	PC4						
Testing Product		SM220-300B 32GB									
System		Windows Emb. 8.1 Industry Pro	Fedora kernel 3.3.4 -5 fc17 / Windows Emb. 8.1 Industry Pro								
M/B	Name	Z170MX-Gaming5	QM77-A1R								
	Vendor	Gigabyte	Avalue EMX								
	Chipset	Intel Z170	Intel QM77								
	Interface	SATA III	SATA III								
	BIOS	F4b	V1.1.0								
Test Result											
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		V	--								
Cold Boot Test		--	V								
		--	--								
		--	--								
Install System Test											
	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	V	V	V	V	V	V	V				
Remark:						Test Result — PASS					

A. Function Test With M/B : Gigabyte Z170MX-Gaming5

Testing Product	SM220-300B 32GB	Testing Engineer	Alex Lin
Testing Environment	M/B: Gigabyte Z170MX-Gaming5	Chipset: Intel Z170 Interface: SATA III	BIOS: F4b

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	29.7GB	29.8GB

3. Burn In Test

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

4. Reboot Test

	Warm Boot 6000 Cycles
Windows Emb. 8.1 Industry Pro	V

5. Install System Test

Install System	Result
Install Windows Embedded Standard 7 System	V
Install Windows Embedded 8 Standard System	V
Install Windows Embedded 8.1 Industry Pro System	V
Windows 10 Multiple Edition	V
Windows 10 Enterprise	V

6. Test Result

Pass

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

Testing Product	SM220-300B 32GB	Testing Engineer	Alex Lin
Testing Environment	M/B: Avalue EMX QM77-A1R	Chipset: Intel QM77 Interface: SATA III	BIOS: 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. Reboot Test

	Cold Boot 6000 Cycles
Windows Emb. 8.1 Industry Pro	V

3. Install System Test

Install System	Result
Install Windows Embedded Standard 7 System	V
Install Windows Embedded 8 Standard System	V
Install Windows Embedded 8.1 Industry Pro System	V
Install Windows 7 System	V
Install Windows 8.1 System	V
Install Fedora kernel 3.3.4 -5 System	V
Install Ubuntu kernel 3.13.0 -32 System	V
Install Red Hat Kernel 2.6.32 -431.e16 System	V

4. Test Result

Pass

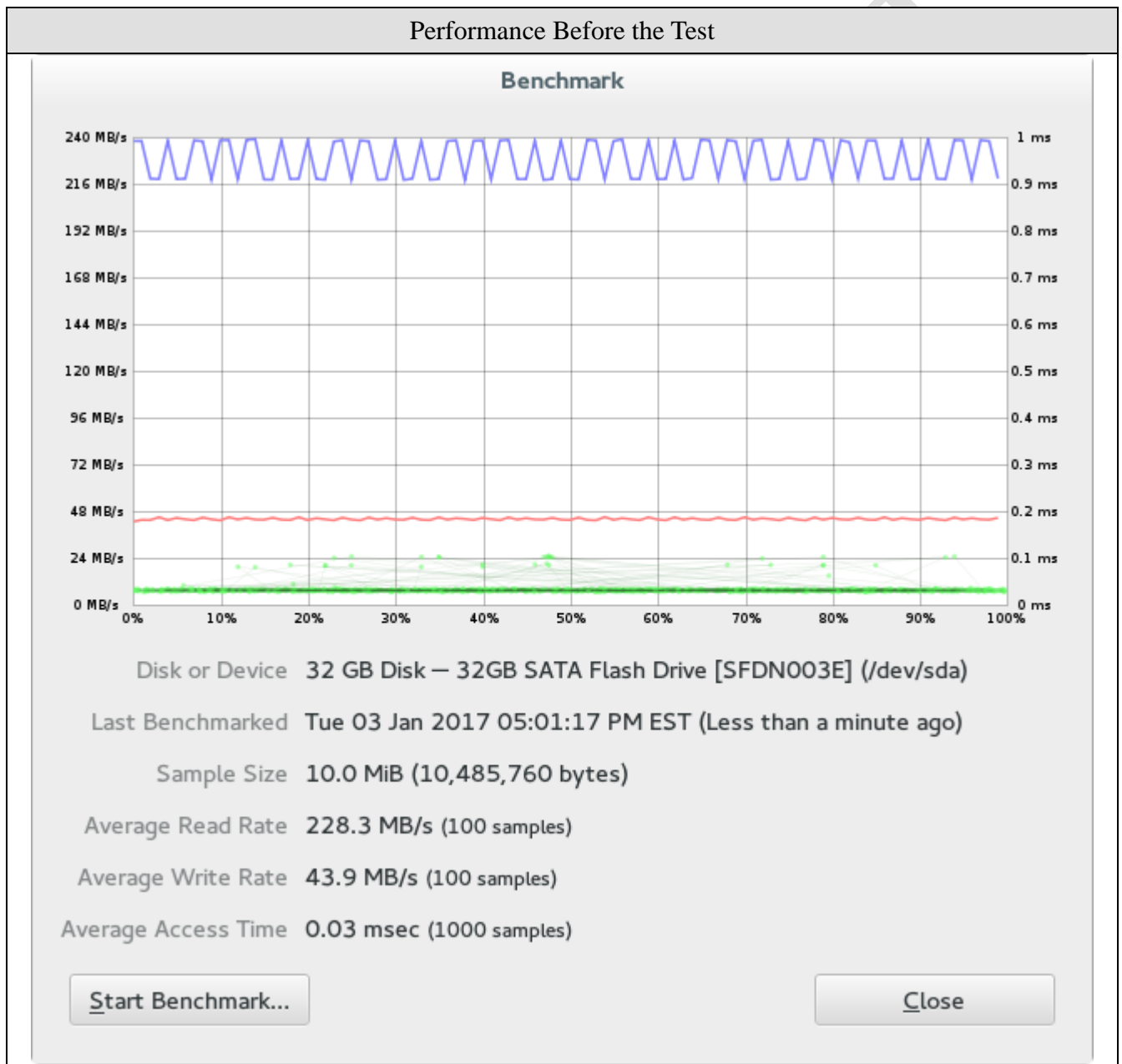
C. Performance Test With M/B : Gigabyte GA-Z77X-D3H

Testing Product	SM220-300B 32GB	Testing Engineer	Alex Lin
Testing Environment	M/B: Gigabyte Z77X-D3H	Chipset: Intel Z77 Interface: SATA III	BIOS: F16
Testing Software	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>223.3</td> <td>45.51</td> </tr> <tr> <td>512K</td> <td>222.0</td> <td>45.91</td> </tr> <tr> <td>4K</td> <td>40.79</td> <td>45.50</td> </tr> <tr> <td>4K QD32</td> <td>102.1</td> <td>45.76</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	223.3	45.51	512K	222.0	45.91	4K	40.79	45.50	4K QD32	102.1	45.76	<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>226.4</td> <td>46.04</td> </tr> <tr> <td>512K</td> <td>218.7</td> <td>45.81</td> </tr> <tr> <td>4K</td> <td>40.81</td> <td>45.34</td> </tr> <tr> <td>4K QD32</td> <td>102.1</td> <td>45.45</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	226.4	46.04	512K	218.7	45.81	4K	40.81	45.34	4K QD32	102.1	45.45
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D. Performance Test With M/B : Asus Maximus VI Hero

Testing Product	SM220-300B 32GB	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

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F. Additional Qualification:

1. Environmental

- 1. RoHS Standard 2011/65/EU / PCRD005
- 2. Other Environmental Standard REACH / China RoHS
- 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 _____