

**Product Qualification**

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

**Product Name:** SM130-25 ET 512GB

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**Firmware Version:** SFPSA22C

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**Description:** SM130-25 ET 512GB

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**Controller:** Phison PS3110

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**Flash Type:** TH58TFG9DDLBA8C QDP 4CE 15nm

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**Qualification:** Qual all

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**Test Result:** PASS

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APPROVAL					
QT	Date	Signature	Approved by	Date	Signature
Alex Lin	2017/01/23	Alex Lin	Danny Chen	2017/01/23	Danny Chen

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## SUMMARY RESULT

		PC1	PC2	PC3	PC4						
Testing Product		SM130-25 ET 512GB									
System		Windows Emb. 8.1 Industry Pro	Fedora kernel 3.3.4 -5 fc17 / Windows Emb. 8.1 Industry Pro								
M/B	Name	Z170A	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		V	--								
Cold Boot Test		--	V								
		--	--								
		--	--								
<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	V	V	V	V	V	V	V				
<b>Remark:</b>						Test Result — PASS					

## A. Function Test With M/B : ASUS Z170A

<b>Testing Product</b>	SM130-25 ET 512GB	<b>Testing Engineer</b>	Alex Lin
<b>Testing Environment</b>	M/B: ASUS Z170A	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	--	476GB

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

<b>Testing Product</b>	SM130-25 ET 512GB	<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. 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

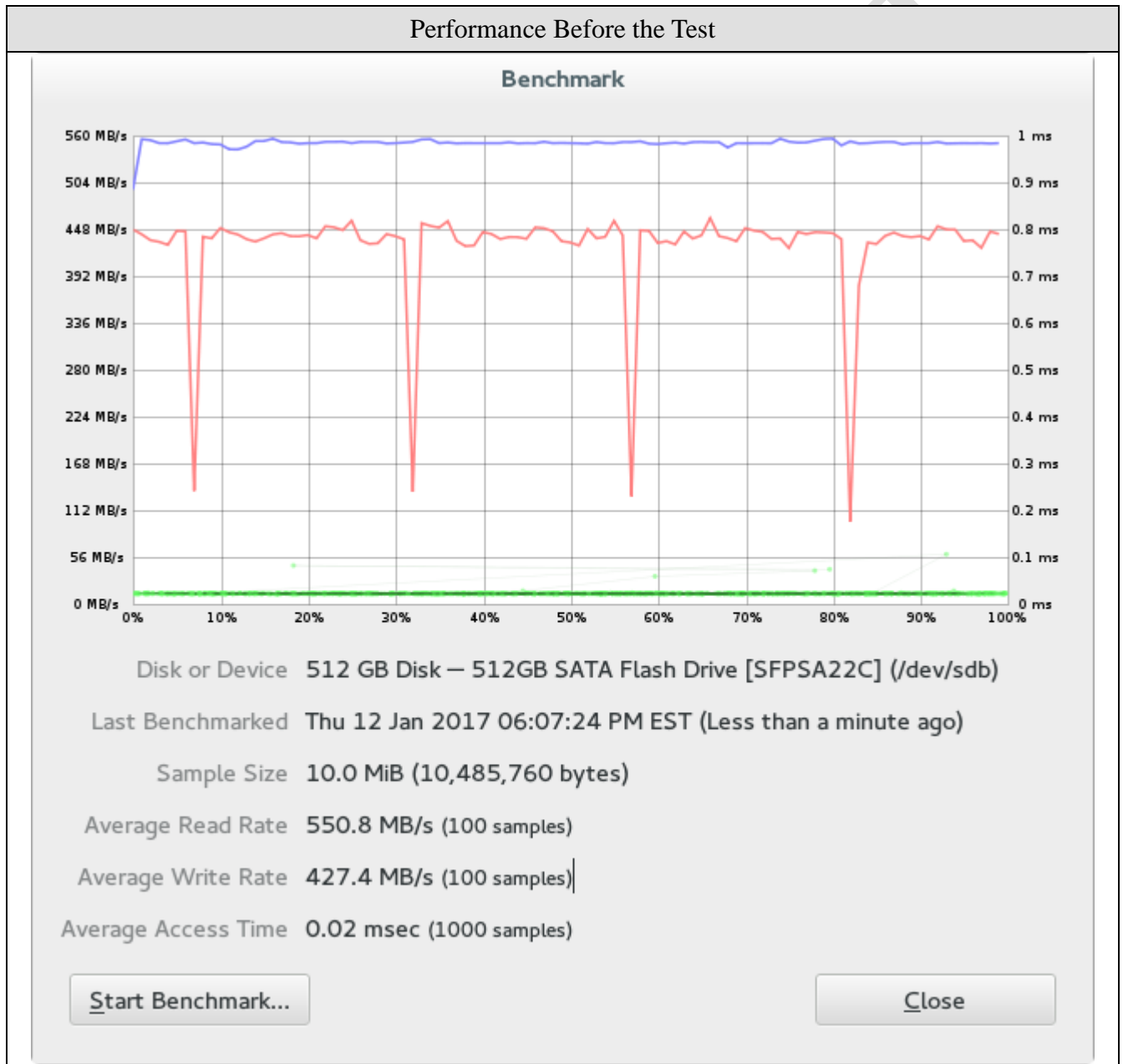
**C. Performance Test With M/B : Gigabyte GA-Z77X-D3H**

<b>Testing Product</b>	SM130-25 ET 512GB	<b>Testing Engineer</b>	Alex Lin
<b>Testing Environment</b>	<b>M/B:</b> Gigabyte GA-Z77X-D3H	<b>Chipset:</b> Intel Z77 <b>Interface:</b> SATA III	<b>BIOS:</b> 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>532.7</td> <td>513.6</td> </tr> <tr> <td>512K</td> <td>401.0</td> <td>494.8</td> </tr> <tr> <td>4K</td> <td>33.22</td> <td>135.8</td> </tr> <tr> <td>4K QD32</td> <td>375.1</td> <td>341.2</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	532.7	513.6	512K	401.0	494.8	4K	33.22	135.8	4K QD32	375.1	341.2	<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>533.8</td> <td>514.6</td> </tr> <tr> <td>512K</td> <td>414.0</td> <td>495.0</td> </tr> <tr> <td>4K</td> <td>34.46</td> <td>112.9</td> </tr> <tr> <td>4K QD32</td> <td>372.3</td> <td>355.8</td> </tr> </tbody> </table>		Read [MB/s]	Write [MB/s]	Seq	533.8	514.6	512K	414.0	495.0	4K	34.46	112.9	4K QD32	372.3	355.8
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D. Performance Test With M/B : Asus Maximus VI Hero

Testing Product	SM130-25 ET 512GB	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 , 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 \_\_\_\_\_

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