

Product Qualification

--- Compatibility Test ---

Product Name: SS220-300B ET 32GB

Firmware Version: SFDN003E

Controller: Jmicron JM60D

Qualification: Qual all

Test Result: PASS

| APPROVAL | | | | | |
|----------|------------|-----------|-------------|------------|------------|
| QT | Date | Signature | Approved by | Date | Signature |
| Alex Lin | 2017/02/06 | Alex Lin | Danny Chen | 2017/02/06 | Danny Chen |

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SUMMARY RESULT

| | | PC1 | PC2 | PC3 | PC4 | | | | | | |
|----------------------------|---|----------------------------------|--|---------------|--------------------------------------|-----------------------------------|---|--|--|--|--|
| Testing Product | | SS220-300B ET 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 | SS220-300B ET 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 | SS220-300B ET 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

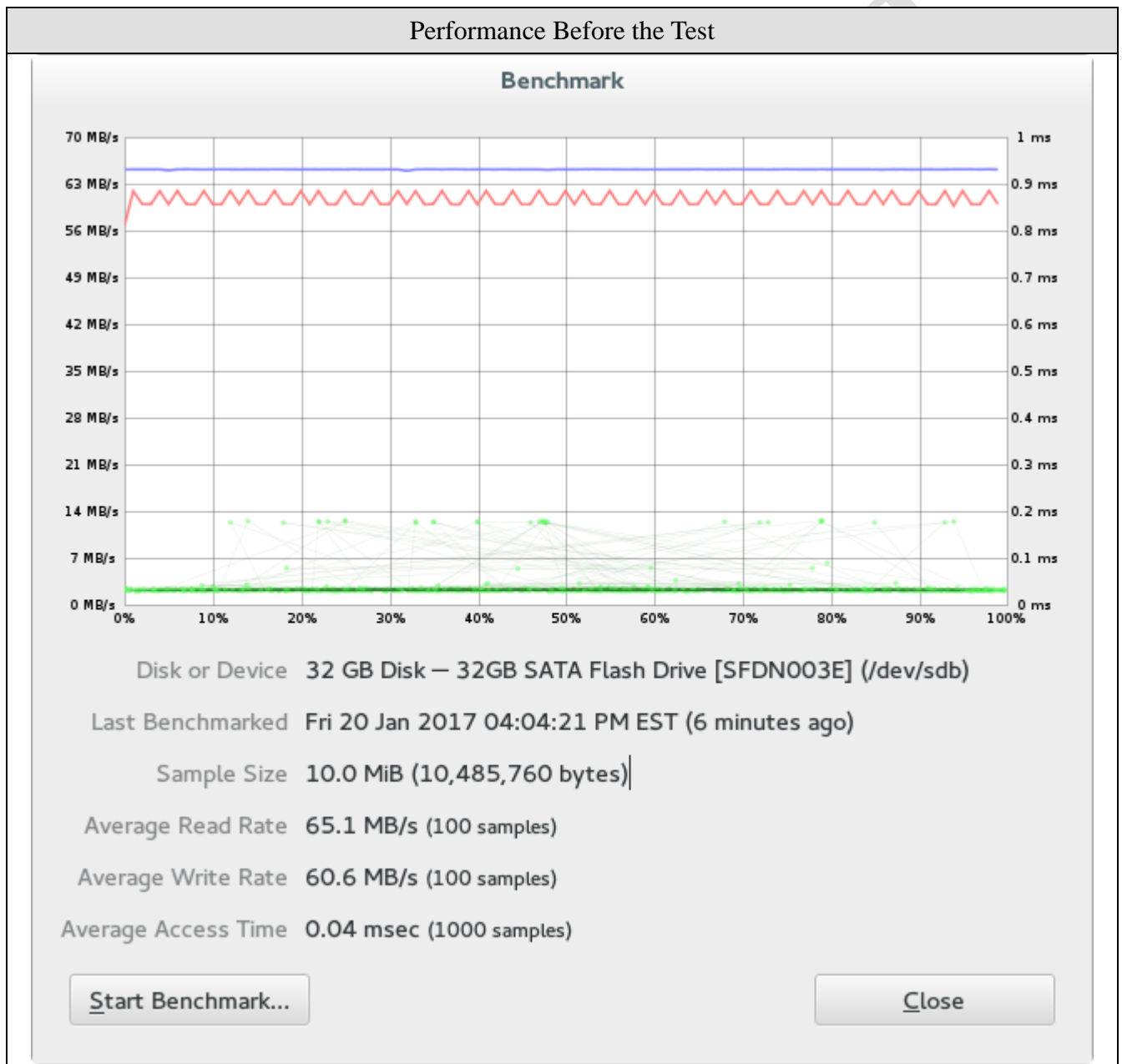
C. Performance Test With M/B : Gigabyte GA-Z77X-D3H

| | | | |
|---------------------|---------------------------|---|-----------|
| Testing Product | SS220-300B ET 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>65.17</td> <td>63.79</td> </tr> <tr> <td>512K</td> <td>61.46</td> <td>64.24</td> </tr> <tr> <td>4K</td> <td>22.19</td> <td>63.20</td> </tr> <tr> <td>4K QD32</td> <td>61.99</td> <td>63.48</td> </tr> </tbody> </table> | | Read [MB/s] | Write [MB/s] | Seq | 65.17 | 63.79 | 512K | 61.46 | 64.24 | 4K | 22.19 | 63.20 | 4K QD32 | 61.99 | 63.48 | <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>65.22</td> <td>63.77</td> </tr> <tr> <td>512K</td> <td>61.77</td> <td>63.99</td> </tr> <tr> <td>4K</td> <td>22.15</td> <td>63.14</td> </tr> <tr> <td>4K QD32</td> <td>61.72</td> <td>63.29</td> </tr> </tbody> </table> | | Read [MB/s] | Write [MB/s] | Seq | 65.22 | 63.77 | 512K | 61.77 | 63.99 | 4K | 22.15 | 63.14 | 4K QD32 | 61.72 | 63.29 |
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| 4K | 22.15 | 63.14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4K QD32 | 61.72 | 63.29 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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

| | | | |
|---------------------|------------------------------|---|------------|
| Testing Product | SS220-300B ET 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 _____

