



**Silicon Motion, Inc.**

## **SM3257EN Test Program and ISP Release Note**

**SM3257EN Test Program and ISP Release Note:**

| Release Date | ISP Version | ISP Check Sum  | Test AP Version          | Description  |
|--------------|-------------|--|--------------------------|--|
| 2011/01/10   | 110110-AA-  | SM3257ENAAISP-ISPSDEX3.BIN<br>0x 0077B55C<br>SM3257ENAAISP-ISPTEX3.BIN<br>0x0077BD20 | V2.03.35 v11<br>10/12/30 | <ol style="list-style-type: none"> <li>1. SM3257ENAAISP Sandisk X3,eX3 and Toshiba eD3 32nm TLC and support 8K/258page &amp; 8K/192page. SM3257ENAAISP support winsat function</li> <li>2. SM3257ENAAISP enhance wear-leveling.</li> <li>3. SM325Xtest.exe support SM3257ENAA IC version.</li> </ol>   |
| 2011/01/21   | 110117-AA-  | SM3257ENAAISP-B74A.BIN<br>0x 0069028A<br>SM3257ENAAISP-27nm.BIN<br>0x0067748B        | V2.03.36 v5<br>11/01/17  | <ol style="list-style-type: none"> <li>1. SM3257ENAAISP-B74A.Bin to support Intel/Micron 25nm TLC B74A</li> <li>2. SM3257ENAAISP-27nm.BIN to support SEC 27nm TLC K9ACGD8U0M, K9ABGD8U0B</li> <li>3. SM3257ENAATSPTEST.BIN modify when system block is bad block , pretest will find the next block</li> <li>4. SM325xtest.exe modifies open short test flow.</li> </ol>                         |
| 2011/02/01   | 110131-AA   | SM3257ENAAISP-B74A.BIN<br>0x 005F94FB<br>SM3257ENAAISP-27nm.BIN<br>0x 00691AD9       | V2.03.36 v9<br>11/01/27  | <ol style="list-style-type: none"> <li>1. SM3257ENAAISP fix MAC compatibility issue.</li> <li>2. Support Micron M64A SLC 29F8G08ABABA</li> <li>3. Support Micron M62B SLC MT29F16G08ABABA</li> <li>4. Support Micron M62B SLC MT29F64G08AJABA</li> <li>5. Support Samsung 32nm SLC Toggle Flash for SM3257EN and set 40bit ECC.</li> <li>6. Support Samsung K9KBGD8U1M and K9KBGD8U1M</li> </ol> |



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|            |           |  |                          | <ul style="list-style-type: none"><li>7. Adjust clock rate to 80MHz for Sandisk &amp; Toshiba 24nm MLC.</li><li>8. Enhance Toshiba / Sandisk read-retry function.</li><li>9. Fix 超穩定測試 fail for Spare block erase.</li><li>10. SM3257ENAAISP fix SEC 27nm TLC Read-retry.</li><li>11. MP tool QC add new function for downgrade BIN level.</li><li>12. MP add external execute file call function with tool initial and destroy.</li><li>13. MP add external option to bypass check USB 2.0.</li><li>14. MP fixed to support two current limit control board.</li></ul> |
| 2011/02/18 | 110131-AA | SM3257ENAAISP.BIN<br>0x 00666FBB<br>SM3257ENAAISP-B74A.BIN<br>0x 01BF749B<br>SM3257ENAAISP-27nmES.BIN<br>0x 00689D0E | V2.03.36 v15<br>11/02/15 | <ul style="list-style-type: none"><li>1. 3257EN ISP fix NTFS format will mis-compare fail issue.</li><li>2. 3257EN ISP fix RELN ROM code bug after power-on/off.</li><li>3. F/W will auto-load B74A ISP for Micron B74A.</li><li>4. Data base modify the Samsung K9LBG08U0E block setting.</li><li>5. Data base add Micron 29F32G08ABAAA (2C680027) supporting</li><li>6. MP tool fixed Transcend Bitmap un-disappear with device removed.</li><li>7. MP tool fixed Ethernet connect setting display error.</li></ul>   |



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| 2011/03/17 | 110311-AA | SM3257ENAAISP.BIN<br><br>0x 00664ACC<br><br>SM3257ENAAISP-B74A.BIN<br><br>0x 01BF4F76<br><br>SM3257ENAAISP-27nmES.BIN<br><br>0x 0068B3EA | V2.03.37 v11<br>11/03/17 | <ol style="list-style-type: none"><li>1. SM3257ENAAISP enhance WinSAT performance to pass DTM logo.</li><li>2. SM3257ENAAISP fixed the system block have ECC fail and initial fail.</li><li>3. SM3257ENAAISP fixed USB-IF logo gold tree issues</li><li>4. SM3257ENAAISP fixed 5V normal power cycling FAT block serial number error issue.</li><li>5. SM3257ENAAISP disable differential function Type2/Type3 on SanDisk/Toshiba Flash.</li><li>6. Added for Toshiba &amp; SanDisk 24nm TLC/MLC flash supporting.</li><li>7. SM3257ENAAISP 5V normal power cycling different address block DB_nowintlev error after load DiffTable.</li><li>8. DBF settings adjusted SanDisk &amp; Toshiba 32nm TLC (eX3,eD3) clock rate from 60Mhz to 80MHz.</li><li>9. MP added Ethernet communication with Hontect Auto-Handler HT-3315.</li><li>10. MP enable function - B74 flash download ISP with weak page write random data.</li><li>11. MP update alignment rule for read / write performance.</li><li>13. MP added auto-handler 3315 connect reference file for ADATA.</li><li>13. MP fixed MP tool FAT mode preload file crash with long filename or directory name.</li><li>14. Fixed MP tool Dialog Read CID show card mode error.</li></ol> |
| 2011/04/07 | 110407-AA | SM3257ENAAISP.BIN  | V2.03.38 v1<br>11/04/01  | <ol style="list-style-type: none"><li>1. SM3257ENAAISP fixed double mark bad block issue.</li></ol>   |



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|            |           | 0x 00243BDF<br>SM3257ENAAISP-B74A.BIN<br>0x 01BF7D87<br>SM3257ENAAISP-27nmES.BIN<br>0x 0068E1F9<br>SM3257ENAAISP-ISPT24nm.BIN<br>0x 007C4BD5<br>SM3257ENAAISP-ISPSD24nm.BIN<br>0x 007C6EB8 |                               | 2. SM3257ENAAISP enhanced Winsat random read performance.<br>3. SM3257ENAAISP added "Fixed Capacity" function.<br>4. SM3257ENAAISP fixed 5V normal power cycling issue for SONY tool.<br>5. SM3257ENAAISP modified B74A read-retry table.<br>6. SM3257ENAAISP updated latest SanDisk/Toshiba Read-Retry Table.<br>7. SM3257ENAAISP fixed initial fail when bad block over setting.<br>8. SM3257ENAAISP support TSB&SDK 24nm/32nm TLC with Erase Good Block Only function.<br>9. MP added "Fixed Capacity" function.<br>10. Fixed MP tool Dialog Read Flash ID show card mode error.<br>11. Adjust Toshiba & SanDisk 24nm TLC clock rate from 80Mhz to 60Mhz. |
| 2011/05/06 | 110506-AA | SM3257ENAAISP.BIN<br>0x 0066A229<br>SM3257ENAAISP-27nmES.BIN   | V2.03.38 v7<br>11/04/26 Build | 1. SM3257ENAAISP fix the abnormal erase-count high with wear-leveling function.<br>2. SM3257ENAAISP fix the DTM logo fail on interleave mode issue.<br>3. SM3257ENAAISP support Toshiba 24nm TLC Toggle mode<br>4. SM3257ENAAISP update the latest Read-Retry Table for  |



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|            |           | 0x 00690FE5<br>SM3257ENAAISP-bucket01.BIN<br>0x 0068CA87<br>SM3257ENAAISP-B74A.BIN<br>0x 01BFA9D2<br>SM3257ENAAISP-ISPT24nm.BIN<br>0x 007DF5D0<br>SM3257ENAAISP-ISPSD24nm.BIN<br>0x 007DD953 |                               | Toshiba 24nm TLC.<br>5. SM3257EN pretest enables Type1 different-address function for TS 32nm TLC Flash.<br>6. ISP and MP tool modify the "Fix Capacity" function.<br>7. Support Samsung K9F8G08U0A 43nm SLC.<br>8. MP tool fixed auto start function fail on SM3257ENAA<br>9. Fixed collection report function calculate page error with interleave mode in debug dialog.<br>10. SM3257ENAAISP support Samsung 27nm TLC with CacheRead mode and adjust Read/Write clock up to 80Mhz. |
| 2011/05/27 | 110520-AA | SM3257ENAAISP.BIN<br>0x00670411<br>SM3257ENAAISP-27nmES.BIN<br>0x0069730<br>SM3257ENAAISP-bucket01.BIN<br>0x00692E62   | V2.03.41 v2<br>11/05/27 Build | 1. SM3257ENAAISP support Sandisk 32nm X3 DualDie TLC , the flash ID : 45 CE 99 B2 7A D5<br>2. SM3257ENAAISP support Sandisk 32nm eX3 TLC, the flash ID is 45 D7 98 82 76 55.<br>3. SM3257ENAAISP support Sandisk 32nm X3 QualDie TLC , the flash ID is 45 4A 9A B2 7E D5.<br>4. SM3257ENAAISP support Samsung 21nm DDR MLC-K9GCGD8U0M<br>5. SM3257ENAAISP fix initial fail when increase new bad block<br>6. SM3257ENAAISP fixed burn-in fail and no mark bad issue when              |



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|            |           | SM3257ENAAISP-B74A.BIN<br><br>0x01C00C6A<br><br>SM3257ENAAISP-ISPTEX3.BIN<br><br>0x007C1556<br><br>SM3257ENAAISP-ISPSDEX3.BIN<br><br>0x007C1625   |                               | CachRead function enable on TSB/SDK 32nm TLC flash.<br><br>7. SM3257ENAAISP fixed fix burn-in fail and mark bad block with Different-address function on TSB/SDK 32nm TLC flash.<br><br>8. Add flash database with Toshiba/SanDisk support : Toshiba 24nm MLC TH58TVG7D2GBA49 , Toshiba 24nm TLC TC58NVG5T2HTA00, Sandsik 32nm TLC eX3 SDTNNNAHEM-004G and Toshiba 32nm TLC ED3 TC58NVG5T2FTA00<br><br>9. MP Tool added option for copy compare N bytes could compare new bad block number to show fail.<br><br>10. MP tool support Flash ID identify from 4 bytes to 6bytes.   |
| 2011/06/27 | 110624-AA | SM3257ENAAISP-ISPTEX3.BIN<br><br>0x 0068928B<br><br>SM3257ENAAISP-ISPSDEX3.BIN<br><br>0x 0068935A<br><br>SM3257ENAAISP.BIN<br><br>0x 0069BE51<br><br>SM3257ENAAISP-bucket01.BIN<br><br>0x00698ACF<br><br>SM3257ENAAISP-B74A.BIN | V2.03.42 v4<br>11/06/20 Build | 1. SM3257ENISP to support Windows latest logo testing – DTM1.6, modified the DTM1.6 new testing items failed<br><br>2. SM3257ENAAISP fixed TSB & SDK 32nm TLC Different address block burn-in fail with wear-leveling function.<br><br>3. SM3257ENISP to support Intel Micron ONFI flash.<br><br>4. SM3257ENISP to support HY 26nm DDR MLC H27QDG8VEBIR<br><br>5. SM3257EN pretest fix the scan original bad block for Samsung 27nm toggle TLC. (wafer remain testing patterns)<br><br>6. MP tool fix correct ISP length for calculating ISP checksum with DialogReadCID dialog.<br><br>7. MP tool fix Resolved "Open-card cannot work with USB-HDD mode"<br><br>8. MP tool support "QC Setting with 6 bytes flash ID comparing function" |



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|            |           | 0x 00682792<br><br>SM3257ENAAPTTEST.BIN  |                               | 9. MP tool add LED shining with SM3257EN MP or QC function.  |
| 2011/07/14 | 110713-AA | SM3257ENAAISP.BIN<br><br>0x 00677DB4<br><br>SM3257ENAAISP-27nmES.BIN<br><br>0x 00696CCE<br><br>SM3257ENAAISP-ISPT24nm.BIN<br><br>0x 00671D2C<br><br>SM3257ENAAISP-ISPSD24nm.BIN<br><br>0x 00671848 | V2.03.43 v1<br>11/07/12 Build | <ol style="list-style-type: none"> <li>1. SM3257ENAAISP fix the "Erase All block" flow for Sandisk &amp; Toshiba 24nm TLC.</li> <li>2. SM3257ENAAISP fix 5V normal power cycling issue when child block change to FAT block.</li> <li>3. SM3257ENAAPTTEST fix the scan original bad block for Samsung 27nm toggle TLC wafer with testing pattern.</li> <li>4. SM3257ENAAISP solved CDROM boot up issue in HP Note Book.</li> <li>5. SM3257ENAAISP solved CDROM Autorun issue in Win2K, when device plug in first.</li> <li>6. SM3257ENAAISP support SanDisk 24nm TLC SDTNPNAHEM-004G (45 D7 98 92 72 56).</li> <li>7. MP tool support exFAT format.</li> </ol> |
| 2011/08/08 | 110804-AA | SM3257ENAAISP.BIN  | V2.03.46 v4<br>11/08/05 Build | <ol style="list-style-type: none"> <li>1. SM3257ENAAISP support special HID command set for Buffalo.</li> <li>2. SM3257ENAAISP support Samsung 21nm MLC.</li> </ol>  |



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|            |           | 0x00670424<br>SM3257ENAAISP-27nmES.BIN<br>0x00696C0F<br>SM3257ENAAISP-ISPT24nm.BIN<br>0x006797A8<br>SM3257ENAAISP-IPSPD24nm.BIN<br>0x00679178 |                               | <ol style="list-style-type: none"> <li>SM3257ENAAISP support Samsung 27nm &amp; 21nm MLC with reliable mode.</li> <li>SM3257ENAAISP update the latest Toshiba Read-Retry Table.</li> <li>SM3257ENAAISP support Toshiba 24nm TLC TC58NVG8T2HTA</li> <li>SM3257ENAA pretest support Toshiba &amp; Sandisk 24nm TLC to run 4way with 4CE</li> <li>SM3257ENAAISP support Toshiba 24nm DDR TLC TC58TVG5T2HTA00.</li> <li>MP tool remove Win98 Factory driver.</li> <li>MP tool solved "check and compare Flash ID 6 bytes problem".</li> <li>MP tool solved "exFAT chkdsk warning" issue.</li> <li>MP tool solved show ECC wrong status on CardMode button for EN series IC.</li> </ol> |
| 2011/08/23 | 110810-AA | SM3257ENAAISP.BIN<br>0x0067282F<br>SM3257ENAAISP-27nmES.BIN<br>0x0069901A<br>SM3257ENAAISP-bucket01.BIN                                       | V2.03.47 v2<br>11/08/17 Build | <ol style="list-style-type: none"> <li>SM3257ENISP update SCSI Write 6 command for DTM v1.6.</li> <li>SM3257EN pretest fixed a 5V normal power cycling fail with D.A. function.</li> <li>MP tool fix "Show wrong serial number for multiple devices"</li> <li>MP tool fix "Show time value meets negative value after finish open-card"</li> </ol>   |



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|            |           | 0x006959C2<br>SM3257ENAAISP-B74A.BIN<br><br>0x0067F4C6   |                               |   |
| 2011/09/15 | 110908-AA | SM3257ENAAISP-ISPT24nm.BIN<br><br>0x0068D91C<br><br>SM3257ENAAISP-ISPSD24nm.BIN<br><br>0x0068D2EC<br><br>SM3257ENAAISP-19nm.BIN<br><br>0x0068B088<br><br>SM3257ENAAISP.BIN<br><br>0x00675959<br><br>SM3257ENAAISP-27nmES.BIN<br><br>0x00698AEC<br><br>SM3257ENAAISP-B74A.BIN<br><br>0x006825F0<br><br>SM3257ENAAISP-ISPTX3.BIN | V2.03.49 v1<br>11/09/08 Build | <ol style="list-style-type: none"> <li>1. SM3257ENISP CID 0x16E to adjust V1.8 &amp; V3.3 voltage and fix the 5V normal power cycling issue for 24nm MLC flash..</li> <li>2. SM3257ENISP fine tune the write flow to fix the flash busy timing issue on SanDisk latest flash, after DC:1129</li> <li>3. SM3257ENISP added Toshiba &amp; SanDisk 19nm MLC Read-Retry Table using 24nm MLC table.</li> <li>4. SM3257ENISP supported DTM 1.6 and CV 2.0 for Toshiba /SanDisk flash.</li> <li>5. Update the Micron 20nm MLC L84A pair page table and RRTB for DC:1128 &amp; 1132.</li> <li>6. MP tool improve the scan device speed for in-box driver mode.</li> <li>7. MP tool supported "LED ON/OFF control for SM325X series".</li> <li>8. MP tool modified "Show disk letter status for all open-card procedures.</li> <li>9. MP tool solved "Program error dialog is happened during open-card for factory driver mode"</li> <li>10. MP tool solved "MP Time shows negative value".</li> </ol> |



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|            |           | 0x006A1222<br><br>SM3257ENAAISP-ISPSEX3.BIN<br><br>0x006A12F1  |             |  |
| 2011/09/30 | 110929-AA | SM3257ENAAISP-HY26.bin<br><br>0x0067A85E<br><br>SM3257ENAAISP-ISPT24nm.bin<br><br>0x 0068E5EF<br><br>SM3257ENAAISP-ISP24nm.bin<br><br>0x 0068DFBF<br><br>SM3257ENAAISP-ISP24nmDDR.bin<br><br>0x 0068E174 |             | <ol style="list-style-type: none"> <li>1. SM3257ENISP implemented HY26 RRTB and enhanced SLC program function.</li> <li>2. SM3257ENISP Support SanDisk 32nm MLC iNand flash SDTNNMBHSM-008G/SDIN5C2-8G (45CE95327AD5)</li> <li>3. SM3257ENISP support SanDisk 32nm TLC iNand flash SDTNNNBHSM-008G/SDIN5C1-8G (45CE99827AD5)</li> <li>4. SM3257ENISP support SanDisk 24nm SDR TLC to DDR mode, need to manual select "SM3257ENAAISP-ISP24nmDDR.Bin"</li> <li>5. SM3257ENISP add CID 0x161 Bit 2 to enable Polling status for SanDisk 24nm TLC ROMFUSE=1 "0":Disable,"1" :Enable. Default is enable polling status.</li> <li>6. DBF added Samsung K9GAGD8U0F for SM3255EN/SM3257EN.</li> <li>7. DBF added Micron 25nm TLC B74A MT29F256G08EJAAA.</li> <li>8. DBF added Toshiba 24nm SDR/DDR MLC TC58NVG4D2HTA.</li> </ol> |
| 2011/10/12 | 111005-AA | SM3257ENAAISP-HY26.BIN   | V 2.3.50 v6 | <ol style="list-style-type: none"> <li>1. SM3257ENISP update the Advanced Read-Retry table for Intel &amp;</li> </ol>  |



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|            |           | 0x0067A095<br><br>SM3257ENAAISP-L84.BIN<br><br>00684C2F   | 11/09/29 Build               | <p>Micron 20nm MLC L84A.</p> <ol style="list-style-type: none"> <li>SM3257ENISP modified enhanced SLC Program flow for HY 26nm MLC.</li> <li>Support SanDisk 24nm DDR MLC , flash ID : 45 DE 94 82 76 D6</li> <li>DBF file modified the auto-load path for TS 32nm TLC.</li> <li>MP tool support preload compare on QC page</li> </ol>   |
| 2011/11/18 | 111118-AA | SM3257ENAAISP-HY26.BIN<br><br>0x 0067C1B4<br><br>SM3257ENAAISP-ISPT24nm.bin<br><br>0x 00692B76<br><br>SM3257ENAAISP-ISPSD24nm.bin<br><br>0x 00692546<br><br>SM3257ENAAISP-ISPSD24nmDDR.bin<br><br>0x 006926F7 | V 2.3.56 v8<br>11/11/14Build | <ol style="list-style-type: none"> <li>SM3257ENISP fix 1-plane interleave flash D.A. problem.</li> <li>SM3257ENISP fix suspend current too high problem.</li> <li>SM3257ENISP support Partial page for iNAND flash and Pseudo die bit for 4plane flash.</li> <li>SM3257ENISP update system blocks will erase system block even this block is in erased status in Hynix flash.</li> <li>SM3257ENISP fixed performance drop with Toshiba 24nm TLC issue.</li> <li>DBF added Toshiba 19nm TLC TC58NVG6T2JTA00 / TC58NVG7T2JTA00</li> <li>SM3257ENISP fix bad column mode and DMA access RAM potential conflict issue.</li> <li>SM3257ENISP modify the mark bad block limitation.</li> <li>Adjust Toshiba 19nm TLC clock rate to 80MHz from 60MHz</li> <li>MP tool modify the "Erase info" flow when FBlock over 0x2000.</li> <li>MP tool support forceflash special setting to control different</li> </ol> |



|            |           |  |                               | address type.  |
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| 2011/11/30 | 111129-AA | SM3257ENAAISP.BIN<br>0x0067D859<br>SM3257ENAAISP-27nmES.BIN<br>0x006A3BAD<br>SM3257ENAAISP-bucket01.BIN<br>0x0069DF36<br>SM3257ENAAISP-SA21nmMLC.BIN<br>0x0068C53B<br>SM3257ENAAISP-19nm.BIN<br>0x00694300 | V 2.3.58 v8<br>11/11/29 Build | 1. SM3257ENISP update the SanDisk 24nm MLC Read Retry Table.<br>2. SM3257ENISP modify ISP version date.<br>3. Disable Reliable mode for Samsung 27nm MLC (EC DE D5 7A 58 43) and Samsung 21nm MLC K9GCGD8U0A (EC DE A4 7A 68 C4).<br>4. MP tool fixed write full ISP flow for TS 32nm TLC. |
| 2011/12/21 | 111216-AA | SM3257ENAAISP-ISPT24nm.bin<br>0x0068E84D<br>SM3257ENAAISP-ISPSD24nm.bin<br>0x0068E21D<br>SM3257ENAAISP-ISPSD24nmDDR.bin<br>0x0068E3CC<br>SM3257ENAAISP-ISPSD19nm.bin<br>0x006904BB                         | V 2.3.60 v8<br>11/12/09Build  | 1. SM3257ENISP fix TSB 24nm DDR TLC will write 00 pattern fail issue.<br>2. SM3257ENISP support SanDisk 19nm TLC SDTNQCAMA-08G/SDTNQCAMA- 16G and update the latest Read-Retry table and flow.<br>3. MP tool add "Read CID buffer page 0 enables max 72-bit ECC for SM3257EN".             |
| 2012/01/30 | 120130-AA | SM3257ENAAISP-ISPT24nm.bin<br>006918CD   | V 2.3.65 v4<br>12/01/16Build  | 1. SM3257ENISP enhance wear-leveling function for SLC mode.<br>2. SM3257ENISP Fix USB test with golden tree hub on SanDisk   |



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|            |           | SM3257ENAAISP-ISP24nm.bin<br>0069129D<br>SM3257ENAAISP-ISP24nmDDR.bin<br>00691452<br>SM3257ENAAISP-ISP19nm.bin<br>0068B351<br>SM3257ENAAISP-ISPT19nm.bin<br>00692AB1  |                               | 32nm TLC flash.<br>3. SM3257ENISP add Toshiba 19nm TLC Read-Retry Table.<br>4. Add CID 0x160 bit0/bit1 to support Sandisk projects LED blinking function.          |
| 2012/02/23 | 120223-AA | SM3257ENAAISP.BIN<br>006808C1<br>SM3257ENAAISP-27nmES.BIN<br>006A6E2E<br>SM3257ENAAISP-bucket01.BIN<br>006A1860<br>SM3257ENAAISP-B74A.BIN<br>0068CF2C<br>SM3257ENAAISP-SA21nmMLC.BIN<br>0068F2A8<br>SM3257ENAAISP-19nm.BIN<br>00697124<br>SM3257ENAAISP-L84.BIN<br>0068F7C8<br>SM3257ENAAISP-ISPT24nm.bin | V 2.3.66 v6<br>12/02/22 Build | 1. Fix scan the original bad block issue for Toshiba flash, and enhance SLC block number for TSB/SDK 19nm TLC.<br>2. Update Toshiba 24/19 nm MLC Read-Retry Table. |



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|            |           | 00692285<br>SM3257ENAAISP-ISPSPD24nm.bin<br>00691C55<br>SM3257ENAAISP-ISPSPD24nmDDR.bin<br>00691E0A<br>SM3257ENAAISP-ISPSPD19nm.bin<br>0068BD09<br>SM3257ENAAISP-ISPT19nm.bin<br>00693469  |                               |  |
| 2012/03/21 | 120321-AA | SM3257ENAAISP-ISPSPD24nm.bin<br>00691C51<br>SM3257ENAAISP-ISPSPD24nmDDR.bin<br>00691E06<br>SM3257ENAAISP-ISPSPD19nm.bin<br>0068BD05<br>SM3257ENAAISP-ISPT19nm.bin<br>00693474<br>SM3257ENAAISP-ISPSPD19nm4P.bin<br>0069DC3A<br>SM3257ENAAISP-ISPT19nm4P.bin<br>006A53A9<br>SM3257ENAAISP-ISPT19nm4P4CE.bin | V 2.3.68 v8<br>12/03/21 Build | <ol style="list-style-type: none"> <li>1. Update SEC 21nm MLC Read-Retry option.</li> <li>2. Update Toshiba 19nm Read-Retry Table.</li> <li>3. Improve 19nm 128Gb TLC x1 / x2 / x4 performance.</li> </ol> |



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|------------|-----------|---|-------------------------------|---|
|            |           | 006CA76D  |                               |   |
| 2012/04/03 | 120402-AA | SM3257ENAAISP-SA27nmMLC.bin<br>00690651<br>SM3257ENAAISP-ISPT24nm.bin<br>0068BA79<br>SM3257ENAAISP-ISPSD24nm.bin<br>0068B449<br>SM3257ENAAISP-ISPSD24nmDDR.bin<br>0068B60E<br>SM3257ENAAISP-ISPSD19nm.bin<br>006854FD<br>SM3257ENAAISP-ISPSD19nmDDR.bin<br>006856C2<br>SM3257ENAAISP-ISPT19nm.bin<br>0068CC5D | V 2.3.69 v9<br>12/03/23 Build | <ol style="list-style-type: none"> <li>1. Add Samsung 27nm MLC Read-Retry Table.</li> <li>2. Update the Samsung 21nm TLC OBP Read-Retry Table.</li> <li>3. Adjust total block size for Toshiba &amp; Sandisk 19nm TLC (128Gb) to improve the initialization yield.</li> </ol>   |
| 2012/04/20 | 120420-AA | SM3257ENAAISP-ISPSD19nm4P.bin<br>006A0855<br>SM3257ENAAISP-ISPSD19nmDDR4P.bin<br>006A0A1C<br>SM3257ENAAISP-ISPT19nm4P.bin<br>006A7FC4<br>SM3257ENAAISP-ISPSD19nm4P4CE.bin<br>006A0855   | V 2.3.70 v8<br>12/04/18 Build | <ol style="list-style-type: none"> <li>1. Update the Samsung 21nm TLC OBP Read-Retry Table.</li> <li>2. Support Read-Retry Table for Samsung 27nm MLC.</li> <li>3. Support show different colors by card mode information when MP show PASS</li> <li>4. Fix the scan original bad block information.</li> <li>5. Fix the randomizer issue in "head_tail" process and burn-in fail with small pattern.</li> <li>6. Adjust SLC block number.</li> </ol> |



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|            |           |   |                               | 7. Fix TLC block wear-leveling function.   |
| 2012/04/25 | 120423-AA | SM3257ENAATSPTTEST24nm4P.bin<br>0x006A6C84<br>SM3257ENAAISP-ISPSPD19nm4P.bin<br>0x0069F515<br>SM3257ENAAISP-ISPSPD19nmDDR4P.bin<br>0069F308   | V 2.3.71 v1<br>12/04/25 Build | 1. Enhance SLC block protection<br>2. Modify the "Fixed Capacity" bug with OBP flash.<br>3. Support "Show status bar with different color" for specific customer.  |
| 2012/05/08 | 120503-AA | SM3257ENAAISP-19nm16K.bin<br>006EEBA8<br>SM3257ENAAISP-ISPT24nm.bin<br>0066B1EE<br>SM3257ENAAISP-ISPSPD24nm.bin<br>0066AB2B<br>SM3257ENAAISP-ISPSPD24nmDDR.bin<br>0066ACEA<br>SM3257ENAAISP-ISPSPD19nm.bin<br>00664B8C<br>SM3257ENAAISP-ISPSPD19nmDDR.bin<br>0066C3CF<br>SM3257ENAAISP-IPSPA21nmTLC.bin<br>00663F17 | V 2.3.73 v6<br>12/05/03 Build | 1. Improve TempISP error handling.<br>2. Enlarge SLC block.<br>3. Support 4CE with inter-leave2 mode.<br>4. Enhance performance for 19nm 128Gb TLC (8K 4 plane).<br>5. Solve ATTO fail issue (when specific capacity). |



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|            |           | SM3257ENAAISP-ISPSPD19nm4P.bin<br>00685A61<br>SM3257ENAAISP-ISPSPD19nmDDR4P.bin<br>00685C20<br>SM3257ENAAISP-ISPT19nm4P.bin<br>0068D2A4  |                               |  |
| 2012/05/17 | 120516-AA | SM3257ENAAISP-ISPSPD19nm4P.bin<br>00688FD6<br>SM3257ENAAISP-ISPT19nm4P.bin<br>00690819   | V 2.3.75 v6<br>12/05/16 Build | <ol style="list-style-type: none"> <li>1. Fine tune performance after copy/compare via MP tool.</li> <li>2. Add Sandisk 19nm 32Gb TLC SDTNQCAMA-004G</li> <li>3. Support clear pair table when enable CopyCompare function.</li> </ol>   |
| 2012/06/12 | 120606-AA | SM3257ENAAISP.BIN<br>00660C22<br>SM3257ENAAISP-27nmES.BIN<br>00686876<br>SM3257ENAAISP-bucket01.BIN<br>00683277<br>SM3257ENAAISP-SA27nmMLC.BIN<br>0067015D<br>SM3257ENAAISP-SA21nmMLC.BIN<br>0066ED2D<br>SM3257ENAAISP-B74A.BIN<br>0066E949<br>SM3257ENAAISP-L84.BIN | V 2.3.80 v1<br>12/06/08 Build | <ol style="list-style-type: none"> <li>1. Update Toshiba 19nm TLC Read-Retry Table.</li> <li>2. Update Sandisk 19nm TLC Read-Retry Table.</li> <li>3. Fix SM3257EN + B74 performance drop when S3 / reboot issue</li> <li>4. Support SEC 21nm TLC K9ABGD8U0C / K9ACGD8U0A</li> <li>5. Support SanDisk 19nm 64Gb MLC 16K 1Plane (SDTNQFAMA-008G) / Toshiba 19nm 64Gb MLC 16K 1Plane (TC58NVG6DCJTA00/ TC58TEG6DCJTA00)</li> <li>6. Support SanDisk 19nm 64Gb MLC 16K 2plane (SDTNQGAMA-008G) / Toshiba 19nm 64Gb MLC 16K 2plane (TC58TEG6DDJTA00) in 1plane mode.</li> <li>7. Support Toshiba 19nm 32Gb TLC (TC58TEG5T2JTA00)</li> <li>8. MPTool support "Card mode check mechanism"</li> <li>9. MPtool resolves "Card mode calculate wrong issue for multiple</li> </ol> |



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|            |           | 0066F29F<br>SM3257ENAAISP-19nm.BIN<br>00676C61  |                               | <p>devices"</p> <p>10. MPTool support copy compare function with clean pattern, write only and read only options.</p> <p>11. MPTool support "Check all same flash type and CE numbers" during MP.</p>  |
| 2012/07/13 | 120712-AA | SM3257ENAATSPTTEST24nm.bin<br>0x25345B<br>SM3257ENAATSPTTEST24nm4P.bin<br>0x274152<br>SM3257ENAAISP-ISPSD19nm4P.bin<br>006B8BC9<br>SM3257ENAAISP-ISPSD19nmDDR4P.bin<br>006B8D8E<br>SM3257ENAAISP-ISPT19nm4P.bin<br>006BDD2B | V 2.3.85 v2<br>12/07/13 Build | <ol style="list-style-type: none"> <li>1. Support "EnablePreventWriteProtect" flag for SM3257ENAA</li> <li>2. Define CID 0x161 bit3 to prevent FW write protect function. (default disable)</li> <li>3. Support HY 20nm MLC: H27UBG8T2CTR / H27UCG8T2ATR</li> <li>4. Support Samsung 21nm TLC with DualDie flash: K9BDGD8U0A / K9CFGD8U1A</li> <li>5. Update the Toshiba &amp; Sandisk Read-Retry Table for 19nm MLC TypeA / B / C</li> <li>6. Update the L84A Read-Retry Table.</li> <li>7. Update the Hynix 26nm read-Retry flow.</li> </ol> |
| 2012/0726  | 120723-AA | SM3257ENAATSPTTEST24nm.bin<br>0x25345B<br>SM3257ENAAISP-ISPT24nm.bin<br>006892A8<br>SM3257ENAAISP-ISPSD24nm.bin   | V 2.3.86 v6<br>12/07/24 Build | <ol style="list-style-type: none"> <li>1. Support Differential Address for 19nm TLC (64Gbx2 / x4, 128Gb x1 / x2)</li> </ol>  |



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|            |           | 00688BE5<br>SM3257ENAAISP-ISP24nmDDR.bin<br>00688CAF<br>SM3257ENAAISP-ISP24nmDDR.bin<br>00685493<br>SM3257ENAAISP-ISP24nmDDR.bin<br>0068555D<br>SM3257ENAAISP-ISPT19nm.bin<br>0068A5F5<br>SM3257ENAAISP-ISP24nmTLC.bin<br>00681FD1 |                               |   |
| 2012/08/16 | 120816-AA | SM3257ENAAISP-B74A.BIN<br>0067EE5D<br>SM3257ENAAISP-ISPT19nm.bin<br>0068BED5<br>SM3257ENAAISP-ISPT19nm4P.bin<br>006C6B8E   | V 2.3.88 v7<br>12/08/10 Build | <ol style="list-style-type: none"> <li>1. Revise Toshiba &amp; Sandisk 19nm MLC retry flow.(TypeB/C)</li> <li>2. Support Toshiba 19nm MLC TC58TEG5DCJTA00 (16K 1Plane)</li> <li>3. Improve B74 error handling: when read spare 0x00 and modify the read flow</li> <li>4. Support setting DDR feature for Toshiba 19nm TLC TC58TEG7T2JTA00 (Toggle Flash with none-toggle Flash ID in TSOP package), need to select ISP manually.</li> </ol> |
| 2012/08/23 | 120822-AA | SM3257ENAAISP-ISPT24nm.bin<br>0068ABF1<br>SM3257ENAAISP-ISP24nm.bin<br>0068A52E  | V 2.3.88 v7<br>12/08/10 Build | <ol style="list-style-type: none"> <li>1. Fix toggle flash will be disable toggle mode problem.</li> <li>2. Adjust 2GB flash SLC block number</li> </ol>  |



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|            |           | SM3257ENAAISP-ISPSPD24nmDDR.bin<br>0068E8F7<br>SM3257ENAAISP-ISPSPD19nm.bin<br>00686DDC<br>SM3257ENAAISP-ISPSPD19nmDDR.bin<br>0068B1A5<br>SM3257ENAAISP-ISPT19nm.bin<br>0068BF3E<br>SM3257ENAAISP-ISPSPA21nmTLC.bin<br>0068391A |                               |   |
| 2012/09/07 | 120905-AA | SM3257ENAAISP-ISPSPD19nm.bin<br>00686EE2<br>SM3257ENAAISP-ISPSPD19nm4P.bin<br>006C2183  | V 2.3.92 v1<br>12/09/06 Build | <ol style="list-style-type: none"> <li>1. Support Micron L72A: MT29F16G08CBACA</li> <li>2. Support SanDisk 19nm 256Gb TLC: SDTNQCBMA-032G (1CE/2die), x1/x2</li> </ol>  |
| 2012/10/11 | 121008-AA | SM3257ENAAPTTEST.BIN<br>0x2392AA<br>SM3257ENAAISP.BIN<br>00678E5E   | V 2.3.95 v9<br>12/10/09 Build | <ol style="list-style-type: none"> <li>1. Support Samsung 21nm TLC 1CE/2Die K9BDGD8U0A x1 / x2</li> <li>2. Support 19nm TLC Flash with SLC block early bad pre-scan</li> <li>3. Support early bad pre-scan function (except 19nm TLC / 21nm TLC)</li> <li>4. Add check CE care Flash function</li> <li>5. Support Hynix 20nm MLC UCG-Bdie (16K 2plane)</li> </ol> |



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|            |           |  |                               | H27UCG8T2BYR   |
| 2012/10/17 | 121012-AA | SM3257ENAAISP-HY20_16K<br>SM3257ENAAPTEST-HY20_16K               | V 2.3.96 v6<br>12/10/16 Build | <ol style="list-style-type: none"> <li>1. Update Hynix 20nm MLC UCG-B die pretest FW flow. (H27UCG8T2BYR)</li> <li>2. Update MPTool to fix some capacity concerns between original (44%) and fix mode</li> </ol>   |
| 2012/10/24 | 121023-AA | SM3257ENAAPTEST.BIN<br>0x2392AA<br>SM3257ENAAISP.BIN<br>0067A6E0 | V 2.3.98 v1<br>12/10/23 Build | <ol style="list-style-type: none"> <li>1. Update FW for 0xCC command / compatibility issue</li> <li>2. Support Micron / Intel L85, MT29F128G08CBCAB, 29F16B08LCMF3</li> </ol>  |
| 2013/01/06 | 130103-AA | SM3257ENAAPTEST.BIN<br>SM3257ENAAISP.BIN                         | V 2.5.08 v8<br>13/01/07 Build | <ol style="list-style-type: none"> <li>1. Support multi-die change to DDR mode for SanDisk / Toshiba 19nm TLC</li> <li>2. Modify L84A initial original bad flow</li> </ol>   |
| 2013/01/24 | 130121-AA | SM3257ENAAPTEST.BIN<br>SM3257ENAAISP.BIN                         | V 2.5.10 v6<br>13/01/17 Build | <ol style="list-style-type: none"> <li>1. Fix DTM1.6 and Serial Number Length issue</li> <li>2. Improve SPOR ability</li> </ol>  |
| 2013/03/04 | 130225-AA | SM3257ENLTPTEST.BIN<br>SM3257ENLTISP.BIN                         | V 2.5.14 v1<br>13/02/25 Build | <ol style="list-style-type: none"> <li>1. Support Micron 20nm 32Gb MLC L83A: MT29F32G08CBADA / MT29F32G08CBADB</li> <li>2. Support Micron 20nm 64Gb MLC L84C: MT29F64G08CBCDB</li> <li>3. Support Toshiba 24nm SLC: TC58NVG5H2HTA00 / TH58NVG6H2HTAK0 / TH58NVG7H2HTAK0</li> </ol> |



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| 2013/05/07 | 130503-AA   | SM3257ENLTPTEST.BIN<br>SM3257ENLTISP.BIN<br>SM3257ENAAISP-L84.BIN   | V 2.5.18 v1<br>13/04/25 Build | <ol style="list-style-type: none"> <li>1. Modify IM L84 read retry flow.</li> <li>2. Update DBF setting for SanDisk 24nm MLC</li> <li>3. Fine-tune WinSAT (ready boost) read performance</li> <li>4. Modify Win8 LED blinking status</li> <li>5. Enhance system block protection</li> <li>6. New alignment to solve "Unallocated partition" issue in some specific capacity.</li> </ol> |
| 2013/07/12 | 120628-AA   | SM3257ENAAISP-ISPSA19nmTLC<br>SM3257ENAAISP-ISPSA19nmTLC4P<br>SM3257ENAAISP   | V 2.5.24 v1<br>13/06/28 Build | <ol style="list-style-type: none"> <li>1. Support Samsung 19nm 64 / 128Gb TLC: K9ACGD8U0B / K9ADGD8U0M</li> <li>2. Support Toshiba 32nm SLC: TC58NVG2S0FTA00 / TC58NVG3S0FTA00 / TH58NVG4S0FTA20 / TH58NVG5S0FTA20</li> </ol>   |
| 2013/09/02 | 130902-A1   | SM3257ENAAISP-ISPSA19nmTLC<br>SM3257ENAAISP-ISPSA19nmTLC4P  | V 2.5.27 v1<br>13/09/02 Build | <ol style="list-style-type: none"> <li>1. Support Samsung 19nm 128Gb TLC ADG-M die with 1CE/2Die: K9BFGY8S0M</li> <li>2. Modify early move criteria</li> </ol>  |
| 2013/10/07 | 130905-A1<br>131002-A1<br>131002-A1<br>131002-A1<br>131002-A1 | SM3257ENAAISP<br>SM3257ENAAISP-ISPSA19nmTLC<br>SM3257ENAAISP-ISPSA19nmTLC4P<br>SM3257ENAAISP-ISPSD19nm<br>SM3257ENAAISP-ISPSD19nm4P | V 2.5.27 v8<br>13/10/04 Build | <ol style="list-style-type: none"> <li>1. Update MPTool to fix Autohandler + Factory Driver can't scan UFD issue</li> <li>2. Update SanDisk / Toshiba 19nm TLC FW to improve error handling in M0902. (FW M0628 or before is ok)</li> </ol>   |



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|  | 131002-A1 | SM3257ENAAISP-ISPT19nm   |  | 3. Support Samsung 19nm ABG-D die: K9ABGD8U0D |
|  | 131002-A1 | SM3257ENAAISP-ISPT19nm4P |  |   |

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