



**Silicon Motion, Inc.**

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

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Release Date	ISP Version	ISP Check Sum	Test AP Version	Description
2011/01/10	110110-AA-	SM3257ENAAISP-ISPSDEX3.BIN 0x 0077B55C SM3257ENAAISP-ISPTEX3.BIN 0x0077BD20	V2.03.35 v11 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 0x 0069028A SM3257ENAAISP-27nm.BIN 0x0067748B	V2.03.36 v5 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 0x 005F94FB SM3257ENAAISP-27nm.BIN 0x 00691AD9	V2.03.36 v9 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>



				<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 0x 00666FBB SM3257ENAAISP-B74A.BIN 0x 01BF749B SM3257ENAAISP-27nmES.BIN 0x 00689D0E	V2.03.36 v15 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>



2011/03/17	110311-AA	SM3257ENAAISP.BIN  0x 00664ACC  SM3257ENAAISP-B74A.BIN  0x 01BF4F76  SM3257ENAAISP-27nmES.BIN  0x 0068B3EA	V2.03.37 v11 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 11/04/01	<ol style="list-style-type: none"><li>1. SM3257ENAAISP fixed double mark bad block issue.</li></ol>



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



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



		SM3257ENAAISP-B74A.BIN  0x01C00C6A  SM3257ENAAISP-ISPTEX3.BIN  0x007C1556  SM3257ENAAISP-IPSPDEX3.BIN  0x007C1625		CachRead function enable on TSB/SDK 32nm TLC flash.  7. SM3257ENAAISP fixed fix burn-in fail and mark bad block with Different-address function on TSB/SDK 32nm TLC flash.  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  9. MP Tool added option for copy compare N bytes could compare new bad block number to show fail.  10. MP tool support Flash ID identify from 4 bytes to 6bytes.
2011/06/27	110624-AA	SM3257ENAAISP-ISPTEX3.BIN  0x 0068928B  SM3257ENAAISP-IPSPDEX3.BIN  0x 0068935A  SM3257ENAAISP.BIN  0x 0069BE51  SM3257ENAAISP-bucket01.BIN  0x00698ACF  SM3257ENAAISP-B74A.BIN	V2.03.42 v4 11/06/20 Build	1. SM3257ENISP to support Windows latest logo testing – DTM1.6, modified the DTM1.6 new testing items failed  2. SM3257ENAAISP fixed TSB & SDK 32nm TLC Different address block burn-in fail with wear-leveling function.  3. SM3257ENISP to support Intel Micron ONFI flash.  4. SM3257ENISP to support HY 26nm DDR MLC H27QDG8VEBIR  5. SM3257EN pretest fix the scan original bad block for Samsung 27nm toggle TLC. (wafer remain testing patterns)  6. MP tool fix correct ISP length for calculating ISP checksum with DialogReadCID dialog.  7. MP tool fix Resolved "Open-card cannot work with USB-HDD mode"  8. MP tool support "QC Setting with 6 bytes flash ID comparing function"



		0x 00682792  SM3257ENAAPTTEST.BIN		9. MP tool add LED shining with SM3257EN MP or QC function.
2011/07/14	110713-AA	SM3257ENAAISP.BIN  0x 00677DB4  SM3257ENAAISP-27nmES.BIN  0x 00696CCE  SM3257ENAAISP-ISPT24nm.BIN  0x 00671D2C  SM3257ENAAISP-ISPSD24nm.BIN  0x 00671848	V2.03.43 v1 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 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>





		0x00670424 SM3257ENAAISP-27nmES.BIN 0x00696C0F SM3257ENAAISP-ISPT24nm.BIN 0x006797A8 SM3257ENAAISP-ISPSD24nm.BIN 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 0x0067282F SM3257ENAAISP-27nmES.BIN 0x0069901A SM3257ENAAISP-bucket01.BIN	V2.03.47 v2 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>



		0x006959C2 SM3257ENAAISP-B74A.BIN  0x0067F4C6		
2011/09/15	110908-AA	SM3257ENAAISP-ISPT24nm.BIN  0x0068D91C  SM3257ENAAISP-ISPSD24nm.BIN  0x0068D2EC  SM3257ENAAISP-19nm.BIN  0x0068B088  SM3257ENAAISP.BIN  0x00675959  SM3257ENAAISP-27nmES.BIN  0x00698AEC  SM3257ENAAISP-B74A.BIN  0x006825F0  SM3257ENAAISP-ISPTX3.BIN	V2.03.49 v1 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>



		0x006A1222  SM3257ENAAISP-ISPSDEX3.BIN  0x006A12F1		
2011/09/30	110929-AA	SM3257ENAAISP-HY26.bin  0x0067A85E  SM3257ENAAISP-ISPT24nm.bin  0x 0068E5EF  SM3257ENAAISP-ISPSD24nm.bin  0x 0068DFBF  SM3257ENAAISP-ISPSD24nmDDR.bin  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-ISPSD24nmDDR.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>



		0x0067A095  SM3257ENAAISP-L84.BIN  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  0x 0067C1B4  SM3257ENAAISP-ISPT24nm.bin  0x 00692B76  SM3257ENAAISP-ISPSD24nm.bin  0x 00692546  SM3257ENAAISP-ISPSD24nmDDR.bin  0x 006926F7	V 2.3.56 v8 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.
2011/11/30	111129-AA	SM3257ENAAISP.BIN 0x0067D859 SM3257ENAAISP-27nmES.BIN 0x006A3BAD SM3257ENAAISP-bucket01.BIN 0x0069DF36 SM3257ENAAISP-SA21nmMLC.BIN 0x0068C53B SM3257ENAAISP-19nm.BIN 0x00694300	V 2.3.58 v8 11/11/29 Build	1. SM3257ENISP update the SanDisk 24nm MLC Read Retry Table. 2. SM3257ENISP modify ISP version date. 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). 4. MP tool fixed write full ISP flow for TS 32nm TLC.
2011/12/21	111216-AA	SM3257ENAAISP-ISPT24nm.bin 0x0068E84D SM3257ENAAISP-ISPSD24nm.bin 0x0068E21D SM3257ENAAISP-ISPSD24nmDDR.bin 0x0068E3CC SM3257ENAAISP-ISPSD19nm.bin 0x006904BB	V 2.3.60 v8 11/12/09Build	1. SM3257ENISP fix TSB 24nm DDR TLC will write 00 pattern fail issue. 2. SM3257ENISP support SanDisk 19nm TLC SDTNQCAMA-08G/SDTNQCAMA- 16G and update the latest Read-Retry table and flow. 3. MP tool add "Read CID buffer page 0 enables max 72-bit ECC for SM3257EN".
2012/01/30	120130-AA	SM3257ENAAISP-ISPT24nm.bin 006918CD	V 2.3.65 v4 12/01/16Build	1. SM3257ENISP enhance wear-leveling function for SLC mode. 2. SM3257ENISP Fix USB test with golden tree hub on SanDisk



		SM3257ENAAISP-ISPSPD24nm.bin 0069129D SM3257ENAAISP-ISPSPD24nmDDR.bin 00691452 SM3257ENAAISP-ISPSPD19nm.bin 0068B351 SM3257ENAAISP-ISPT19nm.bin 00692AB1		32nm TLC flash. 3. SM3257ENISP add Toshiba 19nm TLC Read-Retry Table. 4. Add CID 0x160 bit0/bit1 to support Sandisk projects LED blinking function.
2012/02/23	120223-AA	SM3257ENAAISP.BIN 006808C1 SM3257ENAAISP-27nmES.BIN 006A6E2E SM3257ENAAISP-bucket01.BIN 006A1860 SM3257ENAAISP-B74A.BIN 0068CF2C SM3257ENAAISP-SA21nmMLC.BIN 0068F2A8 SM3257ENAAISP-19nm.BIN 00697124 SM3257ENAAISP-L84.BIN 0068F7C8 SM3257ENAAISP-ISPT24nm.bin	V 2.3.66 v6 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. 2. Update Toshiba 24/19 nm MLC Read-Retry Table.



		00692285 SM3257ENAAISP-ISPSPD24nm.bin 00691C55 SM3257ENAAISP-ISPSPD24nmDDR.bin 00691E0A SM3257ENAAISP-ISPSPD19nm.bin 0068BD09 SM3257ENAAISP-ISPT19nm.bin 00693469		
2012/03/21	120321-AA	SM3257ENAAISP-ISPSPD24nm.bin 00691C51 SM3257ENAAISP-ISPSPD24nmDDR.bin 00691E06 SM3257ENAAISP-ISPSPD19nm.bin 0068BD05 SM3257ENAAISP-ISPT19nm.bin 00693474 SM3257ENAAISP-ISPSPD19nm4P.bin 0069DC3A SM3257ENAAISP-ISPT19nm4P.bin 006A53A9 SM3257ENAAISP-ISPT19nm4P4CE.bin	V 2.3.68 v8 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>



		006CA76D		
2012/04/03	120402-AA	SM3257ENAAISP-SA27nmMLC.bin 00690651 SM3257ENAAISP-ISPT24nm.bin 0068BA79 SM3257ENAAISP-ISPSD24nm.bin 0068B449 SM3257ENAAISP-ISPSD24nmDDR.bin 0068B60E SM3257ENAAISP-ISPSD19nm.bin 006854FD SM3257ENAAISP-ISPSD19nmDDR.bin 006856C2 SM3257ENAAISP-ISPT19nm.bin 0068CC5D	V 2.3.69 v9 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 006A0855 SM3257ENAAISP-ISPSD19nmDDR4P.bin 006A0A1C SM3257ENAAISP-ISPT19nm4P.bin 006A7FC4 SM3257ENAAISP-ISPSD19nm4P4CE.bin 006A0855	V 2.3.70 v8 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>





				7. Fix TLC block wear-leveling function.
2012/04/25	120423-AA	SM3257ENAATSPTTEST24nm4P.bin 0x006A6C84 SM3257ENAAISP-ISPSPD19nm4P.bin 0x0069F515 SM3257ENAAISP-ISPSPD19nmDDR4P.bin 0069F308	V 2.3.71 v1 12/04/25 Build	<ol style="list-style-type: none"> <li>1. Enhance SLC block protection</li> <li>2. Modify the "Fixed Capacity" bug with OBP flash.</li> <li>3. Support "Show status bar with different color" for specific customer.</li> </ol>
2012/05/08	120503-AA	SM3257ENAAISP-19nm16K.bin 006EEBA8 SM3257ENAAISP-ISPT24nm.bin 0066B1EE SM3257ENAAISP-ISPSPD24nm.bin 0066AB2B SM3257ENAAISP-ISPSPD24nmDDR.bin 0066ACEA SM3257ENAAISP-ISPSPD19nm.bin 00664B8C SM3257ENAAISP-ISPSPD19nmDDR.bin 0066C3CF SM3257ENAAISP-IPSPA21nmTLC.bin 00663F17	V 2.3.73 v6 12/05/03 Build	<ol style="list-style-type: none"> <li>1. Improve TempISP error handling.</li> <li>2. Enlarge SLC block.</li> <li>3. Support 4CE with inter-leave2 mode.</li> <li>4. Enhance performance for 19nm 128Gb TLC (8K 4 plane).</li> <li>5. Solve ATTO fail issue (when specific capacity).</li> </ol>



		SM3257ENAAISP-ISPSPD19nm4P.bin 00685A61 SM3257ENAAISP-ISPSPD19nmDDR4P.bin 00685C20 SM3257ENAAISP-ISPT19nm4P.bin 0068D2A4		
2012/05/17	120516-AA	SM3257ENAAISP-ISPSPD19nm4P.bin 00688FD6 SM3257ENAAISP-ISPT19nm4P.bin 00690819	V 2.3.75 v6 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 00660C22 SM3257ENAAISP-27nmES.BIN 00686876 SM3257ENAAISP-bucket01.BIN 00683277 SM3257ENAAISP-SA27nmMLC.BIN 0067015D SM3257ENAAISP-SA21nmMLC.BIN 0066ED2D SM3257ENAAISP-B74A.BIN 0066E949 SM3257ENAAISP-L84.BIN	V 2.3.80 v1 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>



		0066F29F SM3257ENAAISP-19nm.BIN 00676C61		devices" 10. MPTool support copy compare function with clean pattern, write only and read only options. 11. MPTool support "Check all same flash type and CE numbers" during MP.
2012/07/13	120712-AA	SM3257ENAATSPTTEST24nm.bin 0x25345B SM3257ENAATSPTTEST24nm4P.bin 0x274152 SM3257ENAAISP-ISPSD19nm4P.bin 006B8BC9 SM3257ENAAISP-ISPSD19nmDDR4P.bin 006B8D8E SM3257ENAAISP-ISPT19nm4P.bin 006BDD2B	V 2.3.85 v2 12/07/13 Build	1. Support "EnablePreventWriteProtect" flag for SM3257ENAA 2. Define CID 0x161 bit3 to prevent FW write protect function. (default disable) 3. Support HY 20nm MLC: H27UBG8T2CTR / H27UCG8T2ATR 4. Support Samsung 21nm TLC with DualDie flash: K9BDGD8U0A / K9CFGD8U1A 5. Update the Toshiba & Sandisk Read-Retry Table for 19nm MLC TypeA / B / C 6. Update the L84A Read-Retry Table. 7. Update the Hynix 26nm read-Retry flow.
2012/0726	120723-AA	SM3257ENAATSPTTEST24nm.bin 0x25345B SM3257ENAAISP-ISPT24nm.bin 006892A8 SM3257ENAAISP-ISPSD24nm.bin	V 2.3.86 v6 12/07/24 Build	1. Support Differential Address for 19nm TLC (64Gbx2 / x4, 128Gb x1 / x2)



		00688BE5 SM3257ENAAISP-ISP24nmDDR.bin 00688CAF SM3257ENAAISP-ISP24nmDDR.bin 00685493 SM3257ENAAISP-ISP24nmDDR.bin 0068555D SM3257ENAAISP-ISPT19nm.bin 0068A5F5 SM3257ENAAISP-ISP24nmTLC.bin 00681FD1		
2012/08/16	120816-AA	SM3257ENAAISP-B74A.BIN 0067EE5D SM3257ENAAISP-ISPT19nm.bin 0068BED5 SM3257ENAAISP-ISPT19nm4P.bin 006C6B8E	V 2.3.88 v7 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 0068ABF1 SM3257ENAAISP-ISP24nm.bin 0068A52E	V 2.3.88 v7 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>



		SM3257ENAAISP-ISPSD24nmDDR.bin 0068E8F7 SM3257ENAAISP-ISPSD19nm.bin 00686DDC SM3257ENAAISP-ISPSD19nmDDR.bin 0068B1A5 SM3257ENAAISP-ISPT19nm.bin 0068BF3E SM3257ENAAISP-ISPSA21nmTLC.bin 0068391A		
2012/09/07	120905-AA	SM3257ENAAISP-ISPSD19nm.bin 00686EE2 SM3257ENAAISP-ISPSD19nm4P.bin 006C2183	V 2.3.92 v1 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>