



SM2244LT-AB Flash F/W & ISP Release Information – P1021A

Introduction

This purpose of this document is to provide release information on the SM22X family F/W and ISP release information

Fix Coverage

- ☒ stands for the “new fix” or “new support” in the category
☐ stands for the “no-update” in the category

<input checked="" type="checkbox"/> MP Tool	<input checked="" type="checkbox"/> Controller ISP
<input type="checkbox"/> Yield Issue <input type="checkbox"/> Flash Issue <input type="checkbox"/> SLC Flash <input type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/Sandisk Flash <input type="checkbox"/> Intel/Micron Flash <input type="checkbox"/> Hynix Flash <input type="checkbox"/> Others <input type="checkbox"/> MLC Flash <input type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/Sandisk Flash <input type="checkbox"/> Intel/Micron Flash <input type="checkbox"/> Hynix Flash <input type="checkbox"/> Others <input type="checkbox"/> MP Tool Bug Fix <input type="checkbox"/> MP Tool New Function <input checked="" type="checkbox"/> Feature Enhance	<input type="checkbox"/> Yield Issue <input checked="" type="checkbox"/> Flash Issue <input checked="" type="checkbox"/> SLC Flash <input checked="" type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/Sandisk Flash <input type="checkbox"/> Intel/Micron Flash <input type="checkbox"/> Hynix Flash <input type="checkbox"/> Others <input type="checkbox"/> MLC Flash <input type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/SanDisk Flash <input type="checkbox"/> Intel/Micron Flash <input type="checkbox"/> Hynix Flash <input type="checkbox"/> Others <input checked="" type="checkbox"/> ISP Bug Fix <input checked="" type="checkbox"/> Feature Enhance



ISP Revision History

Version	MP Tool version	ISP version	Note
P1021A	P1019A	P1021A	<p>ISP Code</p> <ol style="list-style-type: none">1. Fix Micron L73 flash format failed issue.2. Add CID option for "program dummy page before erase.3. Support Samsung 16nm SLC (K9WAFG08U1F)4. Fix bug:gen new cacheblock but no save cacheinfo may cause data lose in SPOR.5. Fix bug:fw may enter dummy mode in readlink when there is only one cache block is generated but without program6. Prevent SMART sudden power off count always increase for 2k/2plane page size flash.7. Fix bug:in SEC4 (Security Locked State), the DCO sub command Device Configure Identify shall be Abort. (fined from ULINK Test Script) <p>SW</p> <ol style="list-style-type: none">1. Add more log information and bin file when download isp fail.2. Modify 2244LT IDE and PCMI default is fixed.
P0318B	P0317A	P0318B	<ol style="list-style-type: none">1. Support Toshiba 1z 32G & 512G bit flash2. add CID[0x17].bit4 for "return 0x51 in dummy write flow".
O1106A	O1105A	O1106A	<ol style="list-style-type: none">1. Table block use SLC mode readretry for TSB 1y/1z MLC flash2. Fix bug of customed readretry vendor command sometimes hanging.3. Fix bug of timer0 turning off abnormally and causing fw return DtoH hanging.4. Add CID[0x17].bit5 for customized SMART temperature.
O0825A	O0721A	O0825A	<ol style="list-style-type: none">1. Fix bug of program fail may markbad invalid block address.2. Fix bug of check bootisp fail for internal interleave flash.3. Fix bug of read retry hanging for SLC flash.4. Prevent check spare 0xff when restoring index block.5. Power on erase invalid cacheblock &



			cacheinfoblock
O0707A	O0721A	O0707A	<ol style="list-style-type: none"> 1. Support Toshiba 15nm MLC 2. SPOR handling enhancement
O0311A	O0311A	O0311A	<ol style="list-style-type: none"> 1. Fix CacheInfoBlock ECC fail issue
N1224A	N1217A	N1224A	<ol style="list-style-type: none"> 1. Support Intel L63A without ONFI table. 2. Improve firmware flow for power cycling test 3. Add vendor command for "Clear SMART and un-format".
N0730A	N0801A	N0730A	<ol style="list-style-type: none"> 1. Support Micron MT29F128G08CBECB 2. Support Micron MT29F1T08CUCAB 3. Fix bug of Trim command 4. Reduce code size of BOOTISP.C 5. Modify DumpEraseCnt 6. Fix erase count bug 7. Fix Cache Block Serial Count bug 8. Fix Index Block WLCnt bug
N0605A	N0606A	N0605A	<ol style="list-style-type: none"> 1. Fix Toshiba A19 flash different address block issue 2. Fix end cache read issue in read-retry flow 3. Fix referencing self-test issue 4. Fix scan device issue
N0326A	N0326A	N0326A	<ol style="list-style-type: none"> 1. Support Toshiba A19, A19 SLC mode 2. Micron L83A/L84A SLC mode 3. Improve firmware stability and compatibility
M1001C	M1104A	M1001C	<ol style="list-style-type: none"> 1. Improve SATA Gen2 compatibility by turning on SSC and adjusting equalizer setting
M1001B	M1015A	M1001B	<ol style="list-style-type: none"> 1. Support L85A flash
M0816B	M0816A	M0816	<ol style="list-style-type: none"> 1. Bug Fix <ol style="list-style-type: none"> I. Fix the FW bug when both INT+EXT interleave of K9PFGD8U5M enabled 2. Enhancement <ol style="list-style-type: none"> I. Enhance the protection of sudden power off 3. New Flash Support <ol style="list-style-type: none"> I. Micron MT29F32G08CBADA II. Toshiba: TH58NVG7D2FTA20, TC58NVG0S3HTA00, TH58TAG8D2FBA89, TH58TEG8DBHBA8C, TH58NVG4S0FBAID, TH58TEG8DDJBA8C_1, III. Samsung K9F4G08U0E, IV. Intel PF29F64G16MCNE1_1, PF29F16B16NCNE1_1
M0702A	M0701A	M0702	<ol style="list-style-type: none"> 1. Bug Fix <ol style="list-style-type: none"> I. Fix Micron L84A read retry issue



			<ul style="list-style-type: none"> II. Fix the error of erase count in SMART command 2. Enhancement <ul style="list-style-type: none"> I. Enhance the protection of sudden power off II. Destroy function III. The option of setting offset of Temperature 3. New Flash Support <ul style="list-style-type: none"> I. Micron L83A II. Intel JS29F64G08CCNE1/JS29F64G08JCNE1 compute NAND flash. III. Intel 34nm SLC 29F64G08JCND1 IV. Support retry tables for Toshiba 32nm & 24nm SLC (TC58NVG3S0FTA00, TH58TVG5S2FBA49, TH58TEG6H2HBA4C, TH58TEG7H2HBA8C, TH58TEG8H2HBA89)
M0424E	M0423	M0424	<ul style="list-style-type: none"> 1. Report supporting SATA 2.6 in Identify Device Table Word 222. the value is 0x101F 2. Fix a SPOR handling issue 3. Prevent Programming/Erasing block 0 to avoid Boot-ISP damage 4. Disable Power On Hours(09h) attribute ID 5. Add the option of DEVSLP support in "Other setting" 6. Add support destroy option (Opt[0x31], bit0.) 7. Add Destroy feature support by SHOWENDESTROY=1 of setting.set then it will show destroy option in "Parameter Page"
M0412	M0412	M0412	<ul style="list-style-type: none"> 1. Support 2KB page SLC including 1CH1CE 2. Fix read time-out issue of AHCCMD Test 3. Add an option to support LBA48 command when the capacity < 8GB 4. Identify the bad block information in each die and show on MPtool 5. Fix the error of handling interrupt in read command which may damage cache Info block and cause read-only mode 6. When temperature higher than 127 degree, keep the return value to 127 7. Support TSB 32nm SLC TH58NVG6S2FTAK0 8. Fix the compatibility issue with some hosts
M0221b	M0222a	M0221	<ul style="list-style-type: none"> 1. Support 2KB page SLC 2. Fix the error in read retry flow 3. Support Samsung 27nm TLC, K9ACGD8U0M 4. Fix the error of temperature value in SMART data



L1211a	L1122a	L1211	1. Enhance S4 and power cycling especially on SATA II mode
L1126a	L1122a	L1126a	1. Add read retry table Samsung 27nm MLC and intel/Micron L84A 2. Support P13 and P14 for LED blinking. 3. Improve sudden power off protection 4. Improve the host compatibility in AHCI mode 5. Support cache read function 6. Support cache program function 7. Fix a read retry flow bug that may cause S4 or power cycling test fail 8. Fix the compatibility issue with ATI SB400 9. Support Samsung 1.8v flash ID recognition 10. Fix the bug of un-initialization when 8 CE are connected on a channel
L1002a	L0926a	L1002a	1. First release of SM2244LT-AB FW 2. Flash Support: Please refer to the flash support list L1002 for the details I. Support Samsung 27nm, 21nm MLC II. Support Toshiba/Sandisk 24nm, 19nm MLC III. Support Micron 25nm L74, L73 MLC

Note:

1. F/W and ISP update is recommended.
2. History # is denoted by "Version-Date" .

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