

**SM2244LT-AB Flash F/W & ISP Release Information – M0816B****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

■ Tester FW	■ Controller ISP
<input type="checkbox"/> Yield Issue	■ Yield Issue
■ Flash Issue	■ Flash Issue
■ SLC Flash	■ SLC Flash
■ Samsung Flash	■ Samsung Flash
■ Toshiba/Sandisk Flash	■ Toshiba/Sandisk Flash
■ Intel/Micron Flash	■ Intel/Micron Flash
□ Hynix Flash	□ Hynix Flash
□ Others	□ Others
■ MLC Flash	■ MLC Flash
■ Samsung Flash	■ Samsung Flash
■ Toshiba/Sandisk Flash	■ Toshiba/Sandisk Flash
■ Intel/Micron Flash	■ Intel/Micron Flash
□ Hynix Flash	□ Hynix Flash
□ Others	□ Others
<input type="checkbox"/> Compatibility issue	<input type="checkbox"/> Compatibility issue
□ CF card	□ CF card
□ IDE	□ IDE
<input type="checkbox"/> Tester Bug Fix	■ ISP Bug Fix
■ AP Bug Fix & New Function	<input type="checkbox"/> Card Size Adjustment
<input type="checkbox"/> Card Size Adjustment	■ Feature Enhance
■ Feature Enhance	



ISP Revision History

Version	MP Tool version	ISP version	Note
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 enabled2. Enhancement<ol style="list-style-type: none">I. Enhance the protection of sudden power off3. New Flash Support<ol style="list-style-type: none">I. Micron MT29F32G08CBADAII. 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 issueII. Fix the error of erase count in SMART command2. Enhancement<ol style="list-style-type: none">I. Enhance the protection of sudden power offII. Destroy functionIII. The option of setting offset of Temperature3. New Flash Support<ol style="list-style-type: none">I. Micron L83AII. Intel JS29F64G08CCNE1/JS29F64G08JCNE1 compute NAND flash.III. Intel 34nm SLC 29F64G08JCND1IV. Support retry tables for Toshiba 32nm & 24nm SLC (TC58NVG3S0FTA00, TH58TVG5S2FBA49, TH58TEG6H2HBA4C, TH58TEG7H2HBA8C, TH58TEG8H2HBA89)
M0424E	M0423	M0424	<ol style="list-style-type: none">1. Report supporting SATA 2.6 in Identify Device Table Word 222. the value is 0x101F2. Fix a SPOR handling issue3. Prevent Programming/Erasing block 0 to avoid Boot-ISP



			<p>damage</p> <ol style="list-style-type: none"> 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	<ol 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	<ol 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	<ol style="list-style-type: none"> 1. Enhance S4 and power cycling especially on SATA II mode
L1126a	L1122a	L1126a	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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
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Note:

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

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Tester Error Message Description

Item	Error Message	Description	Problem Category (controller or Flash)
1	Initial Fail	CF Initial process fail	Controller or bus error
2			
3	Card Size Err	The card size is different from the setting value in menu.	Mixed materials or Flash error
4	Flash ASM Err	Testing result is different from the setting value in menu about "Set Flash CFG". There are no flash connect to the controller, or the connect fail.	Setup error 或 Flash error
5	Flash OverErr	Read Flash ID command Get Number of Flash more than Set Flash CFG	Setup Error or Flash Error
6	RAM Diag Err	Controller Self Test RAM error	Controller Fail or Power issue
7	ROM Diag Err	Controller Self Test ROM error	Controller Fail or Power Issue
8	Pretest Error	The Flash has too much error.	Flash error
9	NA	NA	NA
10	NA	NA	NA
11	ISP Code Error	Tester Write ISP coed to Card and Read Back Compare Fail	Flash Error
12	NewCIS_ID Err	Tester Write CIS and ID table and Card Option to Card and verify	Flash Error
13	NA	NA	NA
14	CIS_ID Err	Tester Read CIS Error	Flash Error
15	ReInitial Err	Power on test. After power on, ReInitial the card.	Controller error
16	ID TABLE Err	Tester Read ID Table Error	Flash Error
17	Chk QFmt Err	The data in user data area is error.	Flash error
18	Card Short	Card Short	Maybe VCC and GND are short
19	Run Mode Fail	The ISP code is not execute correctly	Controller or Flash error
20	Time Out	Command time out.	Controller or Flash error
21	H/W Ver. Err	Card's controller does not match test firmware version	Please confirm the test firmware version
22	Setting Err	Running test on location F	Please switch to original test place
23	Tst Chksum Err	Tester firmware has error	Please re-download the test firmware
24	ISP Cksum Err	ISP code in tester has error	Please re-download the ISP code
25			
26	No Card	Card detect fail	Please plug-in card again
27	Tester flash error	Fixture flash error	Please configure flash
28	Password Error	Configure fixture flash password error	Please key-in correct password
29	Tester Program error	Fixture hasn't the test program	Please download test program
30	Serial Number error	S/N doesn't match the Card	
31	Flash Maker ID error	The flash maker ID is different from the setting value	Mixed materials
32	NA	NA	NA
33	NA	NA	NA
34	NA	NA	NA
35	Copy Compare error	Copy compare error	Flash error
36	Preload file error	Preload file to card	File system error
37	NA	NA	NA
38	NA	NA	NA
39	Erase Error	Erase flash	Flash error
40	File system error	File system error	File system error

PS: Every error maybe happened with card connection issue.