



SM2258XT IM/ B16 Flash F/W & ISP Release Information – Q01115A0

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 checked="" type="checkbox"/> Flash Issue <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 3D TLC Flash <ul style="list-style-type: none"> <input type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/Sandisk Flash <input checked="" type="checkbox"/> Intel/Micron Flash <input type="checkbox"/> Hynix Flash <input type="checkbox"/> Others <input type="checkbox"/> MP Tool Bug Fix <input checked="" type="checkbox"/> MP Tool New Function <input checked="" type="checkbox"/> Feature Enhance	<input type="checkbox"/> Yield Issue <input checked="" type="checkbox"/> Flash Issue <ul style="list-style-type: none"> <input checked="" type="checkbox"/> 3D TLC Flash <ul style="list-style-type: none"> <input type="checkbox"/> Samsung Flash <input type="checkbox"/> Toshiba/Sandisk Flash <input checked="" 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

PKG Ver.	ISP Ver.	MPTool Ver.	RDT Ver.	Note
Q1124A	Q1115A0	Q1121A	Q1116A0	<p>ISP</p> <ol style="list-style-type: none"> 1. Enable read count 2. Fixed security erase issue 3. Enable cache read 4. Shrink code size 5. Modify Static SLC Thr. & Wear leveling with CID table. 6. Add force FFU option by mp tool. 7. Fix SLC Erase bug 8. Modify the copy cid table sequence for FFU issue <p>RDT</p> <ol style="list-style-type: none"> 1. Support retry for BOKB/ L06B 2. Support unbalanced die card mode <p>MPTool</p> <ol style="list-style-type: none"> 1. Enable Shallow Erase fixed check for B16A and B05A. 2. Add one setting to skip adjust flash clock at tranAdj function for RD debug used. ([OPTION] : SkipAdjClockAtTranAdj) 3. More display which CH-CE occur Flash Time out at [RDT Result] page. 4. Support "Reset SMART Tool". Just reset smart data and can't reset cpu. 5. Enable "RDT Read Retry" option for IM3D flash series at RDT Q1116A0 or later version.
Q1024B	Q0922A0	Q1020B	Q1006A0	<p>ISP:</p> <ol style="list-style-type: none"> 1. Add Swallow Erase Feature. 2. Fix setClock DLL fail issue. 3. Fix Read Reclaim. 4. Add the MASK SMART ID 0x05 & 0xC5 (new bad block count) by MP tool option. 5. Add record Read TLC UECC when block had already mark as 0xF1(chkPostWriteRead). <p>MPISP:</p> <ol style="list-style-type: none"> 1. Modified eraseAll, add reset cmd. 2. Modify tran physical Ch bug. 3. Fix tranRTC issue. 4. Fix bug that getFlashType may find wrong flash id if channel 0 not exist. <p>RDT:</p> <ol style="list-style-type: none"> 1. Support Read ID table. 2. Fix code size issue for B16. <p>MPTool:</p> <ol style="list-style-type: none"> 1. Display GenChCeMap fail information 2. Restore InfoBlock if initial card fail 3. Support manual unbalanced mode initial card. 4. Fix bug: Reference RDT bad twice, can't be recognized by host.
Q0817B	Q0816C0	Q0816A	Q0808A0	<p>ISP</p> <ol style="list-style-type: none"> 1. Fix B16 2Ch1Way UGSD Fail. 2. Add the SMART extension table check point. 3. Initial the different customer temperature. 4. Fix bug of moveRiskyPage() with 4Plane, 16k per plane.



- 5. Define the customer WAF info for smart.
 - 6. Add some unbalance check code for CacheRead
 - 7. Fix read retry bug
 - 8. Add GC Idle condition
 - 9. Fix SLC/TLC erase info invert issue
 - 10. Add SLC/TLC nand read count for HIK
 - 11. Improve WL flow.
 - 12. Support B16 toggle mode with DDR200
 - 13. Support Devslp
- MPISP:
- 1. Flash clock under 100Mhz do not need differential mode.
 - 2. Fix bug that TranAdj would hang up.
 - 3. Support distinguish ES
 - 4. Modify SmithWindow, Controller ODT settings
 - 5. Fix disabling TranAdj.
 - 6. Modify identify device, don't clear buffer flag.
- RDT:
- 1. Modify RDT test flow to cover JIRA issue.
 - 2. Add RDT setting option "Bypass read check for first 2 loop"
 - 3. Add bypass Erase/Program fail status option.
 - 4. Fixed CH remapping bug.
 - 5. Add bypass fail bit for last test block
 - 6. Add force single plane program option
 - 7. Fixed Reverse block order test mode bug.
- MPTool:
- 1. Pre-Check capacity at "Reference RDT Bad" pretest option to initial card.
 - 2. Add "Bypass read check for first 2 loop" option
 - 3. Remove "New Bad Block" display at SSD Information dialog.
 - 4. Add "Ignore Erase Fail" checkbox to set CID[0x33].b0
 - 5. Add "bypass status fail bit" option at [RDT Setting] dialog.
 - 6. Add "Force single plane program" option at [RDT Setting] dialog.
 - 7. Fix bug: "Test Block Cnt" display nothing at [RDT Result] page.
 - 8. Fix bug: Display gibberish at [ID Table] page when user use special string to fill SN/VendorSpecific. (Need to change font type)
 - 9. Add Flash Clock "DDR-300" option.
 - 10. Support that Micron B16A Distinguish ES function.
 - 11. Fix bug: CPU Clock display wrong at SSD Information dialog.
 - 12. Default Toggle mode and Flash Clock > 100MHZ need to always enable differential signal.
 - 13. More save "Temp" information at RDT log file.
 - 14. Modify I/M SDR Mode corresponding setting
 - 15. Pre-Check Capacity fail also need to parse super block counts information at error dialog.
 - 16. Fix bug: DriveSettingTable may assign wrong when selected "Auto" capacity option.
 - 17. Add "Bypass TranADJ" function.



Q0627A	Q0627A0	Q0620A	Q0607A0	ISP 1. First formal release to support Intel and Micron B16 NAND flash. 2. Not support Devslp yet.
--------	---------	--------	---------	--

Note:

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

This document is for information only and is subject to change without notice. Silicon Motion, Inc. reserves the right to make changes in the product design without reservation and without notice to its users.