



## SM2236-AC Flash F/W & ISP Release Information – N0121A

### 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	<input type="checkbox"/> Yield Issue
■ Flash Issue	■ Flash Issue
■ SLC Flash	■ SLC Flash
■ Samsung Flash	■ Samsung Flash
<input type="checkbox"/> Toshiba/Sandisk Flash	<input type="checkbox"/> Toshiba/Sandisk Flash
<input type="checkbox"/> Intel/Micron Flash	<input type="checkbox"/> Intel/Micron Flash
<input type="checkbox"/> Hynix Flash	<input type="checkbox"/> Hynix Flash
<input type="checkbox"/> Others	<input type="checkbox"/> Others
■ MLC Flash	■ MLC Flash
<input type="checkbox"/> Samsung Flash	<input type="checkbox"/> Samsung Flash
■ Toshiba/Sandisk Flash	■ Toshiba/Sandisk Flash
■ Intel/Micron Flash	■ Intel/Micron Flash
<input type="checkbox"/> Hynix Flash	<input type="checkbox"/> Hynix Flash
<input type="checkbox"/> Others	<input type="checkbox"/> Others
<input type="checkbox"/> Compatibility issue	<input type="checkbox"/> Compatibility issue
<input type="checkbox"/> CF card	<input type="checkbox"/> CF card
<input type="checkbox"/> IDE	<input type="checkbox"/> IDE
<input type="checkbox"/> Tester Bug Fix	<input type="checkbox"/> TestMatrix, PCTest and other tools.
<input type="checkbox"/> AP Bug Fix & New Function	<input type="checkbox"/> ISP Bug Fix
<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
N0121A	M0109A	N0121	<ol style="list-style-type: none"><li>1. Support SAMSUNG 21nm 2kB page SLC K9K8G08U0E and K9WAG08U1E Change FW architecture to Cache mode</li><li>2. Support SAMSUNG 19nm MLC</li><li>3. Support Toshiba 24nm SLC</li></ol>
M1216	M1216A	M1216A	<ol style="list-style-type: none"><li>1. Change FW architecture to Cache mode</li><li>2. Random write speed enhancement</li><li>3. Support Micron 20nm SLC M84C and M83C.</li><li>4. Support SANDISK 1Ynm MLC.</li><li>5. Support Intel/Micron 20nm MLC L85</li><li>6. Support Micron and Intel MLC L85 without EC table</li><li>7. Support 512GB density</li></ol>
M0619	M0618A	M0619	<ol style="list-style-type: none"><li>1. Fix NTFS format too long issue with Micron and Intel 20nm MLC.</li><li>2. Fix occasional card crash with Onfi type DDR NAND when receiving soft reset by host</li><li>3. Support Smart Read Data by SMI vender command.</li></ol>
M0426	M0426a	M0426	<ol style="list-style-type: none"><li>1. Support Micron L83A</li><li>2. Improve LBA48 performance on Testmetrix</li><li>3. Fix a format fail issue on Canon 7D</li><li>4. Support internal interleave on intel and Micron flash</li><li>5. Do not support MT29F256G08CJAAA</li></ol>
L1203a	L1109a	L1203a	<ol style="list-style-type: none"><li>1. Improve error handling when read command is terminated.</li><li>2. Improve PATA Master Slave compatibility.</li><li>3. Support 2K page size flash</li><li>4. Fix cache program fail on multi-way interleave</li><li>5. Fix ONFI DDR flash crash when load read retry table</li><li>6. Improve Samsung K9WAG compatibility on internal interleave (it would crash when read flash status)</li><li>7. Fix erase count lost on 2k per page flash.</li><li>8. Support enabling Toggle mode by set feature</li><li>9. Fix reporting select MDMA mode 0~2 error on ID table</li><li>10. Fix the issue of card crash when re-initialing flash which should enable toggle mode by Set</li></ol>



			<p>Feature (TH58TEG8D2HTA20/ TH58TEG7D2HTA20/ TH58TEG6D2HTA00)</p> <ol style="list-style-type: none"> <li>Fix time out issue on Canon 300D</li> <li>Abort Security erase unit if enable Hardware Write Protect.</li> <li>Fix Read retry table index is different with flash database since L1109.</li> <li>Support K9PFG08U5A, K9UHG08U8A.</li> </ol>
L0910a	L0829a	L0910	<ol style="list-style-type: none"> <li>Fix Micron L84A MLC power cycling issue</li> <li>Fixed Samsung 27nm MLC read data error in internal interleave mode</li> <li>Support Flash Toshiba 32 nm Mlc (TC58NVG5D2FTA00 and SLC TH58NVG5S0FTA20</li> <li>Support Flash without ONFI EC table: Micron and Intel M73 M74, Micron M62B, L63B</li> <li>Fix erase block error when re-initial card.</li> <li>Support DDR mode flash but no EC table to indicate DDR mode.</li> <li>Fix load system block (Info, Link and Child info) would lost info block if enter read retry flow since L0622.</li> <li>Fix lost Index Block data after SPOR.</li> <li>Fix MDMA mode setting error when disable MDMA and set MDMA 0</li> <li>Add CID [0x1D] for PATA driving setting by user.</li> <li>Fix slave device compatibility issue due to PDIAG signal error assert by master.</li> </ol>
L0622a	L0622a	L0622	<ol style="list-style-type: none"> <li>Support Micron L84A MLC</li> <li>Set Early refresh and early retirement from CID[0x2A~0x2B]</li> <li>Add Read Retry in Read Link</li> <li>Add SDTNQFAMA-008G, SDTNQGAMA-008G to database</li> <li>Add Toshiba TC58NVG6DCJTA00, TH58NVG7DCJTA20, TH58NVG8DCJTA20 database</li> </ol>
L0517b	L0530	L0517	<ol style="list-style-type: none"> <li>Fix Samsung 21nm Toggle mode Run ISP Fail</li> <li>Add earlier move function</li> <li>Add CF CHS option</li> <li>Add QC Procedure button to set QC options on Parameter Dialog</li> </ol>



			<ul style="list-style-type: none"><li>5. Fix the bug of checking spare block number</li><li>6. Add the option to check FW version of ISP binary file on Parameter Dialog</li><li>7. Add "Disable Host Cache" option on Parameter Dialog</li><li>8. Fix the bug of reading ISP block on QC</li><li>9. Add "ENABLECFCHS" of [OPTION] tag in SETTING.SET to enable CF CHS mode.</li></ul>
L0425a	L0510	L0425	<ul style="list-style-type: none"><li>1. Add SMI SMART<ul style="list-style-type: none"><li>I. Power-off Retract Count or Emergency Retract Cycle Count (0xC0)</li><li>II. Total Erase Count (0xA4)</li><li>III. Total Write Sector Count (0xF1)</li><li>IV. Total Read Sector Count (0xF2)</li></ul></li><li>2. Support K9QDG08U5M and Toshiba 32nm SLC</li><li>3. MPtool<ul style="list-style-type: none"><li>I. Modify LED switch of tester.</li><li>II. Fix the bug to check spare block number</li><li>III. Remove "Enable Turbo Mode" option</li></ul></li></ul>
L0329a	L0323a	L0329	<ul style="list-style-type: none"><li>1. Based on SM2236AB FW L0202a</li><li>2. Add 16KB page support</li><li>3. Fix the lower frequency to work around AB version hardware bug</li><li>4. Add hardware quick erase function</li><li>5. Fix First STROBE time violate spec. in UDMA mode. (Fix Sony camcorder compatibility issue.)</li><li>6. Fix the violation of ready signal spec. for LBA48 UDMA Read and write in PCMCIA memory mode.</li><li>7. Set Non-rotating media for SSD</li><li>8. Support Samsung 21nm MLC.</li><li>9. Support Toshiba 32nm 4KB page SLC</li></ul>

**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.