



Product Change Notification

PCN No. FL081001-03

Issue Date Oct 1, 2008

ECN # N/A

Nature of Change(s) Samsung NAND die revision impacting all ATA and USB card/module products based on STEC's M1 and U1 controllers with selected Samsung 2Gb (A-die) SLC NAND flash components.

Affected Part Number(s)	xxxCF512M1U(I)-x (see table) xxxATA512M1U(I)-x (see table) xxxFDM4xx-512M1U(I) (see table) xxxFLD25-512M1U(I) (see table) xxxlSCD512M1U(I) (see table) xxxUSCD512U1U(I) (see table) xxxUFD1GU1U(I)-x (see table) xxxUFD1GU1U(I)-x (see table) xxxSD512BS(I)U (see table) xxxMSD512BS(I)U (see table)	Last Time Buy Date	11/30/08	Effective Change Date	10/01/2008
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Product Description All CF, ATA, FDM, FLD, and SCD in 256MB capacities; UFD and UFD1 in 512MB capacities

Reason for Change(s)

Samsung will implement a manufacturing enhancement to its 63nm SLC NAND flash components and will replace with new 59nm parts as listed below:

- 2Gb "A-die" (K9F2G08U0A) components will transition to 2Gb "B-die" components with part number K9F2G08U0B

The new parts will implement changes to the copy-back programming and power-up initialization sequence.

Samsung 4Gb (512MB) Flash		
	A-die	B-die
Samsung Part#	K9F2G08U0A	K9F2G08U0B
Copy-back Programming	With EDC	Without EDC
Power-up Initialization Sequence	10µs	5ms
STEC Controller	M1 / U1	M1B / M2P / U2

Traceability Guidelines

The STEC ordering part number will change, for example:

SLCF256MM1U(I)-x (old) → SLCF256MM1BU(I)-x (new)
or
SLCF256MM1U(I)-x (old) → SLCF256M2PU(I)-x (new)

The ordering part numbers are clearly marked on each STEC device.



STEC Product Enhancement Plan

STEC will support the new B-die flash with current STEC M1 single-channel controller (scheduled to sample in 4Q08) as well as upcoming STEC M2+ dual-channel controller (scheduled to sample in 1Q09). The M2+ is a new SSD-grade controller platform specifically designed with increased internal memory and more robust 8-bit ECC and total drive wear-leveling algorithm to support future flash revisions for improved reliability and long-term support.

	STEC Controller Evolution		
	M1	M1B	M2P
Channels	1-channel	1-channel	2-channel
Frequency	25MHz	25MHz	66MHz
Typical Read/Write (MB/sec)	10 read / 7 write	10 read / 7 write	25 read / 20 write
Flash Supported	63nm (2K page)	59nm (2K page)	50nm-40nm (2K/4K page)
Modes Supported	MWDMA	MWDMA	UDMA
ECC	4 Byte Correct per sector	4 Byte Correct per sector	8-bit per 512bytes
Capacities supported	32MB - 16GB	32MB - 16GB	128MB - 16GB
SRAM buffer	2Kb	2Kb	40Kb
Code Storage	NOR	NOR	ROM + external flash
Regulator	External	External	Integrated (external for I-Temp)
Wear-Leveling	Dynamic	Dynamic	Dynamic + Static
Lithography/Process	.25m	.25m	.13m

Specific Part(s) Affected


All M1 based, USB SCD, and SD parts in 256MB capacity and all UFD and UFD M parts in 512MB capacity, including customer specific parts from same family.

Old Mfg P/N	New Mfg P/N	Effective PCN Date	Samples Availability Date (New Product)	Last Time Buy Date (Old Product)
xxxCF256MM1U(I)-x	xxxCF256 M1B U(I)	10/1/2008	11/08	11/30/08
xxxCF256L2A(I)U	xxxCF256 M2P U(I)	10/1/2008	1/09	11/30/08
xxxATA256MM1U(I)-x	xxxATA256 M1B U(I)	10/1/2008	11/08	11/30/08
xxxFDM4xx-256MM1U(I)	xxxFDM4xx-256 M1B U(I)	10/1/2008	12/08	11/30/08
xxxFLD25-256MM1U(I)	xxxFLD25-256 M1B U(I)	10/1/2008	12/08	11/30/08
xxxISCD256MM1U(I)	xxxISCD256 M1B U(I)	10/1/2008	12/08	11/30/08
xxxUSCD256U1U(I)	xxxUSCD256 U2 U(I)	10/1/2008	12/08	11/30/08
xxxUFD512U1U(I)-x	xxxUFD512 U2 U(I)	10/1/2008	11/08	11/30/08
xxxUFD M512U1U(I)-x	xxxUFD M512 U2 U(I)-x	10/1/2008	11/08	11/30/08
xxxSD256BS(I)U	xxxSD256 BBS (I)U	10/1/2008	11/08	11/30/08
xxxMSD256BS(I)U	xxxMSD256 BBS (I)U	10/1/2008	12/08	11/30/08



Additional Documentation(s)

Attachments:

File Description	File Attachment
STEC MACH2+ CF/ATA Datasheet	 SLCFxxx(G)M2PU(I) 61000-05610-101.pd
STEC U2 USB Datasheet	To be released