Product Notification Form

swissbit®

PN #: PCN_20150616_SFSD_19nm_S-40	**Rev:** 1.0	**Issue Date:** June 16, 2015

Type of Change: Product change notification – new flash DIE Revision for S-40 Industrial SD Memory Cards and S-40μ Industrial Micro SD Memory Cards

☐ minor / ☒ major

Detailed description of change:

This Product Change Notification is to inform you that the Toshiba MLC 19nm process is going EOL and will be replaced by MLC A19nm process.

Based on the new A19nm NAND die shrink, Swissbit is introducing a new generation (Generation 2) of the S-40 SD Memory Cards and S-40μ Micro SD Memory Cards.

The introduction of the S-45 SD Memory Card and S-45μ Micro SD Memory Card with UHS-I support is planned for 01.10.2015.

Product Family Comparison:

	S-40 Generation 1	S-40 Generation 2	S-45	Comment
Interface	SD 3.0	SD 3.0	SD 3.0 UHS-I	
NAND Flash	Toshiba 19nm MLC	Toshiba A19nm MLC	Toshiba A19nm MLC	
MCU	S8	S8	S8	UHS-I support for S-45
FW	Ver 1	Ver 2	Ver A (new architecture)	Improved SD host compatibility for Ver 2 and Ver A
PCB	Version 1, contacts >0.5μm hard gold	Changed for DIE assembly, contacts >0.8μm hard gold	Changed for DIE assembly, contacts >0.8μm hard gold	Adaption for new DIE sizes and pad layout, improved contacts
Package	Dam & Fill (SD), Molding (uSD)	Molding	Molding	Changed packaging for inlay. Now all products are molded.
Bond wire	AU 17.5μm	AU 20μm	AU 20μm	Improved wire stability, same wire material
Performance	Cf. data sheet	Same or better	Same or better	
Availability	Phase-out, EOL	Now	Starting 01.01.2015	

Firmware change log (Ver 2):

- Improved compatibility
  - for critical SD signal quality
  - with USB readers that use life time monitoring and diagnostic features
  - for protocol handling
- Improved power fail stability
- Enhanced card life time information

Quality impact:

☐ minor / ☐ major / ☒ no

Reliability impact:

☒ minor / ☐ major / ☐ no   Improved production process

Reason for change: NAND Flash DIE end of life by flash supplier

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Products affected:

Series	Current EOL Part Number (S-40 Gen 1, non UHS)	New backward compatible Part (S-40 Gen 2, non UHS)	Preferred UHS-I Part Number (S-45, UHS-I)
S-40 SD	SFSDxxxxL1BM1T0-t-xx-111-xxx	SFSDxxxxL2BM1T0-t-xx-121-xxx	SFSDxxxxL2BM1T0-t-xx-2A1-xxx
S-40u Micro SD	SFSDxxxxN1BM1T0-t-xx-111-xxx	SFSDxxxxN2BM1T0-t-xx-121-xxx	SFSDxxxxN2BM1T0-t-xx-2A1-xxx

Product Description	Current EOL Part Number (S-40 Gen 1, non UHS)	New backward compatible Part (S-40 Gen 2, non UHS)	Preferred UHS-I Part Number (S-45, UHS-I)
S-40 SD 4GB	SFSD4096L1BM1T0-E-GE-111-STD	SFSD4096L2BM1T0-E-GE-121-STD	SFSD4096L2BM1T0-E-GE-2A1-STD
S-40 SD 4GB	SFSD4096L1BM1T0-I-GE-111-STD	SFSD4096L2BM1T0-I-GE-121-STD	SFSD4096L2BM1T0-I-GE-2A1-STD
S-40 SD 8GB	SFSD8192L1BM1T0-E-GE-111-STD	SFSD8192L2BM1T0-E-GE-121-STD	SFSD8192L2BM1T0-E-GE-2A1-STD
S-40 SD 8GB	SFSD8192L1BM1T0-I-GE-111-STD	SFSD8192L2BM1T0-I-GE-121-STD	SFSD8192L2BM1T0-I-GE-2A1-STD
S-40 SD 16GB	SFSD016GL1BM1T0-E-LF-111-STD	SFSD016GL2BM1T0-E-GE-121-STD	SFSD016GL2BM1T0-E-GE-2A1-STD
S-40 SD 16GB	SFSD016GL1BM1T0-I-LF-111-STD	SFSD016GL2BM1T0-I-GE-121-STD	SFSD016GL2BM1T0-I-GE-2A1-STD
S-40 SD 32GB	n/a	SFSD032GL2BM1T0-E-LF-121-STD	SFSD032GL2BM1T0-E-LF-2A1-STD
S-40 SD 32GB	n/a	SFSD032GL2BM1T0-I-LF-121-STD	SFSD032GL2BM1T0-I-LF-2A1-STD
S-40u Micro SD 4GB	SFSD4096N1BM1T0-E-GE-111-STD	SFSD4096N2BM1T0-E-GE-121-STD	SFSD4096N2BM1T0-E-GE-2A1-STD
S-40u Micro SD 4GB	SFSD4096N1BM1T0-I-GE-111-STD	SFSD4096N2BM1T0-I-GE-121-STD	SFSD4096N2BM1T0-I-GE-2A1-STD
S-40u Micro SD 8GB	SFSD8192N1BM1T0-E-LF-111-STD	SFSD8192N2BM1T0-E-LF-121-STD	SFSD8192N2BM1T0-E-LF-2A1-STD
S-40u Micro SD 8GB	SFSD8192N1BM1T0-I-LF-111-STD	SFSD8192N2BM1T0-I-LF-121-STD	SFSD8192N2BM1T0-I-LF-2A1-STD
S-40u Micro SD 16GB	SFSD016GN1BM1T0-E-HG-111-STD	SFSD016GN2BM1T0-E-HG-121-STD	SFSD016GN2BM1T0-E-HG-2A1-STD
S-40u Micro SD 16GB	SFSD016GN1BM1T0-I-HG-111-STD	SFSD016GN2BM1T0-I-HG-121-STD	SFSD016GN2BM1T0-I-HG-2A1-STD

t = temperature grade C or I; x = options and custom configuration

Implementation date:
S-40(u) Gen. 2: Samples available now, limited stock of EOL S-40 Generation 1
S-45(u): Starting 01.10.2015, please contact your sales agent for details

Forecasted Milestones:

Milestone	Date
Qualification Samples availability	S-40 Gen2: Now S-45: Q3/2015
Last Time Buy – LTB	July 30, 2015*
Last Time Shipment – LTS	October 30, 2015*

*) Subject to limited stock

Recommended Action: Qualification of new product, transition as soon as possible.

Reference Documents / Attachments: N/A

Should you have any issues with the content of this change, please contact the representative listed below within 20 days. No response will be deemed as customer's acceptance of the change and the change will be implemented.

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IMPORTANT NOTE:

Swissbit – as a provider of industrial products – announces and informs about every change in the product hardware and firmware. We always test backwards compatibility and assure best quality, reliability and transparency for our customers. We apology for any inconvenience caused.

Products affected:

SAP#	Part number
604412	SFSD4096L1BM1T0-E-GE-111-STD
604589	SFSD4096L1BM1T0-I-GE-111-STD
604415	SFSD8192L1BM1T0-E-GE-111-STD
604591	SFSD8192L1BM1T0-I-GE-111-STD
604413	SFSD016GL1BM1T0-E-LF-111-STD
604584	SFSD016GL1BM1T0-I-LF-111-STD
604587	SFSD032GL1BM1T0-E-HG-111-STD
604588	SFSD032GL1BM1T0-I-HG-111-STD
604414	SFSD4096N1BM1T0-E-GE-111-STD
604590	SFSD4096N1BM1T0-I-GE-111-STD
604417	SFSD8192N1BM1T0-E-LF-111-STD
604592	SFSD8192N1BM1T0-I-LF-111-STD
604585	SFSD016GN1BM1T0-E-HG-111-STD
604586	SFSD016GN1BM1T0-I-HG-111-STD
604650	SFSD4096L1BM1T0-I-GE-111-OEM
604649	SFSD8192L1BM1T0-I-GE-111-OEM
604648	SFSD016GL1BM1T0-I-LF-111-OEM
604647	SFSD032GL1BM1T0-I-HG-111-OEM

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