

## **Product Notification Form**

PCN #: PCN19-0015	<b>Rev:</b> 1.0	Issue Date: June 14, 2019
Type of Change: Firmware improvement for S-45µ and S-46µ ⊠ minor / ☐ major	microSD Memory	r Cards

# Detailed description of change:

- Improved general read and write performance
- Improved SD erase performance
- Improved handling of very high number of power cycles (> 1 million power cycles)
- Further host compatibility improvements:
  - o Improved handling of aborted write commands (without data transfer)
  - o Fixed Switch Command (CMD6) behavior when driver strength is set before a speed mode change.
  - o Fixed potentially incorrect error indication for Function Group 3 in Switch Command (CMD6)
  - o Increased driving strengths for SD driver Type A and B to allow for greater range of customization.

#### Overview:

Firmware S-45u	B (160125)	D (180312)
Random Read 4k (IOPS)	734	1225
Random Write 4k (IOPS)	689	964
Sequential Read (MB/s)	33	40
Sequential Write (MB/s)	15	22
Operating Current Read (mA) [measured]	72	71
Operating Current Write (mA) [measured]	66	65

Firmware S-46u	C (160307)	D (180312) <sup>1)</sup>
Random Read 4k (IOPS)	1021	1430
Random Write 4k (IOPS)	1182	1308
Sequential Read (MB/s)	46	42
Sequential Write (MB/s)	41	39
Operating Current Read (mA) [measured]	71	64
Operating Current Write (mA) [measured]	72	65

For the S-46u series with new firmware, there will be a change of the UHS speed class on the PadPrint. New UHS speed class: U3

#### Overview UHS mode:

UHS-I mode (host support)	Card mode (select by host)	Card mode (select by host)
SDR12	SDR12	SDR12
SDR25	SDR12, SDR25	SDR12, SDR25
SDR50	SDR12, SDR25, SDR50	SDR12, SDR25, SDR50
DDR50	SDR12, SDR25, SDR50, DDR50	SDR12, SDR25, SDR50, DDR50
SDR104	SDR12, SDR25, SDR50, DDR50, SDR104	SDR12, SDR25, SDR50, DDR50

Swissbit has completed its internal testing and has qualified the new firmware to ensure full compatibility.

Firmware revision D is the new recommended version for new qualifications of the S-45 $\mu$  and S-46 $\mu$  microSD Memory Cards series.

FW revision B for S-45 $\mu$  and revision C for S-46 $\mu$  will still be available for approved customer applications and can be used without any risk.

Updated data sheets can be downloaded from our website www.swissbit.com or are available on request.



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Quality impact: ☐ minor / ☐ major / ☒ no	o Performance and compatibility improvements	
Reliability impact: ☐ minor / ☐ major / ☒ no	0	
Reason for change:	Continuous improvement process	
Products affected:		
Series	Current Part Number	New Part Number
S-45µ	SFSDxxxxN3BMxT0-t-xx-2B1-xxx	SFSDxxxxN3BMxT0-t-xx-2D1-xxx
S-46µ	SFSDxxxxN3BMxT0-t-xx-2CP-xxx	SFSDxxxxN3BMxT0-t-xx-2DP-xxx
micro SD Memory Cards		
t = temperature grade C or I	; x = card capacity and options	
•	une 14, 2019 e can be ordered immediately. Products wi	th old firmware remain orderable for approved
<b>Recommended action:</b> Q system	**************************************	

Should you have any questions or concerns with the content of this change, please contact the Swissbit PCN team at <a href="mailto:customer.pcn@swissbit.com">customer.pcn@swissbit.com</a> within 30 days. No response will be deemed as customer's acceptance of the change and the change will be implemented pursuant to the implementation date set forth in this PCN.

## **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 apologize for any inconvenience caused.

### Products affected:

Series	Current ERP#	Current Part number	New ERP#	New Part number
	605811	SFSD4096N3BM1T0-E-GE-2B1-STD	606544	SFSD4096N3BM1TO-E-GE-2D1-STD
	605812	SFSD4096N3BM1T0-I-GE-2B1-STD	606545	SFSD4096N3BM1TO-I-GE-2D1-STD
	605505	SFSD8192N3BM1TO-E-GE-2B1-STD	606546	SFSD8192N3BM1T0-E-GE-2D1-STD
	605509	SFSD8192N3BM1TO-I-GE-2B1-STD	606547	SFSD8192N3BM1TO-I-GE-2D1-STD
	605506	SFSD016GN3BM1T0-E-LF-2B1-STD	606548	SFSD016GN3BM1TO-E-LF-2D1-STD
	605510	SFSD016GN3BM1T0-I-LF-2B1-STD	606549	SFSD016GN3BM1T0-I-LF-2D1-STD
S-45µ	605507	SFSD032GN3BM1T0-E-HG-2B1-STD	606340	SFSD032GN3BM1T0-E-HG-2D1-STD
,	605511	SFSD032GN3BM1T0-I-HG-2B1-STD	606550	SFSD032GN3BM1T0-I-HG-2D1-STD
	606455	SFSD4096N3BM1T0-E-GE-2B1-S01	TBD	SFSD4096N3BM1T0-E-GE-2D1-S01
	606099	SFSD8192N3BM1TO-I-GE-2B1-HEL	TBD	SFSD8192N3BM1TO-I-GE-2D1-HEL
	606343	SFSD8192N3BM1TO-I-GE-2B1-NAM	TBD	SFSD8192N3BM1T0-I-GE-2D1-NAM
	606069	SFSD032GN3BM1T0-I-HG-2B1-NAM	TBD	SFSD032GN3BM1T0-I-HG-2D1-NAM
S-46II	606050	SFSD2048N3BM1T0-E-GE-2CP-STD	606683	SFSD2048N3BM1TO-E-GE-2DP-STD
	606054	SFSD2048N3BM1TO-I-GE-2CP-STD	606684	SFSD2048N3BM1TO-I-GE-2DP-STD
	606051	SFSD4096N3BM1T0-E-GE-2CP-STD	606685	SFSD4096N3BM1TO-E-GE-2DP-STD
	606055	SFSD4096N3BM1T0-I-GE-2CP-STD	606686	SFSD4096N3BM1TO-I-GE-2DP-STD
	606052	SFSD8192N3BM1TO-E-LF-2CP-STD	606687	SFSD8192N3BM1TO-E-LF-2DP-STD
	606056	SFSD8192N3BM1TO-I-LF-2CP-STD	606688	SFSD8192N3BM1TO-I-LF-2DP-STD



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606053	SFSD016GN3BM1T0-E-HG-2CP-STD	606689	SFSD016GN3BM1T0-E-HG-2DP-STD
606057 606931	SFSD016GN3BM1T0-I-HG-2CP-STD SFSD016GN3BM1T0-I-HG-2CP-STD-JEWEL	606690 TBD	SFSD016GN3BM1TO-I-HG-2DP-STD SFSD016GN3BM1TO-I-HG-2DP-STD-JEW
606807	SFSD4096N3BM1TO-I-GE-2CP-PC1	TBD	SFSD4096N3BM1TO-I-GE-2DP-PC1