

Product Notification Form

PCN #: PCN19-0015	Rev: 1.0	Issue Date: June 14, 2019
--------------------------	-----------------	----------------------------------

Type of Change: Firmware improvement for S-45μ and S-46μ microSD Memory Cards

minor / major

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:
 - Improved handling of aborted write commands (without data transfer)
 - Fixed Switch Command (CMD6) behavior when driver strength is set before a speed mode change.
 - Fixed potentially incorrect error indication for Function Group 3 in Switch Command (CMD6)
 - 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) ¹⁾
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

1) 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-45μ and S-46μ microSD Memory Cards series.

FW revision B for S-45μ and revision C for S-46μ 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.

Product Notification Form

606053	SFSD016GN3BM1T0-E-HG-2CP-STD	606689	SFSD016GN3BM1T0-E-HG-2DP-STD
606057	SFSD016GN3BM1T0-I-HG-2CP-STD	606690	SFSD016GN3BM1T0-I-HG-2DP-STD
606931	SFSD016GN3BM1T0-I-HG-2CP-STD-JEWEL	TBD	SFSD016GN3BM1T0-I-HG-2DP-STD-JEWEL
606807	SFSD4096N3BM1T0-I-GE-2CP-PC1	TBD	SFSD4096N3BM1T0-I-GE-2DP-PC1