CFast™ Cards

CFast™ cards combine the CompactFlash™ (CF) card form factor and the Serial ATA (SATA) interface into a single product. CFast™ cards can replace both HDDs and CompactFlash™ cards in applications requiring small form factors, high endurance and the ability to withstand shock, vibration, extreme temperatures (−40°C to +85°C), and rough environmental conditions. Swissbit's CFast™ cards provide rugged and easy replaceable storage for embedded and industrial systems. The Swissbit CFast™ card portfolio covers the range from high end SLC based F-600 to the cost/performance optimized F-50. With an equal feature set as the 2.5" X-60 SSD, the F-60 MLC product and F-66 pSLC card are perfect devices for high performance and endurance and lowest total cost of ownership.

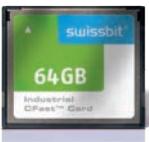|												
F-600	●	●	●	★	●	◐	●	★	●	●	●	★	○	●
F-60 / F-66	●	●	●	★	●	◐	●	★	●	●	●	★	○	●
F-50 / F-56	●	●	●	★	●	◐	●	★	●	●	●	●	○	○
F-240	●	●	●	★	○	◐	○	★	●	★	●	○	●	○

★ Industry Leading; ● default implemented; ◐ on request; ○ not available

F-600   F-60 / F-66   F-50 / F-56   F-240

GENERAL INFORMATION

	F-600	F-60 / F-66	F-50 / F-56	F-240
TYPE	CFast™ CARD			
INTERFACE / DATA TRANSFER MODE	CFast™ 2.0 – SATA III – 6 Gbit/s / ATA8			CFast™ 1.0 – SATA II – 3 Gbit/s / ATA7
CONNECTOR	CFast™ Type I			
OUTLINE DIMENSIONS	36.4 x 42.8 x 3.6 mm			
FLASH TYPE	SLC	MLC durabit™ / pSLC everbit™	MLC / pSLC	SLC
DENSITY RANGE	8 GB – 64 GB	MLC: 8 GB – 240 GB / pSLC: 16 GB – 120 GB	MLC: 8 GB – 256 GB / pSLC: 4 GB – 128 GB	2 GB – 64 GB
DATA RETENTION	10 years @ life begin | 1 year @ life end			
ENDURANCE ENTERPRISE WL	8.7 TBW per GB drive capacity	0.6 TBW / 3.8 TBW per GB drive capacity	0.04 TBW / 0.32 TBW per GB drive capacity	100,000 P/E cycles (Flash cell level)

TEMPERATURE

OPERATING TEMPERATURE	Commercial: 0°C to +70°C / Industrial: –40°C to +85°C			
STORAGE TEMPERATURE	–40°C to +85°C			

PERFORMANCE

	F-600	F-60 / F-66	F-50 / F-56	F-240
BURST RATE (MB/S)	up to 600	up to 600	up to 600	up to 300
SEQUENTIAL READ (MB/S)	up to 520	up to 520 / 520	up to 500 / 510	up to 120
SEQUENTIAL WRITE (MB/S)	up to 245	up to 180 / 415	up to 330 / 415	up to 120
RANDOM 4KB READ (IOPS)	up to 76,000	up to 72,000 / 80,000	up to 53,000 / 32,000	up to 3,200
RANDOM 4KB WRITE (IOPS)	up to 54,000	up to 43,000 / 75,000	up to 74,000 / 66,000	up to 75

ROBUSTNESS

MTBF	≥ 2,000,000 hours			≥ 2,500,000 hours
SHOCK	1,500 G, 0.5 ms			1,500 G
VIBRATION	50 G, 131–2,000 Hz			20 G
HUMIDITY	85 % RH 85°C, 1,000 hrs			

ELECTRICAL DATA

	F-600	F-60 / F-66	F-50 / F-56	F-240
VOLTAGE	3.3 V ± 5 %			
POWER CONSUMPTION	typ 450 mA / max 715 mA / Idle 105 mA / DEVSLP 35 mA	typ 400 mA / max 495 mA / Idle 110 mA / DEVSLP 35 mA	typ 290 mA / max 420 mA / Idle 75 mA / DEVSLP 35 mA	typ 500 mA / max 960 mA / Idle 115 mA / PHYSLP <25 mA

FEATURE LIST

	F-600 / F-60 / F-66 / F-50 / F-56	F-240
FEATURES & TOOLS	Proven Power Fail Safety / NCQ, TRIM / Advanced Wear Leveling & Bad Block management / In-field firmware update / SBLTM Tool & SDK for S.M.A.R.T. based Life Time Monitoring	Proven Power Fail Safety / Sophisticated Wear Leveling & Bad Block management / Read Disturb Management / TRIM / Low Power Consumption / Security & SBZoneProtection features available / SBLTM Tool & SDK for S.M.A.R.T. based Life Time Monitoring
PART NUMBER	SFCAxxxxHvAAxss-t-dd-rrr-ccc	SFCAxxxxHvBVxss-t-dd-rrr-ccc