

CFast Card XL+

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SMART Modular Technologies' CFast Card XL+ is a single-level cell (SLC) solid state drive product. This drive specifically targets the needs of OEM markets, such as server, storage cache/accelerators, networking, and data communications applications requiring reliable internal storage with a small footprint. The embedded products are also a natural fit for embedded computing, medical, automotive, and industrial applications. The small form factor, low power consumption, and fast data throughput are major advantages of the SMART's CFast XL+ over traditional rotating hard disk drives (HDDs).

The CFast Card XL+ modules are fully CFA compliant up to and including the 32GB capacity. Utilizing an industry-standard SATA interface and connector, the CFast Card XL+ are easily integrated into a host system without any special BIOS modifications or additional device drivers. The CFast Card XL+ offer sustained read performance up to 99MBs/sec and sustained write performance of up to 81MBs/sec. These modules are available in a capacities of 2GBs to 32GBs.

SMART's industrial-grade CFast Card XL+ products address the need for enhanced reliability by incorporating on-board error detection and correction and static wear leveling algorithms to provide reliable operation over the product life cycle. SMART further increases the reliability of its SATA product offering by using SLC NAND flash technology.

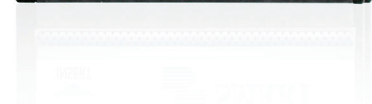
The CFast Card XL+ product line supports self-monitoring analysis and reporting technology (S.M.A.R.T.), which is designed to reduce field failures and unscheduled service maintenance operations. By providing an accurate forecast of the expected lifespan, S.M.A.R.T. enables a reliable monitoring application that efficiently supports the CFast XL+ product in the field and guarantees a 24/7 service availability.

Features & Benefits

- SLC NAND technology
- Whole drive static wear leveling
- Support for 48-bit LBA addressing for larger transfer sizes
- ATA and SATA Interface Power Management support
- Native Command Queuing (NCQ) support with a maximum queue depth of 32

Product Family Overview

	Capacity	Performance Sequential
CFast Card XL+		
CFA Compliant	2GB to 32GB	116MB/s Read (max) 89MB/s Write (max)



Specifications

CFast Card XL+		
Performance		
Read (maximum)	116MB/s	
Write (maximum)	89MB/s	
Host Interface Rate (maximum)	3Gb/s	
Reliability		
Data Reliability	< 1 Non-Recoverable Error in 10 ¹⁴ bits read	
Data Retention	10 years >90% life remaining 1 year at the end of life	
Endurance	TBW = 3 Tbytes per 1GB capacity	
Error Correction / Error Detection (BCH)	8/15 bits per 512 Bytes at each channel	
Power		
Vcc	3.3 ± 5%	V
Read	< 480	mA
Write	< 420	mA
Idle	< 230	mA
Environmental		
Shock - Non-Operating	1500 g half-sine, 0.5 msec, 1 shock along each axis, X,Y,Z in each direction	
Shock - Operating	50 g half sine, 11 msec, 3 shocks along each axis, X,Y,Z in each direction	
Vibration - Operating	16.4 g rms 10-2000Hz, 3 axes	
Operating Temperature - Commercial	0°C to 70°C	
Operating Temperature - Industrial	-40°C to 85°C	
Humidity	10% to 90%, non-condensing, relative humidity	
Altitude	24,384m [80,000 ft]	
Physical		
Length	36.4 mm	
Width	42.8 mm	
Thickness	3.6 ± 0.10 mm	

Ordering Information

Part Number	Density (GB)
Commercial Operating Temperature	
SG9CFF32GAS02	2
SG9CFF34GAS02	4
SG9CFF38GAS02	8
SG9CFF316GAS02	16
SG9CFF332GAS02	32
Industrial Operating Temperature	
SG9CFF32GASI02	2
SG9CFF34GASI02	4
SG9CFF38GASI02	8
SG9CFF316GASI02	16
SG9CFF332GASI02	32

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