

SCDD

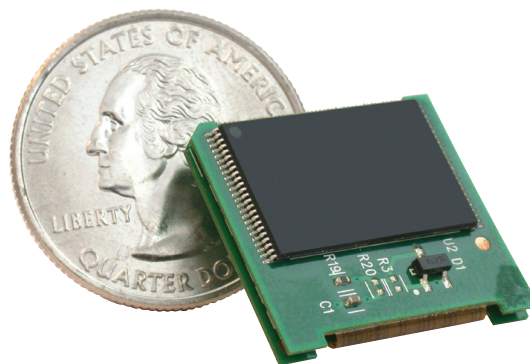
SMART's high-performance single-chip disk drive (SCDD) is specifically designed for networking, telecommunications, and data communication applications. Additionally, SMART's SCDD is a natural fit for mobile and embedded computing, medical, automotive, and industrial applications. Offering reliable, high-performance operation in a 52-pin BGA package, SMART's SCDD can operate in either 3.3V or 5V hosts and is available in capacities from 128MB to 8GB.

SCDD Product Family At-A-Glance

	Power	Capacity
SCDD		
52-pin BGA	5V & 3.3V	128MB to 8GB

Features

- Electrically Compatible with CFA Specification 4.1
- High Data Throughput
- Static and Dynamic Wear Leveling
- Advanced Error Detection/Correction
- Improved Shock and Vibration Performance
- Drive Diagnostics using S.M.A.R.T. Sub-Commands
- Field-Upgradeable Firmware



Specifications

	Single Channel		Dual Channel	
Performance				
Max Performance PIO 6	Read	Write	Read	Write
8GB	n/a	n/a	24MB/s	12MB/s
256MB – 4GB	19MB/s	8MB/s	24MB/s	12MB/s
128MB	19MB/s	6MB/s	n/a	n/a
Max Performance UDMA 5	Read	Write	Read	Write
8GB	n/a	n/a	47MB/s	25MB/s
256MB – 4GB	24MB/s	12MB/s	47MB/s	25MB/s
128MB	24MB/s	7MB/s	n/a	n/a
Host Interface Transfer Rate (Maximum)	100MB/s			
Power Up to Ready	220ms			
Reset to Ready	< 30us			
Command to DRQ (Read)	< 350us			
Command to DRQ (Write)	< 75us			
Reliability				
Data Reliability	1 in 10 ¹⁴ bits, read			
Data Retention	10 years @ 25°C			
Endurance	> 2 Million program/erase cycles per Logical Block Address (LBA)			
Error Correction/Error Detection	4 Symbol Reed Solomon / 4 random bytes in 528 bytes			
Environmental				
Shock – Operating	50G Max @ 11ms			
Vibration – Operating	15G Peak to Peak			
Commercial Temperature	0°C to 70°C			
Industrial Temperature	-40°C to 85°C			
Storage Temperature	-65°C to 150°C			
Humidity	5% to 95%			
Altitude	Up to 80,000ft			
Physical	Single Channel		Dual Channel	
Length	22.73mm		28.32mm	
Width	20.24mm		21.97mm	
Height	3.38mm		3.38mm	
Weight (Maximum)	3.3gm		3.5gm	

Ordering Information

Part Number	Drive Capacity	Unformatted Capacity
Single Channel Drives		
SG9SCDSS128SME1x	128MB	127,008,768
SG9SCDSS256SME2x	256MB	254,541,824
SG9SCDSS512SME4x	512MB	509,386,752
SG9SCDSS1GSME9x	1GB	1,018,773,504
SG9SCDSS2GSMEAx	2GB	2,004,516,864
SG9SCDSS4GSMEBx	4GB	4,009,549,824
Dual Channel Drives		
SG9SCDD256SME1x	256MB	254,541,824
SG9SCDD512SME2x	512MB	509,386,752
SG9SCDD1GSME4x	1GB	1,018,773,504
SG9SCDD2GSME9x	2GB	2,004,516,864
SG9SCDD4GSMEAx	4GB	4,009,549,824
SG9SCDD8GSMEBx	8GB	7,985,553,408



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