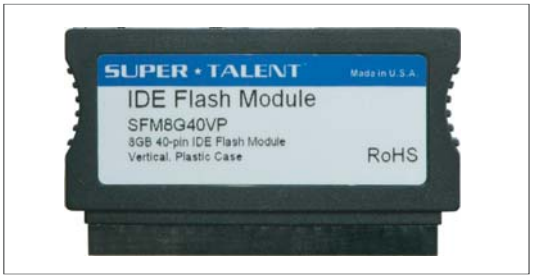
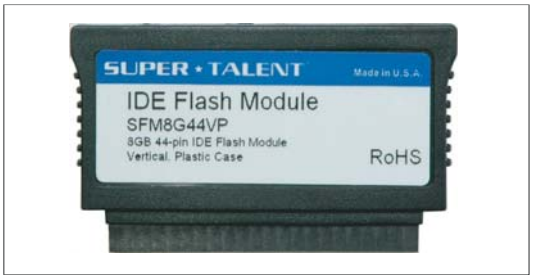
Flash Disk Module (FDM)

Vertical Mount 40/44 Pin IDE



40-pin Vertical Mount FDM



44-pin Vertical Mount FDM

Super Talent's Flash Disk Module (FDMs) provide non-volatile storage in a compact design, making a perfect fit for embedded applications. This FDM model mounts vertically and is available with either a 40- or 44-pin IDE interace. While typical spinning hard disk drives are the weakest point when it comes to withstanding extremes, FDM's are an asset and ideal to use in severe environments.

Other benefits of FDMs are that they are rugged, lightweight, silent, and have low power consumption. Features include:

- MLC or SLC NAND Flash options
- Platform Independence
- Fast Time to Market - No Driver Required
- Hamming Code-Based EDC/ECC
- 160bit internal and external operation from 4GB - 32GB capacity
- IDE Master/Slave Modes of Operation

Physical Specifications

Mount Type		Vertical
***Capacity**		4GB - 32GB
Interface		40- or 44-pin IDE
Modes		PIO modes 0-4
OS Support		All
NAND Flash		MLC / SLC
Power Supply		5Vcc ± 10%
Current	**Active Mode**	55 mA (max)
	Sleep/Idle Mode	0.18 mA (max)

Environmental Specifications

Shock (operating)	10G, 3 axis
Vibration (operating)	1G, each axis
Storage Temperature	-55°C to +80°C

Performance Specifications

Seq. Read	**MLC**	80 MB/sec
	SLC	80 MB/sec
Seq. Write	**MLC**	40 MB/sec
	SLC	60 MB/sec
Access Time		0.1 ms
Track to Track Seek		0.1 ms
Bus Tx Speed		16.7 MB/sec (peak time)

Endurance Specifications

MTBF		+1,000,000 hours
Data Reliability		Built-in EDC/ECC function
Data Integrity		10 years
Wear Leveling		Patent Pending
Write/Erase	**MLC**	10,000 cycles
	SLC	100,000 cycles
Read		Unlimited

*Usable capacity may be less than specified after formatting.

Flash Disk Module (FDM)

Vertical Mount 40/44 Pin IDE

Ordering Information: 40-Pin Vertical

	MLC	SLC
4GB	--	SF4GA4F40
8GB	SF8GB5F40	SF8GA5F40
16GB	SF16B6F40	SF16A6F40
32GB	SF32B7F40	--

Ordering Information: 44-Pin Vertical

	MLC	SLC
4GB	--	SF4GA4F44
8GB	SF8GB5F44	SF8GA5F44
16GB	SF16B6F44	SF16GA6F44
32GB	SF32B7F44	--

Pin Assignment

Pin #	Signal	Function	Pin #	Signal	Function
1	RESET#	Host Reset	2	GND	Ground
3	HD7	Host Data Bit 7	4	HD8	Host Data Bit 8
5	HD6	Host Data Bit 6	6	HD9	Host Data Bit 9
7	HD5	Host Data Bit 5	8	HD10	Host Data Bit 10
9	HD4	Host Data Bit 4	10	HD11	Host Data Bit 11
11	HD3	Host Data Bit 3	12	HD12	Host Data Bit 12
13	HD2	Host Data Bit 1	14	HD13	Host Data Bit 13
15	HD1	Host Data Bit 1	16	HD14	Host Data Bit 14
17	HD0	Host Data Bit 0	18	HD15	Host Data Bit 15
19	GND	Ground	20	NC	Not Connected
21	DMARQ		22	GND	Ground
23	HIOW#	Host I/O Write	24	GND	Ground
25	HIOR#	Host I/O Read	26	GND	Ground
27	IORDY	I/O Ready	28	CSEL	Master/Slave Select
29	DMACK#		30	GND	Ground
31	INTRQ	Interrupt Request	32	IOIS16#	CS I/O 16-bit
33	HA1	Host Address Bit 1	34	PDIAG#	Passed Diagnostics
35	HA0	Host Address Bit 0	36	HA2	Host Address Bit 2
37	CS0#	Chip Select 0	38	CS1#	Chip Select 1
39	DASP#	Drive Active/Drive 1 Pres.	40	GND	Ground
41[1)]	VCC	Supply Voltage	42[1)]	VCC	Supply Voltage
43[1)]	GND	Ground	44[1)]	RESERVED	Reserved

1) Flash Disk Module 40-pin version does not contain pins 41 - 44
NC = These pins are not connected internally
RESERVED = All reserved signals must be left floating

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