

SC3500 Sidewinder 3.5" SCSI Solid State Drive



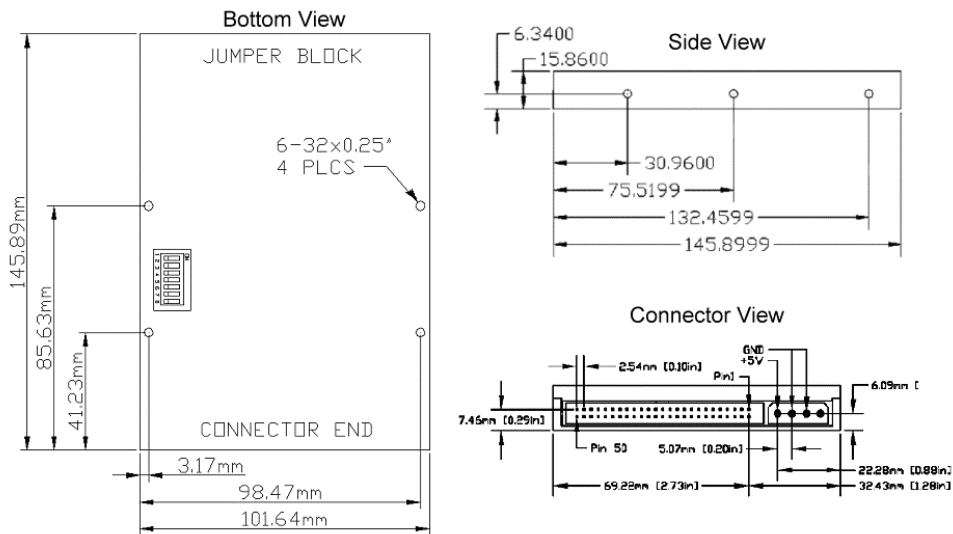
- Up to 36 Gbyte uncompressed capacity
- Full -40°C to +85°C industrial temp range
- Rugged, 3.5" half height drive formfactor
- Single-ended 50 pin SCSI-2 interface
- Active Remap™ Technology
- 5 volt only, low power operation
- Completely solid state - no moving parts
- SCSI-2 Compliant active termination
- 500G operating shock
- 10G operating vibration
- 0.5 millisecond random access time
- 10 Mbyte/sec synchronous transfers
- 2.3 Mbyte/sec sustained Read throughput
- 1.0 Mbyte/sec sustained Write throughput
- NO installable device drivers
- 10 year guaranteed data integrity



The SC3500 is a modular, high performance solid state flash drive in a 3.5 inch half-height drive format, designed for implementation on systems conforming to the SCSI-2 standard. Composed of a large array of 1 Gbit NAND E²PROM memories, the SC3500 can emulate the storage and retrieval operations of a standard rotating drive, but with faster access, throughput, ruggedness and reliability. The unit is completely solid state with no moving parts. This makes it resistant to most environmental extremes like shock, vibration, dust and temperature. No special drivers or flash file managers are required to access the device, so it offers the same ease of implementation and use as standard rotating media and makes it fully bootable.

The SC3500 can be used in applications where operating conditions are harsh and when reliability is critical. Power consumption is minimized with a 100% CMOS logic design, and the +5 volt only power requirement simplifies system supply needs. All control functions are monitored by the on-board microprocessor. The SCSI-2 interface is implemented using a QLogic FAS209 SCSI controller. An embedded DMA controller produces a media transfer rate of over 8 Mbytes per second. The unit responds to all Direct-Access device commands, and as with all single-ended SCSI units, the SC3500 may be placed up to 18 feet (6 m) from the host SCSI controller. Data integrity is maintained by error detection logic and Memtech's proprietary Active Remap™ technology. Active termination is jumper selectable, as is the unit's SCSI ID.

The drive is available in capacities from 128 Mbytes to 36 Gbytes in a number of standard sizes. Please contact the factory with your specific requirements. Disk compression utilities may be used to effectively double the capacity of the drive.



Every SC3500 drive is fully tested under environmental and voltage extremes to guarantee data integrity under even the harshest conditions.

The drive may be mounted in any orientation. Eight mounting holes are provided: four on the bottom and four on the sides. All holes are tapped 6-32, with a maximum penetration of 0.25 inches.

SPECIFICATIONS

Interface

SCSI Compatibility	SCSI-1,2
SCSI Device Type	0 - Direct Access Device
Maximum Capacity	36864 Mbytes
Bytes/Block	512
Bus Width	8 bits
Termination	SCSI-2 Compliant, Active

Performance

Average Access	0.5 ms
Read Transfer Rate	2.3 Mbyte/sec sustained
Write Transfer Rate	1.0 Mbytes/sec sustained
Media Transfer Rate	8 Mbytes/sec
Synch Transfers	10 Mbytes/sec

Environmental

Operating Temperature Range	
Commercial	0° to 70°C
Extended	-20° to +75 °C
Industrial	-45°C to +85°C
Storage Temperature	-55°C to +125°C
Airflow	None required
Humidity	5% to 95% NC
Shock	500G operating
Vibration	10G operating
Safety (pending)	CSA File LR114427
EMC (pending)	EN55022 and EN50082-1

Reliability

Endurance	Application Specific
1 write/10 sec	250,000 hours
ECC	44-bit

Power Requirements

Voltage	5V +/- 5%
Current	
Standby	80 mA
Read	200 mA
Write	225 mA
Termination Power	Supplied by initiator

Mechanical

Length	5.75 inches (146mm)
Width	4.00 inches (102mm)
Height (example)	
12 Gbytes	0.63 inches (16mm)
13 Gbytes	TBD
Cable Length	18 feet (6 m)
Interface Type	50-pin single ended
Weight	1b 5 oz (595 g) max

