

# AT2500 Tusker

## 2.5" IDE Solid State Drive



- 3072 Mbyte uncompressed capacity
- Full -40°C to +85°C industrial temperature range
- 2.5" drive form-factor with 44 pin, 2mm IDE interface
- 11 byte ECC and Active Remap™ for exceptional data reliability
- 5 volt, low power operation
- Completely solid state - no moving parts
- 1000G operating shock
- 15G operating vibration
- 0.3 millisecond random access time
- 2.0 Mbyte/sec sustained Read throughput
- 650 Kbyte/sec sustained Write throughput
- 128 Kbyte SRAM buffer
- 10 year data integrity
- CE and CSA/UL Compliant

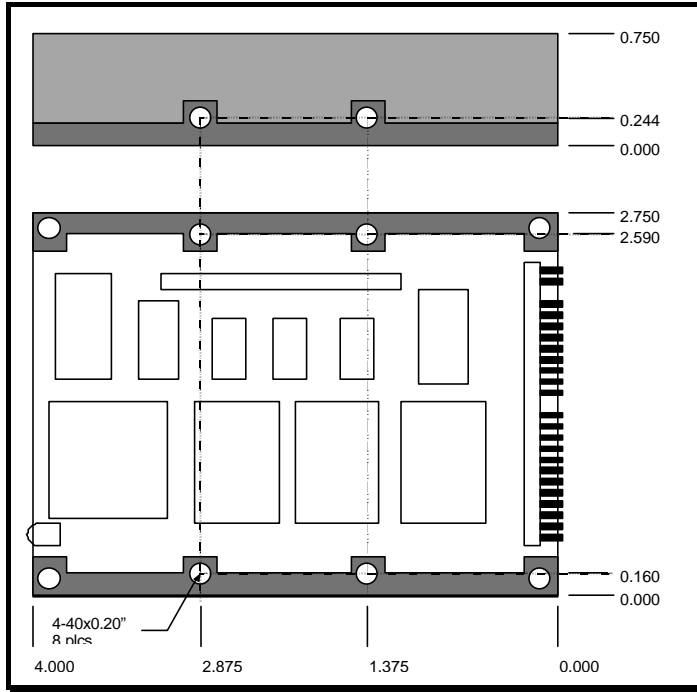


The AT2500 solid-state flash drive is a 100% IDE compatible storage module offered in a standard 2.5 inch drive form-factor. It is completely solid state, with no moving parts. This contributes to the unit's exceptional ruggedness and wide operating temperature range; with no moving parts, there is no mechanism for mechanical wear-out. Being 100% IDE compatible, no special drivers or flash file managers are required to interface the drive. It is a virtual drop in replacement for standard rotating media.

By employing sector erasable NAND E<sup>2</sup>PROMs (Flash), Memtech is able to deliver up to 3072Mbytes of uncompressed, non-volatile solid-state storage in an extremely small, rugged form-factor. The 0.3 millisecond access time permits thousands of transactions to occur per second, which is critical in server and high I/O applications. Raw data throughput is also very fast at a sustained 2.0Mbytes per second.

The interface is implemented using a commercially available IDE controller with a 128Kbyte SRAM buffer and an 11-byte Reed-Solomon error detection and on-the-fly correction mechanism that greatly improves data reliability over other drives. The ECC circuitry, in conjunction with Memtech's proprietary Active Remap™ technology, makes for a virtually bulletproof medium for data storage. The drive supports advanced PIO and DMA transfer modes, multi-sector transfers, and LBA addressing.

The AT2500 is available now in standard capacities ranging from 16 to 3072 Mbytes. Disk compression utilities may be used to effectively double the physical capacity of the drive.



Every drive is fully tested under environmental and voltage extremes to guarantee data integrity under even the harshest conditions, and to ensure full functionality out of the box.

The AT2500 may be mounted in any orientation. Eight mounting holes are available: four on the bottom and four on the sides. All holes are tapped 4-40, with a maximum penetration of 0.20 inches.

## **SPECIFICATIONS\***

### **Interface**

IDE Compatibility	X3T10 2008D, Rev. 6
IDE Drive Number	Drive 0 or 1
Physical Capacity	3072 Mbytes
Physical Sector Size	512 bytes

### **Performance**

Average Access	0.3 ms
Track/Track Access	0.3 ms
Onboard Cache	128 Kbytes
Read Transfer Rate	2.0 Mbytes/sec sustained
Write Transfer Rate	650 Kbytes/sec sustained
Burst Transfers	8.0 Mbytes/sec

### **Environmental**

Operating Temperature Range	
Commercial	0° to +70°C
Extended	-20° to +75°C
Industrial	-40° to +85°C
Storage Temperature	-55° to +125°C
Shock - operating	1000G, half sine
Vibration - operating	15G Random
Airflow	None required
Humidity	5% to 95% NC
Safety	CSA File LR114427
EMC	EN55022 and EN50082-1

### **Reliability**

Endurance	Application Specific
	1 write/10 sec
	250,000 hours
Error Rate	<1 in 10 <sup>14</sup> bits read

### **Power Requirements**

Voltage	5V +/- 5%
Current	AT2500-3072
Idle	10 mA
Read	210 mA
Write	225 mA

### **Mechanical**

Length	4.00 inches (102 mm)
Width	2.75 inches (70 mm)
Height	
>768 Mbytes	0.75 inches (19 mm)
≤768 Mbytes	0.57 inches (15 mm)
Cable Interface	44-pin, 2mm
Max. Cable Length	18 inches (457 mm)
Rec. Cable Length	12 inches (305 mm)
Weight (3072 Mbytes)	5.8 oz (165 g)
Weight (768 Mbytes)	4.2 oz (120 g)

\*Specifications subject to change without notice.

