

AT2550 Wolverine

2.5" IDE Solid State Drive



- 4.8 Gbyte capacity under 9.5mm
- 8.7 Gbyte capacity under 12.5mm
- 27 Gbyte maximum capacity
- Full -55°C to +125°C military temperature range
- 2.5" drive low profile form-factor
- UDMA-66 compliant IDE interface
- 16 byte CRC/ECC and Active Remap™ for exceptional data reliability
- Kicker™ Hold Up Circuit
- Active Remap™ Data Reliability Feature
- 5 volt, low power operation
- Completely solid state - no moving parts
- 1000G operating shock
- 15G operating vibration
- 0.1 millisecond random access time
- 26 Mbyte/sec cached Read performance
- 20 Mbyte/sec cached Write performance
- 8 year product warranty
- 8 million erase/write cycle endurance



The AT2550 solid-state flash drive is an UDMA-66 compliant IDE memory module offered in an extremely low profile 2.5 inch drive form-factor. The drive 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.

The primary storage media in the drive is sector-erasable NAND E²PROMs (Flash). Using these devices, Memtech is able to deliver up to 27 Gbytes of uncompressed, non-volatile solid-state storage in an extremely small, rugged form-factor. The access time for the drive is under 0.1 milliseconds, which permits thousands of transactions to occur per second. Cached read data performance is 26 Mbytes/second, and cached write performance is 20 Mbytes/second.

The Kicker™ Hold Up Circuit, using ultra-cap technology, meets all the requirements for a robust and reliable solution. Ultra-caps are new, high-energy capacitors that offer an extremely low ESR, wide operating temperature and small footprint. Unlike batteries, they offer a much more robust form of energy storage, with a wider operating temperature and longer life. Combined with some innovative firmware control, back-EMF and surge current suppression and power monitoring, the Kicker™ virtually eliminates the chance of corrupted data in the flash array due to a power loss.



SPECIFICATIONS*

Interface

IDE Compatibility	ATA-6 compliant
IDE Drive Number	Drive 0 or 1
Physical Capacity	1 to 27 Gbytes
Physical Sector Size	512 bytes

Performance

Average Access	0.1 ms
Track/Track Access	0.1 ms
Onboard Buffer	16 Mbyte
Burst Transfers	66 Mbytes/sec
Cached Read Rate	26 Mbytes/sec
Cached Write Rate	20 Mbytes/sec

Environmental

Operating Temperature Range	
Commercial	0° to +70°C
Extended	-20° to +75°C
Industrial	-40° to +85°C
Military	-55° to +125°C
Storage Temperature	-55° to +125°C
Shock - operating	1000G, half sine
Vibration - operating	15G Random
Altitude	130,000 feet
Airflow	None required
Humidity	5% to 95% NC
Safety	CSA File LR114427
EMC	EN55022 and EN50082-1

Reliability

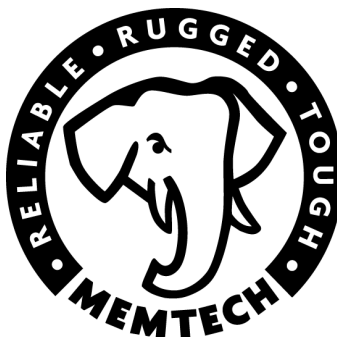
Kicker™ Hold Up Circuit	
Active Remap™ Data Reliability Feature	
Endurance	
erase/write endurance	8 million cycles
read endurance	unlimited
data Integrity	10 years
ECC	96-bit Reed-Solomon

Power Requirements

Voltage	5V +/- 5%
Current	4.8 Gbyte model
Idle	200 mA
Read	350 mA
Write	320 mA

Mechanical

Length	3.95" (100 mm)
Width	2.75" (70 mm)
Height	
5 GB to 8.7 GB	0.49" (12.5 mm)
1 GB to 4.8 GB	0.37" (9.5 mm)
Cable Interface	44-pin, 2mm
Weight	
4.8 GB	3.5 oz (98 g)
8.7 GB	3.9 oz (110g)



*Specifications subject to change without notice.