

AT1830 Mustang 1.8" IDE Solid State Drive

- 64Mbyte to 8 Gbyte uncompressed capacity
- Full -40°C to +85°C industrial temperature range
- Compact 1.8" drive form factor with 44 pin, 2mm IDE interface
- 32-bit ECC for exceptional data reliability
- 3.3 to 5 volt, low power operation
- Completely solid state no moving parts
- 1000G operating shock
- 15G operating vibration
- 4.0 Mbyte/sec sustained Read throughput
- 3.5 Mbyte/sec sustained Write throughput
- 10 year data integrity

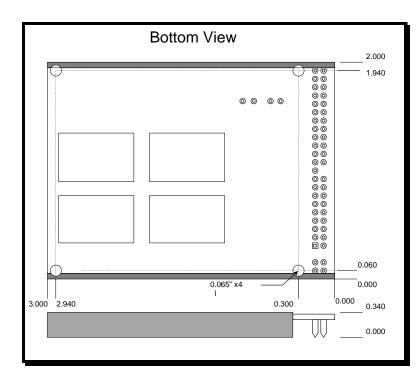


The AT1830 Mustang is the largest capacity 1.8" IDE drive available today. With a current maximum capacity of 8 Gbyte in an extremely compact 1.8" drive form-factor, it delivers exceptional value for its features. Future capacity, as new, higher capacity NAND EEPROM become available, is 16 Gbytes. It 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 wearout. Being 100% IDE compatible, no special drivers or flash file managers are required. It is a virtual drop in replacement for standard rotating media.

The AT1830 employs sector erasable NAND E²PROMs (Flash) to deliver up to 8 Gbytes of uncompressed, non-volatile solid state storage in an extremely small, rugged form factor. Raw data throughput is fast at a sustained 4.0 Mbytes per seconds for reads and 3.5 Mbytes/second for writes.

The drive is implemented using a custom IDE Flash controller with an integrated error detection and correction mechanism and proprietary remapping and wear-leveling technology to greatly improve data reliability. It's small form factor and low-power operation make the AT1830 ideal for hand-held, portable or embedded applications requiring up to 8 Gbytes of data storage. Advanced PIO modes and multi sector transfer modes are supported, as well as LBA addressing.

The drive is available in a number of standard capacities from 64 Mbytes to 8 Gbytes. Please contact the factory for specific size availability.



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

The Mustang may be mounted in any orientation. Four mounting holes with an internal diameter of 0.065" are available. External standoffs may be required for proper mounting of the drive.

SPECIFICATIONS*

Interface

ATA Compatibility X3T10 2008D, Rev. 6
IDE Drive Number Drive 0 or 1
Current Capacity 2 Gbytes
Physical Capacity 16 Gbytes
Physical Sector Size 512 bytes

Performance

Random Seek 0.4mS

Read Transfer Rate
Write Transfer Rate
BIOS Setup
4.0 Mbytes/sec sustained
3.5 Mbytes/sec sustained
PIO Mode 4, no DMA

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, 0.5ms, half sine Vibration - operating 15G Random, 5-2000Hz

Airflow None required
Humidity 5% to 95% NC
Safety CSA File LR114427
EMC EN55022 and EN50082-1

Reliability

Endurance Application Specific 8Kbytes/30 sec Error Rate <1 in 10¹⁵ bits read ECC 44-bit

Power Requirements

 Voltage
 5V +/- 5%

 Current (rms)
 AT1830-1024

 Sleep
 5 mA

 Read
 30 mA

 Write
 35 mA

 Peak
 150 mA

Mechanical

Length3.00 inches (76.2mm)Width2.00 inches (50.8 mm)Height0.34 inches (8.6mm)Cable Interface44-pin, 2mm

Max. Cable Length 18 inches (457 mm) Rec. Cable Length 12 inches (305 mm)

Weight

(128 Mbytes) 1.0 oz (28 g) (2 Gbytes) 1.3 oz (37 g)



^{*}Specifications subject to change without notice.

Mouser Electronics

Authorized Distributor

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STEC:

AT1830I-8192C AT1830I-1024 AT1830I-4096C AT1830-1024C AT1830I-256 AT1830I-4096 AT1830-512

AT1830I-2048C AT1830-8192 AT1830I-256C AT1830I-024 AT1830I-2048 AT1830I-6144C AT1830I-8192C

AT1830I-8192 AT1830I-4096 AT1830I-6144 AT1830I-6144C AT1830I-4096C AT1830I-512C AT1830I-6144 AT1830I-6144 AT1830I-512C A