

Industrial Solid State Flash Drives (SSD)



The Cactus Technologies 1.8" & 2.5" Solid State Drives (SSD)

are high capacity solid-state flash memory products that comply with the industrial standard IDE and S-ATA interfaces. Our 1.8" and 2.5" line of robust and reliable storage solutions are designed for today's rigorous industrial marked applications. The storage capacity of the Solid State Drive line ranges from 128MB to 64GB.



Cactus 1.8" & 2.5" Solid State Drive Feature

- ◆ Industry Standard: 1.8" & 2.5" IDE
2.5" S-ATA
- ◆ Capacities: 128MB to 32/64GB
- ◆ Pro Revision with additional Security Features
- ◆ Interface Supports:
 - ATA PIO Mode 0 - 4
 - Multiword DMA Mode 0 - 2
 - UDMA Mode 0 - 4*
- ◆ Dual Voltage Support: 3.3V or 5.0V
- ◆ SMART Life cycle analysis option
- ◆ Unique Electronic Serial Card ID
- ◆ Traceability Barcode
- ◆ Solid State Design with no moving parts
- ◆ Industry Leading:
 - Data Reliability
 - Shock & Vibration
 - Operating Temperature Range
 - Data Transfer Rates
- ◆ Zero dB Noise
- ◆ 4-Million Hour MTBF
- ◆ 5-year Warranty

*For reliable transfers at UDMA Mode 4, proper termination on host and device side required

Performance

IDE Read Transfer Rate: 35MB/sec
 IDE Write Transfer Rate : 25MB/sec
 S-ATA Read Transfer Rate : 140MB/sec
 S-ATA Write Transfer Rate: 85MB/sec

Reliability

Advanced Wear Leveling Algorithm
 Error Checking & Correction
 Less than 1 Error in 10^{14} Bits read
 MTBF: 4,000,000 hours

Environmental & Power

Operating Temperature Range
 Standard: 0°C to +70°C
 Extended: -45°C to +90°C

Power Consumption
 5V \pm 10%
 Read: 220mA
 Write: 180mA
 Sleep: 0.5mA

Shock & Vibration (MIL-STD-883G)
 Shock: 3,000G
 Vibration: 20G peak to peak

Industrial Grade 1.8" & 2.5" Solid State Drives (SSD)



Interface

Industry Standard IDE/S-ATA

Performance

IDE Read Transfer Rate 35MB/sec
IDE Write Transfer Rate 20MB/sec

S-ATA Read Transfer Rate 140MB/sec
S-ATA Write Transfer Rate 85MB/sec

Power Requirement

DC Input Voltage 3.3V or 5.0V \pm 10%
Sleep 0.5mA
Read 220mA
Write 180mA

Environmental Specification

Standard Temperature 0°C to +70°C
Extended Temperature -45°C to +90°C
Humidity 8 – 95%, non-condensing
Acoustic Noise 0 dB
Vibration 20G peak to peak max.
Shock 3,000G max.
Altitude 100,000 feet max.

Reliability and Maintenance

Endurance 2,000,000 erase cycles per block
MTBF 4,000,000 Hours
Data Reliability less than 1 Error in 10¹⁴ Bits read

Drive Capacity

128MB – 32/64GB

Features of Pro Version (IDE)

ATA Security Feature Set
CTPurge[®]
CTLock[®]
Write Protect

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