

FFD™ 2.5" Serial ATA

Most Reliable, High-Capacity SATA Drive



M-Systems' Fast Flash Disk (FFD)-2.5" Serial ATA (SATA) provides the full functionality of a high-capacity SATA hard disk drive. It achieves burst performance of 150MB/sec and read/write performance of 44 MB/sec. FFD 2.5" Serial ATA provides security features and top data integrity under the harshest environmental conditions. Capable of delivering over 5 million write/erase cycles with M-Systems' TrueFFS® flash management, FFD 2.5" Serial ATA offers a no-compromise solution for the military and aerospace, telecommunications, servers, and high availability computing systems.

M-Systems' FFD 2.5" Serial ATA is a SATA 1.0a solid-state flash disk used as a drop-in replacement for rotating SATA mechanical disks.

CAPACITY

Unformatted (GB): 1, 2, 4, 8, 12, 16, 24, 32, 40, 48, 56, 64, 72, 80, 88, 96, 104, 112, 120, 128

COMPATIBILITY

Serial ATA: High-speed serialized AT attachment, revision 1.0a, Serial ATA working group

PERFORMANCE

Burst Read/Write: 150MBytes/sec (1.5 Gbits/sec)
Sustained Read: 44MBytes/sec
Sustained Write: 40MBytes/sec
Access time: <0.04ms

PHYSICAL

Form factor: 2.5"
Dimensions (mm): 100.2 (L) X 69.85 (W) X 9.5 to 22.5 (H)
Weight: 0.1kg (16GB), 0.22kg (128GB)

ENVIRONMENTAL

Operating temperature
Commercial: 0°C to +70°C
Enhanced: -25°C to +75°C
Extended: -40°C to +85°C
Storage temperature: -55°C to +95°C
Humidity: 5% to 95% relative, non-condensing
Operating altitude: Up to 80,000 feet
Operating shock: 1,500G, MIL-STD-810F
Operating vibration: 16.3G RMS, MIL-STD-810F (random, 10 Hz to 2000 Hz; 3 vibration axes)

POWER

Input voltage:	5VDC ±5%	
Typical consumption:		
	16GB	128GB
Idle	1.8 W	2.2 W
Sustained Read/Write	2.3 W	2.9 W
Sanitize	2.4 W	6.2 W

COMPLIANCE

CE, UL, EN 55022 Class B, CISPR 22 Class B, AS/NZS 3548 Class B, BSMI CNS 13438 Class B, CAN/CSA-V-3/2001.04 (VCCI), FCC Part 15 Class B, EN 61000-3-2, EN 61000-3-3, IEC 61000, MIL-STD-810F
RoHS compatibility

RELIABILITY

MTBF: 1,180,777 operating hours for 16GB
Based on Telcordia SR-332, GB, 25°C
EDC/ECC: On-the-fly based on BCH algorithm
BER (Bit Error Rate) <10⁻²⁰
Built-in power-up self-test (BIT)
Manual and automatic self-diagnostics
TrueFFS bad block mapping management
Data integrity under power-cycling
Self-Monitoring, Analysis and Reporting Technology (SMART)

ENDURANCE

Read unlimited
>5,000,000 write/erase cycles
TrueFFS dynamic wear-leveling
>10 years data retention

ENHANCED SECURITY ERASE

Fast security erase in seconds
Sanitize complies with DoD NISPOM 5220.22-M, NSA 130-2, Air Force AFSSI 5020, Army 380-19, Navy NAVSO P-5239-26 and IREC (IRIG) 106
Software and hardware interrupt secure erase/sanitize
Auto-resume security erase/sanitize on power-down
Partial/selective security erase
LED indication for secure erase/sanitize

USER INTERFACE & CONFIGURATION

Interface: SATA 1.5Gbits/sec
Firmware upgrade: Field upgrade capability

WARRANTY

5 years

CUSTOMIZATION

PCB conformal coating
Faster read/write rates
Made in the USA
Supports FMF requirements

ORDERING INFORMATION

FFD-25-SATA-CCC-T-H-P
CCC: Unformatted capacity – 1GB to 128GB
T: Operating temperature range
Blank – Commercial: 0°C to +70°C
N – Enhanced: -25°C to +75°C
X – Extended: -40°C to +85°C
H: Case Height (mm)
A: 9.5 (up to 16GB), B: 14.5 (up to 64GB),
C: 18.5 (up to 112GB), D: 22.5 (up to 128GB)
P: Blank - non-RoHS version
P - RoHS-compliant version



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