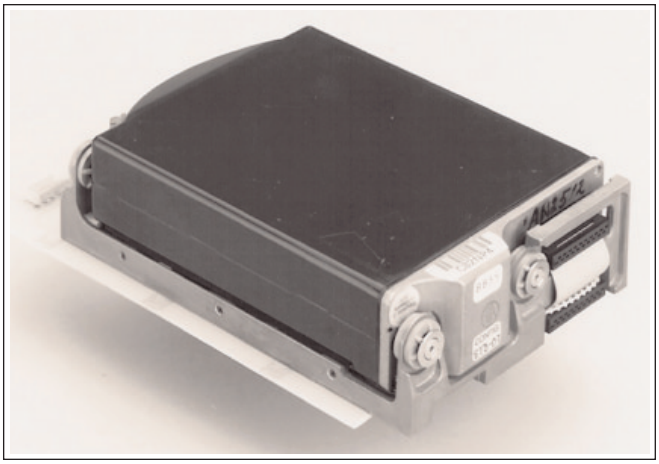
WinSystems®
STD BUS

HDAT Subsystem Hard Disk Drive

FEATURES

- 850 and 1G MByte storage capacity
- 3.5 inch disk drive mounts directly inside a STD Bus card cage
- High performance: 29 mS access time (avg.)
- Automatic head landing zone
- Internal error correction
- Microprocessor controlled diagnostics that are automatically executed at start-up
- Internal air filtration system
- No extra mounting hardware required
- MTBF greater than 20,000 hours (POH)
- HDAT withstands 10G's shock operating
- OEM version (without drive) available



The HDAT-850 and HDAT-1G are hard disk drive modules containing a 3.5 inch drive mounted directly on an STD Bus card. The HDAT is an IDE compatible drive used with STD Bus compatible DOS systems. This configuration allows mass storage from a hard drive to be easily and conveniently mounted in a STD Bus card cage.

FUNCTIONAL CAPABILITY

STD Bus Interface - The HDAT is a 3.5 inch 850 or 1G Megabyte formatted hard disk drive packaged on a STD Bus card that easily fits inside a card cage. The STD Bus is only used for the +12VDC, +5VDC and ground since the STD Bus disk controller is located on a separate board.

Disk Drive - The drive uses a brushless DC drive motor and a high performance rotary voice coil actuator with an embedded servo system to maintain precise alignment of each read/write head over the data throughout the operating temperature range. A dynamic break is used to provide a fast stop to the spindle motor when power is removed. Also at power down, the heads are automatically retracted to the inner diameter of the disk and are latched and parked on a landing zone that is inside the data tracks.

A totally sealed head/disk assembly protect the head, media and data from non-operational shock of 50G's. Within the sealed enclosure, a 0.3 micron filter provides a clean environment to the heads and disk.

Data is 2, 7 Run Length Limited (RLL) coded to further assure maximum data density and high transfer rates. The drive performs internal error correction on the data. An onboard microprocessor controls diagnostic routines that are automatically executed at start-up. If an error is detected, the drive will not come ready.

The mean time between failures (MTBF) for the drive exceeds 20,000 POH.

HDAT - The HDAT interfaces to an IDE compatible host adapter card such as the WinSystems MCM-DISK-AT. The interface to the STD Bus is 16-bits wide for use with high data rates and improved performance.

Software Support - The HDAT is designed to work with the appropriate disk controller boards. No BIOS extensions or modifications are required for the HDAT to work with WinSystems' STD Bus-based systems.

Mounting Configuration - The disk drive is mounted directly on the STD Bus card and held in place by 4 screws. The STD Bus card provides mechanical positioning and rigidity inside the card cage and power for the drive electronics. The drive will mount in any of the WinSystems' table top, rack mount or wall mount card cage configurations. The mounting also will not interfere with the optional hold down bar available for the card cages.

OEM Disk Mounting Kit - The disk drive STD Bus mounting board is available by itself for volume, cost conscious OEMs that wish to mount their own hard disk drives and integrate it directly into the card cage. The kit includes the base board and power cable. The STD Bus disk drive mounting board is notched to facilitate cabling to the controller.

Warranty - The disk drives are not manufactured by WinSystems and are limited to the warranty (typically 1 year) provided by the original manufacturer.

Cables - WinSystems offers a variety of cables to interface the drives with its respective controller. The CBL-126-1 is a 7 inch, 40-pin ribbon cable that connects the MCM-DISK-AT to the HDAT-850 or HDAT-1G. The cable is designed for a single hard drive in a STD Bus card cage. For other cable configurations not listed, please contact the factory.

SPECIFICATIONS

Electrical

Drives: 850 or 1G Megabyte (formatted)

Power

HDAT = +5VDC @ 300mA typ.
+12VDC @ 1.8A max. start surge during the initial 7 seconds then 325mA typ. (steady state)

Environmental

Operating temperature: -0°C to +50°C
Non-operating temperature: -40°C to +60°C
Thermal gradient: 20°C per hour maximum
Non-condensing relative humidity: 8 to 80%

ORDERING INFORMATION

HDAT-850	850 MByte 3.5" IDE Hard Disk Drive
HDAT-1G	1G MByte 3.5" IDE Hard Disk Drive
CBL-126-1	HDAT to MCM-DISK-AT cable