*H*ard Disk Controller

The Only One with Error Correcting and Hard/Soft Sector Capability

The HDC-2001 Controller Board is the only microprocessor-based S-100 hard disk controller with error correcting (ECC) and hard/soft sector capability. It is fully compatible with IEEE 696 and provides a compact, cost-effective way to operate up to four 8" or 5¼" disk drives.

The drive signals are based upon the floppy look-alike interface available on the Shugart SA1000, the Seagate ST506, Quantum Q2000 and other compatible drives. All necessary buffers and receivers/drivers are included on the board to allow direction to the drive. 34 and 50-pin connectors are provided to drive 8" or 5¼" drives.

Features

- IEEE 696, S100 bus compatible
- Built-in data separator
- Data rates up to 5 M bits/sec
- 1024 cylinder addressing range
- Controls up to 4 drives
- 256-512 sector addressing range
- Controls up to 8 heads
- CRC generation/verification on ID fields
- ECC generation/correction on data fields
- Automatic retries on all errors
- 32-bit computer generated polynomial
- Single burst correction, up to 8 bits
- Multiple burst detection
- Soft and hard sector interface

ADVANCED DIGITAL CORPORATION

Hard Disk Controller

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Western Digital's 1100-X Chip Set is the heart of the hard disk Read/Write interface, CRC/ECC encoder and decoder, and serializer/deserializer. The Western Digital chip set, combined with the high-performance 8X305 controller and on-board sector buffer, the HDC-2001 Controller board provides the S-100 user with the best high density storage available. The controller permits error correction of up to 8-bits with multiple burst detection, 32-bit ECC polynomial, automatic restore and reseek on seek errors. The HDC-2001 also supports Read/Write and Short/Long formats.

SPECIFICATIONS:

Encoding Method:	MFM
Cylinders per head:	Up to 1024
Sectors per track:	Up to 256 (512 Bytes)
Heads:	8
Step rate:	10 μs to 7.5 ms
Data transfer rate:	4.34 M bits/sec (SA-1000, Q2000)
	5.000 M bits/sec (ST506)
Sectoring:	Soft
Power requirements:	+5v (3.A Max)
Ambient Temp.:	0°C to 50°C (32°F to 122°F)
Relative Humidity:	20% to 80%
MTBF:	10,000 POH

It also supports Hard Sector Drives, DMA Systems, Cynthia & Syquest.

Existing Winchester Drive Interfaces

Quantum 2010	**Seagate ST506**	**DMA 5R**
Quantum 2020	**Tandon TM 502**	**Maxtor 1065**
Quantum 2040	**Tandon TM 503**	**Maxtor 1140**
Miniscribe 4020	**DMA 5/5**	**Micropolis**
		Syquest

Additional drivers are being added.
Check for drives other than those listed above.