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 5 1/4" 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 5 1/4" drives.

**Features**
- IEEE 696, S100 bus compatible
- Built-in data separator
- Data rates up to 5M 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
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 (3A 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

<table>
<thead>
<tr>
<th>Quantum 2010</th>
<th>Seagate ST506</th>
<th>DMA 5R</th>
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</thead>
<tbody>
<tr>
<td>Quantum 2020</td>
<td>Tandon TM 502</td>
<td>Maxtor 1065</td>
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<tr>
<td>Quantum 2040</td>
<td>Tandon TM 503</td>
<td>Maxtor 1140</td>
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<tr>
<td>Miniscibe 4020</td>
<td>DMA 5/5</td>
<td>Micropolis</td>
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<td>Syquest</td>
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</tbody>
</table>

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

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