1143M FLOPPY DISK DRIVE CONTROLLER

KEY FEATURES
- Single Printed Circuit Board Controller
- Firmware Controlled
- IBM 3740, 3600, or Series/1 Compatible Formats
- Micro Processing Unit (MPU)
- Controls up to Four Drives
- 1K Buffer Memory
- Basic Operating Software

SIGNIFICANT CAPABILITIES
- Sector Interleaving
- Automatic Initialization of Media
- Automatic Media Flaw Marking and Rejection
- IPL Capability
- Automatic Reset on Power Up
- Cycle Steal DMA Host Adapter
- Automatic CRC Generation and Checking

CalComp’s Model 1143M Controller is an intelligent firmware-driven microprocessing unit capable of controlling up to four CalComp Model 142M (single-sided) or Model 143M (double-sided) floppy disk drives. Contained on a single printed circuit board, the 1143M uses proven LSI technology, sophisticated microprogramming techniques and innovated interface capabilities to minimize host adapter requirements and maximize controller processing power.

Standard features include a programmable microprocessor and 1K buffer memory for data preprocessing as well as a phase-lock oscillator (PLO) for precise data recovery. The 1143M uses standard IBM format with 26, 15, or 8 sectors per track.

Data can be transferred between the 1143M and the host system in word, byte or serial forms. Data flow may be as follows:
- Directly between the host adapter and drive
- Between the host adapter and buffer*
- Between the buffer and drive*
*Transfers occur concurrently on the shared buffer memory bus.

In addition, the 1143M Controller can accommodate two host adapters simultaneously. Examples of host adapters include LSI-11, RS-232-C port and the S-100 Bus.

Basic Operating Software is included for a wide variety of preprocessing system applications. Other significant software features include automatic CRC, formatting and the capability of duplicating a disk.

CalComp also offers an 1149M Multipurpose cabinet assembly that can house the 1143M controller, up to 4 floppy disk drives, power supply and host adapters.

1143M CONTROLLER BLOCK DIAGRAM

1149M MULTIPURPOSE CABINET ASSEMBLY CONTAINING TWO 143M DRIVES, POWER SUPPLY AND 1143M CONTROLLER
1143M FLOPPY DISK DRIVE CONTROLLER
SPECIFICATIONS

CAPACITY
Up to four Model 142M or 143M drives

BUFFER TRANSFER RATE
400 Kbytes per sec

CONTROLLER INTERFACE
8 data bits

INTERFACE LOGIC
TTL compatible

POWER
+24 VDC or +12 VDC
+5 VDC
-12 VDC* or -5 VDC
*Required RS-232-C Host Adapter

TEMPERATURE
Operating: 50°F (10°C) to 100°F (38°C)
Non-operating: -30°F (-34°C) to 140°F (60°C)

FORMAT COMPATIBILITY
IBM 3740, 3600 or Series 1

SECTOR SIZE
128, 256 and 512 bytes

PHYSICAL DIMENSIONS
8 inches (20.3cm) x 14 inches (34.6cm)

INTERFACE CONNECTORS
One 50-pin drive connector
Two 40-pin drive connectors
One 12-pin power connector
One 50-pin host adapter I/O connector

HOST ADAPTER INTERFACES
LSI-11
RS-232-C
S-100 Bus

OPTIONAL 1149M MULTIPURPOSE CABINET ASSEMBLY
Configuration and Size
Table Top: 9.6" x 20.1" x 17.9" (20.2cm x 51.1cm x 45.5cm)
19" Retma Rack: 8.8" x 19" x 17.2" (22.3cm x 48.2cm x 43.7cm)

Model 1149M Contains:

<table>
<thead>
<tr>
<th>Unit</th>
<th>Type</th>
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<tbody>
<tr>
<td>Floppy Disk Drive</td>
<td>142M or 143M (Up to 2 drives)</td>
</tr>
<tr>
<td>Power Supply</td>
<td>One or two drives</td>
</tr>
<tr>
<td>Controller</td>
<td>1143M</td>
</tr>
<tr>
<td>Host Adapters</td>
<td>LSI-11</td>
</tr>
<tr>
<td></td>
<td>RS-232-C</td>
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<tr>
<td></td>
<td>S-100</td>
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<tr>
<td>Self-Contained</td>
<td>Cooling Fans</td>
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</tbody>
</table>

CONNECTOR TERMS

Signal Connector Terms

| DATA 0/          | SELECT HOST/                |
| DATA 1/          | INTERRUPT/                  |
| DATA 2/          | R/W/                        |
| DATA 3/          | DATA STROBE/                |
| DATA 4/          | CLOCK/                      |
| DATA 5/          | DMA REQUEST 1/              |
| DATA 6/          | DMA ACKNOWLEDGE 1/          |
| DATA 7/          | DMA REQUEST 2/              |
| ADDRESS 0/       | DMA ACKNOWLEDGE 2/          |
| ADDRESS 1/       | IPL/                        |
| ADDRESS 2/       | RESET/                      |
| ADDRESS 3/       | MEMORY RDY/                 |
| ADDRESS 4/       |                             |

Power Connector Terms

+24 VDC           -5 VDC          IPL CLR/
+12 VDC           -12 VDC         RESET/
+5 VDC            GND             KEY
GND               IPL SET/       (SPARE)