

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:

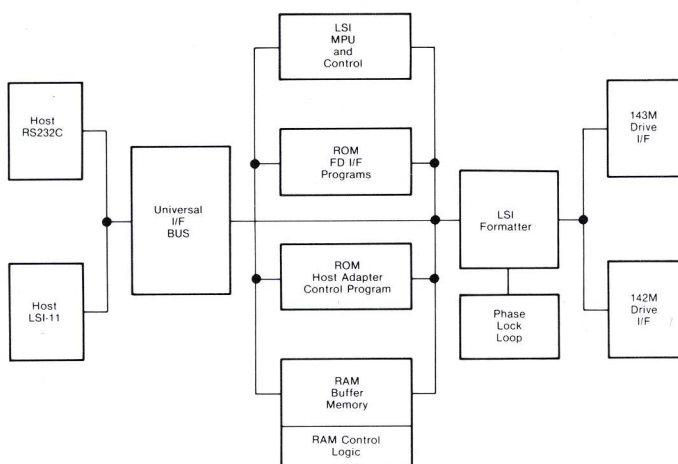
- Directly between the host adapter and drive
- Between the host adapter and buffer*
- Between the buffer and drive*

*Transfers occur concurrently on the shared buffer memory bus.

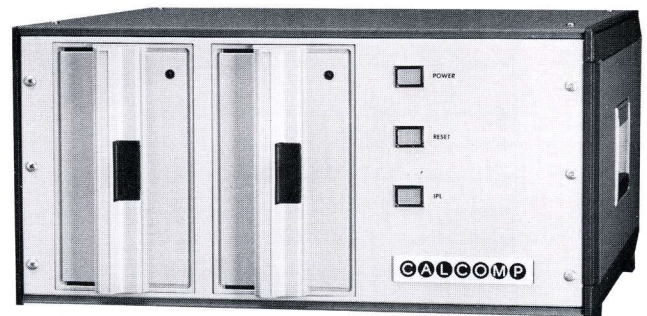
In addition, the 1143M Controller can accommodate two host adapters simultaneously. Examples of host adapters include LSI-11, RS-232-C port and the S-100 Bus.

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

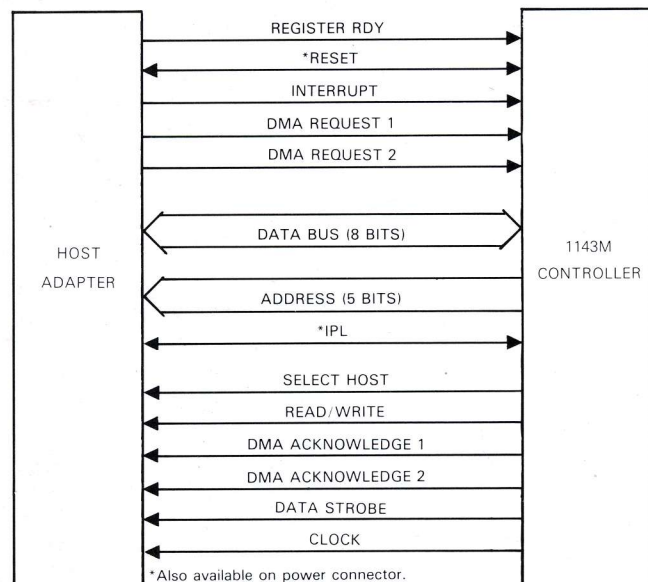
Table Top: 9.6" x 20.1" x 17.9" (20.2cm x 51.1cm x 45.5cm)

19" Retma Rack: 8.8" x 19" x 17.2" (22.3cm x 48.2cm x 43.7cm)

Model 1149M Contains:

Unit	Type
Floppy Disk Drive	142M or 143M (Up to 2 drives)
Power Supply	One or two drives
Controller	1143M
Host Adapters	LSI-11 RS-232-C S-100

Self-Contained Cooling Fans



INTERFACE DIAGRAM

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)



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