

DILOG

Model DQ409

FLOPPY DISC CONTROLLER

DEC LSI-11 COMPATIBLE

FEATURES

- Single dual wide printed circuit board with Shugart interface.
- On-board bootstrap with jumper selectable address for booting RX02 compatible diskettes.
- Compatible with RX02 (DY) software drivers in RT-11 and RSX-11.
- RX01, RX02 media compatible.
- IBM 3740 format.
- Controls one or two single or dual density flexible diskette drives with Shugart 800 or 850 compatibility.
- Jumper selectable 4 level interrupt.
- DMA data transfer.
- On-board formatting capability.
- Write precompensation.
- Automatic power fail/power down protection.
- Memory addressing to 128K words.
- Automatic self-test feature with built-in microdiagnostics and status indicator.

DESCRIPTION

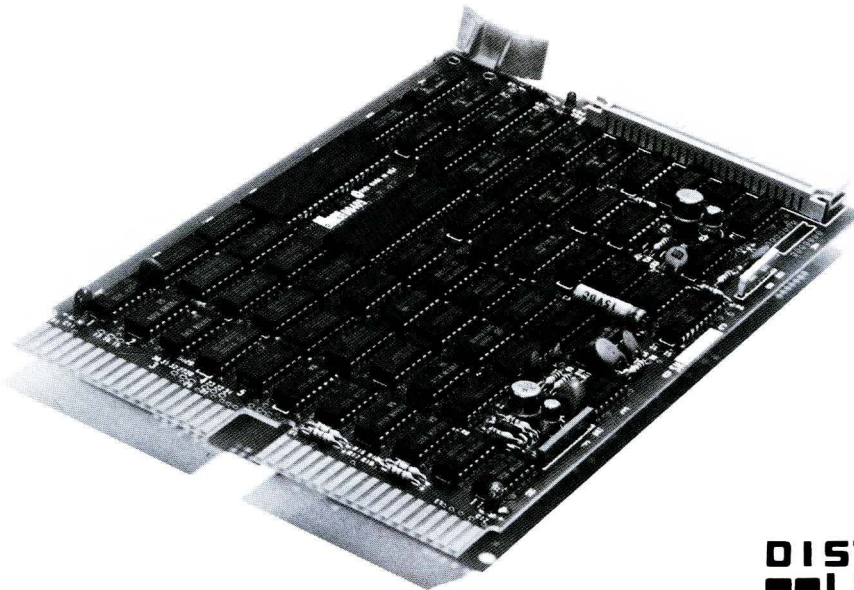
The Distributed Logic Corporation (DILOG) Model DQ409 emulating floppy disc controller couples up to two Shugart SA800 or 850 equivalent floppy disc drives to LSI-11 (Q-BUS) based computer systems. The controller is compatible with all LSI-11, 11/2 and 11/23 based configurations.

The Model DQ409 controller is microprocessor based, and implemented on a single dual wide board, which plugs into and requires one dual wide slot in an LSI-11 based backplane.

On-board firmware provides such features as automatic self-test, write current control, and power fail protect.

A complete disc subsystem is comprised of the controller, one or two floppy disc drives and the necessary interconnecting ribbon cables.

No specially wired connectors, additional chassis, power supplies or bus converters are required. The single, dual printed circuit module contains all necessary disc controller interface and formatting circuitry.



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WRITE PRECOMPENSATION

The Model DQ409 is designed to compensate for a time displacement phenomenon that occurs after the writing of certain bit patterns on the magnetic media. This compensation is required for all floppy disc drives, and designed into the DQ409 to increase the performance level of your floppy disc subsystem. For additional information, refer to Shugart Associates Application Bulletin—"SA800 Series Diskette Storage Drive Double Density Design Guide."

WRITE CURRENT CONTROL

The Model DQ409 provides the appropriate circuitry to reduce the write current for tracks greater than 43.

HARDWARE BOOTSTRAP

The Model DQ409 contains an on-board bootstrap loader to automatically boot double density diskettes. On-board jumpers allow you to disable bootstrap for booting from the standard DEC bootboard, or selection of an alternate bootstrap address.

DATA FORMATTING

The Model DQ409 contains on-board circuitry to allow for the formatting and verification of sector headers, in addition to the writing of the data field in the user selected density.

LOW POWER CONSUMPTION

With its single board architecture and extensive use of Low Power Shottky circuitry, the Model DQ409 exhibits up to 60% less power consumption than other DEC compatible floppy diskette controllers.

FULL SYSTEM SUPPORT

Distributed Logic Corporation also supplies fully integrated and tested disc subsystems, including the disc drives themselves. For the customer that wishes to purchase drives directly from the manufacturer, they can be drop-shipped to our facility where they will be integrated, tested and shipped as a complete system with the Model DQ409.

DOCUMENTATION

Each Model DQ409 is supplied with an Instruction Manual.

OPTIONS

Disc drive I/O cables • Disc Drives • Factory integration of customer-supplied drives.

DISC DRIVES SUPPORTED

SHUGART
REMEX
PERTEC
BASF
MICROPOLIS
PER SCI, INC.
TANDON MAGNETIC CORP.
QUME CORP.

CONTROLLER SPECIFICATIONS

Mechanical—The Model DQ409 is completely contained in one dual module 5.22 inches wide by 8.88 inches deep, and plugs into one dual slot in any DEC LSI-11 based system backplane.

Computer I/O Register Addresses

- Command and status register 777 170
- Data buffer register 777 172

Data Transfer

- Method: DMA

Bus Load

- 1 std unit load

Address Ranges

- Disc drive: up to one meabyte total
- Computer memory: to 128K words

Interrupt Vector Address

- Factory set at 264, priority level BR4

Disc Drive I/O

- 50 pin type "A" flat ribbon cable connector mounted on outer edge of controller module.

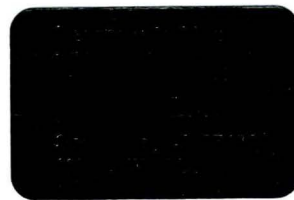
Signal— Shugart 800 compatible

Power— + 5 volts at 2.5 amps

Environment— Operating temperature 40°F. To 140°F, humidity 10 to 95% non-condensing.

Shipping Weight— 5 pounds, includes documentation and cables.

†Specifications subject to change without notice.



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