TAPE

DEC

DISK

DILOG

VAX

PDP-11

LSI-11

"HIGHWAY TO COMPATIBILITY"

TABLE OF CONTENTS

DILOG—Distributed Logic Corporation—is the **First** controller corporation. Take Route 1, the DILOG Highway, on the DEC Bus—UNIBUS and Q-Bus. Follow our signs of technical innovations and quality. Here is our list of **Firsts**:

- **First** DEC* emulating single-board quad-size SMD disk controllers.

- **First** tape coupler for ½" start/stop formatted tape drives.

- **First** tape coupler for ½" streaming tape drives.

- **First** tape coupler for ½" cache tape drives.

- **First** disk controllers with Universal Formatting™ and mapping which allow connection of multiple drives that have the same electrical interface, but have the same or different number of heads, tracks or bpi configuration.

- **First** to use an expanded 56-bit ECC polynomial for enhanced data error recovery.

- **First** disk controller designed specifically for Winchester disk drives.

- **First** to offer a complete family of 22-bit disk and tape controllers/couplers.

- **First** to offer choices of mapping one or more logical units in a physical drive on a vertical or horizontal axis.

- **First** full range of disk controllers that support floppy, 5¼", 8" or 14" Winchester, cartridge or removable media disk drives. AND HERE IS OUR COMPLETE RANGE:

LIST OF MANUFACTURERS

MAGNETIC TAPE		HARD DISK CAPACITIES 2.5 to 300 MB					
½" REEL-TO-REEL STD. & STREAMER	2315/5440/RK05 CARTRIDGE CLASS	CMD CARTRIDGE MODULE	SMD STORAGE MODULE	WINCHESTER 5¼", 8" or 14"		¼" TAPE CARTRIDGE	FLOPPY DISK DRIVE
AMPEX	AMPEX	AMPEX	AMPEX	AMPEX	NIPPON	DEI	BASF
CIPHER	CAELUS	CONTROL	BALL	BASF	PER LTD.	DIGI-DATA	CONTROL
CONTROL DATA	CENTURY DATA	DATA	COMPUTER	CENTURY	OLIVETTI	E.P.I.	DATA
DATUM	CONTROL DATA	VERMONT	CENTURY	DATA	PERTEC (T.A.)	KENNEDY	MICROPOLIS
DIGI-DATA	DEC	RESEARCH	DATA	C.M.I.	PRIAM	PENNY &	M.P.I.
KENNEDY	DIABLO		CONTROL	DMA SYSTEMS	QUANTUM	GILES	QUME
MICRODATA	DRI		DATA	FUJITSU	RODIME	PEREX	REMEX
PERTEC (T.A.)	IOMEC		MITSUBISHI	IMI	SEAGATE	QANTEX	SHUGART
S.E. LABS (EMI)	MICRODATA			KENNEDY	SIEMENS		TANDON
TANDBERG DATA	PERTEC			MEMOREX	SHUGART		
(IDT)	WANGCO (CIPHER)			MICROPOLIS	S.L.I.		
TDX	WESTERN DYNEX			MINISCRIBE	TANDON		
WANGCO (CIPHER)				M.P.I.	TEXAS INST.		
MEGATAPE				N.E.C.	TECSTOR		
				ATASI	3M		
				EVOTEK	SYQUEST		
				DISCTRON	VERTEX		
				DISCTECH ONE	MAXTOR		

*DEC, RSX, RSTS, IAS, DSM, UNIBUS, MUMPS and VAX are registered trademarks of Digital Equipment Corporation.

CORPORATE OVERVIEW
RIGHT TURN

RIGHT TURN

DISTRIBUTED LOGIC CORP.
DILOG
INTERNATIONAL

The whole idea behind the Distributed Logic Corporation is simple: to market state-of-the-art disk and tape drive controllers which deliver a high level of performance at low cost.

Our controllers are smaller, boast lower power requirements and are more reliable—due to fewer components —than any other products on the market today. They are also easier to install and maintain. And we back up every one of our products with quality control and delivery systems that are second to none.

Mass storage and tape drive controllers for the Digital Equipment Corporation (DEC) line of mini- and micro-computers are our specialty. DILOG is the acknowledged leader in this area for the low end of the DEC product line —by far, the largest installed base of small computers in the world.

Collectively, the people at DILOG represent over 300 years of electronics industry experience in the management, marketing and technical areas. We have been involved in all facets of the mini-/microcomputer segment of the industry since its inception in the early 1960's. Today, DILOG maintains a staff of experienced professionals in the key disciplines, augmented when necessary by outside services and consultants of the highest caliber.

Both domestically and internationally, DILOG markets its products through direct sales offices in Garden Grove, California and in the U.K. These are augmented by a network of manufacturer's representatives and distributors. Currently, tens of thousands of DILOG peripheral controllers are installed and operating in customer sites throughout the U.S., the U.K., Europe and Southeast Asia.

PRODUCTS

Before we began selling our products in 1978, we spent a considerable amount of time with one goal in mind: to be able to go from specification to marketplace with any new controller in 120 to 180 days, versus the industry average of 8 to 12 months. Our automated concept for product development has enabled us to do just that. We can always react quickly to the rapid technological changes which are a cornerstone of the small computer industry.

We currently offer 28 magnetic tape and disk controller products for the DEC PDP-11 minicomputer and LSI-11 microcomputer. Connection of each controller to the magnetic tape or disk drive which it controls is made through common flat cables. Along with the small size of DILOG's products, this means our customers can easily install and service our boards.

At the heart of every DILOG product is a proprietary design. In tandem with our unique automated computer based peripheral controller development systems, we are able to produce the highest quality peripheral controllers— products which are not only more cost effective, but which can be brought to the marketplace faster than any other competitive products.

The intelligence—or "personality"—of each of our controllers is determined by firmware programming of the DILOG proprietary microprocessor-based design, representing approximately 60% of the circuitry involved with each device. There is an 80% overall physical and electrical commonality between most products offered by the company.

All of DILOG's intelligent controllers have an on-board automatic self-test feature as well. Each controller contains built-in microdiagnostics with which it can test itself upon initiation by the host computer. A green light on the edge of each controller's printed circuit card remains lit as long as the self-test procedure is successful. Should the controller fail a test on itself, the light is extinguished. The customer then simply unplugs the controller and replaces it.

Other DILOG controller features include automatic media flaw compensation, automatic power down protection and memory addressing capability to 256 Kbytes, or with 22-bit addressing 4 megabytes. Our controllers consume up to 60% less power than multiple board type embedded controllers and no specially wired connectors, power supplies or bus converters are required.

BRIGHT FUTURE AHEAD

We're currently looking into new applications of our existing technology to other areas of data processing. In the near future, we hope to be making important announcements regarding new product categories which DILOG is just beginning to explore.

In every sense, we're a company on the move. Wherever the industry is headed next, DILOG intends to map out new directions in powerful, simple-to-use computer components for all the years to come.
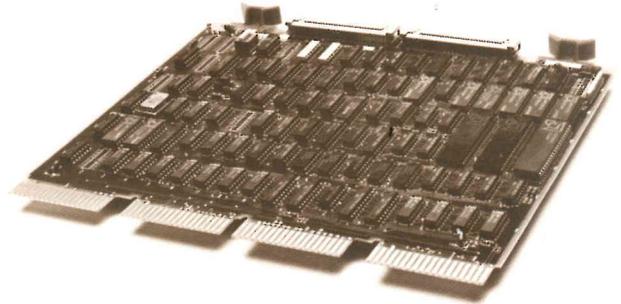
MODEL DQ130
DEC LSI-11 Compatible
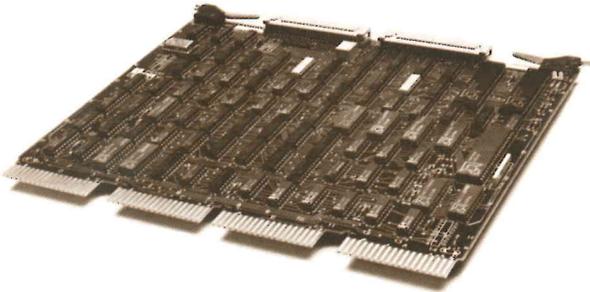
- Interfaces to LSI-11 through -11/23 PLUS microcomputers.
- Emulates DEC TM-11 controller.
- Handles up to eight 9-track, 800/1600 bpi industry standard formatted tape drives at speeds from 12.5 to 125 ips—eight stop/starts or four ½″ streamers.
- Completely contained on one quad-wide module.
- RT-11, RSX-11, RSTS and TSX-Plus* software compatibility.
- FIFO buffer for DMA latency.
- Memory addressing capability to 256 Kbytes.
- Software or switch selectable density control.

*TSX-Plus is a trademark of s&h computer systems, inc.

MODEL DU130
DEC PDP-11 Compatible

- Interfaces to DEC PDP-11 UNIBUS computers.
- Emulates DEC TM-11 controller.
- RT-11, RSX-11, RSTS, IAS, MUMPS and TSX-Plus software compatibility.
- Handles up to eight 9-track, 800/1600 bpi industry standard formatted tape drives at speeds from 12.5 to 125 ips—eight stop/start or four ½″ streamers.
- FIFO buffer for DMA latency.
- Software or switch selectable density control.
- Completely contained on one quad-wide board.
- Memory addressing compatibility to 256 Kbytes.

MODEL DQ132
DEC LSI-11 Compatible
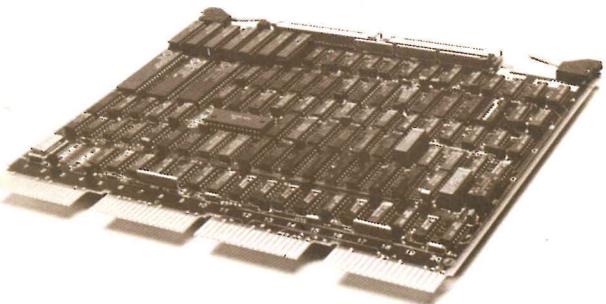
- Interfaces LSI-11 through LSI-11/23 PLUS microcomputers.
- Emulates DEC TS-11 or TSV05.
- 600 Kbytes/sec data transfer rate, for both GCR and CacheTape compatibilities.
- Controls up to four ½″ streamer tape drives or four ½″ formatted start/stop tape drives, with switch selectable interrupt vectors for the second, third and fourth drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- 22-bit addressing for access to four megabytes.
- Contained on one quad module.
- Extended 1 Kbyte data buffer.
- DMA burst size of 8 bytes with dynamic auto throttle control.

MODEL DU132
DEC PDP-11/VAX Compatible
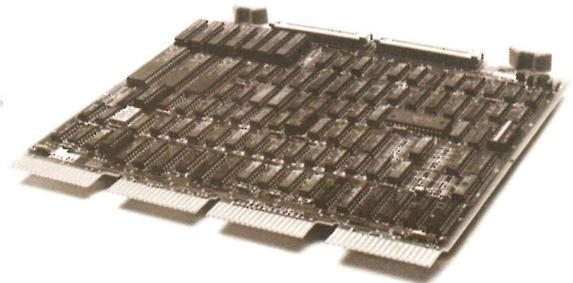
- Interfaces PDP-11 and VAX UNIBUS computers.
- Controls up to four ½″ streamer tape drives or four ½″ formatted start/stop tape drives, with switch selectable interrupt vectors for the second, third and fourth drives.
- VMS, RT-11, RSTS and RSX software compatibility.
- 600 Kbytes/sec data transfer rate, with both GCR and CacheTape compatibilities.
- Contained on one quad module.
- Extended 1 Kbyte data buffer.
- Switch selectable DMA burst sizes of 4 to 8 bytes with dynamic auto throttle control.
- Full TU-80 diagnostic compatibility.
- Emulates DEC TS-11 or TU-80.

## MODEL DQ215/SMD INTERFACE
DEC LSI-11 Compatible
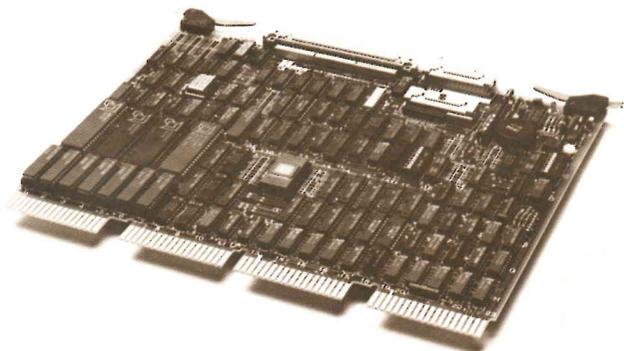
- Interfaces LSI-11 through 11/23 PLUS microcomputers.
- Emulates DEC RK06 or RK07 (switch selectable).
- Connects up to two SMD I/O disk drives, including 8- and 14-inch Winchester, SMD pack and CMD cartridge type drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- 22-bit addressing for access to four megabytes.
- 56-bit error correction code (ECC).
- Full sector data buffer.
- On-board bootstrap loader.

MODEL DU215/SMD INTERFACE
DEC PDP-11/VAX Compatible
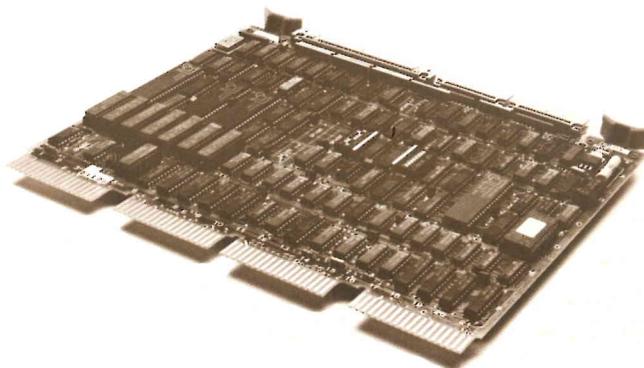
- Interfaces PDP-11 and VAX UNIBUS computers.
- Emulates DEC RK06 or RK07 (switch selectable).
- Connects up to two SMD I/O disk drives, including 8- and 14-inch Winchester, SMD pack and CMD cartridge type drives.
- RT-11, RSX-11, RSTS and VMS software compatibility.
- Universal Formatting.™
- Memory addressing to 256 Kbytes.
- 56-bit error correction code (ECC).
- Full sector data buffer.

MODEL DU218/SMD INTERFACE
DEC PDP-11 Compatible
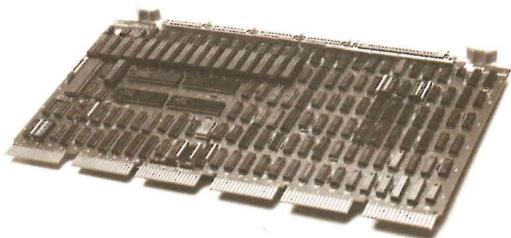
- Interfaces to DEC PDP-11 UNIBUS computers.
- Emulates DEC RM02/RM05.
- Media compatible wth DEC RM02/RM03/RM05 drives when using CDC 9762/9766 or equivalent disk drives.
- Connects to four Winchester drives that contain an industry standard SMD interface.
- RSTS, RSX-11, IAS and DSM software compatibility.
- Completely contained on one hex-wide module.
- FIFO data buffer of 1,536 bytes (3 sectors).
- 32-bit ECC for data error detection and correction in addition to a 16-bit CRC for header error detection (RM02/RM05 media compatible).
- Offset commands for electrical head adjustment.
- Number of data transfers per DMA request switch selectable with dynamic auto throttle control.

MODEL DQ228/SMD INTERFACE
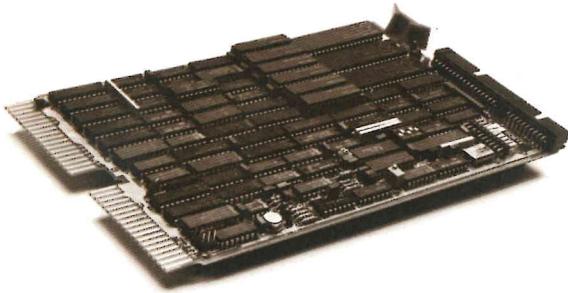### DEC LSI-11 Compatible
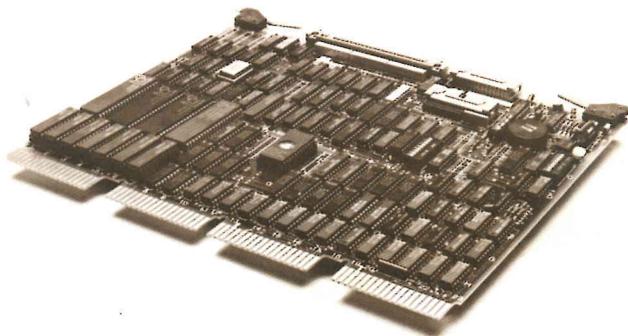
- Interfaces LSI-11 through 11/23 PLUS microcomputers.
- Emulates DEC RM02/RM05.
- Connects up to two disk drives which contain an industry standard SMD interface.
- RSTS and RSX-11 software compatibility.
- 22-bit addressing accesses four megabytes.
- 56-bit error correction code (ECC).
- Universal Formatting.™
- Full sector data buffer.
- Completely contained on one quad-wide module.
- On-board bootstrap loader.

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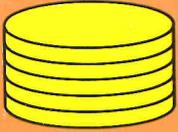
DISTRIBUTED LOGIC CORP.
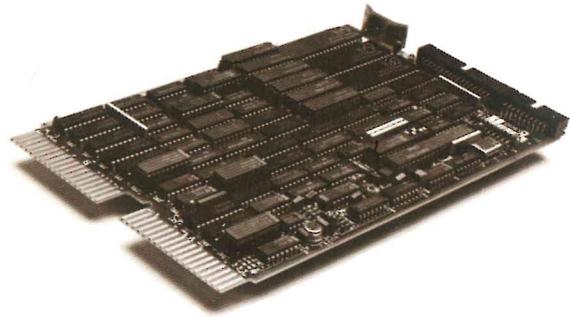**dilog**
INTERNATIONAL

MODEL DQ614/WINCHESTER ST506
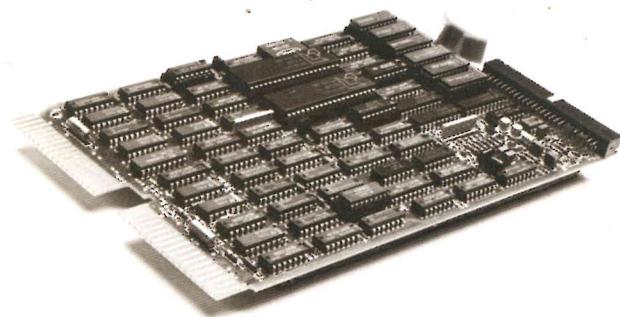**DEC LSI-11 Compatible**

- Interfaces LSI-11 through 11/23 PLUS microcomputers.
- Emulates DEC RL01/RL02.
- Connects up to two ST506 or equivalent disk drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- 22-bit addressing for access to four megabytes.
- Enhanced error correction code (ECC) with a 32-bit checkword.
- Completely contained on dual-wide module.
- Full sector data buffer.
- On-board bootstrap loader.

MODEL DQ615/WINCHESTER ST506
DEC LSI-11 Compatible

- Interfaces LSI-11 through 11/23 PLUS microcomputers.
- Emulates DEC RK06/RK07.
- Connects up to two high capacity, 5¼″ Winchester drives which have ST506 interfaces.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- 22-bit addressing for access to four megabytes.
- Enhanced error correction code (ECC) with a 32-bit checkword.
- Completely contained on one dual-wide module.
- Full sector data buffer.
- On-board bootstrap loader.

MODEL DQ409/FLOPPY
DEC LSI-11 Compatible

- Interfaces LSI-11 through 11/23 microcomputers.
- Emulates DEC RX02.
- Controls one or two single or dual density flexible diskette drives with Shugart 800 or 850 compatibility.
- RT-11 and RSX-11 software compatibility.
- Media compatible with DEC RX01/RX02.
- IBM 3740 format compatible.
- On-board formatting capability.
- Completely contained on one dual-wide module.

MODEL DQ214/SMD INTERFACE
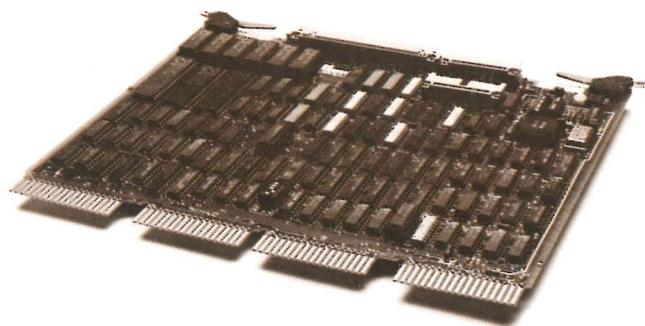**DEC LSI-11 Compatible**
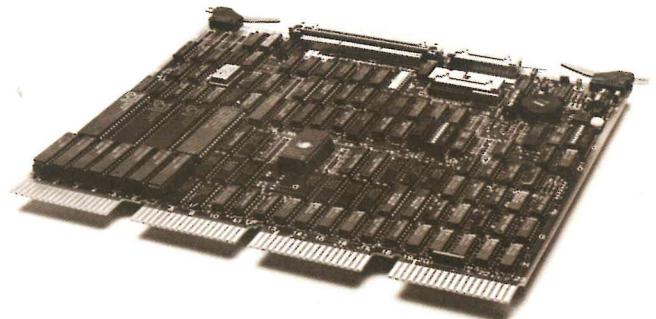
- Interfaces LSI-11 through 11/23 PLUS microcomputers.
- Emulates DEC RL01/RL02.
- Connects up to two SMD compatible disk drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- 22-bit addressing for access to four megabytes.
- 56-bit error correction code (ECC).
- Completely contained on one quad-wide module.
- Full sector data buffering.
- On-board bootstrap loader.

MODEL DQ202A/SMD INTERFACE
DEC LSI-11 Compatible

- Interfaces LSI-11 through 11/23 microcomputers.
- Emulates DEC RP02/RP03.
- Connects up to two SMD I/O disk drives including 8- and 14-inch Winchester, SMD pack and CMD cartridge type drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- Completely contained on one quad-wide module.
- Automatic media flaw compensation with bad-sector flagging and transparent, automatic track-skipping features.
- Full sector data buffer.
- On-board bootstrap loader.

MODEL DU202A/SMD INTERFACE
DEC PDP-11 Compatible
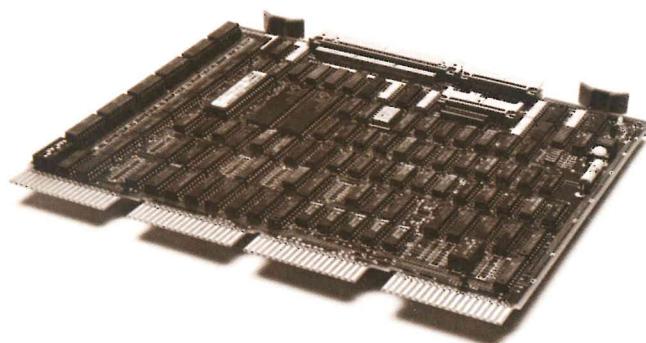
- Interfaces PDP-11 computers.
- Emulates DEC RP02/RP03.
- Connects up to two SMD I/O disk drives.
- RT-11, RSX-11, RSTS and TSX-Plus software compatibility.
- Universal Formatting.™
- Up to 88% utilization of drive unformatted storage capacity.
- Completely contained on one quad-wide module.
- Full sector data buffer.
- Automatic media flaw compensation with bad-sector flagging and transparent, automatic track-skipping features.

HOW TO ORDER

To place an order, simply supply DILOG with the following information:

(1) Your purchase order number.

(2) "Bill to" and "Ship to" addresses.

(3) Your DEC computer type (e.g., PDP-11/34, etc.).

(4) Operating system and version used (e.g., RSX-11M, Ver. 4.0; VMS, Ver. 3.1, etc.)

(5) Manufacturer (see page 2) and drive model number (e.g., Cipher F880-1).

(6) Emulation desired (TS-11, RP02, RK06, etc.).

(7) Diagnostics media (800 or 1600 bpi tape, RX01 or 02 floppy, etc.).

(8) Quantity desired and ship date.

(9) Cables (from controllers to the drive[s]).

SERVICE & WARRANTY

- Twelve-month warranty with return to factory.

- Ninety-day warranty replacement service.

- Controller board loaner service program—fixed fee—includes shipment of loaner board via overnight express service.

- Product update service to reflect upgrades by DEC of DEC operating system software.

- Telephone technical assistance.

- On-site service availability as required.

- Out-of-warranty repair—return to factory—fixed fee.

ACTION REQUEST

Name:_____

Title:_____

Company:_____

Address:_____

_____

_____

Telephone (   ) _____

My Application:

    CPU _____

    Disk _____

    Tape _____

    Operating System _____

    Present Controller _____

Please provide the following services:

☐ Send specific data sheets on: _____

☐ Provide price quote quantity: _____

☐ Have salesman call.

☐ Add to mailing list.

ACTION REQUEST

Name:_____

Title:_____

Company:_____

Address:_____

_____

_____

Telephone (   ) _____

My Application:

    CPU _____

    Disk _____

    Tape _____

    Operating System _____

    Present Controller _____

Please provide the following services:

☐ Send specific data sheets on: _____

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