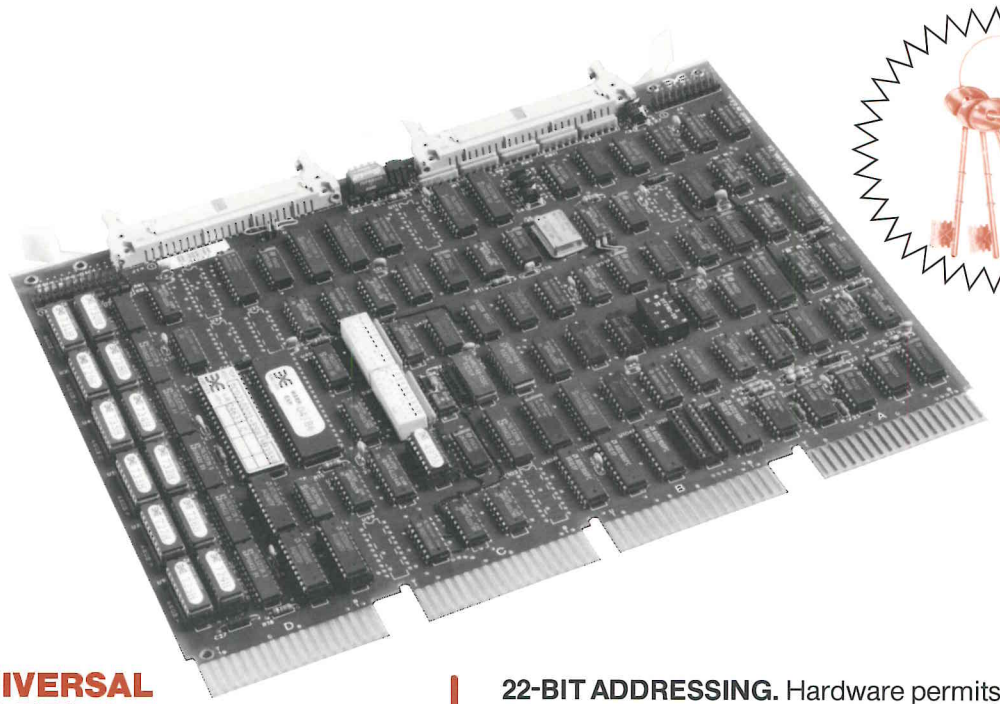
EMULEX

THE GENUINE ALTERNATIVE
FOR MICROVAX I AND II, MICROPDP, LSI-11 TAPE CONTROLLERS

MODEL TC02
TS11-COMPATIBLE



A TRULY UNIVERSAL TAPE COUPLER!

The TC02 has DEC™ TS11 diagnostic/software transparency and standard operating system support across the MicroVAX™ I and II, MicroPDP™ and LSI-11™ CPU lines. The TC02 also handles industry-standard half-inch tape transports — conventional start/stop, streaming, and the new generation of GCR units. Compactly packaged on a single quad-height board with low power consumption, the TC02 is backed by worldwide support and the EMULEX brand of quality.

COMPARE THESE FEATURES TO ANY...

FLEXIBLE TRANSPORT INTERFACE. Industry standard ("Pertec interface") drives incorporating embedded or integral formatters are handled by this coupler. Up to four similar type transports (i.e., start/stop or streamer) may be daisy-chained on a single coupler.

PERFORMANCE. The TC02 is designed to handle tape data rates up to 200K bytes per second. This permits operation with high-performance transports, including: 1600 bpi @ 125 ips; 3200 bpi @ 50 ips; and 6250 bpi @ 25 ips.

INTERNAL SELF-TEST. The TC02 automatically performs extensive diagnostic tests during power-up and flags detected errors with fault LED indicators.

22-BIT ADDRESSING. Hardware permits direct access to the full 4M byte memory range on Q-bus-based processors.

MICROVAX MEMORY. The MicroVAX II has a bus map that translates the 4M bytes of Q-bus virtual address space to physical locations within the 9M bytes of private memory. All of this is done automatically and transparently to the operating system. This ensures full access to the 9M bytes of memory available on MicroVAX II systems.

COMPACT PACKAGING. The TC02 is contained on a single quad-height pcb which plugs into any standard Q-bus quad slot.

TRANSPARENT SOFTWARE OPERATION. The coupler, combined with one to four standard formatted tape drives, emulates all functions of the DEC TS11 subsystem, including execution of standard diagnostic programs.

STANDARD CPU BUS INTERFACE. The coupler interfaces to any standard quad bus slot and presents only one unit load on all lines. Full 16-bit word NPR data transfers are made, and the controller checks for bus parity errors if a parity controller is installed in the system. The TC02 interfaces through the Q-bus A–B connectors.

FLEXIBLE FORMATTING. Data may be packed in either DEC or IBM 9-channel format. Tape drives may be daisy-chained together. The user may edit previously recorded records.

Emulex Corporation, 3545 Harbor Boulevard, P.O. Box 6725, Costa Mesa, California 92626
In California, call 714/662-5600. Outside California, call toll free 800/854-7112
TWX: 910-595-2521 EMULEX CSMA • TELEX: 183627 EMULEX CSMA

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MODEL TC02 SPECIFICATIONS

FUNCTIONAL

Design:
High-speed 8-bit bipolar microprocessor-based tape coupler for formatted tape transports.

CPUs:
MicroVAX I and II, MicroPDP, 11/23 and 11/23-PLUS.

Tape Speeds:
12.5 to 125 ips.

Tape Densities:
800, 1600, 3200, 6250 bpi.

Maximum Tape Data Transfer Rate:
200K bytes/second.

Standard Emulation:
DEC TS11 Tape Subsystem.

Bus Address Range:
0-4M bytes for MicroVAX II and LSI-11/23-PLUS.

Standard Register Base Address:
Variable.

Standard Interrupt Vector:
Variable.

Interrupt Level:
5.

Tape Transports:
START-STOP — All 9-track, 800/1600 bpi industry-standard formatted tape drives.
STREAMER — Cipher-F880 and F880 II Microstreamer
CDC-92181 Streaming Tape
Kennedy-6809 Data Streamer
Pertec-F1000 Streaming Tape

Number of Transports:
Daisy-chain 1-4 drives.

Coupler/Tape Bus Parity:
Parity generated and checked on all byte transfer between coupler and tape transport, with errors flagged as status bits.

Self-Test:
Coupler automatically executes extensive power-up self-test.

Fault/Activity:
LED indicates detected board fault and coupler read/write activity.

PHYSICAL

Packaging:
Quad-size board, standard quad slot.

Cabling:
Two 50-conductor flat cables to first tape transport.

Adapters:
Daisy-chain cable adapters available for most industry standard tape drives.

ELECTRICAL

Computer:
Standard Interface — Q-bus using DEC-approved drivers and receivers; one unit load per bus line.
Transport Interface — 25mA drivers used on all output lines. Maximum 25 feet cumulative daisy-chain cable length.

Power:
+5VDC ±5%, 6 amps.

ENVIRONMENTAL

Exceeds all environmental ranges and conditions specified for commercial MicroVAX I and II, MicroPDP and LSI-11 computers and applicable tape drives.

SOFTWARE

LSI-11 and MicroPDP Diagnostics:
TS11 Controller Logic Test — ZTSIBO.
TS11 Data Reliability Test — ZTSHCO.

Operating Systems:
All applicable to the TS11 tape system; includes RT-11, RSX-11M, RSX-11M-PLUS, RSTS/E and MicroVMS.

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