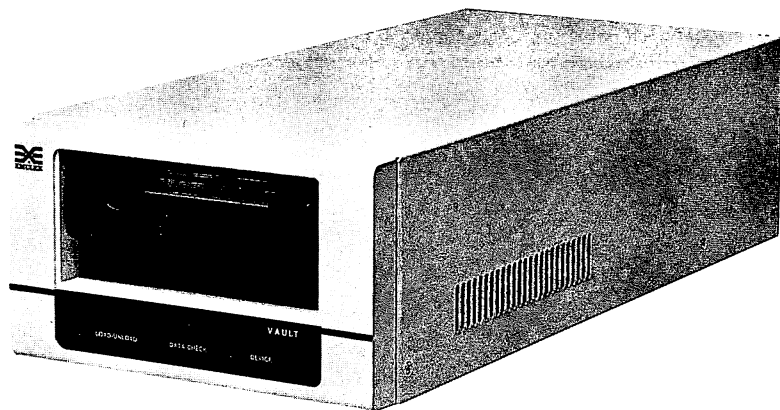




THE GENUINE ALTERNATIVE
FOR 1/4-INCH STREAMING TAPE SUBSYSTEMS
THE VAULT SERIES
FOR DEC* LSI/PDP/VAX-11 COMPUTERS
TS11 COMPATIBLE



**WE HAVE THE LOW-COST 1/4-INCH TAPE
SUBSYSTEM MARKET LOCKED-UP!**

Now you can put your data in a nice, safe place... the EMULEX VAULT, featuring the high-capacity CDC Sentinel† 1/4-inch tape cartridge STREAMER in a compact desktop subsystem. With the EMULEX TC05 or TC15 Tape Coupler, you have all you need to transfer or backup data from your LSI/PDP/VAX-11 computer. Standard TS11 software transparency makes this little tape unit look like a big 1/2-inch TS11 subsystem to the operating system. Another GENUINE ALTERNATIVE from EMULEX.

* DEC, LSI, PDP, VAX, OBus, and Unibus are registered trademarks of Digital Equipment Corporation.
† CDC and Sentinel are trademarks of Control Data Corporation.



A DESKTOP PACKAGED TAPE SUBSYSTEM DESIGNED AROUND THE CDC SENTINEL 1/4-INCH TAPE STREAMER!

The VAULT Tape Subsystem opens up a whole new range of applications and product configurations from which to choose. And at the same time, it provides software compatibility to DEC's TS11, using CDC's new 1/4-inch streaming magnetic tape unit. With this exceptional new product, you get the advantages of:

- INCORPORATING the CDC Sentinel 1/4-inch STREAMER tape drive, which features high-capacity in a compact, convenient desktop package.
- EMULATING a streaming 1/2-inch TS11 tape subsystem, with start-stop emulation.
- EXECUTING TS11 diagnostics and system software under all major DEC-supported operating systems — including RT11, RSX11M, RSTS-E... even VMS on the VAX-11.
- BACKING UP fixed media (Winchester) disk drives with standard DEC-supported TS11 tape software.
- EMBEDDING the coupler in any quad slot of a standard QBus or Unibus backplane or system unit.
- FUNCTIONING when you plug it in and continuing to work reliably for thousands of hours.

COMPARE THIS COMBINATION OF KEY FEATURES AGAINST THOSE OF ANY SIMILAR PRODUCT. And we think you will agree that the VAULT is the best choice for meeting your 1/4-inch tape subsystem requirements.

TRANSPARENT SOFTWARE OPERATION.

The combination of CDC's new 1/4-inch formatted tape drive and the TC05 or TC15 coupler emulates all functions of the DEC TS11 subsystem, including execution of the standard diagnostic programs.

FOR BACKUP OF WINCHESTER DISKS...

...you can use your standard LSI/PDP/VAX-11 software. A 3.5 KByte data buffer provides capability for physical media backup for all EMULEX and DEC hard disk subsystems using the standard RSX11M, RSX11M-PLUS, RSTS-E, RT11 and VMS software. Backup is efficient, too, with each tape cartridge holding up to 50 megabytes of data, depending on block size and re-command time

THE VAULT SUBSYSTEM CABINET.

A compact unit that houses the tape drive and its power supply and sits on a desk, shelf, or just about any other location convenient for your application. The subsystem power supply accepts 115 or 230 volts (50-60 Hz.) and the package is fully FCC Class A certified and is designed for UL and CSA approval.

THE VAULT SUBSYSTEM TAPE COUPLER.

LIKE ALL EMULEX CONTROLLERS, the TC05 and TC15 for LSI/PDP/VAX-11's incorporate the same modern bipolar microprocessor technology first introduced by EMULEX, then perfected and proven in the many thousands of units already shipped. Use of this technology results in a product line with full flexibility, optimum packaging, outstanding reliability, extra features, and high performance.

COMPACT PACKAGING. Each coupler is contained on just one stand-alone quad pc board which plugs into any standard QBus or Unibus SPC slot.

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

LARGE DATA BUFFER. Provides efficient tape operation while functioning with standard DEC software.

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 DMA data transfers are available, with the coupler checking for bus parity errors. The TC05 electrically interfaces via the QBus A-B connectors and the TC15 interfaces via connectors C-F in a Unibus SPC slot.

4 MEGABYTE QBUS ADDRESS. The TC05 has full 22-bit QBus address hardware implemented, permitting software to utilize the full 4 megabyte memory capacity of the LSI-11/23 PLUS.

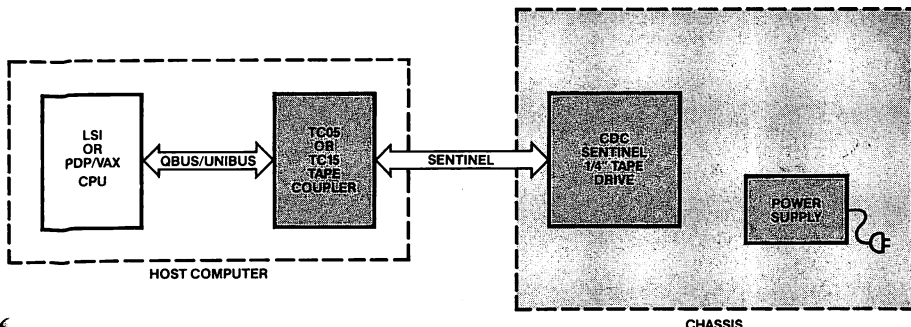
THE VAULT SUBSYSTEM TAPE DRIVE.

ADVANCED TRANSPORT INTERFACE. The VAULT incorporates CDC's SENTINEL 1/4-inch formatted tape drive, which contains its own integral formatter.

WE OFFER MORE THAN JUST GREAT PRODUCTS.

You get superb quality and excellent support from EMULEX with the VAULT Tape Subsystem. All pcb components are pre-aged for at least 160 hours, and final pcb assemblies are environmentally cycled for at least 96 hours (while operating).

The VAULT packaged subsystem is fully system tested for two hours, to ensure ultimate reliability from the moment it is installed. Plant production capability exists to meet the highest of volume requirements. All EMULEX products are backed by a full one year warranty and supported worldwide by the company's technical applications group.



VAULT™ PACKAGED SUBSYSTEM



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PRODUCT SPECIFICATIONS EMULEX VAULT TAPE SUBSYSTEM

Characteristic Specification

*The following specifications apply to the
VAULT Tape Subsystem:*

EMULEX Controllers	EMULEX TC05 for LSI-11 through 11/23 PLUS. EMULEX TC15 for PDP-11/04 through 11/70 and VAX-11.
Standard Emulation	DEC TS11 Tape Subsystem.
Cabling	Single 34-conductor round shielded cable between embedded tape coupler and tape cabinet. Maximum 10 foot cable length.
Software	LSI/PDP-11 Diagnostics: TS11 Controller Logic Test — ZTSIBO (patched). TS11 Data Reliability Test — ZTSHCO. VAX-11 Diagnostics: TS11 Subsystem Repair — EVMAD (patched). TS11 Data Reliability Test — EVMAA. Operating Systems: Transparent to all software appli- cable to TS11 tape system on LSI/PDP/VAX-11. Includes RT11, RSX11M, RSX11M-PLUS, RSTS-E, and VMS.
Power Supply	115 VAC + 10%, 60 Hz or 230 VAC + 10%, 50 Hz.
Size	Height: 5½ inches. Width: 8¾ inches. Depth: 19½ inches.
Environment	Exceeds all environmental ranges and conditions specified for com- mercial LSI/PDP/VAX-11 computers and applicable tape drives.

*The following specifications apply to the
EMULEX Tape Couplers:*

Design	High-speed 8-bit bipolar micro- processor-based tape coupler for formatted cartridge tape transports.
Data Buffering	3.5 KBytes.
Bus Address Range	0-256 KBytes standard (0-4 MBytes optional for LSI-11/23-PLUS).

Characteristic Specification

Standard Register Base Address	Variable.
Standard Interrupt Vector	Variable.
Interrupt Level	BF5.
Self-Test	Coupler automatically executes extensive power up self-test.
Fault/Activity Display	LED indicates detected board fault and coupler read/write activity.
Option/ Configuration Switches	Three on-board slide switch modules for Base Address and Interrupt Vector.
Packaging	Quad-size four layer board.
Computer Interface	Standard QBus (TC05) or Unibus (TC15) using DEC approved drivers and receivers; one unit load per bus line.
Power	+5 volts + 5%, 6 amps.

*The following specifications apply to the
Control Data Sentinel Tape Drive:*

Tape Drive	CDC 92190 Sentinel 1/4-inch NRZ 8000 bpi formatted streaming tape drive.
Transport Interface	Standard CDC Sentinel tape drive formatter interface.
Subsystem Configuration	Single formatted tape drive and coupler per subsystem.
Tape Media	1/4-inch tape data cartridge.
Tape Speed	55 ips.
Tape Density (Forward & Reverse)	8000 bpi.
Tape Capacity	Up to 50 Megabytes on 450 foot tape cartridge, depending on block size and re-command time.

Recording Mode	Serial recording in NRZ format.
Track Configuration	Sequential, serpentine track record- ing (11 tracks) per ANSI X3.55-1977.