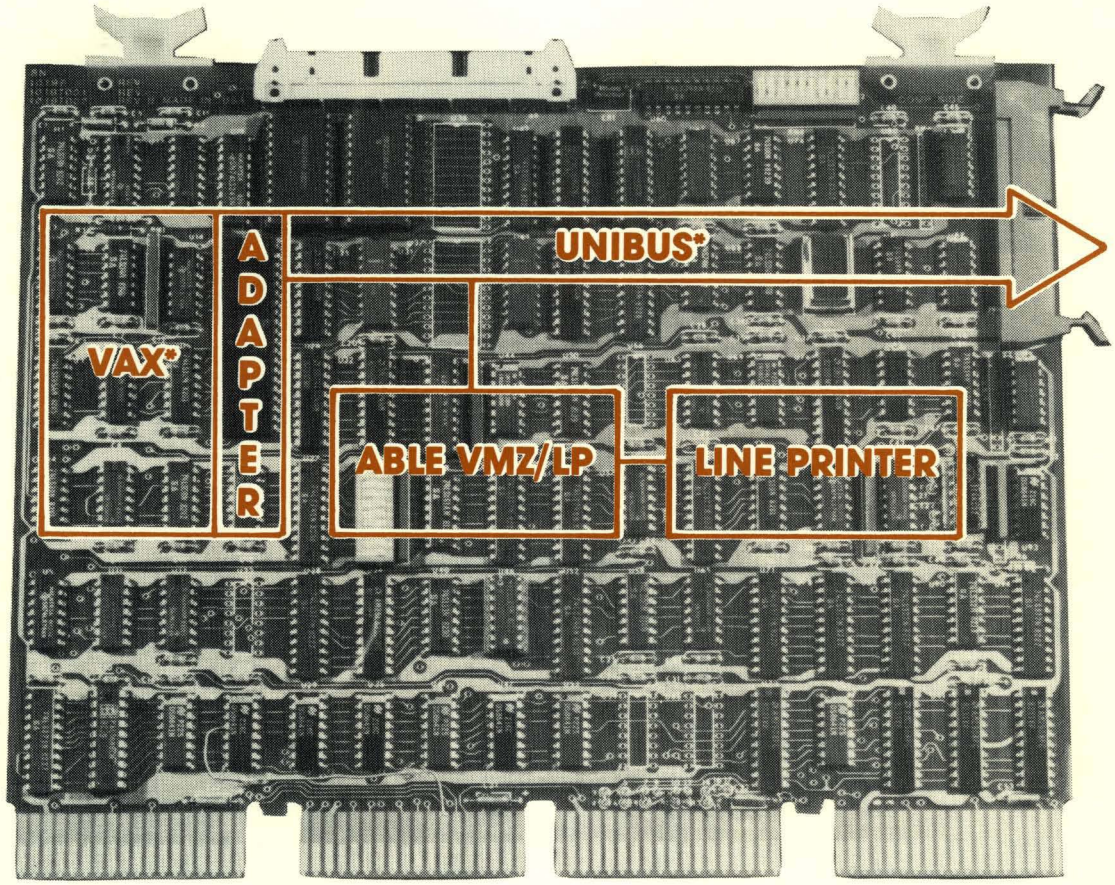
ABLE COMPUTER

ABLE VMZ/LP

THE USER-FRIENDLY ALTERNATIVE

EQUIVALENT TO LINEPRINTER CONTROLLER FUNCTION OF DMF-32

FULLY COMPATIBLE TO VMS* VERSION 3



The VMZ/LP LINEPRINTER CONTROLLER is a microprocessor based lineprinter controller which contains a single parallel channel programmed to emulate the lineprinter function of a Digital DMF32 controller. The channel contains the hand shaking signals necessary for lineprinter operations.

Data transfer from the VAX-11* computer system is initiated under system software control in a manner compatible with procedures which operate a Digital DMF32. The Able VMZ/LP is LP11 cable compatible; change controllers using your existing DEC* cable and printer.

A 256 character buffer is provided which may be enabled or disabled by a switch provided on the VMZ/LP.

Characters are transferred from the VAX-11 memory by the VMZ/LP LINEPRINTER using DMA. A program interrupt may be generated when the transfer is complete, and is enabled or disabled under program control.

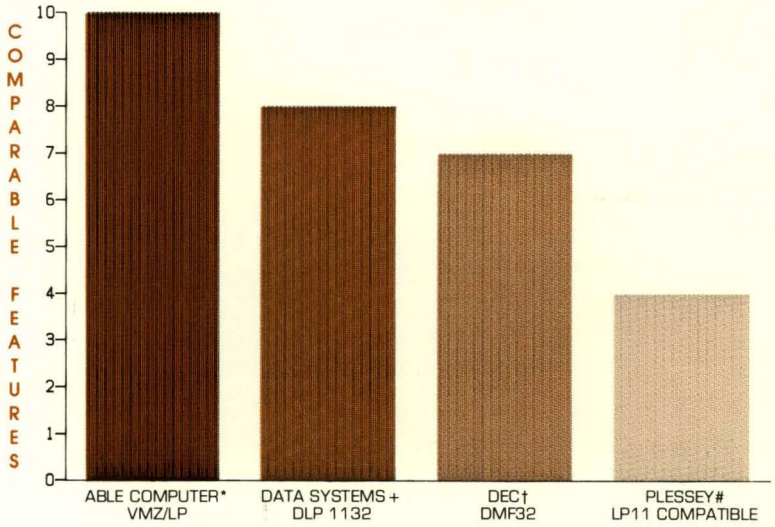
*VMS, VAX, UNIBUS and DEC are trademarks of Digital Equipment Corporation.

ABLE COMPUTER

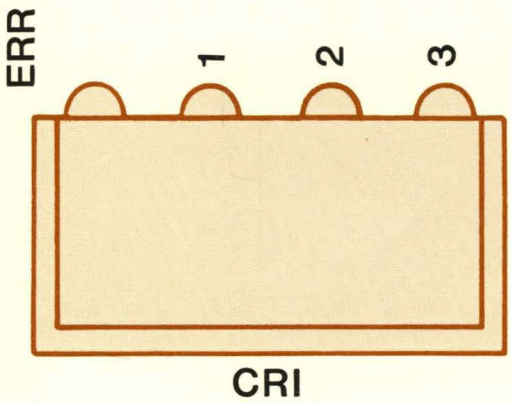
THE ABLE VMZ/LP LINEPRINTER PROVIDES

- Pin-compatible replacement for LP11 interface (M7258)
- DMA transfers
- Expanded Character Buffer size
- Easy to Install
- Parallel Data Transfer
- VAX/VMS User-Friendly
- Formatting capabilities include:
  - Tab expansion
  - Auto CR insertion
  - Line wrap
  - Form feed to line feed conversion
  - Lower case to upper case conversion

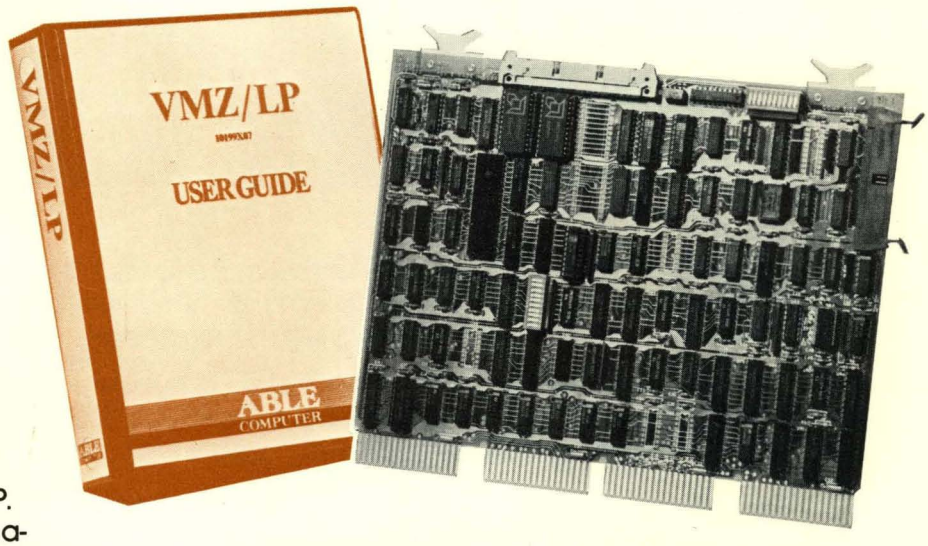
USER-FRIENDLY FEATURES



VMZ/LP is a registered trademark of ABLE Computer
DLP 1132 is a registered trademark of Data Systems Corp.
DMF32 is a registered trademark of Digital Equipment Corporation
Plessey is a registered trademark of Plessy Peripheral Systems



- **High-reliability** and rapid fault isolation. On-board micro-diagnostics automatically check basic functions of the controller at every power-on and report exceptions in a LED display.



- **ABLE Computer** gives you total support with your purchase of the VMZ/LP Lineprinter Controller. You will receive a comprehensive User's Guide to assist in the installation and operation of your VMZ/LP. ABLE also gives you complete application engineering support should you have any special applications in mind. Your VMZ/LP is shipped to you with an optional 220/330 ohm resistor pack, so you can contour your VMZ/LP to accommodate many of the popular brands of printers in the marketplace. We also assist you with rapid board replacement and repair at our factory. You will find that ABLE's quality is unsurpassed.

ABLE
COMPUTER

ELECTRICAL SPECIFICATIONS

Bus Loading ..... One DC load

Power Required ..... 3.6 amps at +5V.

Bus Request ..... BR5 is standard

Optional Selections BR4, BR6, BR7

Addressing .... The VMZ/LP uses 40 (octal) bytes of floating address space (760000 - 763740).

Interrupt Vector ..... Programmable

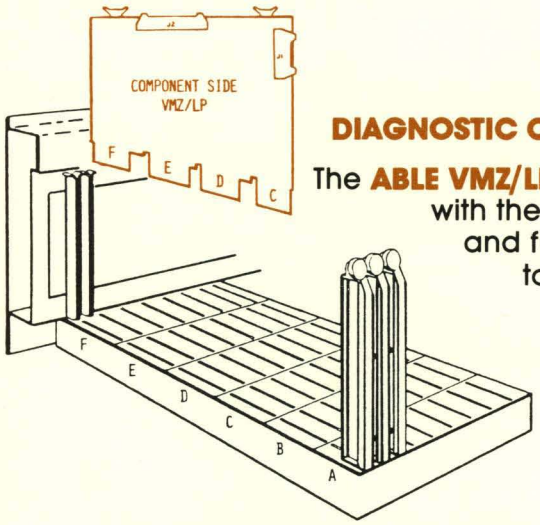
ELECTRICAL INTERFACE

The ABLE VMZ/LP interface is LP11 compatible.

SIGNAL	J1		SIGNAL
STROBE-L	1	2	GND
LPDO4-H	3	4	GND
LPDO5-H	5	6	GND
PRIME-L	7	8	GND
LPDO1-H	9	10	GND
LPDOO-H	11	12	GND
LPDO3-H	13	14	GND
LPDO6-H	15	16	GND
LPDO2-H	17	18	GND
MODE-H	19	20	GND
DEMAND-H	21	22	GND
PAPER-H	23	24	GND
HDWR-H	25	26	GND
FAULT-L	27	28	GND
SELECT-L	29	30	GND
TERM-H	31	32	GND
REMFF-H	33	34	GND
REMEOT-H	35	36	GND
LPDO7-H	37	38	GND
BUFCLR-H	39	40	GND

LINE PRINTER CABLE

Physically, The VMZ/LP consists of a single quad-width module which is installed in a small peripheral controller (SPC) slot of a standard DD11 Unibus backplane. The selected SPC slot must be configured for DMA operation and provide adequate power and cooling.



DIAGNOSTIC COMPATIBILITY

The **ABLE VMZ/LP** is compatible with the UETP Exercisers and fully compatible to VMS version 3.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: ... 0 to 50C (32 to 122F)

Storage Temperature: ..... −10 to 70C (14 to 158F)

Relative Humidity: ..... 90% non-condensing

Altitude: ..... 15,000 feet maximum

NOTE:

DE-RATE THE ABOVE SPECIFICATIONS 1 DEGREE CENTIGRADE FOR EACH 1000 FEET OF ALTITUDE ABOVE 8000 FEET.

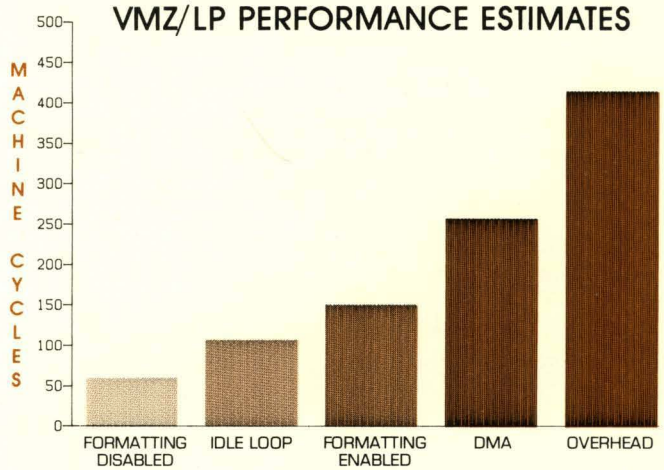
VMZ/LP PERFORMANCE ESTIMATES

CHAR/LINE	FORMATTING	LINES/MINUTE
80	DISABLED	2400
80	ENABLED	2000
132	DISABLED	1800
132	ENABLED	1600

ORDERING INFORMATION

MODEL	ABLE ORDER NUMBER	DESCRIPTION
ABLE VMZ/LP	10199	Standard quad-width board

VMZ/LP PERFORMANCE ESTIMATES



We reserve the right to improve our products at any time.

ABLE COMPUTER

ALSO FROM ABLE

FOR YOUR PDP 11*

ENABLE/34 Allows PDP 11/34, 11/45, and 11/60 users to break the 128K word barrier and expand their systems to 2 Megawords. Use 18 bit memory with 22 bit memory. Optional cache available.

MEGABOX Extends the main memory addressing capability of PDP 11 systems to 1 million bytes. Provides extended memory management and a Unibus Map. 8K byte ENABLE/CACHE optional.

QUADRASYNC B, C Replaces 4 DL11* units with one board, saves DC bus loading. Switch selectable data format, addressing and vectors.

QUADRASYC E Replaces DL11-E. Modified quad-width, runs in EIA mode and provides modem control. Has features of QUADRASYNC B.

QUADRACALL Replaces DN11*. Provide four line auto-call capabilities. Replaces four individual DEC boards.

ABLE DV/16 Interface between PDP 11 and up to 16 comm. lines. Runs synchronous or asynchronous. Transfers words not bytes.

ABLE DZ/16 Replaces DZ11-E. Supports 16 comm. lines with modem but only half the space and power required of a DZ11-E.

ABLE DH/DM Replaces DH11 and DM11. Allows 16 lines with one third the bus loading and one half the power required of a DH11.

REBUS Allows double the bus loading of Unibus. Replaces DM11-A bus repeater. Dual width. Saves space, transparent.

DUAL I/O Replaces 2 DR11-C's in same quad-width size. Switch selectable addressing and vectors. Runs DEC diagnostics.

INTERLINK General purpose DMA interface. Replace DR11-B. Board replacement for dedicated backplace and boards.

BUSLINK General purpose inter-processor link. Replaces DA11-B. Consists of two interlinks.

SCAT/45 Put 128K words on your 11/45, 11/50, 11/55 Fastbus. DEC compatible with all software. 330 nanosecond memory.

CACHE/434 Increases speed of 11/34, 11/40 without additional space. Has automatic disable, is software transparent. Fast !!!

FOR YOUR LSI 11*

QNIVERTER Use PDP 11 peripherals on your LSI 11 or use LSI 11 equipment on your PDP 11. Software Transparent.

ABLE Q/DH Use 8 or 16 lines on your LSI 11. Features modem control, EIA and Current Loop/EIA Dual Distribution panels.

INTERLINK, BUSLINK See above under PDP 11.

UNIMAP A Quad width board that allows 18 bit UNIBUS DMA devices to address 4 Megabytes of Q Bus memory.

QNIMAP Two Dual width boards that gives the 11/23 the capabilities and advantages of a 22 bit bus.

FOR YOUR VAX*

ABLE VMZ/32 Connects your VAX to 16 asynchronous lines. Replaces 2 DMF32's EIA or EIA Current Loop. UETP compatible.

ABLE VMZ/LP Intelligent, high-performance lineprinter controller. DMA and 256 character buffer. LP function of DMF32 compatible.

*DEC, PDP 11, LSI 11, DL11, DN11 and VAX are trademarks of Digital Equipment Corporation.

CALL (800) 332-ABLE FOR THE NAME OF THE ABLE REPRESENTATIVE IN YOUR AREA

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West Germany
49 089/463080, 463089
TX 5213883 ABLE D

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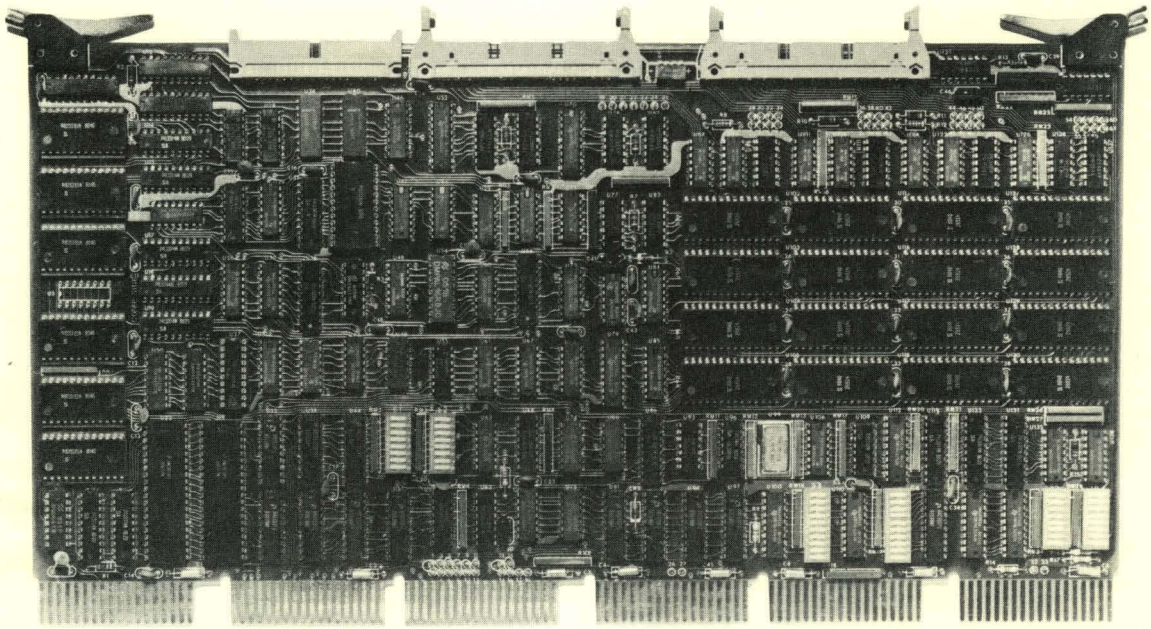
VMZ/32N

VAX-11* Series Compatible Communications Controller



EQUIVALENT TO 2 DEC* DMF/32 CONTROLLERS
FULLY COMPATIBLE WITH VMS* VERSION 3

The ABLE VMZ/32N COMMUNICATIONS CONTROLLER is a microprocessor based communications controller containing two 8-line multiplexers programmed to emulate the asynchronous line functions of two Digital Equipment Corporation DMF/32 controllers.

The ABLE VMZ/32N Controller operates on any VAX-11 system and is fully compatible with VMS version 3.

Programmable DMA operation and modem control are provided by the VMZ/32N. Data transfer from the VAX-11 computer is initiated under software control in a manner compatible with procedures used to operate a DEC DMF32 controller.

All 16 lines can be programmed independently to operate at baud rates from 75 to 19,200, with optional split baud rate capability on each line. DZ11-type modem capabilities are provided on all lines.

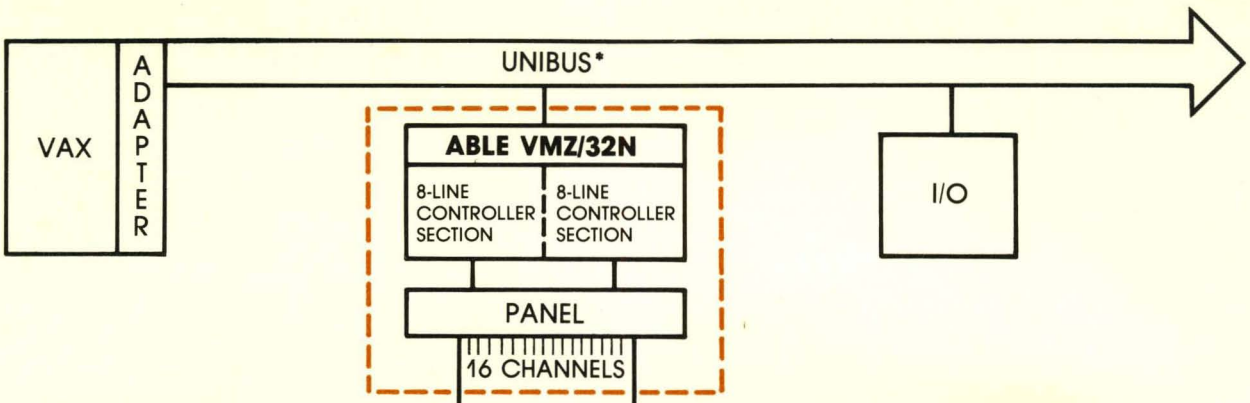
The ABLE VMZ/32N provides:

HIGH PERFORMANCE. ABLE's VMZ/32N offers substantial performance improvement and reduction of system overhead in VAX-11 systems.

FLEXIBILITY. The VMZ/32N provides split speed capability on all lines. Modem control is also available on each line to permit full-duplex dial-up operations. VZMZ/32N hardware flow control capability prevents a loss of data for low-speed devices. A choice of EIA or 20-ma current loop distribution panels is offered with the VMZ/32N controller.

MAINTAINABILITY. On-board LED self-test indicator provides a visual display of VMZ/32N operation on every power up sequence. The high density design of the board reduces physical mounting requirements and installs easily into a DEC DD11 backplane. In addition, ABLE Computer offers you complete support of your VMZ/32N communications controller: hardware, software and documentation.

ABLE COMPUTER



ELECTRICAL SPECIFICATIONS

Bus Loading: 1 DC load		
Power Requirements: Voltage	Current (amps) EIA	20 ma
+5	6.9	7.7
+15	0.35	0.35
−15	0.15	0.30

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature . . . . 0 to 50C (32 to 122F)

Storage Temperature . . . −10C to 70C (14 to 158F)

Relative Humidity . . . . . 90% non-condensing

Altitude . . . . . 15,000 feet maximum

NOTE:

De-rate the above specifications 1 degree Centigrade for each 1000 feet of altitude above 8000 feet.

PROGRAMMABLE LINE PARAMETERS

Number of Stop Bits	1 or 1.5 @ 5 characters. 1 or 2 @ 6, 7, and 8 characters
Parity Generation/ Detect	Odd, even, or none
Operating Mode	Full duplex
Transmitter/Receiver Speed	50, 75, 110, 134.5 150, 300, 600, 1200, 1800, 2000, 2400, 3600, 4800, 7200, 9600, 19200

Breaks can be generated and detected on each line.

ORDERING INFORMATION

MODEL	ABLE ORDER NO.	DESCRIPTION
ABLE VMZ/32N with EIA	10210-0	Hex-width board, EIA distribution panel, 2 connecting cables.
ABLE VMZ/32N with EIA/CL	10210-1	Hex-width board, EIA/CL distribution panel, 2 connecting cables.

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