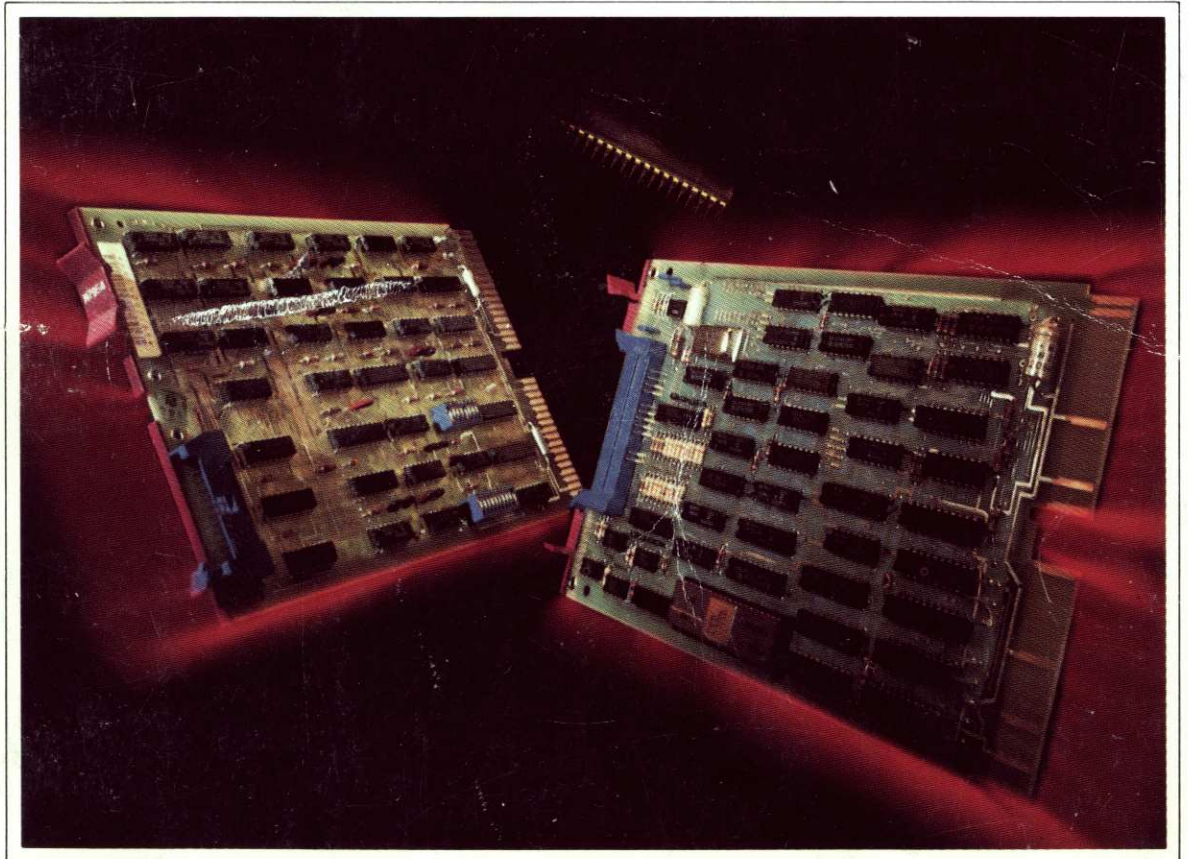


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PDP-11

Microcomputer Interfaces Handbook 1983-84



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DDV11-B

DDV11-B Backplane

INTRODUCTION

The DDV11-B is an optional LSI-11 bus expansion backplane for use when additional logic space is required. The DDV11-B is a 9 × 6, 54-slot backplane with a 9 × 4 slot section (18 individual double-height or nine quad-height module slots) prebused specifically for LSI-11 bus signal, power, and ground connections. The remaining 9 × 2 slot section is provided with +5 Vdc, GND, and -12 Vdc powerconnections only; this leaves the remaining pins free for use with any special double-height logic modules to be used in conjunction with the LSI-11 family of modules and bus requirements.

DESCRIPTION

The DDV11-B consists of an H034 system unit mounting-frame, six H863 and three H8030 connector blocks, and the etched-board bus structure necessary for signal routing. The etched board completely overlays the entire pin side of all connector blocks and is recessed sufficiently to allow wirewrapping on those same pins with 30-AWG wire.

An optional cardcage, type H0341, is also available to provide protection against physical damage to modules and to serve as a cardguide. The cardcage completely surrounds the slot side of the system unit and is shown in Figure 1. The DDV11-B can be mounted in the H909-C enclosure.

NOTE

The H909-C includes the H0341 cardguide.

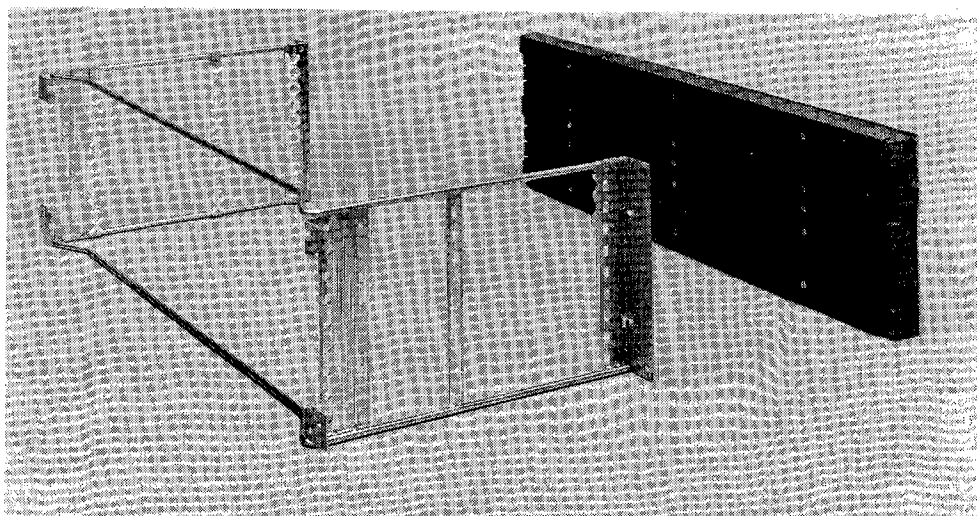


Figure 1 DDV11-B with H0341 Card Assembly

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DDV11-B

CONFIGURATION

Module Slot Assignments

Figure 2 shows the slot location assignments of the DDV11-B. Rows A, B, C, and D are dedicated to the LSI-11 bus. Any module which conforms to the LSI-11 bus specifications can be used in this portion of the DDV11-B. The position numbers indicate the bus-grant wiring scheme with respect to the processor module. The bus-grant signals propagate through the slot locations in the position order shown in Figure 2 until they reach the requesting device. Any unused slots must be jumpered to provide busgrant signal continuity, or it is recommended that unused locations occur only in the highest position-numbered locations.

Rows E and F contain the 18 user-defined slots with power and ground connections provided.

Equipment Supplied

The DDV11-B option consists of the following items:

- Six H863 connector blocks
- Three H8030 connector blocks
- Etched-board bus structure

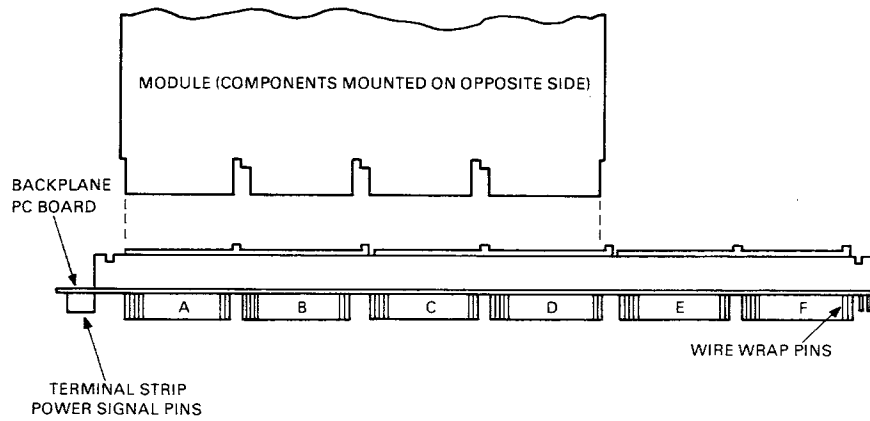
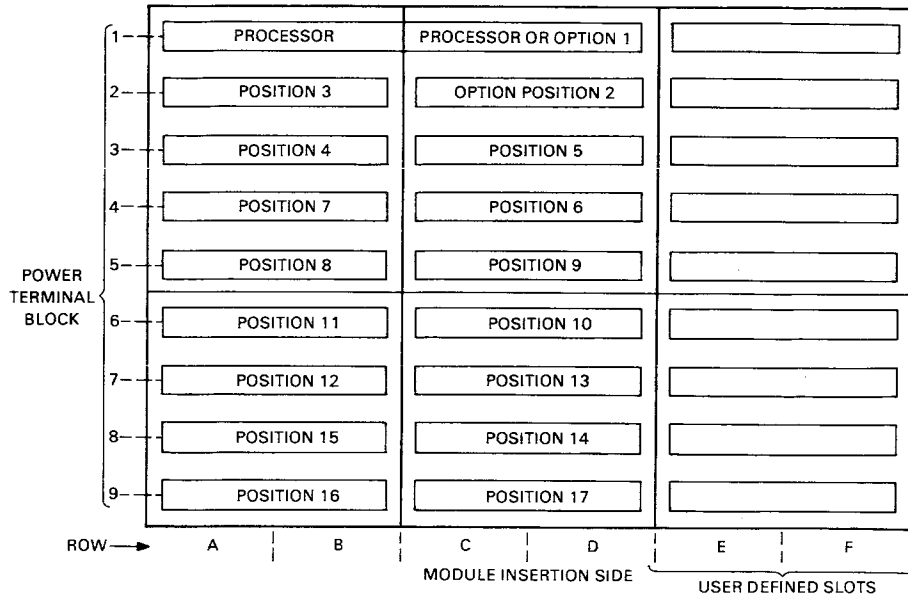
Installation

The DDV11-B can be mounted on panels or chassis using standard hardware. The overall dimensions of the unit are shown in Figure 3. The H034 mounting frame of the DDV11-B is provided with tapped holes and clearance holes to enable the attachment of the system unit.

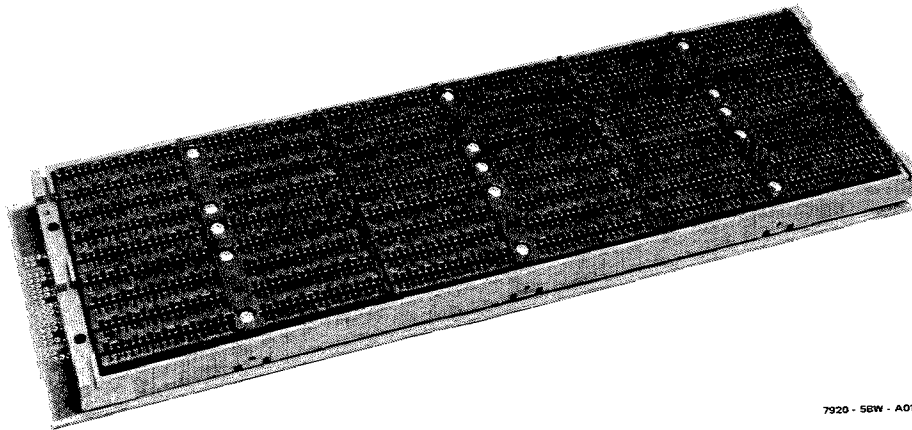
H0341 Card Assembly Mounting

The card assembly provides nylon guides which help to guide and support the modules installed in the system unit. The H0341 card assembly is supplied with the hardware necessary to mount to the H034 mounting frame. Figure 4 shows the method of assembly. Two screws (item 2) and two washers (item 1) are inserted through the clearance holes of the PC board and H034 mounting frame and into the two threaded inserts on each bracket of the card assembly.

DDV11-B



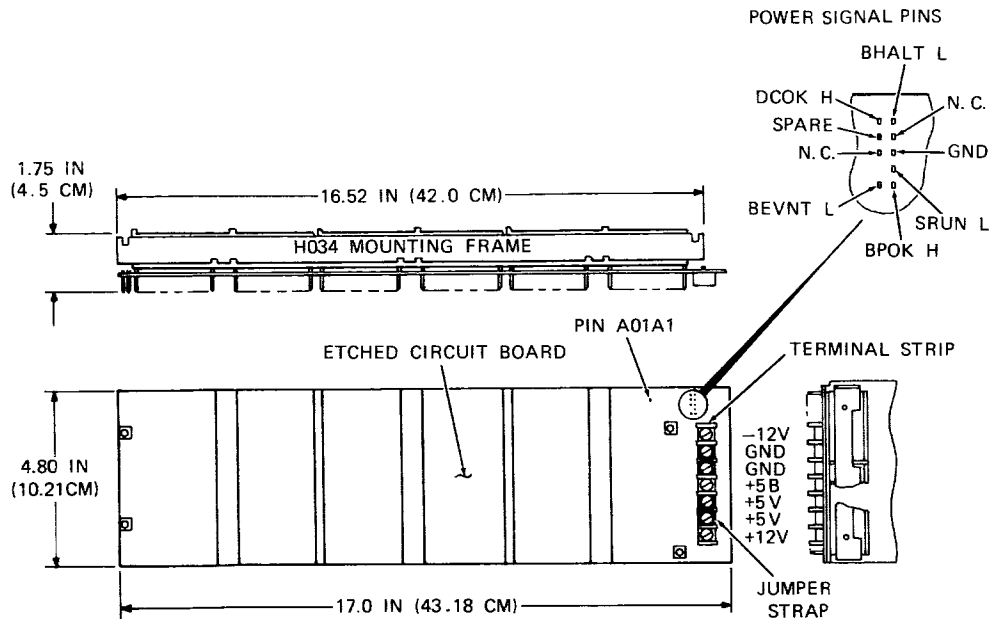
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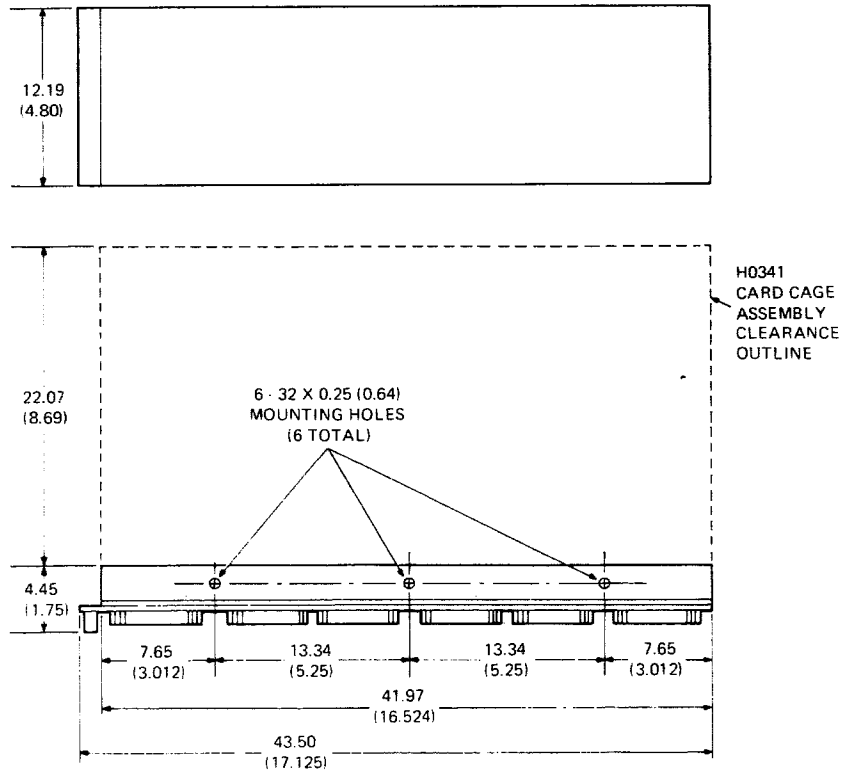
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Figure 2 DDV11-B Module Installation and Slot Assignments

DDV11-B



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Figure 3 DDV11-B Power Wiring and Dimensions

DDV11-B

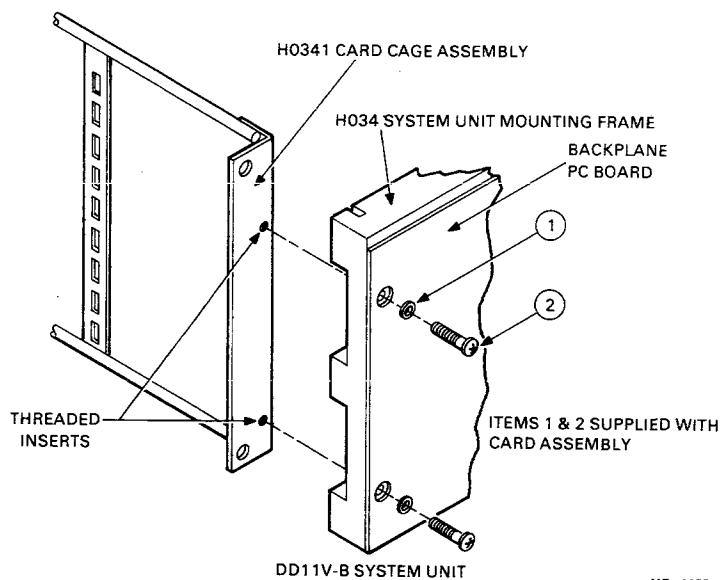


Figure 4 H0341 Card Assembly Installation

dc Power and PowerSignal Connections

dc power is supplied to the modules in the DDV11-B through the backplane PC board. The power and ground leads from the external source connect to the seven-position terminalboard mounted on the edge of the PC board as shown in Figure 3. Any suitable connector terminals, solder, or crimp style, can be attached to the powersupply leads and inserted under the terminal strip screws. A jumpertab is mounted between the two + 5 V screws and between the two ground (GND) screws on the terminal board. The total current capability of the DDV11-B and the wire size required are as follows:

Terminal		Current (Max)	Wire Size (AWG)
+ 12 V		20 A	14
+ 5 V	Jumped	40 A	14
+ 5 V			
+ 5 B		20 A	
GND	Jumped	40 A	14
GND			
- 12 V		20 A	

Figure 5 identifies the powersignal pins which are located at the opposite end of the backplane PC board from the power terminal strip. A mating female connector (DIGITAL P/N 12-11206-02 or 3M P/N 3473-3) can be inserted over the pins and used to connect the external signals to the backplane.

Backplane Pin Assignments

Table 1 lists the backplane pin assignments for the LSI-11 bus signals and dc power and ground connections on the DDV11-B backplane.

Table 1 DDV11-B Backplane Pin Assignments

Side	2	1	2	1	2	1	2	1
Row	A&C	A&C	B&D	B&D	E	E	F	F
A	+5V	BSPARE1	+5V	BDCOK H	+5V	BLANK	+5V	BLANK
B	-12V	BSPARE2	-12V	BPOK H	-12V	BLANK	-12V	BLANK
C	GND	BDAL 17 L	GND	SSPARE 4	GND	BLANK	GND	BLANK
D	+12V	BDAL 16 L	+12V	SSPARE 5	BLANK	BLANK	BLANK	BLANK
E	BDOUT L	SSPARE1	BDAL2 L	SSPARE 6	BLANK	BLANK	BLANK	BLANK
F	BRLPY L	SSPARE2	BDAL3 L	SSPARE 7	BLANK	BLANK	BLANK	BLANK
H	BDIN L	SSPARE3	BDAL4 L	SSPARE 8	BLANK	BLANK	BLANK	BLANK
J	BSYNC L	GND	BDAL5 L	GND	BLANK	BLANK	BLANK	BLANK
K	BWTBT L	MSPAREA	BDAL6 L	MSPARE B	BLANK	BLANK	BLANK	BLANK
L	BIRQ L	MSPAREA	BDAL7 L	MSPARE B	BLANK	BLANK	BLANK	BLANK
M	BIAK I L	GND	BDAL8 L	GND	BLANK	BLANK	BLANK	BLANK
N	BIAK O L	BDMR L	BDAL9 L	BSACK L	BLANK	BLANK	BLANK	BLANK
P	BBS 7 L	BHALT L	BDAL10 L	BSPARE 6	BLANK	BLANK	BLANK	BLANK
R	BDMG 1 L	BREF L	BDAL11 L	BEVNT L	BLANK	BLANK	BLANK	BLANK
S	BDMG 0 L	PSPARE3	BDAL12 L	PSPARE 4	BLANK	BLANK	BLANK	BLANK
T	BINIT L	GND	BDAL13 L	GND	BLANK	GND	BLANK	GND
U	BDAL 0 L	+12B	BDAL14 L	PSPARE 2	BLANK	BLANK	BLANK	BLANK
V	BDAL 1 L	+5B	BDAL15 L	+5	BLANK	BLANK	BLANK	BLANK

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