SPECIFICATIONS

Physically, the PDP-11 is composed of a number of System Units. Each System Unit is composed of three eight-slot connector blocks mounted end-to-end as shown in Figure 6-1. The UNIBUS connects to the System Unit at the lower left and at the upper left. Power also connects to the unit in the leftmost black. A System Unit is connected to other System Units only via the UNIBUS.
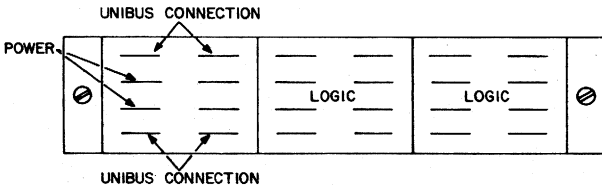

Figure 6.1 System Unit

The remainder of the System Unit contains logic for the processor, memory or an I/O device interface. This log ic is composed of single height, double height, or quad height modules which are 8.5" deep.

The use of System Units allows the PDP-11 to be optimally packaged for each individual application. Up to six System Units can be mounted into a single mounting box. For a basic PDP-11/20 system, the processor/console would fill 2 1/2 System Unit spaces and 4096 words of core memory would fill one System Unit space. This leaves 2 1/2 spaces for the user-designated options. This would allow the user to add 8192 words of additional core memory, a Teletype control, and a High-Speed Paper Tape Control, or 4096 words of core memory and six Teletype interfaces. Larger systems will require a BA11-EC or BA11-ES Extension Mounting Box which contains space for six additional System Units.

The use of System Units also facilitates expansion of systems in the field and service. To add an additional option to a PDP-11 system, the proper System Unit is mounted in the Basic or Extension Mounting Box and the UNIBUS is extended. Servicing of the PDP-11 can be done by swapping modules or by swapping System Units.

When ordering PDP-11 systems it is important that sufficient mounting hardware is ordered to accommodate each system. Particular attention should be given to the of DD11's required and whether a BA11-EC or BA11-ES Extension Mounting Box is needed.

To determine the number of DD11's to order, total the number of spaces required for each item ordered times the quantity ordered. Subtract two from this number and divide by four. Round up to the next whole number if there is a remainder. Order this number of DD11's.

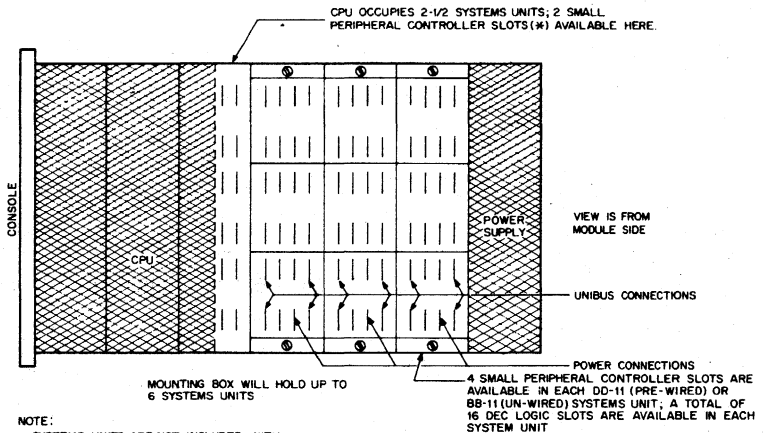$$\frac{\text{\# of ''Spaces'' used} -2}{4} = \text{\# of DD11's needed}$$

Note: Round up to a whole number.

Six System Units will mount in either the Basic or the Extension Mounting Box. To determine whether to order an Extension Mounting Box, total the products of the number of System Units required for each item ordered times the quantity ordered. Include DD11's and BB11's. Add one and divide the new total by six and round up to the next whole number if there is a remainder. If the result is one, an Extension Mounting Box is not needed. If the result is two, order an Extension Mounting Box (BA11-ES or BA11-EC) and Power Supply (H720A or H720B).

$$\frac{\text{\# of System Units used}}{6} = \text{\# of Mounting Boxes Required}$$

Note: Round up to a whole number. If the result is greater than one an Extension Mounting Box is needed.

DD11's are system Units prewired to mount small peripheral controllers such as a Teletype control or a High Speed Paper Tape Reader/Punch control. Each DD11 can hold four controllers and mounts in 1/6 of a Basic or Extension Mounting Box. This is in addition to the two small peripheral controller slots available in the KA-11.

CPU OCCUPIES 2-1/2 SYSTEMS UNITS; 2 SMALL PERIPHERAL CONTROLLER SLOTS(*) AVAILABLE HERE.

VIEW IS FROM MODULE SIDE

UNIBUS CONNECTIONS

POWER CONNECTIONS

MOUNTING BOX WILL HOLD UP TO 6 SYSTEMS UNITS

4 SMALL PERIPHERAL CONTROLLER SLOTS ARE AVAILABLE IN EACH DD-11 (PRE-WIRED) OR BB-11 (UN-WIRED) SYSTEMS UNIT; A TOTAL OF 16 DEC LOGIC SLOTS ARE AVAILABLE IN EACH SYSTEM UNIT

NOTE:
SYSTEMS UNITS ARE NOT INCLUDED WITH MOUNTING BOX.
CPU PLUGS INTO 3 SYSTEMS UNITS (SUPPLIED WITH CPU.
ONE SYSTEM UNIT IS INCLUDED WITH EACH MEMORY ORDERED (EXCEPT M792)

* THESE SMALL PERIPHERAL CONTROLLERS MAY BE:
1. TTY CONTROLLER (KL-11)
2. HIGH-SPEED READER/PUNCH CONTROL
3. LINE-PRINTER CONTROL
4. CARD READER CONTROL
5. 32-WORD DIODE ROM BOOTSTRAP
6. DR-11A GENERAL PURPOSE INTERFACE

Figure 6-2 PDP-11 Box Configuration