# Installing Hardware Accessories

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## Adding Third–Party Boards to Expansion Slots

Loosen the two thumb screws on the hinged lid of the D4–470 to open the lid and expose the interior of the case. The compartment is compact but accessible. Remove the two screws that hold the upper card edge bracket in place and remove the bracket.

**WARNING:** To minimize the risk of electrical shock, personal injury, or equipment damage, always turn off the system power before opening the case of the D4–470 and before connecting peripheral devices to the D4–470.



As you will notice in the photo below, we removed the backplane circuit board from the D4–470 case to facilitate veiwing. *Do not* remove the backplane board to install expansion boards.

**Four ISA and PCI Expansion Slots** Viewed as shown below, the PCI slots use the three white connectors indicated. The ISA slots use the black connectors also identified below. The third PCI connector from the top and upper ISA connector occupy the same slot position. This is the full length slot. It can be use as either a PCI or ISA slot but not both.



Take care not to uncouple any cable connectors while installing accessory boards, and be sure the boards you are installing are fully seated into the appropriate connectors. Re-install the upper card edge bracket after installing new circuit boards.

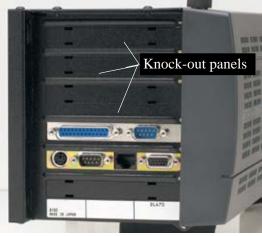
**WARNING:** Use grounding straps or other appropriate anti-static safeguards when handling electronic ciruit boards to prevent damage to electronic components.

Knock-out Panels

The expansion slots are covered by knock-out panels. Carefully pry the knock-out panel from the case using a blade screwdriver or similiar tool. After prying out the Knock-out, press your expansion board firmly into the card-edge connector. A screw is provided to secure the expansion board bracket to the case. Follow the expansion board manufaturer's recommendations for set-up.

Windows<sup>®</sup> 98 supports Plug & Play features but Windows® NT does not. New boards which are Plug & Play compatable will be recognized by Windows<sup>®</sup> 98 on power up.

We do not offer technical support for third party expansion boards. We also do not guarantee the compatability between any third-party products and the D4-470. The D4–470 is a standard PC, however, and can be expected to perform normally with most PC accessory products.



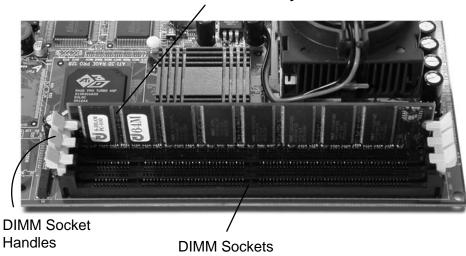
#### **Installing Additional RAM Memory**

The D4–470 comes equipped with 128MB of RAM. You do not need to add RAM memory if 128MB of RAM is sufficient for your application.

The three 168–pin DIMM (Dual In–line Memory Module) sockets on the D4–470 support PC100–compliant SDRAMs. The sockets can be filled in any combination of DIMMs of any size up to 768 MB of memory.

**Installing the Memory** Prior to installing the DIMMs, first make sure the two handles of the DIMM socket are in the open position (i.e. the handles lean outward). Slide the DIMM slowly along the plastic guides on both ends of the socket. Then press the DIMM module straight down into the socket until you hear a click. Note that the two DIMM socket handles have automatically locked the memory module in place.

To remove the memory module, gently push the two handles outward simultaneously. This will eject the memory from the DIMM socket.



**Dual In–line Memory Module** 



**NOTE:** It is not necessary to remove the CPU–board to install additional DIMMs.

## **Powering Internal and External Devices**

See the specifications in Chapter 2 to determine whether the D4–470's internal power supply is adequate to power internal accessory devices. Use external power *only* for CD–ROM drives and other external devices. The D4–470 power supply is *not* designed to power external devices.

# Changing the CPU

Because of the range of choices and the complexity of setup when you change CPUs, we are unable to offer technical support or warranty coverage in the event that a CPU change is made.