

ISA/PCI 3/4 Length Expansion Kit

Introduction

The ISA/PCI 3/4 Length Expansion Kit allows the installation of 3/4 length ISA or PCI cards into your PS Series PowerStation. The expansion kit includes the expansion card housing, 4 screws, and an Electrostatic Discharge Kit.

Before You Start

You will need the following items to complete the installation of a 3/4 length expansion kit:

- Installation instructions for the ISA/PCI 3/4 Length Expansion Kit
- Screwdriver
- Electrostatic Discharge Kit
- Wrench (for PS50 and PS51 PowerStations only)

When you add modules to the PowerStation, keep the following information in mind.

Plug and Play

The PS Series PowerStation supports Plug and Play features. When you select ISA or PCI cards, choose cards that either contain Plug and Play features or cards that allow you to enable the Plug and Play features.

I/O Addresses and IRQs

Addresses 310 through 317 are reserved for the PowerStation. Be certain that any cards you install do not conflict with these addresses.

See Chapter 2 of the *PowerStation PS Series User Guide* for more information about I/O addresses and IRQs used by the PowerStation PS Series.

Precautions:



Warning

For safety reasons, the PowerStation should be opened only by qualified service personnel.



Warning

Be sure to observe electrostatic discharge (ESD) precautions while working inside the unit.

Electrostatic Discharge Precautions

Modern integrated electronic devices, especially CPUs and memory chips, are extremely sensitive to electrostatic discharges (ESD) and fields. Before you disassemble the PowerStation, be sure to use the Electrostatic Discharge Kit to protect you and the PowerStation from harm resulting from ESD.

Important	Open the Electrostatic Discharge Kit and follow the directions for attaching the wrist strap and handling sensitive electronic components.
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Installation of the Expansion Kit

Removing the Existing Back Cover

To remove the existing back cover, complete the following steps:

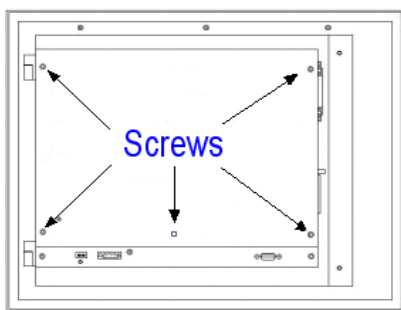
1. Turn off the unit.
2. Disconnect the unit from its power source.
3. Disconnect all cables attached to the unit..



Caution

Before you complete the next steps, you must wear an ESD wrist strap connected to a good, known, earth ground to avoid damaging the unit.

4. If you cannot reach the back of the unit while it is mounted, remove the unit from its enclosure and place it on a static dissipative mat free from dust and dirt.
5. Remove the fastening screws from the back cover of the unit, as shown below.



6. Remove any memory modules you have installed.
7. Remove the current shell by removing the four corner screws.

Installing the 3/4 Length Shell

To install the 3/4 length expansion card housing, complete the following steps:

1. Align the new 3/4-length shell as shown below and gently rock the new riser card into the riser card socket.



2. Attach the new shell using the four screws included in the kit.

You can only access screw 4 through the opening at the edge of the shell as shown above.

Mounting the Unit

If your unit is still in its enclosure, skip to the next section, *Installing the Expansion Cards*.

This section contains three topics:

- Preparing to Mount the Unit
- Mounting the PS10, PS12, PS15, and PS18
- Mounting the PS50 and PS51

Preparing to Mount the Unit

If you have any PS Series PowerStation (PS10, PS12, PS15, PS50, PS51, PS18), complete the following steps to prepare for mounting:

1. Make your cutout.

If your cutout is already made, ensure you have enough space in your enclosure for the expansion shell. You will need at least two inches of clearance around the unit for

cooling.

Important The 3/4 length ISA/PCI supported PowerStation is **not** a drop-in replacement for any PS PowerStation model. With addition of the expansion shell, the depth of the PS PowerStation increases by 2.75 inches.

2. If the back cover is still removed, continue to the next step. If you replaced the back cover, remove it by removing the five screws that hold the cover in place.

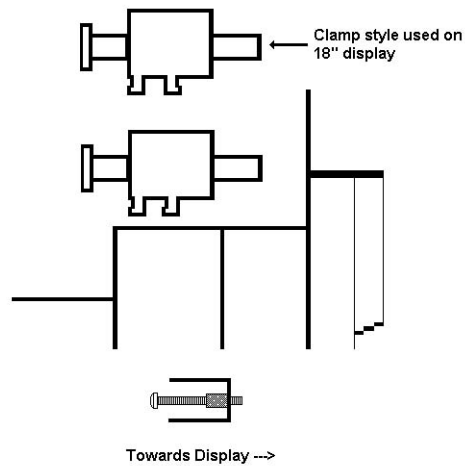
Mounting the PS10, PS12, PS15, and PS18

If you have a PS10, PS12, PS15, or PS18 complete the following steps to mount the unit:

1. Select the step below depending on the size of your display.
 - If you have a system with a 9.5", 10.4", or 12.1" display, attach 6 mounting clamps, with their screws, to the back of the unit in the spaces provided. You will place 2 clamps at the top and bottom of the unit and 1 on each side.
 - If you have a system with a 15.1" display, attach 8 mounting clamps, with their screws, to the back of the unit in the spaces provided. You will place 2 clamps at the top and bottom of the unit and 2 on each side.
 - If you have a system with a 18.1" display, attach 12 mounting clamps, with their screws, to the back of the unit in the spaces provided. You will place 3 clamps at the top and bottom of the unit and 3 on each side. You must slide the feet of the mounting clip into the slot, then slide the clip over to properly mount the unit..

Note

There are two styles of clamps used to secure the unit to your enclosure. Both styles are illustrated in the figure below. The clamp shown at the top of the figure is used on units with an 18" display while all other units use the clamp shown at the bottom of the figure. The prongs at the bottom of each clamp should hook into the slots in each space. The end of each screw should point toward the front of the enclosure.



2. Tighten each screw against the front of the enclosure to a torque of 8 lb./in.

Mounting the PS50 and PS51

If you have a PS50 or PS51, complete the following steps to mount the unit:

1. Mount the unit by screwing the nuts provided onto the 14 mounting screws.
2. Tighten the nuts to a torque setting of 17in./lb. in a criss-crossed sequence.

Installing the Expansion Card

1. If the back cover is still removed, continue to the next step. If you replaced the back cover, remove it by removing the five screws that hold the cover in place.
2. Remove the ISA/PCI bracket by removing the four screws that hold it in place, as shown below.

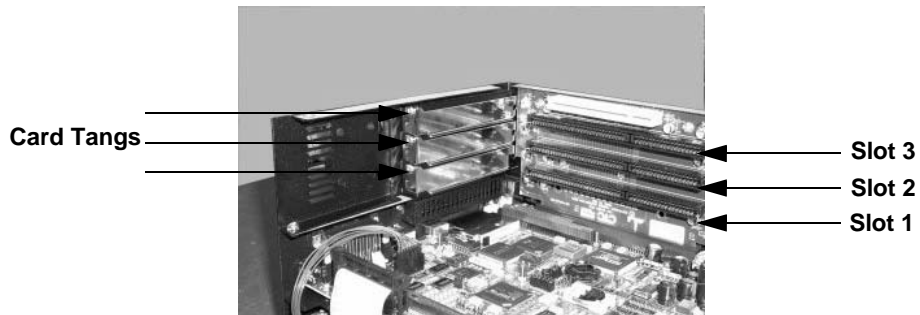


3. Remove the card tang of the slot in which you intend to place the card.



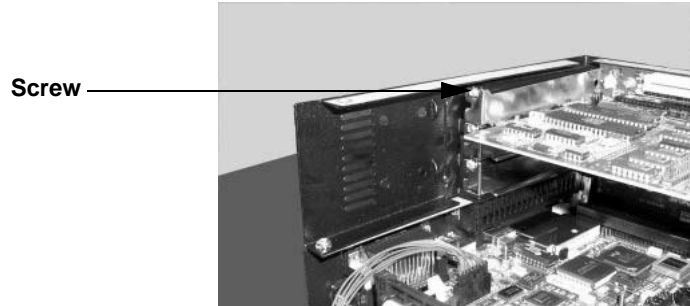
Warning

3/4 length ISA or PCI cards are only supported in Slot 2 or Slot 3. Do not place a 3/4 length card in Slot 1, or the card may cause an electrical short. The slots are labeled on the unit and in the picture below.



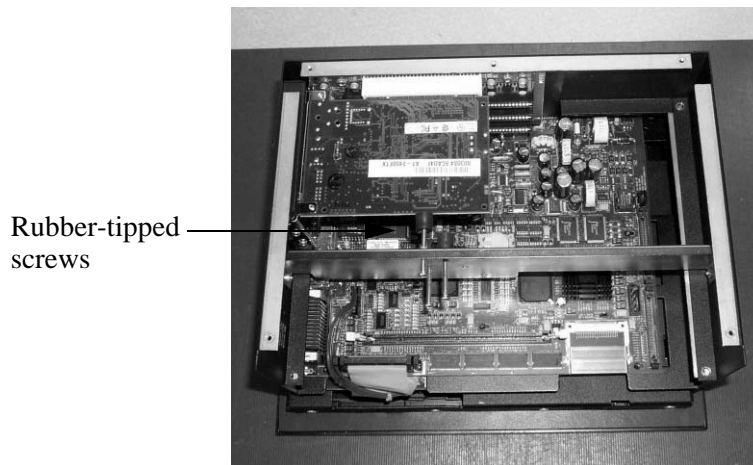
4. Slide the 3/4 length card into an available slot.
The card must line up with the card cage on one side and the card guard on the other side.

- Secure the card by screwing it into place as shown below.



- Repeat steps 3 through 5 for each additional card you wish to install.
- Place the ISA/PCI bracket back in the unit and screw it into place.
- Tighten the rubber-tipped screws that will hold the installed cards in place and reduce card vibration.

Each hole in the center of the ISA/PCI bracket corresponds to a particular type of card (ISA or PCI) in a particular slot (Slot 1, 2, or 3). Ensure that each card has its matching rubber-tipped screw holding it in place, as shown below:



- Replace any additional memory you may have previously removed.
 - Replace the back cover by securing it with the five screws you previously removed.
- The installation of your ISA/PCI 3/4 Length Expansion Kit is complete.