

Installation of ISA/PCI Full Length Expansion Kit

Introduction

The ISA/PCI Full Length Expansion Kit allows the installation of full length (13.1") ISA or PCI cards into your PS Series PowerStation. The expansion kit includes the full length 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 full length expansion kit:

- Installation instructions for the ISA/PCI Full 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. For more information on Plug and Play, see Adding Expansion Cards in Chapter 4 of the *PowerStation PS Series User Guide*.

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 1 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.

Installation of the Expansion Kit

Important Notes

If possible, install the expansion kit while the unit is mounted in its enclosure.

If you must remove the unit from its enclosure to install the expansion kit, do not install any cards until you re-mount the unit. You must install the cards last in order to reach all of the mounting clamps.

If you choose to install the cards first for testing, you will have to remove the cards before you can finish mounting the unit.

We recommend that you follow the order of instructions as they are listed below:

1. Remove the existing back cover and any existing expansion housing.
2. Install the full length expansion housing.
3. Mount the unit (if you have removed it from its enclosure).
4. Install the expansion cards.

Removing the Existing Expansion Card Housing

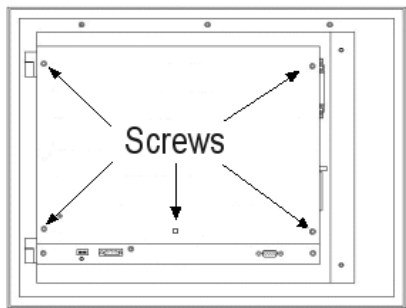
To remove the existing expansion card housing, complete the following steps:

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

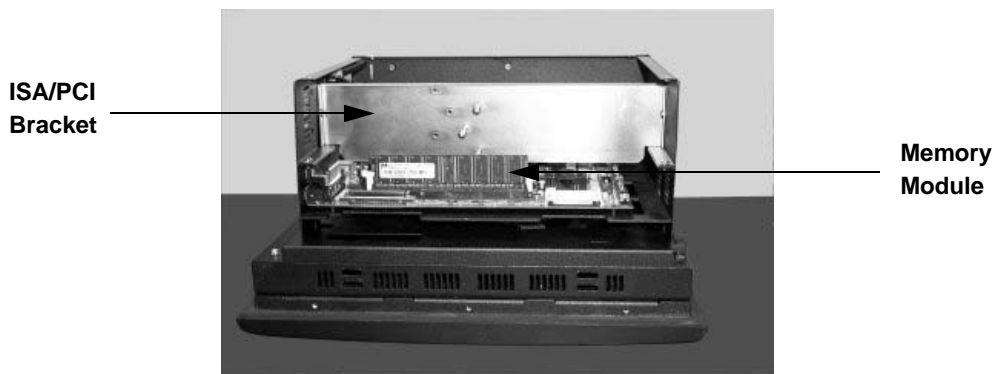
Caution

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.

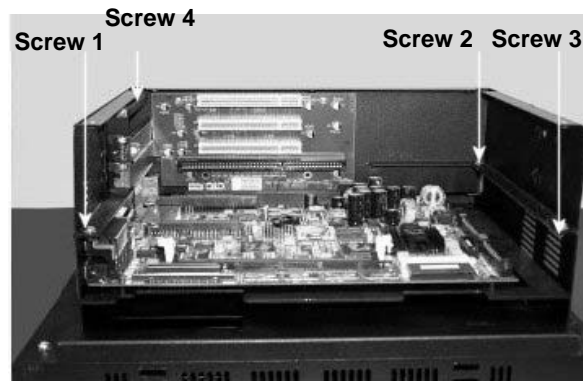


6. If you have a PSXX-2, skip to the next section, "Installing the Full Length Expansion Card Housing." If you have a PSXX-3 or -4, continue to step 7.
7. Remove any memory modules you have installed. See the picture below.



8. Remove the bracket that holds the ISA/PCI bracket (shown above) and any ISA or PCI cards you have installed.

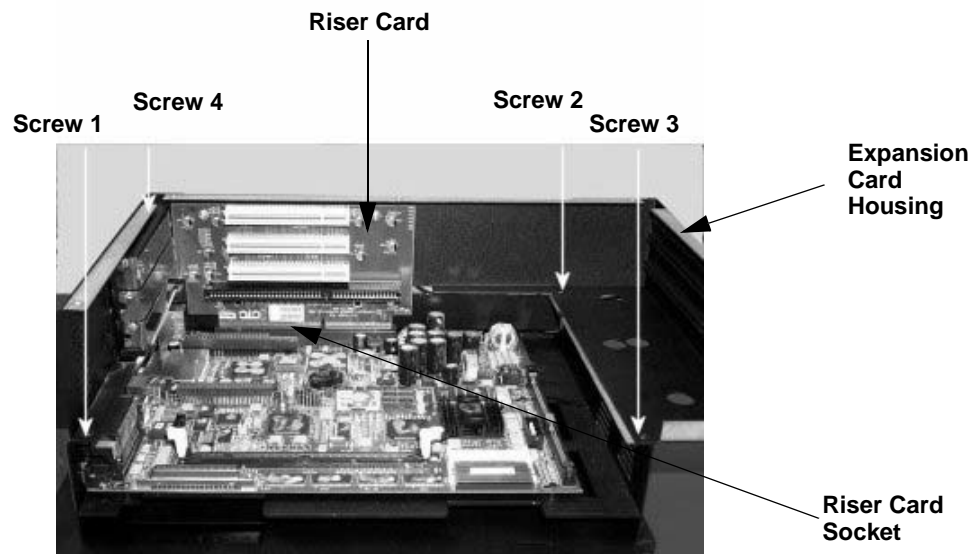
9. Remove the expansion card housing by removing the 4 corner screws indicated in the following picture. You can only access Screw 4 through the opening on the edge of the expansion housing as shown below.



Installing the Full Length Expansion Card Housing

To install the full length expansion card housing, complete the following steps:

1. Align the new full-length expansion card housing as shown below and gently rock the new riser card into the riser card socket.



2. Attach the new expansion card housing using the 4 screws included in the kit. You can only access Screw 4 through the opening at the edge of the expansion housing 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, and PS15, and Mounting the PS50 and PS51.

Preparing to Mount the Unit

If you have any PS Series PowerStation (PS10, PS12, PS15, PS50, PS51), 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 extended cover. You will need at least two inches of clearance around the unit for cooling. You may need three or more inches of clearance to easily mount the unit.

Important The full length ISA/PCI supported PowerStation is **not** a drop-in replacement for the PS10, PS50, or PS51.

2. Angle the unit through the enclosure as shown below.



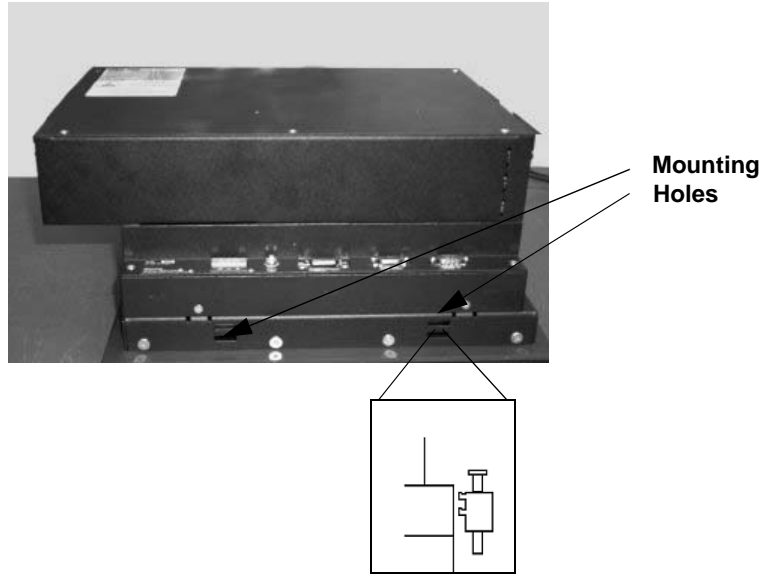
3. If the back cover is still removed, continue to the next step. If you replaced the back cover, remove it by removing the 5 screws that hold the cover in place.

Mounting the PS10, PS12, and PS15

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

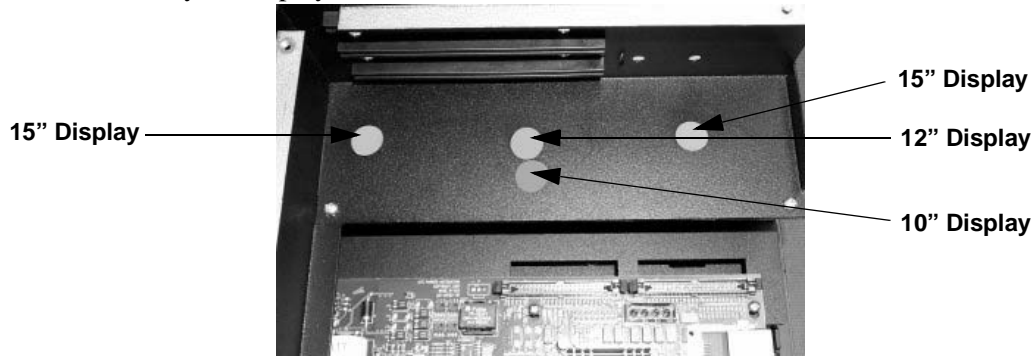
1. Using the mounting clamps, mount all sides **except** the elongated side.
 - If you have a system with a 10.4” or 12.1” display, attach 5 of the 6 mounting clamps, with their screws, to the back of the unit in the spaces provided. You will place 2 clamps at the top and bottom of the unit and 1 on the side.
 - If you have a system with a 15.1” display, attach 6 of the 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 the side.

- The prongs at the bottom of each clamp should face backward, as shown in the following illustration, and they should hook into the slots in each space. The end of each screw should point toward the front of the enclosure.



2. Attach the mounting clamp(s) on the elongated side.

To do this, you will need to access the mounting clamps with a screwdriver placed through the pre-cut holes. Below is a picture of the pre-cut holes. Use the hole(s) for your display size.



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.

Note You will need a wrench to mount the elongated side.

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 5 screws that hold the cover in place.
2. Remove the ISA/PCI bracket by removing the 4 screws that hold it in place, as shown below.

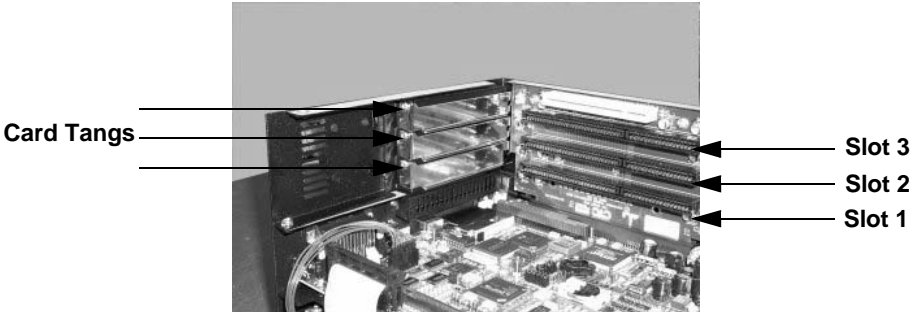


3. Remove the card tang of the slot in which you intend to place the card.:



Warning

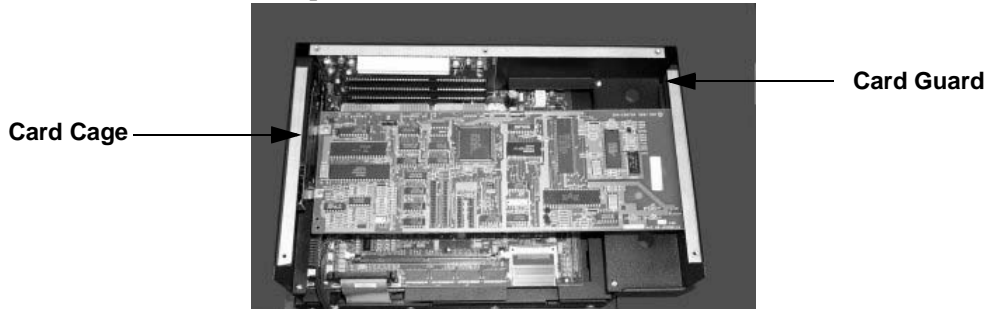
Full length ISA or PCI cards are only supported in Slot 2 or Slot 3. Do not place a full length card in Slot 1, or the card may cause an electrical short. The slots are labeled on the unit and in the picture below.



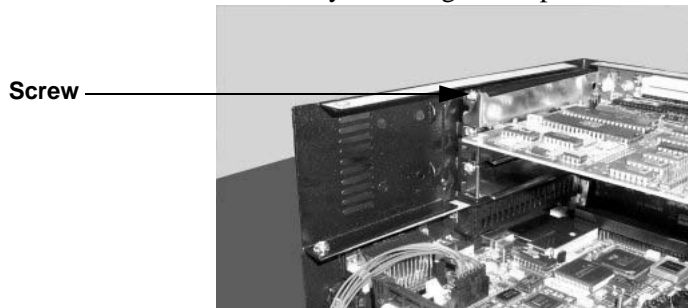
Installation of ISA/PCI Full Length Expansion Kit

- Slide the full 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. See the picture below:

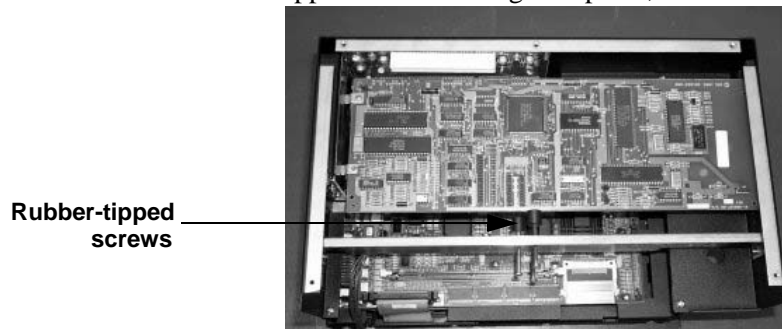


- Secure the card by screwing it into place as shown below.



- 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 5 screws you previously removed.

The installation of your ISA/PCI Full Length Expansion Kit is complete.