

PC9/P9 Processor Replacement

Introduction

These instructions explain how to replace the processor in the PC9 Industrial PC or the P9 PowerStation. They include steps for disassembling the unit, removing the old processor, installing a new processor, and reassembling the unit.



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

To complete this procedure, you will need the following items:

- The Processor Replacement/Upgrade Kit that you have purchased:
 - PROC-9300 (300MHz processor)
 - PROC-9500 (500MHz processor)
 - PROC-9850 (850MHz processor)
- Phillips-head screwdriver
- Small, flat-tipped screwdriver

Warning Be sure to observe electrostatic discharge (ESD) precautions while working inside the unit. Use the wrist strap included with the Processor Upgrade/Replacement Kit to protect against ESD.

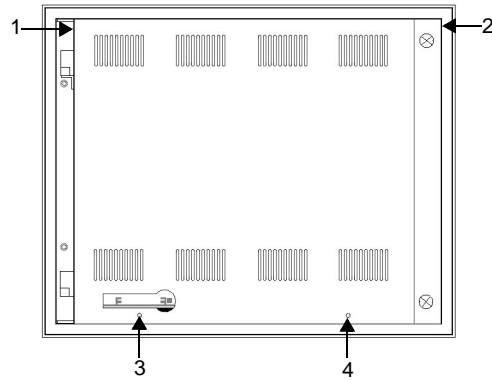
Disassembling the Unit

To disassemble the unit, follow these steps:

1. Turn off the unit.
2. Disconnect the unit from the power source.
3. Disconnect all cables attached to the unit.
4. Remove the four retaining screws holding the back cover onto the unit, as shown in Figure 1 on page 2.

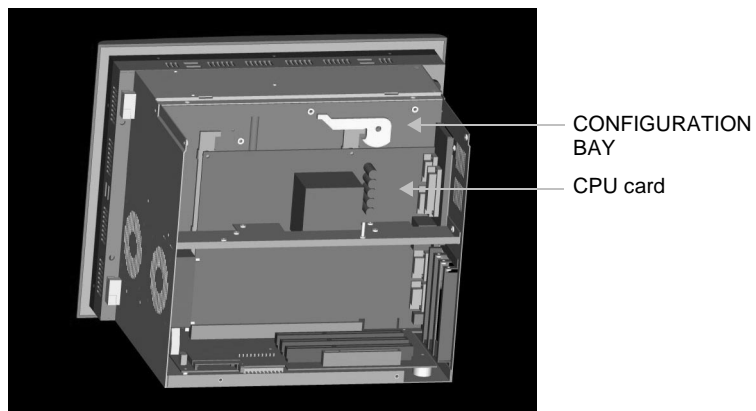
Note Screws 1 and 2 are located at the sides of the cover; screws 3 and 4 are in the back of the cover.

Figure 1: Opening the Backshell



5. Slide the back cover off the unit, exposing the configuration bay and the CPU card, as shown in Figure 2.

Figure 2: Configuration Bay



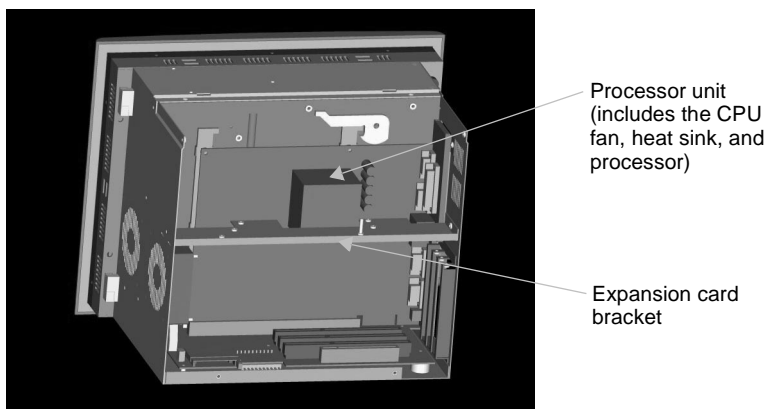
Removing the Old Processor

To remove a previously installed processor, follow these steps:

1. Locate the processor unit on the CPU card, as shown in Figure 3 on page 3.

The processor is located underneath the CPU fan and heat sink. The processor, fan, and heat sink are fastened together and will be removed and replaced as a single unit. The processor itself fits into a zero insertion force (ZIF) socket, where it is fastened in place by a lever located at the bottom of the processor unit.

Figure 3: Processor Unit



2. Remove the expansion card bracket and any installed expansion cards.
3. Disconnect the fan cable from its connection on the CPU card.
 - Note** Note where this connection is so that you can attach the new fan cable in the same place.
4. Unfasten the ends of the metal clip that passes through the center of the processor unit. Each end of the clip fits over a tab at the left and right sides of the heat sink.
 - Press down on each side of the clip until it releases from the tab. *OR*
 - Use a flat-tipped screwdriver to push downward on the tab until the clip comes free.
5. Rotate the ZIF socket lever (at the bottom of the processor unit) from left to right.
 - Pull the free end of the lever slightly downward, then move it to the right.
 - You may find it easier to use a small, flat-tipped screwdriver to pull the free end of the lever down.

6. Gently, lift the processor unit (fan, heat sink, and processor) from its socket on the CPU card.

Installing the New Processor

To install a new processor, follow these steps:

1. Position the new processor unit over the processor socket (the silver-colored lever should be at the bottom of the unit), carefully lining up the processor pins with the holes in the socket. Then press the processor down until it is firmly seated in its socket.
2. Make sure that the fan cable lies underneath the metal clip at the right side of the processor unit.

Warning Make sure that no part of the fan cable can become entangled in the fan blades.

3. Push down on the two sides of the clip until they snap into place over the tabs at the left and right sides of the processor unit.
4. Rotate the silver-colored lever at the base of the processor unit from right to left until it snaps into place.
5. Re-attach the fan cable to its connector on the CPU card.
6. Replace the expansion cards and the expansion card bracket that you removed in step 2 on page 3.

Reassembling the Unit

To reassemble the unit, follow these steps:

1. Fit the two tabs in the top of the back cover into the two slots at the top of the configuration bay, and slide the back cover onto the unit.
2. Fasten the back cover onto the unit by replacing the four retaining screws that you removed in step 4 on page 1.
3. Reconnect power and other cables to the unit.

Your processor replacement is complete. You may now restart the unit.