
Replacement Instructions

**Routing Engine
(with 4-Mbyte PCMCIA Flash Card)
for the HP Router 650**

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This guide provides installation instructions for the following Hewlett-Packard Company exchange assembly:
5063-5967

Warranty

The information contained in this guide is entirely unwarranted.

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Preparation

If diagnosis of the HP J2430A Router 650 indicates replacement of the routing engine, then exchange assembly part number 5063-5967 can be used with these replacement instructions. See chapter 3 in the *Installation Guide* for the HP Router 650, part number 5962-8317.

The exchange assembly consists of the following items:

- *Replacement Instructions* (this manual, 5962-8366)
- The module called the routing engine, for slot 1 of the router.

This assembly includes:

- A new PCMCIA flash card with a factory-default configuration and a version of the router operating system that may differ from those already in use on the router. Resuming operation of the network as before the engine exchange requires either using the old flash card or re-entering the configuration information onto the new flash card, depending on whether the flash card has failed. These considerations and procedures are detailed on page 8.

This assembly does *not* include the following items that were included with the original product or that may have been added to it. You must save these items from the router before exchange.

- Console cables and adapters for the routing engine's console port.
- The LED label strip for the routing engine (located in the router's front door).
- Memory upgrade modules that may be installed on the routing engine PCA, such as the two 4-Mbyte Single In-line Memory Modules (SIMMs), from product HP J2443A.

You will need the following additional items:

- A grounding wrist strap, such as the Disposable Wrist Strap (9300-1408) supplied with interface cards for the HP Router 650.
- A console (and any equipment such as a modem), as described in chapter 1 of the *Installation Guide* for the HP Router 650.
- The *Installation Guide* for the HP Router 650 (5962-8317).

Preparation

Caution

Use the precautions described below while performing the procedures described in this manual.

To avoid damage to the HP Router 650, switch off all power supply modules, or disconnect all power cords, before removing the routing engine (the module in slot 1, the topmost slot). The routing engine and its PCMCIA flash card and memory modules may *not* be “hot swapped,” that is, changed while power is connected to the router chassis. Special instructions for hot swapping (online replacement of) the other interface cards are in the *Installation Guide* for the HP Router 650.

The routing engine contains electrical components that are easily damaged by small amounts of static electricity. This can happen when it is installed or removed—whether power is disconnected or connected. Follow these precautions to avoid damage to the card or chassis:

- Store the routing engine in an antistatic box or bag when it is not installed in the HP Router 650.
 - Before unpacking the card, use a grounding wrist strap. (The Disposable Wrist Strap supplied with some of the router products has instructions on its envelope.) Attach the strap to your wrist, and attach the other end to the metal panel on the back surface of the HP Router 650 chassis. This is a grounded unpainted metal surface.
 - Handle the routing engine only by its edges, metal tray, bezel (face plate), or locks (extractor levers). When removing or inserting the flash card, touch only the card or the lockshaft on its housing. Do not unnecessarily touch electrical components on the routing engine.
 - Do not remove the wrist strap until the routing engine has been installed in the chassis or stored in an antistatic box or bag.
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Replacing the Routing Engine

1. Disconnect the console cable, if any, from the routing engine and save it for reconnection after the new engine is installed.

Caution

In the next step, be careful not to open the router door more than 90°. Opening the door further could damage it.

2. Unlock the front door of the router by pulling its lock—the round post at the upper right—to the right, as shown in figure 1, and open the door to about 90°.

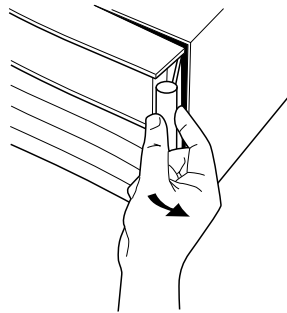


Figure 1. Opening Router Door

3. Switch the power supply off by pressing the bottom of its switch (marked with “○”). If two power supplies are installed, switch both off. Close and lock the router door.
4. Connect a grounding wrist strap to your wrist and to the metal panel on the back of the router.

Replacing the Routing Engine

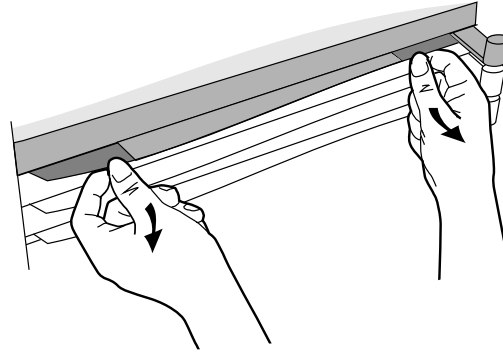


Figure 2. Unlocking Routing Engine

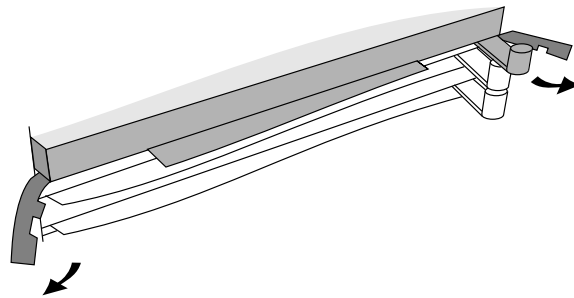


Figure 3. Disengaging Routing Engine

5. Press down slightly on the insides of both locks on the front bezel of the routing engine in the slot numbered 1 (the topmost card slot), as shown in figure 2. Then swing them outward until the bezel disengages from the chassis, as shown in figure 3.
6. Grasping the left and right edges of the bezel, pull out until the tray is about half exposed.
7. Grasping the sides of the tray, remove the engine from the router. Do not return the routing engine to HP until the new engine is operating correctly and the problem with the router is resolved.

Replacing the Routing Engine

8. If required, replace the flash card in the new router engine with the flash card already being used in the old router engine. See the procedure on page 8, “Replacing the PCMCIA Flash Card”, for:
 - How to determine which flash card to use, the old or the new.
 - How to replace the new flash card with the old one, if needed.
9. Remove the new routing engine from its antistatic packaging. Place the old routing engine in the packaging. Holding the new engine by the sides of its tray, slide the back about half-way into the router.

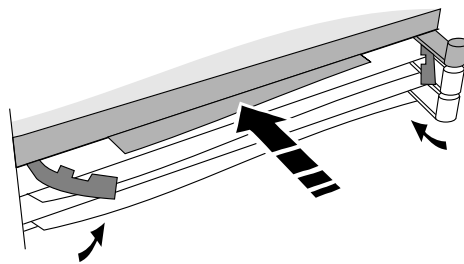


Figure 4. Installing Routing Engine

10. Pull the locks on the bezel outward; then push evenly on both ends of the bezel until it engages fully and the locks swing inward to about 45°. See figure 4.
11. Push the two locks evenly to close them, pressing downward slightly to secure them in place.
12. Reconnect the console cable that you disconnected in step 1.
13. Open the front door of the router by pulling its lock—the round post at the upper right. Switch the power supply on by pressing the top of the switch (marked with “|”). If two power supplies are installed, switch both on. Close and lock the router door. Check the LEDs to verify that the engine failure has been resolved and the router is operating correctly. Consult the *Installation Guide* for the HP Router 650, particularly chapter 3, for instructions.
14. Detach the grounding wrist strap.
15. Once the new routing engine is operating correctly, return the old routing engine to HP, including the old or new flash card (where it will be erased at the factory and reused).

Replacing the Routing Engine

Replacing the PCMCIA Flash Card

The replacement routing engine comes with a new flash card preinstalled on it. A new PCMCIA flash card is not available from HP separately from the routing engine.

The new flash card has a factory-default configuration and a version of the router operating system that may differ from what is currently used on the router.

- ☞ If the problem that necessitates this routing engine replacement is a failure of the engine *other than the flash card*, then you can use the old flash card with its operating system version and configuration that currently operate on your router. To do this, follow the flash card replacement procedure, on the next page, for replacing the flash card in the *new* routing engine with the currently used flash card from the *old* routing engine. Then return to the preceding procedure at step 9, on page 7, installing the *new* routing engine as described there.
- ☞ If the problem that necessitates this routing engine replacement is a failed flash card, then you will use the new flash card that comes preinstalled on the new routing engine. The procedure on the next page is not needed. Simply return to the preceding procedure at step 9, on page 7, to install the *new* engine as described there.

Then after the router is operating, you will need to re-enter your customized configuration for your network.

However, you have another option of restoring your current configuration and current operating system to this new flash card if you have saved one or both on another host or router or PC.

For information about transferring the configuration or operating system to/from a router or host over the network, refer to “Using TFTP to Transfer Operating Code, Configuration, and NCL Display” in the *User's Guide*. For information about transferring the configuration to/from a PC used as the router console, refer to “Using PC Modem Access to Transfer Configuration and NCL Display” in the *User's Guide*.

Replacing the Routing Engine

1. With the engine on a flat working surface, connect a grounding wrist strap to your wrist and to the tray of the routing engine.

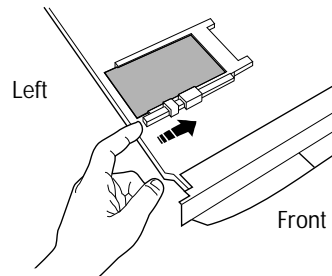


Figure 5. Ejecting Flash Card

2. Press in on the lockshaft on the flash card housing, as shown in figure 5. The flash card should eject until its left end is flush with the routing engine.

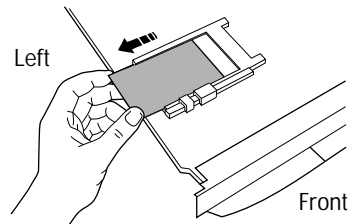


Figure 6. Removing Flash Card

3. Grasping the exposed end of the flash card, remove it from its housing, as shown in figure 6.
4. Position the replacement flash card to the left of the housing, with the pin receptacles to the right and the card's top label on top.
5. Insert the right end of the flash card into the left end of the housing, lifting it slightly to engage properly in the housing. The flash card's left end will no longer extend beyond the left edge of the routing engine.

Replacing the Routing Engine

6. Push the flash card further into the housing as far as it will go; its lockshaft will move to the left. When properly seated, the end of the flash card will be flush with the end of its lockshaft.
7. Install the routing engine according to the preceding procedure, "Replacing the Routing Engine", beginning with step 9 on page 7.





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