Installation Guide

HP J2443A
8-Mbyte Memory Upgrade
for the HP Router 650

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Product Numbers

This guide provides installation instructions for the following Hewlett-Packard Company product:
J2443A

Warranty

The information contained in this guide is entirely unwarranted.

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Introduction

If you will be using the HP Router 650 with very large networks, installing the HP J2443A 8-Mbyte Memory Upgrade will help keep network performance at a high level. (A network with more than 50 routers running OSPF or a network with more than 1,000 subnets would be considered very large.)

Ensure that you have the following items.

- Grounding wrist strap (9300-1408)
- *Installation Guide* (this manual, 5962-8323)
- *Caution: Static-Sensitive Devices* (5962-8318)

Ensure that you have the following items.

Caution

Use the precautions described below while performing the procedures described in this installation guide.

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, interface cards, flash card, and memory modules contain electrical components that are easily damaged by small amounts of static electricity. This can happen when cards are installed or removed—whether power is disconnected (offline replacement) or connected ("hot swap" or online replacement). *In all cases*, follow these precautions to avoid damage to the card or chassis:

- Store memory modules in an antistatic box or bag whenever they are not installed in the HP Router 650.
- Before unpacking the memory modules, use a grounding wrist strap. (The grounding wrist strap supplied with the memory upgrade has instructions on its envelope.) Attach one end to your wrist, and attach the foil 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, bezel (face plate), or locks (extractor levers). Do not unnecessarily touch electrical components on the routing engine.
- When installing memory modules, do not touch any other components on the routing engine.
- Do not remove the wrist strap until the memory module has been installed in the chassis or the memory modules have been stored in an antistatic box or bag.

Install the memory upgrade.

You will install the memory upgrade on the routing engine, which is the module located in slot 1 (the topmost slot).

1. Disconnect the console cable from the routing engine.

2. Open the front door of the router by pulling its lock—the round post at the upper right—to the right. (See figure 1.)

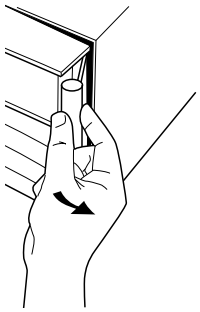

Figure 1. Opening Router Door

3. Switch off the power supply by pressing the bottom of its switch (marked with "❍"). If two power supplies are installed, switch both off.

4. Connect a grounding wrist strap to your wrist and to the back of the router.

Install the memory upgrade.

5. Press down slightly on the insides of both locks on the routing engine bezel (see figure 2), then swing them outward until the routing engine disengages (see figure 3).

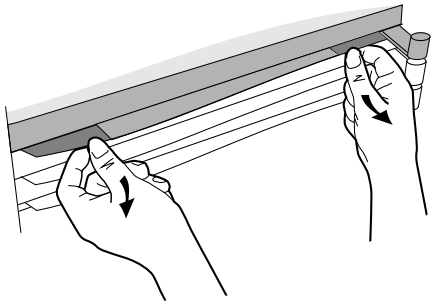

Figure 2. Unlocking Routing Engine

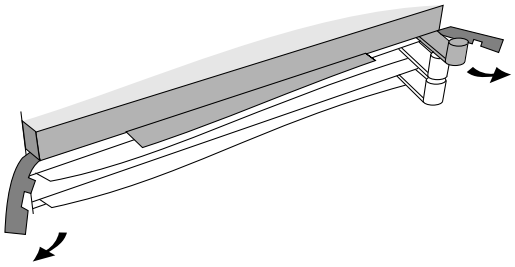

Figure 3. Disengaging Routing Engine

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 routing engine from the router.

8. Place the routing engine on a flat surface.

9. Disconnect the grounding wrist strap from the back of the router, and connect it to the tray of the routing engine.

10. Position one of the memory modules above the rear socket, with the memory chips facing you and the connectors down. (See figure 4.)

11. Lower the memory module into the socket, ensuring that the bottom edge of the module is seated in the groove in the socket.

12. Tilt the top of the memory module back and rest it against the socket.

13. Push evenly on the upper corners of the memory module until the retainers alongside the ends of the module snap into place.

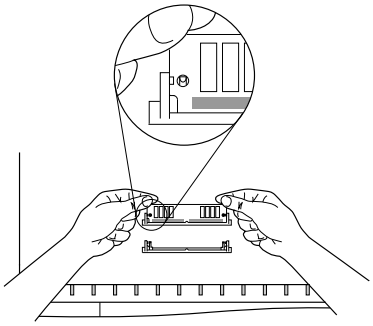

Figure 4. Installing Memory Module

14. Repeat steps 10–13 to install the other memory module in the front socket.

15. Holding the routing engine by the sides of its tray, slide the back of the routing engine about half-way into the router.

16. 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°.

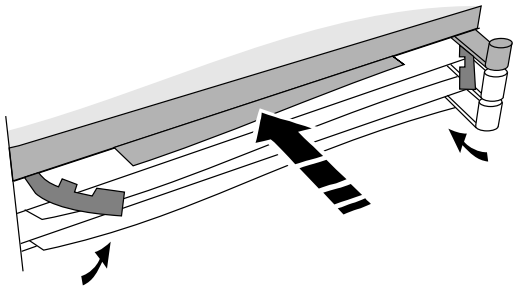

Figure 5. Reinstalling Routing Engine

17. Push the two locks evenly to close them, pressing downward slightly to secure them in place.

Verify router initialization.

1. Connect a console to the router—refer to the procedure described under “Connect a console” in chapter 1 of the router’s *Installation Guide*.

2. Switch on the router power and verify that no errors are found during the power-on self-test—refer to the procedure described under “Plug in and verify router hardware” in chapter 1 of the router’s *Installation Guide*.

Troubleshooting

After you have installed the memory upgrade, if the LEDs during the power-on self-test indicate a routing engine failure (refer to table 3-1, "LED Error Patterns During Power-On Self-Test," in chapter 3 of the router's *Installation Guide*), the cause could be a failure of either of the memory modules or of the routing engine. To determine which is faulty, use the procedure in table 1 below.

Table 1. Troubleshooting Routing Engine Failure After Installing Memory Upgrade

<table>
<tr><td colspan="4">1. Remove the routing engine from the router, using steps 1–9 of the procedure "Install the memory upgrade," page 5.
2. Disengage the front memory module by pulling the retainers alongside the ends of the module outward with your thumbs and tilting the top of the module forward with your fingers until the module clears its retainers. (See figure 6, page 10.) Remove the memory module from the socket.
3. Reinstall the routing engine, using steps 15–17 of the procedure "Install the memory upgrade," page 5.
4. Switch on the router power, and check the LEDs during the power-on self-test for a routing engine failure.</td></tr>
<tr><td colspan="2">If there is a failure: either the memory module in the rear socket or the routing engine is faulty.
1. Remove the routing engine from the router.
2. Remove the memory module from the rear socket, then install the other memory module (that was originally in the front socket) in the rear socket.
3. Reinstall the routing engine.
4. Switch on the router power, and check the LEDs during the power-on self-test for a routing engine failure.</td><td colspan="2">If there is no failure: either the memory module you removed from the front socket or the routing engine is faulty.
1. Remove the routing engine from the router.
2. Remove the memory module from the rear socket, then install the other memory module (that was originally in the front socket) in the rear socket.
3. Reinstall the routing engine.
4. Switch on the router power, and check the LEDs during the power-on self-test for a routing engine failure.</td></tr>
<tr><td>If there is a failure: the routing engine is faulty.</td><td>If there is no failure: the memory module that was originally in the rear socket is faulty.</td><td>If there is a failure: the memory module that was originally in the front socket is faulty.</td><td>If there is no failure: the routing engine is faulty.</td></tr>
</table>

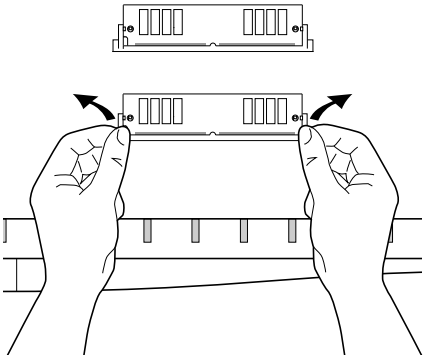

Figure 6. Removing Memory Module

Note

If one of the memory modules is faulty, you can still operate the router with just one of the memory modules (4 MB) installed. However, the remaining memory module must be installed in the *rear* socket. When you receive a replacement memory upgrade from HP, remove the remaining good memory module and send it, along with the faulty module, back to HP.

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