Replacement Instructions

**Replacement Chassis
for the HP Router 650**

This guide provides installation instructions for the following Hewlett-Packard Company exchange assembly:
J2430-69001

Warranty
The information contained in this guide is entirely unwarranted.

Preparation

Description

The empty chassis exchange assembly for the HP J2430A Router 650 is used when the routing engine, interface cards, fan tray, power supplies, and cables and power cords are in working order, but some other part of the chassis needs replacement. Note that the backplane and the LED printed circuit assemblies are also available separately, as well as included in this empty chassis. For diagnostic information, also see chapter 3 in the *Installation Guide* for the HP Router 650, part number 5962-8317. These replacement instructions should be used for replacing the empty chassis.

What's Included and Not Included

This chassis exchange assembly consists of the following items:

- *Replacement Instructions* (this manual, 5962-8368)

- The router chassis

  This assembly includes the empty chassis, backplane, power connectors, back metal panel, router door assembly, LED card, plastic display bezel, and the plastic bezel to the left of the slots.

  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:

  - Power cord
  - Power supplies
  - Fan tray
  - Routing engine
  - Console cables and adapters for the routing engine's console port
  - Interface cards and cables
  - Card blanks
  - LED label strips for routing engine, interface cards, card blanks
  - Interface card labels for the slots
  - Mounting brackets and screws
  - Rubber feet
  - Disposable wrist strap
  - Product manuals

Preparation

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

- Torx T-10 screwdriver

- The *Installation Guide* for the HP Router 650 (5962-8317)

C a u t i o n   *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 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.

All of the cards 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 or connected. Follow these precautions to avoid damage to the card or chassis:

- Store cards in an antistatic box or bag whenever they are not installed in the chassis.

- Before removing or installing a 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 chassis. This is a grounded unpainted metal surface.

- Handle a card only by its edges, metal tray, bezel (face plate), or locks (extractor levers). Do not unnecessarily touch electrical components on the card.

- Do not remove the wrist strap until the cards have been installed in the chassis or stored in an antistatic box or bag.

Replacement Procedure

1. Disconnect the power cord(s) from all power supplies, at the back of the router.

2. Connect a grounding wrist strap to your wrist and to the metal panel on the back of the router.

3. Disconnect all cables from the routing engine and all interface cards, including the console cable. Save the cables and removable cable ties for reconnection after reassembly.

4. Repeat the following steps a through c for the routing engine, each interface card, and each blank (all generically called "card" here) in slots 1 through 5. Illustrations of card removal can be found in the "Replacing a Module" section in chapter 3 of the *Installation Guide* for the HP Router 650.

    a. Press down slightly on the insides of both locks on the front bezel card. Then swing them outward until the bezel disengages from the chassis.

    b. Grasping the left and right edges of the bezel, pull out until the tray is about half exposed.

    c. Grasping the sides of the tray, remove it from the router. Record which slot it came from and save it for reinstallation.

5. Unlock the front door of the router by pulling its lock—the round post at the upper right—to the right, and open the door to about 90°. Be careful not to open the router door more than 90°. Opening the door further could damage it.

6. Using the Torx T-10 screwdriver, remove the #M3 screws from the top corner(s) of each power supply. A power supply installed in the left compartment has screws in both corners; a power supply installed in the right compartment has a screw only in the upper-left corner. Save the screws.

7. For each power supply, pull the handle and remove it from its compartment. All power supplies must be removed and saved for reinstallation later.

8. Using the Torx T-10 screwdriver, remove the #M3 screws from the upper- and lower-right corners of the cooling module (fan tray). Save the screws. Illustrations of cooling module removal can be found in the "Replacing a Module" section in chapter 3 of the *Installation Guide* for the HP Router 650.

9. Holding the door open at 90°, grasp the handle on the cooling module and pull it out about 1 inch. Pull the white tab to disconnect the ribbon cable from its connector inside the door.

Note While removing the cooling module from its compartment in the next step, ensure that the cooling module housing does not catch on the three screws on the inside of the router door.

10. Holding the door open at 90°, grasp the handle on the cooling module and remove it from its compartment.

11. Remove all five LED label strips from the inside of the front door. Pull each strip from the right end of the door where the lock fits.

12. Close and lock the router door.

13. On the front of the router, to the left of the empty slots, remove all interface card (slot) labels by sliding them out to the right. Store these labels with the corresponding card and/or record which slots they were in. Make sure you remove all blank labels too, including any that are behind others, since the replacement chassis does not include any interface card labels.

14. Remove the chassis from the rack or cabinet, if installed in one. Save any mounting brackets and screws for remounting the replacement chassis.

15. Remove any rubber feet that have been attached to the chassis. They may have enough adhesive to stick to the replacement chassis, which is not supplied with any rubber feet.

16. Detach the grounding wrist strap from the back of the chassis.

Note Do not return the chassis to HP until the new chassis is assembled and operating correctly.

Reassembly   17. Mount the new (replacement) chassis in the rack or cabinet or on the table with the accessories saved from the old chassis. The rubber feet (for flat surface mounting only) may or may not stick to the bottom. Refer to chapter 1 in the *Installation Guide* for the HP Router 650 for mounting instructions.

18. Connect the grounding wrist strap to the metal panel on the back of the new chassis.

19. Repeat the following steps a through c for the routing engine, each interface card, and each blank in slots 1 through 5. An illustration of card insertion can be found in the "Replacing a Module" section in chapter 3 of the *Installation Guide* for the HP Router 650.

Caution   Each of these items must be returned to the same slot from which it was removed, or else the configuration will not be implemented and/or the self-test will fail.

    a. Holding the sides of the tray, slide the back of the tray about half-way into the router.

    b. 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°.

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

20. Unlock the front door of the router by pulling its lock—the round post at the upper right—to the right, and open the door to about 90°. Be careful not to open the router door more than 90°. Opening the door further could damage it.

21. Replace the LED label strips in the front door for all five slots, corresponding to the positions of the cards. Make sure the folded ends of the labels are directed toward the back.

22. Reinstall the interface card (slot) labels to the left of the card slots, corresponding to the positions of the cards.

Note   In the next step, be sure that the cooling module (fan tray) is aligned vertically and parallel to the housing in the router. If the module is tilted, you might not be able to insert it further into the module housing.

23. Holding the router door open at 90°, place the cooling module at the front of its housing (with the ribbon cable at upper front). Then carefully push it back into the housing until the mounting ears for the screws are about 1 inch from the holes in the router chassis. You may need to wiggle the cooling module and/or adjust its position so that it slides in properly.

24. Reconnect the cable that you disconnected in step 9. Press the connector in place with your finger.

25. Holding the door open at 90°, continue sliding the cooling module back until the mounting ears for the screws are flush against the holes in the router chassis.

26. Insert and tighten the two #M3 screws you removed in step 8.

27. For each power supply, insert the supply into the compartment, and push it all the way back. Insert and tighten the #M3 screw(s) you removed in step 6.

28. Reconnect the cables that you disconnected in step 3, including the console cable.

29. Detach the grounding wrist strap.

30. Reconnect the power cord(s), switch on the power switches of the power supplies, and close and latch the front door.

31. As self-test runs, check the LEDs. If one or more cards that previously operated correctly now appears to fail, then check the slot configuration; cards may have been returned to the wrong slots.

    Once the router is operating correctly, return the old chassis to HP.

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