MicroVAX 3100
Model 80 to Model 90

Upgrade Guide

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This guide describes how to install the MicroVAX 3100 Model 80 to Model 90 Upgrade Kits.

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Preface

This guide describes how to install and test the MicroVAX™ 3100 Model 80 to Model 90 upgrade kits (47HAX-C9, 47HAX-E9, 47HEX-C9, 47HEX-E9, 47HAX-CA, 47HAX-EA, 47HEX-CA, 47HEX-EA).

Audience

This guide is intended for Digital™ Services representatives or self-maintenance customers who want to install the MicroVAX 3100 Model 80 to Model 90 upgrade kits.

Structure of This Guide

This guide is divided into one chapter and three appendixes:

- Chapter 1 describes how to upgrade a MicroVAX 3100 Model 80 system to a Model 90 system.
- Appendix A describes the module return procedure for Digital Services personnel
- Appendix B describes the module return procedure for self-maintenance customers.
- Appendix C contains the upgrade forms and European module return labels.

Additional Information

The following documents provide additional information that you require to upgrade a Model 80 system to a Model 90 system:

- *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual (EK-A0511-MG)
- *MicroVAX 3100 Platform KA50 CPU System Maintenance* manual (EK-A0514-MG)

These manuals are part of the MicroVAX 3100 Platform Maintenance Information Kit (QZ-K44AC-GZ).

Conventions

The following conventions are used in this guide:

Convention	Description
`Monospace`	Text displayed on labels or on the screen isshown in monospace type.
`Monospace` bold	User input is shown in monospace bold.
italic type	Italic type emphasizes important information and indicates the complete titles of manuals.
Uppercase	Words in uppercase indicate a command.
Note	A note contains information of special importance to the reader.
Caution	A caution contains information to prevent damage to the equipment.

1

Installing the Upgrade Kits

This chapter describes how to install a MicroVAX 3100 Model 80 to Model 90 upgrade kit. It contains information on the following:

- Upgrade kit contents
- Export compliance
- Upgrade procedure for Digital Services representatives
- Upgrade procedure for self-maintenance customers
- Differences between the MicroVAX 3100 Model 80 and the MicroVAX 3100 Model 90
- Installing the MicroVAX 3100 Model 80 to Model 90 Upgrade Kits

1.1 Upgrade Kit Contents

Table 1–1 lists the contents of the upgrade kits.

Table 1–1 System Upgrade Kit Parts

Part Number	Description	Quantity -C9	-E9	-CA	-EA
Parts Common to All Kits					
36-15946-01	Product conversion label	1	1	1	1
36-26123-07	Return label for U.S.	1	1	1	1
36-36394-02	Serial label showing the product ID	1	1	1	1
70-29672-01	Model 90 CPU module with 16M bytes of memory	1		1	
70-29672-02	Model 90 CPU module with 64M bytes of memory		1		1
74-37642-27	Medallion, MicroVAX 3100 Model 90	1	1	1	1
EK-A0614-UP.001	Upgrade Guide	1	1	1	1
Parts Specific to the 47HAX-*nn* Kits					
QL-005AL-TH	OpenVMS™ VAX™ Base/IA upgrade license	1	1		
Parts Specific to the 47HEX-*nn* Kits					
QL-005AL-GH	DECnet™–VAX 3100 Model 80 to Model 90 upgrade license	1	1		
QL-005AP-62	OpenVMS VAX Base MicroVAX 3100 license	1	1		
QL-MA4AP-AA	VAX Rdb™ VMS run-time license	1	1		
QL-XULA9-BC	OpenVMS VAX I/A 2 user license	1	1		

1.2 Export Compliance

Note

This material is supplied under a U.S. Export License. It is imperative that the replaced parts are returned to Digital Equipment Corporation to comply with the U.S. Export License regulations.

1.3 Upgrade Procedure for Digital Services Representatives

To upgrade a MicroVAX 3100 Model 80 to a Model 90 system, follow these steps:

1. If necessary, back up the system software before setting the on/off switch on the system unit to the off (O) position.
2. Complete the upgrade procedure following the steps in Section 1.6, then return to this procedure.

Note

You must ensure that the replaced parts are returned to Digital™ to comply with the U.S. Export license regulations and to ensure that the customer receives credit.

3. Return the replaced parts following the steps in Appendix A.

1.4 Upgrade Procedure for Self-Maintenance Customers

To upgrade a MicroVAX 3100 Model 80 to a Model 90 system, follow these steps:

Note

To do the following procedure, you must be a qualified self-maintenance customer. If you are not qualified to do the upgrade procedure, contact your Digital Services representative to schedule a system upgrade.

1. Back up the system software before setting the on/off switch on the system unit to the off (O) position.
2. Complete the upgrade procedure following the steps in Section 1.6, then return to this procedure.

Note

You must return the replaced parts to comply with the export regulations. These parts are the property of Digital.

3. Return the replaced parts following the steps in Appendix B.

1.5 Differences Between the MicroVAX 3100 Model 80 and the MicroVAX 3100 Model 90

The MicroVAX 3100 Model 90 has a number of significant differences compared with the MicroVAX 3100 Model 80. Figure 1–1 shows the unique features on the Model 90 CPU Module. Table 1–2 describes the differences between the Model 80 and Model 90 CPU Module features. Use the information in Figure 1–1 and Table 1–2 to ensure that you install the upgrade kit correctly. For more information see the *MicroVAX 3100 Model 90 BA42-B Enclosure Maintenance* manual and the *MicroVAX 3100 Model 90 Options* manual.

Figure 1–1 Unique Features on the Model 90 CPU Module

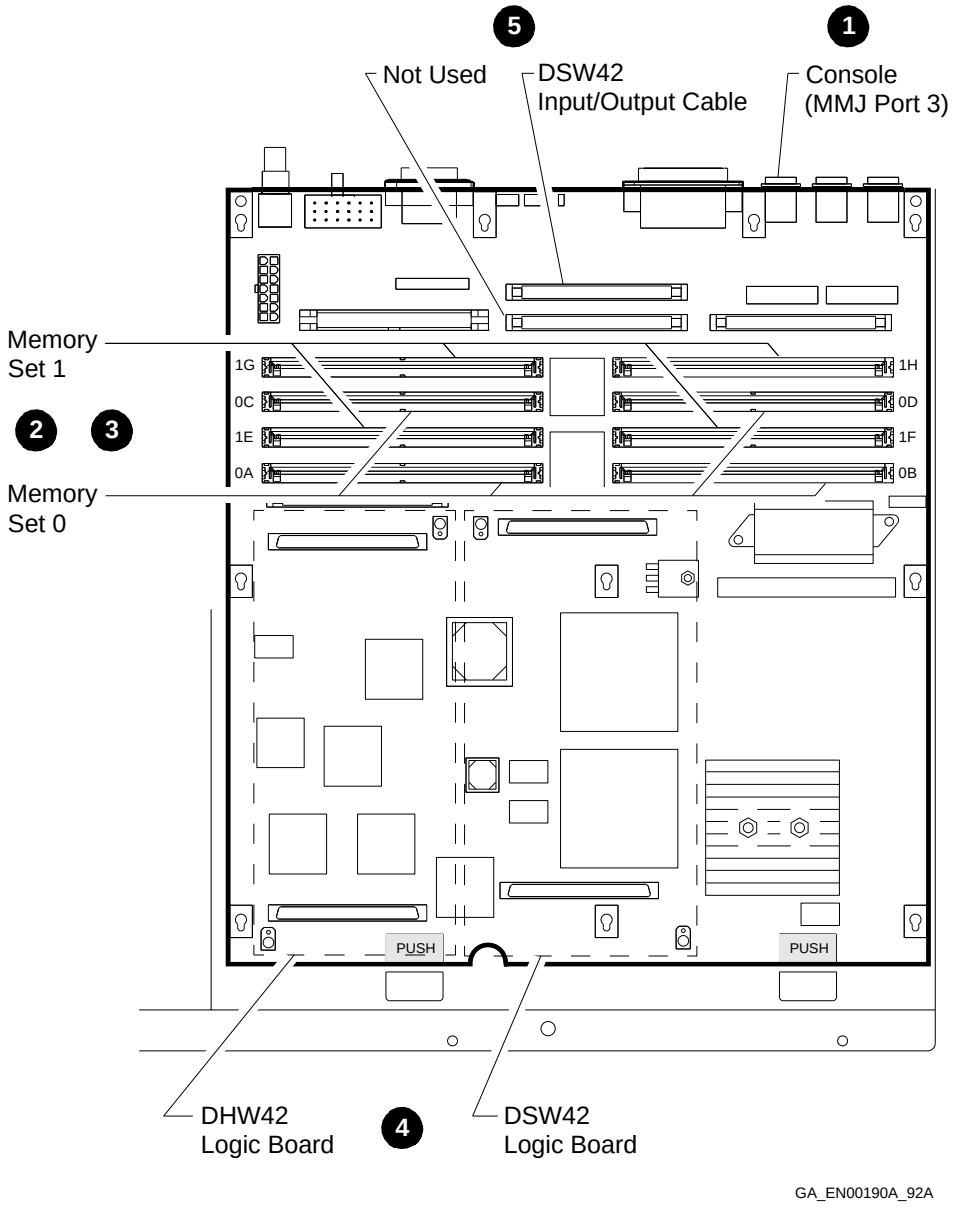


Table 1–2 Differences Between the Model 80 and Model 90 CPU Module Features

	Model 80	Model 90
❶	Console is port 0.	Console is port 3.
❷	Memory is installed as a bank of two memory modules.	Memory is installed as a set of four memory modules.
❸	Memory must be installed in banks in the following order: • Bank 1—1L+1H • Bank 2—2L+2H • Bank 3—3L+3H	Memory must be installed in sets in the following order: • Set 0—0A+0B+0C+0D • Set 1—1E+1F+1G+1H
❹	Looking from the front of the BA42-B enclosure, the DHW42 logic board is on the right of the DSW42 logic board.	Looking from the front of the BA42-B enclosure, the DHW42 logic board is on the left of the DSW42 logic board.
❺	The DSW42 input/output cable fits into the single connector provided.	Looking from the front of the BA42-B enclosure, the DSW42 input/output cable fits into the rear connector of the two connectors provided on the CPU module. The first connector is not used.

1.6 Installing the MicroVAX 3100 Model 80 to Model 90 Upgrade Kits

To install one of the MicroVAX 3100 Model 80 to Model 90 upgrade kits, follow these steps:

1. Give all system users advance notice that the system is shutting down.
2. Unpack the contents of the upgrade kit.

   When unpacking the contents of the upgrade kit, keep the packing material. You can use it to pack the replaced module when returning it to Digital.
3. Shut down the system.

   To shut down the system, follow these steps:

   a. Shut down the operating system software and halt the system.

   b. Set the on/off switch on any peripherals connected to the system to the off (O) position.

c. Set the on/off switch on the system unit to the off (O) position.

4. Disconnect any cables connected to the system unit.

Caution

Wear an antistatic wrist strap connected to a grounded antistatic workstation or an antistatic mat before you handle the system field replaceable units (FRUs).

5. Remove the KA47-AA CPU module by following steps 1 to 14 in the section entitled, Removing the CPU Module, in Chapter 3 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual.

6. Install the KA50-AA CPU module.

   To install the KA50-AA CPU module, follow these steps:

   a. Remove the Ethernet ID ROM from the KA50-AA CPU module and install it in the KA47-AA CPU module.

   b. Install the Ethernet ID ROM that you removed from the KA47-AA CPU module in the KA50-AA CPU module.

      This step ensures that the system maintains the same Ethernet address after you have completed the upgrade.

   c. Follow steps 2 to 6 in the section entitled, Replacing the CPU Module, in Chapter 3 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual.

Note

If the Model 80 system was configured with 8M bytes, 24M bytes, 40M bytes, 48M bytes, or 72M bytes of memory, you cannot use the same memory configuration in the Model 90 system.

   d. Install the MS44 or MS44L memory modules supplied with the kit by reversing the instructions in step 3 in the section entitled, Removing an MS44 or MS44L Memory Module, in Chapter 3 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual.

See the section entitled, Model 90 Memory Configurations, in Chapter 1 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual for information on configuring memory in Model 90 systems.

Note

You must return any unused memory modules with the KA47 CPU Module.

e. Follow steps 8 to 11 in the section entitled, Replacing the CPU Module, in Chapter 3 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual to complete the installation procedure.

7. Reinstall the system unit.

   To reinstall the system unit, follow the procedures described in the section entitled, Installing the BA42-B System, in Chapter 2 of the *MicroVAX 3100 Platform BA42-B Enclosure Maintenance* manual.

8. Examine the results of the system self-tests.

   The *MicroVAX 3100 Platform KA50 CPU System Maintenance* manual describes how to interpret the results of these self-tests.

9. Enter the following command to test the system configuration:

   ```
   >>> SHOW CONFIG
   ```

   The *MicroVAX 3100 Platform KA50 CPU System Maintenance* manual describes how to interpret the results of this command.

10. Place the product conversion label (PCL) (36-15946-01) on the bottom right-hand corner of the rear bezel, below the power switch.

11. Write the following information on the label.

    a. Write the part number of the Model 80 system (450ZM-B9) beside the word *From* on the label.

    b. Write the part number of the Model 90 system beside the word *To* on the label.

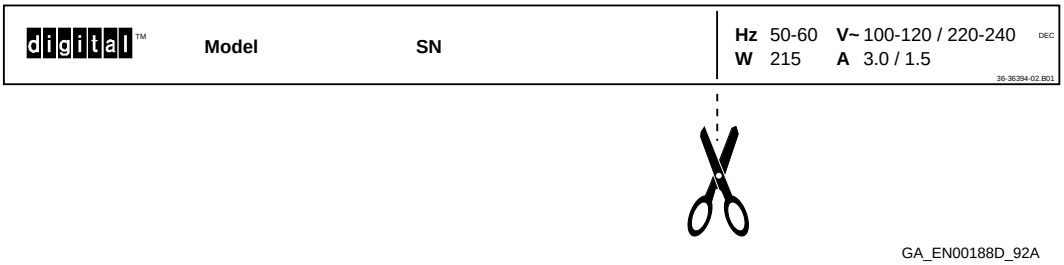
    The part number for the Model 90 system depends on the upgrade kit installed (see Table 1–3).

Table 1–3 Model 90 System Part Numbers

Part Number	Upgrade Kit
47ZBM-A9	47HAX-C9, 47HEX-C9, 47HAX-CA, 47HEX-CA
47ZBM-B9	47HAX-E9, 47HEX-E9, 47HAX-EA, 47HEX-EA

12. Cut the new serial label in half, part number 36-36394-02, as shown in Figure 1–2, and discard the left-hand part. Place the remaining part of the new serial label on the right-hand side of the old serial label, which is located on the top left-hand corner of the rear bezel.

Figure 1–2 New Serial Label



13. Replace the medallion on the top left-hand corner of the front of the system unit.

    To replace the medallion, follow these steps:

    CAUTION

    Use the flat-headed screwdriver carefully to avoid damaging the plastic front bezel.

    a. Insert a small flat-headed screwdriver under the bottom right-hand corner of the medallion and gently lever it off.

b. Remove the protective cover on the adhesive back of the replacement Model 90 medallion and insert it in the vacant medallion slot on the front of the system unit.

14. Follow the procedure described in Appendix A (Digital Services) or Appendix B (self-maintenance customers) to return the KA47-AA CPU module to Digital.

A

Module Return Procedure for Digital Services

Note

This appendix is for Digital Services personnel only.

This appendix describes how to repackage and return replaced modules to Digital. The conversion agreement with Digital is not complete until you complete the procedure in this appendix. This procedure applies only to U.S. and European installations. For information on returning modules in other locations, contact the local Digital Customer Administration Services (CAS) office.

To repackage and return replaced modules to Digital, follow these steps:

Note

See Appendix C for the forms referenced in the following procedure.

1. If you do not have the information needed to complete the return procedure, contact your local Digital CAS office. You need the following information:
   - Return authorization (RA) number
   - Digital order number
   - Name of the CAS representative
   - Branch office that arranges the pickup and return of the module
2. Use the packaging material set aside from the upgrade kit to pack the replaced modules in the empty shipping cartons.

3. Complete the Digital Services Worksheet. It documents the work that you performed.

   Return that worksheet to your contract administrator at the branch office.

4. Complete both of the following:

   - Installation Receipt–Customer Copy

     The Installation Receipt–Customer Copy is for the customer to keep. It shows that the installation was completed and that Digital Services contacted CAS.

   - Installation Receipt–Digital Services Copy

     Return the Installation Receipt–Digital Services Copy to the CAS office to ensure that the customer receives credit for the replaced modules.

5. Complete the Return Material Checklist.

   Return the checklist with the replaced modules.

6. For U.S. installations, place one of the self-adhesive mailing labels contained in this kit on each module box that you are returning.

   Write the RA number, Digital order number, and package number in the spaces provided on each label.

7. For European installations, remove a mailing label supplied in Appendix C and attach it to each module box that you are returning.

   Write the RA number, Digital order number, and package number in the spaces provided on each label.

8. Seal the box for shipment.

   Digital arranges for the module to be picked up and returned from the customer's site.

Contact your local account representative if you have further questions on this return procedure.

B

Module Return Procedure for Self-Maintenance Customers

Note

This appendix is for self-maintenance customers only.

Contact your Digital account representative for information on the module return procedure that applies to you. You must return the replaced modules to Digital to comply with the U.S. Export License requirements and to ensure you receive credit.

C

Module Return Procedure Forms

This appendix contains the following forms:

- Digital Services Worksheet
- Installation Receipt—Customer Copy
- Installation Receipt—Digital Services Copy
- Return Material Checklist
- European Module Return Label

Digital Services Worksheet

MicroVAX 3100 Model 80 to Model 90 Upgrade (47HAX-*nn* and 47HEX-*nn*)

This form verifies the work performed on the system and acts as a check on the procedures used. Please fill out this form and return it to your contract administrator for updating the customer's contract.

Customer: _____

System Serial Number: _____

Old System Name: MicroVAX 3100 Model 80

Old System Model Number: 470ZM-B9

Old CPU Module Serial Number: _____

New System Name: MicroVAX 3100 Model 90

New System Model Number: 47ZBM-A9 or 47ZBM-B9[1]

New CPU Module Serial Number: _____

Return Authorization Number: _____

Digital Order Number: _____

[1] Delete as appropriate. See Table 1–3 for information about which new part number to use to replace old part numbers.

Installation Receipt—Customer Copy

MicroVAX 3100 Model 80 to Model 90 Upgrade (47HAX-*nn* and 47HEX-*nn*)

This form is the customer's receipt and is verification for Digital Services that the upgrade kit (47HAX-*nn* or 47HEX-*nn*) was installed.

Digital Services: Complete both copies of this form. Give a copy to the customer and a copy to the local CAS office for filing with customer documents.
Customer: Digital will contact you within the next few days to arrange to pick up and return your module. Keep this copy as your record of installation by Digital.

Name of CAS representative: _____

Branch Office that arranges for package pick up and return
_____.

Return Authorization Number: _____

Digital Order Number: _____

Converted from: MicroVAX 3100 Model 80

Old CPU Module Serial Number: _____

Converted to: MicroVAX 3100 Model 90

New CPU Module Serial Number: _____

Installation was performed on this day: _____

CPU Module Packed for Return: (54-20652-01 [KA47-AA]) Quantity:

Customer Name: _____ Phone Number: _____

Signatures:

Customer: _____

Digital Services Representative: _____

Installation Receipt—Digital Services Copy

MicroVAX 3100 Model 80 to Model 90 Upgrade (47HAX-*nn* and 47HEX-*nn*)

This form is the customer's receipt and is verification for Digital Services that upgrade kit (47HAX-*nn* or 47HEX-*nn*) was installed.

Digital Services: Complete both copies of this form. Give a copy to the customer and a copy to the local CAS office for filing with customer documents.
Customer: Digital will contact you within the next few days to arrange to pick up and return your module. Keep this copy as your record of installation by Digital.

Name of CAS representative: _____

Branch Office that arranges for package pick up and return
_____.

Return Authorization Number: _____

Digital Order Number: _____

Converted from: MicroVAX 3100 Model 80

Old CPU Module Serial Number: _____

Converted to: MicroVAX 3100 Model 90

New CPU Module Serial Number: _____

Installation was performed on this day: _____

CPU Module Packed for Return: (54-20652-01 [KA47-AA]) Quantity:

Customer Name: _____ Phone Number: _____

Signatures:

Customer: _____

Digital Services Representative: _____

Return Material Checklist

MicroVAX 3100 Model 80 to Model 90 Upgrade (47HAX-*nn* and 47HEX-*nn*)

This form must be filled in and returned with the old modules to clear the customer's account.

CPU Module Packed for Return: (54-2062-01 [KA47-AA]), Quantity: _____

Return Authorization Number: _____

Digital Order Number: _____
Customer Name: _____
Customer Address: _____
_____
_____

Customer Contact: _____

Include this form with the modules that you are returning.

European Module Return Label

Ship to:

Digital Equipment Corporation
Attention: TREG JGO/SR 251
Nijmegen
THE NETHERLANDS

RA#_____

DEC#_____

Package #_____ of _____