



# MicroVAX II

## Upgrade Installation Guide

**digital**™





# MicroVAX II

## Upgrade Installation Guide

Prepared by Educational Services  
of  
Digital Equipment Corporation

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| DECSYSTEM-20 | P/OS         | VMS            |
| DECUS        | Professional | VT             |
| DECwriter    | Q-Bus        | Work Processor |

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## PREFACE

The MicroVAX II upgrade kit is designed to upgrade MicroVAX I or BA23 enclosure based MICRO/PDP-11 systems to a MicroVAX II system. Follow the instructions in the order given and be sure to return the old CPU module when you have upgraded your system.

This upgrade is not designed for use with any enclosure except for the BA23.

If any item is missing or damaged:

- o Contact your sales representative.
- o Contact your delivery agent.

When the upgrade is complete, return the two CPU modules from the MicroVAX I or the single CPU module from the MICRO/PDP-11 to:

Digital Equipment Corporation  
Idle Material Management  
215 South Broadway  
Salem, NH 03079

Use the packing material from the upgrade kit to pack the old modules for return.

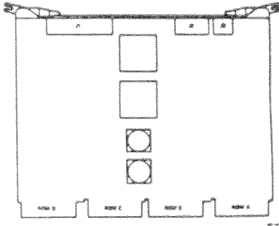
Be sure to take anti-static precautions when installing the new modules. The MicroVAX II CPU and RQDX disk controller modules are susceptible to damage by static discharge.

Refer to the technical manual included with this upgrade kit for further information.

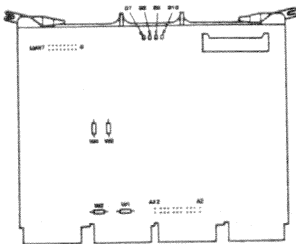
## Identify Parts

### UNPACK THE MicroVAX II UPGRADE KIT

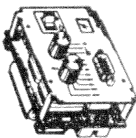
#### CONTENTS:



MicroVAX II CPU Module (M7606-A)



RQDX2 (Quad height module, shown here, M8639-YB) or RQDX3 (Dual height module, not shown here, M7555) Disk Drive Controller and cable



MicroVAX II CPU Distribution Panel Insert and Two Cables

#### PRODUCT VARIATION

MODEL CHANGED  
FROM:

TO:

BY:

3615946-01

Product Variation Label

## Identify Parts

M9047 Grant Continuity Card (Dual height, full length)

MicroVAX II Medallion

Console Terminal Cable

ZNAAA Hardware Information Kit which includes the Owner's Manual, Technical Manual, binder, slipcase and user diagnostics

In addition to the contents included in the upgrade kit, you may have ordered additional memory. If you did order additional memory, make sure that it is a MS630-AA, BA or BB type (M7607-AA, M7608-AA or M7608-BA). The MicroVAX II only supports these memory expansions.

Do not proceed with this upgrade unless you have received:

- o all items listed in the upgrade contents section and

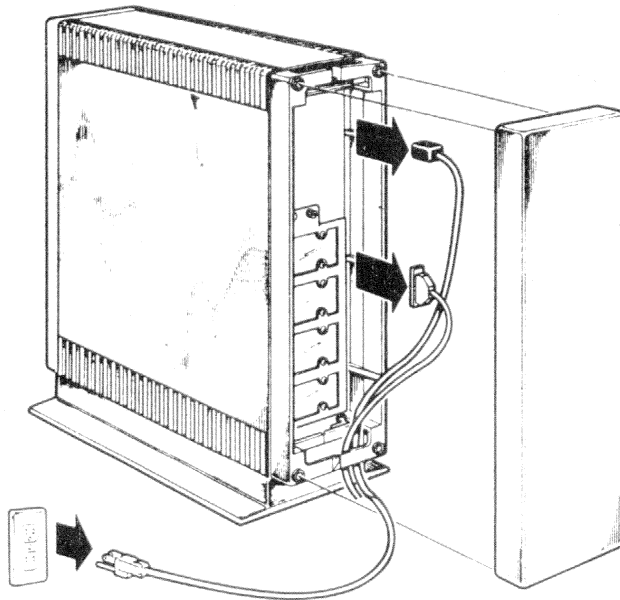
- o any additional memory ordered.



## Installation

### REMOVE THE COVER

1. Set the power switch to 0 (off).
2. Unplug the power cord from the power outlet.
3. Remove the rear cover and all cables. You may want to label the cables for installation later.



## Installation

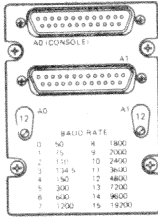
### REMOVE THE CPU DISTRIBUTION PANEL INSERT

1. Unscrew the two screws at the top of the distribution panel assembly and remove it.
2. Remove the ground wires connecting the distribution panel assembly to the system.
3. The CPU distribution panel insert should match one of the inserts shown on the top row of the next page. Loosen the four screws holding the CPU distribution panel insert and remove the insert. Disconnect any cables attached to the rear of the insert.

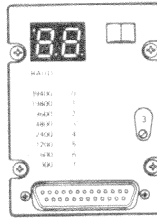
### INSTALL THE NEW CPU DISTRIBUTION PANEL INSERT

1. Place the new insert in the space where the old insert was removed. Check the insert orientation and replace the four screws.

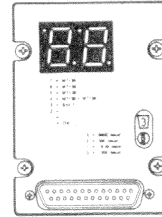
# DISTRIBUTION PANEL INSERTS



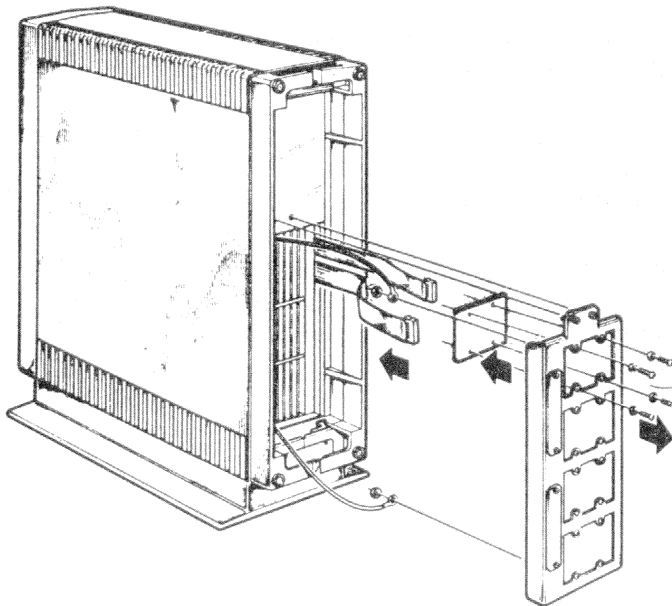
MICRO/PDP-11



MICRO PDP-11/73



MICROVAX I



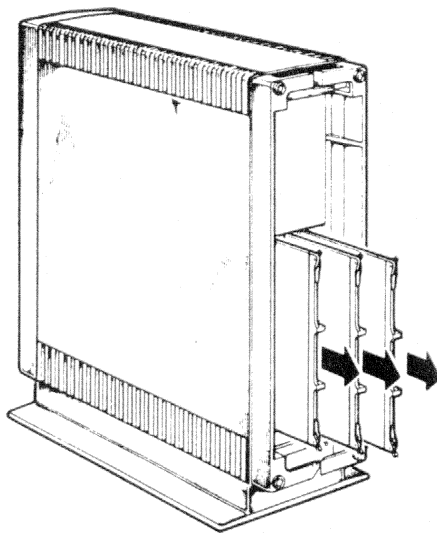
## Installation

### REMOVE OLD MODULES

1. The first slot is the right-most slot in a vertical system or the top slot in a tabletop system. The part number of the module in the first slot should be M7136, M8189 or M8190. Remove the module and any attached cables in the first slot by pulling the levers away from the module and sliding it out of the guides. Set this module aside for return to Digital.
2. Remove the module from slot 2. The module part number should be M7135 or M8067. If the module part number is M7135, set this module aside with M7136 for return to Digital.
3. If a module is present in slot 3, remove it. This module will not be returned to Digital.
4. Remove the module from the last used slot. The module part number should be M8639-YA. This module will not be returned to Digital.
5. Check the remaining modules and remove any modules with the part number M8067 or G7272. These modules will not be returned to Digital.

# Installation

|   | A | B | C | D |                         |
|---|---|---|---|---|-------------------------|
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10 |   |   |   |   | CPU MODULE              |
|   |   |   |   |   | DATA PATH/MEMORY MODULE |
|   |   |   |   |   | MEMORY MODULE           |
|   |   |   |   |   | OPTIONS                 |
|   |   |   |   |   | RQDX CONTROLLER         |



## Installation

### INSTALL NEW MODULES

#### NOTE

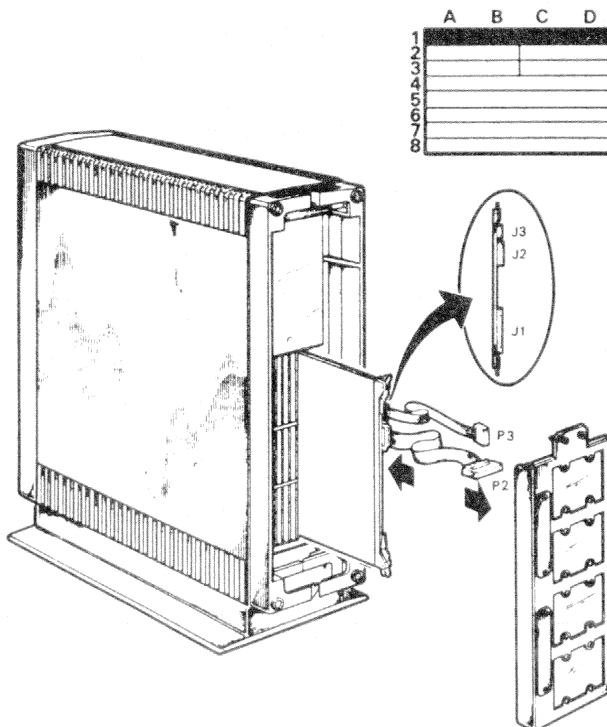
DO NOT install the MicroVAX II CPU module (M7606) or the MS630 memory modules (M7607 and M7608) in slots 4 through 8 or they WILL be damaged. DO NOT install the dual height MS630-AA (M7607) memory module in the A-B portion of slots 1, 2 or 3 or it WILL be damaged.

1. Install the MicroVAX II CPU module, M7606, in slot 1. Connect the 10 pin and 20 pin cables to module connectors J2 and J3.
2. If MS630 memory expansion modules were ordered, install these in slots 2 and 3. If one memory module is used, it must be in slot 2. The MS630-AA memory module, M7607-AA, is a dual height module and must be installed in the C-D portion of slots 2 or 3. Once the modules are seated, connect the MicroVAX II M7606 CPU module to the memory modules with the 3-connector 50-pin cable supplied with the memory modules.
3. If there are gaps between modules installed in slots 4 through 8, remove each module one at a time and install the module in the next slot toward the MicroVAX II CPU module. Be sure to keep the modules in relative order.
4. Install the new RQDX disk controller in the slot next to the last module installed in the backplane. The RQDX3 is a dual height module and may be installed in the C-D portion of the last slot used if a dual height module is in the A-B portion of that

## Installation

slot. Otherwise, the RQDX3 must occupy the A-B portion of the last used slot. The RQDX2 is a quad height module and occupies the entire slot. Once the RQDX controller is installed, connect the existing cable from the disk distribution panel.

5. If there are any gaps between slots in the A-B portion of slots 2 and 3 or gaps in either the A-B or C-D portion of slots 4 through 8, install a M9047 grant card so that the A-B and C-D rows are occupied.
6. Connect the cables from the MicroVAX II M7606 CPU module to the CPU distribution panel insert.



## Installation

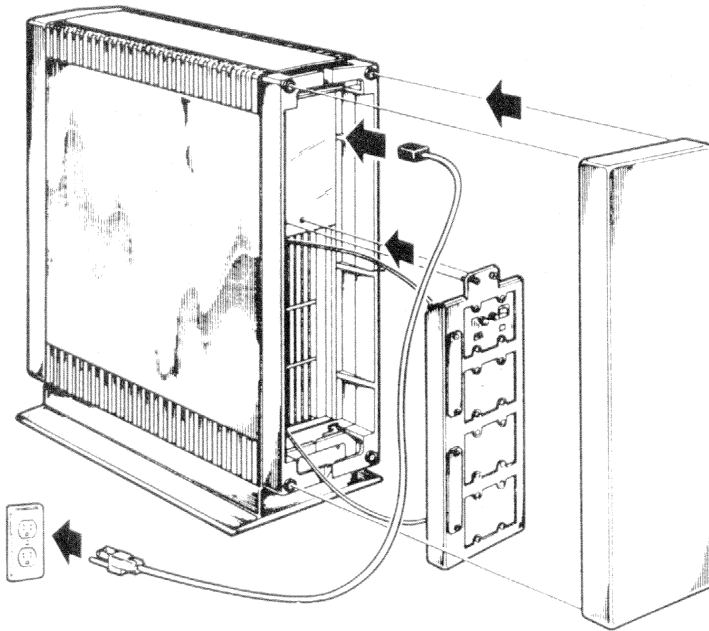
### INSTALL DISTRIBUTION PANEL ASSEMBLY

1. Reconnect the the grounding wires to the distribution panel assembly.
2. Install the distribution assembly by setting the bottom of the panel on the system enclosure and swinging the panel up. Tighten the two screws which fasten the panel to the system enclosure.
3. Reconnect all the signal cables to the distribution panel.
4. Connect the console terminal cable to the CPU distribution panel insert and route the cable through the bracket at the bottom of the system. Connect the other end to the console terminal.
5. Place the product variation label on the back panel next to the model and serial number sticker. Write the option number of the system you are converting on the FROM: line. If your system is in the pedestal or table-top configuration, write 630QY-A2 on the TO: line. If it is a rack mount configuration, write 630QZ-A2 on the TO: line. Write your name in the BY: line.
6. Connect the power cord to the system.
7. Plug the power cord into the power outlet.
8. Refer to the MicroVAX II Owner's Manual Installation section, for information on how to set the MicroVAX II controls and test your system.



## Installation

9. Once testing is complete, replace the rear cover.



## Installation

### INSTALLING THE MEDALLION

1. Remove the front cover and locate the rear of the system medallion.
2. Use a pair of small pliers to grasp and remove the spring on the shaft of the old medallion.
3. Press the tabs on the rear of the medallion shaft with the pliers and grasp the front of the medallion with your free hand. Pull the medallion from the front until it comes out of the system.
4. Replace the old medallion with the MicroVAX II medallion and install the new spring on the rear shaft.

### RETURNING THE OLD CPU MODULES

1. Return the two CPU modules from the MicroVAX I or the single CPU module from the MICRO/PDP-11 to:

Digital Equipment Corporation  
Idle Material Management  
215 South Broadway  
Salem, NH 03079

2. Use the packing material from the upgrade kit to package the modules for return.

## MODULE PART NUMBERS

| <u>NUMBER</u> | <u>OPTION</u> | <u>MODULE FUNCTION</u>                                   |
|---------------|---------------|--|
| G7272         | ---           | Single Height Short Grant<br>Continuity Card             |
| M7135         | ---           | MicroVAX I Data Path Module                              |
| M7136         | ---           | MicroVAX I Memory Controller                             |
| M7555         | RQDX3         | Disk Drive Controller                                    |
| M7606         | KA630-A       | MicroVAX II CPU Module                                   |
| M7607         | MS630-AA      | MicroVAX II Dual Height<br>Memory Module                 |
| M7608         | MS630-B       | MicroVAX II Quad Height<br>Memory Module                 |
| M8067         | MSV11         | MicroVAX I and MICRO/PDP-11<br>Quad Height Memory Module |
| M8189         | KDF11-B       | MICRO/PDP-11 CPU Module                                  |
| M8190         | KDJ11-B       | MICROPDP-11/73 CPU Module                                |
| M8639-YA      | RQDX1         | Disk Drive Controller                                    |
| M8639-YB      | RQDX2         | Disk Drive Controller                                    |
| M9047         | ---           | Dual Height Full length<br>Grant Continuity Card         |









