



Upgrades
V2.4—23 February 1998
DIGITAL Systems and Options Catalog

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Upgrades

AlphaStation 500 CPU Upgrades

| Order Number | From | To | Includes |
|-----------------------|----------------------|----------------------|---|
| PB56U-BA ¹ | AlphaStation 500/266 | AlphaStation 500/500 | 500 MHz CPU Note: Mandatory Return of 266 MHz CPU |
| PB56U-BB | AlphaStation 500/333 | AlphaStation 500/500 | 500 MHz CPU Note: Mandatory Return of 333 MHz CPU |
| PB56U-BC ¹ | AlphaStation 500/400 | AlphaStation 500/500 | 500 MHz CPU Note: Mandatory Return of 400 MHz CPU |

1. Installation and Travel are not included with CPU Board Upgrade. Order FM-WSDTP-IN and FM-TRAVL-IN separately.

AlphaStation 600 CPU Upgrade

| Order Number | From | To | Includes |
|--------------|----------------------------------|------------------------|---|
| PB62U-CA | AlphaStation 600 5/266, 5/333 | AlphaStation 600 5/500 | 500 MHz CPU 4MB Fast cache for DIGITAL UNIX, OpenVMS, and Windows NT Note: Mandatory Return of 266 or 333 MHz CPU |

AlphaServer 800 CPU Upgrades-

| Order Number | From | To | Includes |
|--------------|-----------------------|-----------------------|---|
| PB81U-AZ | AlphaServer 800 5/333 | AlphaServer 800 5/400 | 400 MHz CPU Note: Mandatory return of 333 MHz CPU |
| PB82UAZ | AlphaServer 800 5/333 | AlphaServer 800 5/500 | 500 MHz CPU Note: Mandatory return of 333 MHz CPU |
| PB82U-FZ | AlphaServer 800 5/400 | AlphaServer 800 5/500 | 500 MHz CPU Note: Mandatory return of 400 MHz CPU |

AlphaServer 1000 to AlphaServer 1000A Upgrades

| Order Number | From | To | Includes |
|--------------|------------------------------------|-------------------------|--|
| PB78U-FX | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and pedestal enclosure, DIGITAL UNIX license Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |
| PB78U-MX | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and pedestal enclosure, OpenVMS license Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |
| PB78U-AX | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and pedestal enclosure, Windows NT Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |
| PB78U-FR | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and rackmount enclosure, DIGITAL UNIX license Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |
| PB78U-MR | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and rackmount enclosure, OpenVMS license Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |
| PB78U-AR | AlphaServer 1000 4/2xx or 5/300 | AlphaServer 1000A 5/400 | 400 MHz CPU and rackmount enclosure, Windows NT server media Note: Mandatory return of 4/2xx or 5/300 MHz CPU and enclosure |

AlphaServer 1000A CPU Upgrades

| Order Number | From | To | Includes |
|--------------|---|-------------------------|---|
| PB78U-FZ | AlphaServer 1000A 4/2xx or 5/3xx | AlphaServer 1000A 5/400 | 400 MHz CPU, DIGITAL UNIX license Note: Mandatory return of 4/2xx or 5/3xx MHz CPU. |
| PB78U-MZ | AlphaServer 1000A 4/2xx or 5/3xx | AlphaServer 1000A 5/400 | 400 MHz CPU, OpenVMS license Note: Mandatory return of 4/2xx or 5/3xx MHz CPU. |
| PB78U-AZ | AlphaServer 1000A 4/2xx or 5/3xx | AlphaServer 1000A 5/400 | 400 MHz CPU, Windows NT server media Note: Mandatory return of 4/2xx or 5/3xx MHz CPU. |
| PB79U-FZ | AlphaServer 1000A 4/2xx, 5/3xx, or 5/400 | AlphaServer 1000A 5/500 | 500 MHz CPU, DIGITAL UNIX license Note: Mandatory return of 4/2xx , 5/3xx or 5/400 MHz CPU. |
| PB79U-MZ | AlphaServer 1000A 4/2xx or 5/3xx | AlphaServer 1000A 5/500 | 500 MHz CPU, OpenVMS license Note: Mandatory return of 4/2xx , 5/3xx or 5/400 MHz CPU and enclosure |
| PB79U-AZ | AlphaServer 1000A 4/2xx or 5/3xx | AlphaServer 1000A 5/500 | 500 MHz CPU, Windows NT server media Note: Mandatory return of 4/2xx , 5/3xx or 5/400 MHz CPU. |

AlphaServer 2000 CPU Upgrades

| Order Number | From | To | Includes |
|-----------------------|---|------------------------|--|
| 460XR-UA ¹ | AlphaServer 2000 4/200, 4/233 | AlphaServer 2000 4/275 | 275 MHz CPU, 4 MB cache Note: Mandatory return of 200 or 233 MHz CPU |
| 470XR-UA ¹ | AlphaServer 2000 4/200, 4/233, 4/275 | AlphaServer 2000 5/250 | 250 MHz CPU, 4 MB cache Note: Mandatory return of 233 or 275 MHz CPU |
| 480XR-UA ¹ | AlphaServer 2000 4/200, 4/233, 4/275 | AlphaServer 2000 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return 200, 233, or 275 MHz CPU |
| 480XR-UC ¹ | AlphaServer 2000 5/250 | AlphaServer 2000 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return of 250 MHz CPU |
| 490XR-UA | AlphaServer 2000 4/200, 4/233 | AlphaServer 2000 5/375 | 375 MHz CPU, 8 MB cache DIGITAL UNIX and Windows NT only Note: Mandatory return of 200 or 233 MHz CPU |
| 490XR-UB | AlphaServer 2000 5/250 | AlphaServer 2000 5/375 | 375 MHz CPU, 8 MB cache DIGITAL UNIX and Windows NT only Note: Mandatory return of 250 MHz CPU |
| 490XR-UC | AlphaServer 2000 5/300 | AlphaServer 2000 5/375 | 375 MHz CPU, 8 MB cache DIGITAL UNIX and Windows NT only Note: Mandatory return of 300 MHz CPU |

1. To upgrade AlphaServer 2000 4/2xx systems with serial number(s) xx515xxxxxx or lower to a 4/275, 5/250, or 5/300 CPU, order a BA720-UA AlphaServer 2000 Enclosure EMC Upgrade Kit (at no charge) along with the CPU upgrade.

Upgrades

AlphaServer 2100 CPU Upgrades

| Order Number | From | To | Includes |
|--------------|---|------------------------|--|
| 470XR-UA | AlphaServer 2100 4/200, 4/233, or 4/275 | AlphaServer 2100 5/250 | 250 MHz CPU, 4 MB cache Note: Mandatory return of 200, 233, or 275 MHz CPU |
| 480XR-UA | AlphaServer 2100 4/200, 4/233, or 4/275 | AlphaServer 2100 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return of 200, 233, or 275 MHz CPU |
| 480XR-UC | AlphaServer 2100 5/250 | AlphaServer 2100 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return of 250 MHz CPU |
| 490XR-UC | AlphaServer 2100 4/200, 4/233 | AlphaServer 2100 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 200 or 233 MHz CPU |
| 490XR-UB | AlphaServer 2100 5/250 | AlphaServer 2100 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 250 MHz CPU |
| 490XR-UC | AlphaServer 2100 5/300 | AlphaServer 2100 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 300 MHz CPU |

AlphaServer 2100 to 2100A Upgrades

| Order Number | From | To | Includes |
|--------------|------------------|-------------------|---|
| KFPEA-AA | AlphaServer 2100 | AlphaServer 2100A | Hardware and Software components to upgrade AlphaServer 2100 to AlphaServer 2100A DIGITAL UNIX V3.2-D2 media Note: Does not include CPU upgrade. |
| KFPEY-AA | AlphaServer 2100 | AlphaServer 2100A | Hardware and Software components to upgrade AlphaServer 2100 to AlphaServer 2100A OpenVMS V6.2 1-1H1 media Note: Does not include CPU upgrade. |
| KFPEN-AA | AlphaServer 2100 | AlphaServer 2100A | Hardware and Software components to upgrade AlphaServer 2100 to AlphaServer 2100A Windows NT Server V3.51B media Note: Does not include CPU upgrade. |

AlphaServer 2100 RM to 2100A RM Upgrades

| Order Number | From | To | Includes |
|--------------|---------------------|----------------------|---|
| KFPEA-BA | AlphaServer 2100 RM | AlphaServer 2100A RM | Hardware and Software components to upgrade AlphaServer 2100 RM to AlphaServer 2100A RM DIGITAL UNIX V3.2-D2 media Note: Does not include CPU upgrade. |
| KFPEY-BA | AlphaServer 2100 RM | AlphaServer 2100A RM | Hardware and Software components to upgrade AlphaServer 2100 RM to AlphaServer 2100A RM OpenVMS V6.2 1-1H1 media Note: Does not include CPU upgrade. |
| KFPEN-BA | AlphaServer 2100 RM | AlphaServer 2100A RM | Hardware and Software components to upgrade AlphaServer 2100 RM to AlphaServer 2100A RM Windows NT Server V3.51B media Note: Does not include CPU upgrade. |

AlphaServer 2100A CPU Upgrades

| Order Number | From | To | Includes |
|--------------|--------------------------------|-------------------------|--|
| 480XR-UA | AlphaServer 2100A 4/275 | AlphaServer 2100A 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return of 275 MHz CPU |
| 480XR-UC | AlphaServer 2100A 5/250 | AlphaServer 2100A 5/300 | 300 MHz CPU, 4 MB cache Note: Mandatory return of 250 MHz CPU |
| 490XR-UA | AlphaServer 2100A 4/200, 4/233 | AlphaServer 2100A 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 200 or 233 MHz CPU |
| 490XR-UB | AlphaServer 2100A 5/250 | AlphaServer 2100A 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 250 MHz CPU |
| 490XR-UC | AlphaServer 2100A 5/300 | AlphaServer 2100A 5/375 | 375 MHz CPU, 8 MB cache Note: Mandatory return of 300 MHz CPU |

AlphaServer 4000 With 8 PCI Slots to AlphaServer 4000 With 16 PCI Slots

| Order Number | From | To | Includes |
|--------------|-----------------------------------|---|--|
| DH-53Z2A-AA | AlphaServer 4000 with 8 I/O Slots | AlphaServer 4000 ¹ with 16 I/O Slots | AlphaServer 4000 System Drawer with I/O Expansion option Note: Mandatory return of existing AlphaServer 4000 System Drawer |

1. 5/300 MHz CPUs numbered B3001-AA and B3002-AA are not supported in the new AlphaServer 4000 8/16 PCI slot System Drawers. B3002-AA CPUs will be upgraded to B3004-BA CPUs before installation in new AlphaServer 4000 System Drawer.

Upgrades

AlphaServer 4000 with 8 PCI Slots to AlphaServer 4000 With 16 PCI Slots

| Order Number | From | To | Includes |
|--------------|------------------|--|--|
| DN-53ZEA-AA | AlphaServer 4100 | AlphaServer 4000 ¹ with 16 I/O Slots (Windows NT 4.0) | AlphaServer 4000 System Drawer Upgrade for Windows NT with I/O Expansion Option Note: Mandatory return of existing AlphaServer 4100 System Drawer |
| DA-53ZEB-AA | AlphaServer 4100 | AlphaServer 4000 ¹ with 16 I/O Slots (DIGITAL UNIX) | AlphaServer 4000 System Drawer Upgrade with DIGITAL UNIX base system license and I/O Expansion Option Note: Mandatory return of existing AlphaServer 4100 System Drawer |
| DY-53ZEB-AA | AlphaServer 4100 | AlphaServer 4000 ¹ with 16 I/O Slots (OpenVMS) | AlphaServer 4000 System Drawer Upgrade with OpenVMS base system license and I/O Expansion Option Note: Mandatory return of existing AlphaServer 4100 System Drawer |

1. 5/300 MHz CPUs numbered B3001-AA and B3002-AA are not supported in the new AlphaServer 4000 8/16 PCI slot System Drawers. B3002-AA CPUs will be upgraded to B3004-BA CPUs before installation in new AlphaServer 4000 System Drawer.

AlphaServer 4000 to AlphaServer 4100 System Drawer Upgrades

All AlphaServer 4000 and 4100 systems can be upgraded to the newest 5/533 CPU. New upgrade paths and business practices are being introduced with this newest process. To upgrade to a faster CPU, customers need to:

- Purchase a SMP module for the faster speed CPU.
- Refer to the DIGITAL Trade-In '97 trade-in table to establish the trade-in value for the older CPU.
- Return the older CPU to DIGITAL to receive a trade-in credit towards the purchase of the newer, faster processor.

This new business practice for performance upgrades applies for all existing 5/300, 5/300E, 5/466, and 5/533 CPUs.

| Order Number | From | To | Includes |
|--------------|------------------|------------------|---|
| DN-51Z1L-AA | AlphaServer 4000 | AlphaServer 4100 | AlphaServer 4100 System Drawer for Windows NT Note: Mandatory return of AlphaServer 4000 System Drawer |
| DA-51Z1J-AA | AlphaServer 4000 | AlphaServer 4100 | AlphaServer 4100 System Drawer and DIGITAL UNIX base system license Note: Mandatory return of AlphaServer 4000 System Drawer and DIGITAL UNIX license |
| DY-51Z1K-AA | AlphaServer 4000 | AlphaServer 4100 | AlphaServer 4100 System Drawer and OpenVMS base system license Note: Mandatory return of AlphaServer 4000 System Drawer and OpenVMS license |

AlphaServer 4100 CPU Upgrades

| Order Number | From | To | Includes |
|--------------|--|------------------------|---|
| KN304-BA | AlphaServer 4x00 5/300, 5/300E | AlphaServer 4x00 5/400 | 400 MHz CPU, 4 MB cache; DIGITAL UNIX SMP |
| KN304-DB | AlphaServer 4x00 5/300, 5/300E, 5/400 | AlphaServer 4x00 5/466 | 466 MHz CPU, 4 MB cache; DIGITAL UNIX SMP |
| KN305-DB | AlphaServer 4x00 5/300, 5/300E, 5/400 | AlphaServer 4x00 5/533 | 533 MHz CPU, 4 MB cache; DIGITAL UNIX SMP |
| KN304-BB | AlphaServer 4x00 5/300, 5/300E | AlphaServer 4x00 5/400 | 400 MHz CPU, 4 MB cache; OpenVMS SMP |
| KN304-DC | AlphaServer 4x00 5/300, 5/300E, 5/400 | AlphaServer 4x00 5/466 | 466 MHz CPU, 4 MB cache; OpenVMS SMP |
| KN305-DC | AlphaServer 4x00 5/300, 5/300E, 5/400, 5/466 | AlphaServer 4x00 5/533 | 533 MHz CPU, 4 MB cache; OpenVMS SMP |
| KN304-BC | AlphaServer 4x00 5/300, 5/300E | AlphaServer 4x00 5/400 | 400 MHz CPU, 4 MB cache; Windows NT SMP |
| KN304-DD | AlphaServer 4x00 5/300, 5/300E, 5/400 | AlphaServer 4x00 5/466 | 466 MHz CPU, 4 MB cache; Windows NT SMP |
| KN305-DD | AlphaServer 4x00 5/300, 5/300E, 5/400 | AlphaServer 4x00 5/533 | 533 MHz CPU, 4 MB cache; Windows NT SMP |

AlphaServer 8200 CPU Upgrades

Upgrades for AlphaServer 8200 5/300 or 5/350 customers are available to upgrade current system platform to AlphaServer 8200 5/625 systems.

Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8200 5/300 or 5/350 systems to AlphaServer 8200 5/625 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0B, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/625 support.

Step 1—AlphaServer 8200 System Upgrades

Includes dual 612.8 MHz CPU module, clock module and two terminator modules.

Note: Must be ordered before AlphaServer 8200 5/625 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|---|
| 75U93-AX | No license | Uni or Dual 8200 5/300 or 5/350 to Dual 8200 5/625 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/300 or 5/350 CPUs to 5/625s.

Note: All CPUs in an AlphaServer 8200 system must be at the same speed.

AlphaServer 8200 CPU Upgrades (*continued*)

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8200 5/300 or 5/350 to AlphaServer 8200 5/625 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

75U94-AX **From - AlphaServer 8200 5/300 or 5/350 CPU Module to AlphaServer 8200 5/625 Dual-CPU module.** Includes processor module with two 21164/612.8 MHz CPUs.

Step 3—Memory

- .. Select additional memory if required; maximum 12 GB per system.
- .. Order up to two additional memory modules, for a maximum of three memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of three memory modules is reduced by one for each additional CPU module added from Step 2 in this section.

Step 3a—Memory Expansion

| | |
|-----------------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

Step 3b—Memory Upgrades

Field installation only; not configurable in Manufacturing.

| | |
|-----------------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|-----------------|--|

AlphaServer 8200 5/440 to 5/625 Upgrades

Upgrades for AlphaServer 8200 5/440 customers are available to upgrade current system platform to AlphaServer 8200 5/625 systems. Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8200 5/440 systems to AlphaServer 8200 5/625 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0B, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/625 support.

Step 1—AlphaServer 8200 System Upgrades

Includes dual 612.8 MHz CPU module and two terminator modules. No clock module change required for 5/440 to 5/625 upgrades.

Note: Must be ordered before AlphaServer 8400 5/625 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|--|
| 75U91-AX | No license | Uni or Dual 8200 5/440 to Dual 8200 5/625 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/440 CPUs to 5/625s

Note: All CPUs in an AlphaServer 8200 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current 8200 5/440 CPUs to AlphaServer 8200 5/625 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

| | |
|----------|--|
| 75U92-AX | From - AlphaServer 8200 5/440 Dual CPU Module to AlphaServer 8200 5/625 Dual-CPU. Includes processor module with two 21164/612.8 MHz CPUs. |
|----------|--|

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2.

Step 3a—Memory Expansion

| | |
|----------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

AlphaServer 8200 5/440 to 5/625 Upgrades (*continued*)

Step 3b—Memory Upgrades— Field installation only (not configurable in Manufacturing)

MS7CC-UB 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module

AlphaServer 8200 5/300 to 5/440 Upgrades

Upgrades for AlphaServer 8200 5/300 customers are available to upgrade current system platform to AlphaServer 8200 5/440 systems.

Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8200 5/300 systems to AlphaServer 8200 5/440 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0a, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/440 support.

Step 1—AlphaServer 8200 System Upgrades

Includes dual 437 MHz CPU module, 437 MHz clock module, and two terminator modules

Note: Must be ordered before AlphaServer 8200 5/440 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|---|
| 75UYY-AX | OpenVMS SMP license | Uni 8200 5/300 to Dual 8200 5/440 System Upgrade |
| 75UYY-BX | DIGITAL UNIX SMP license | Uni 8200 5/300 to Dual 8200 5/440 System Upgrade |
| 75UYY-CX | No license | Dual 8200 5/300 to Dual 8200 5/440 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/300 CPUs to 5/440s.

Note: All CPUs in an AlphaServer 8200 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8200 5/300 to AlphaServer 8200 5/440 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

| | |
|-----------------|---|
| 75UY4-AX | From - AlphaServer 8200 5/300 Uni CPU Module to AlphaServer 8200 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8200 5/300 Uni CPU module. Includes processor module with two 21164/437 Mhz CPUs, DIGITAL UNIX SMP license. |
| 75UY5-AX | From - AlphaServer 8200 5/300 Dual CPU Module to AlphaServer 8200 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8200 5/300 Dual CPU module. Includes processor module with two 21164/437 MHz CPUs. |

AlphaServer 8200 5/300 to 5/440 Upgrades (*continued*)

Step 3—Memory

- .. Select additional memory if required; maximum 12 GB per system.
- .. Order up to two additional memory modules, for a maximum of three memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4 GB is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of three memory modules is reduced by one for each additional CPU module added from Step 2 in this section.

Step 3a—Memory Expansion

| | |
|-----------------------------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA¹ | 4096 MB memory module |

1. Supported on 5/300 MHz CPUs Rev H07, H08, H09, P08, P09, P10 and all 5/350 and 5/440 MHz CPUs.

Step 3b—Memory Upgrades

Field installation only (not configurable in Manufacturing)

| | |
|-----------------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|-----------------|--|

AlphaServer 8200 5/350 to 5/440 Upgrades

Upgrades for AlphaServer 8200 5/350 customers are available to upgrade current system platform to AlphaServer 8200 5/440 systems.

Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8200 5/350 systems to AlphaServer 8200 5/440 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0a, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/440 support.

Step 1—AlphaServer 8200 System Upgrades

Includes dual 437 MHz CPU module and 437 MHz clock module.

Note: Must be ordered before AlphaServer 8200 5/440 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|-----------------|-----------------------------------|---|
| 75USS-AX | OpenVMS SMP license | Uni 8200 5/350 to Dual 8200 5/440 System Upgrade |
| 75USS-BX | DIGITAL UNIX SMP license | Uni 8200 5/350 to Dual 8200 5/440 System Upgrade |
| 75USS-CX | No license | Dual 8200 5/350 to Dual 8200 5/440 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

AlphaServer 8200 5/350 to 5/440 Upgrades (*continued*)

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/350 CPUs to 5/440s.

Note: All CPUs in an AlphaServer 8200 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8200 5/350 to AlphaServer 8200 5/440 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

| | |
|-----------------|---|
| 75US4-AX | From - AlphaServer 8200 5/350 Uni CPU Module to AlphaServer 8200 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8200 5/350 Uni CPU module. Includes processor module with two 21164/437 MHz CPUs, DIGITAL UNIX SMP license. |
| 75US5-AX | From - AlphaServer 8200 5/350 Dual CPU Module to AlphaServer 8200 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8200 5/350 Dual CPU module. Includes processor module with two 21164/437 MHz CPUs. |

Step 3—Memory

- .. Select additional memory if required; maximum 12 GB per system.
- .. Order up to two additional memory modules, for a maximum of three memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of three memory modules is reduced by one for each additional CPU module added from Step 2 in this section.

Step 3a—Memory Expansion

| | |
|-----------------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

Step 3b—Memory Upgrades

Field installation only; not configurable in Manufacturing.

| | |
|-----------------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|-----------------|--|

AlphaServer 8200 to AlphaServer 8400 Upgrades

These options are complete box-swap system upgrades to provide AlphaServer 8200 customers greater expandability and growth. While system cabinet changes as a result of this upgrade, the existing AlphaServer 8200 CPU, CPU clock module, memory and I/O modules remain usable and are transferable.

Refer to AlphaServer 8400 system menu for a additional expansion options.

Upgrades include AlphaServer 8400 system cabinet with:

- .. 9-slot system bus
- .. Three-phase power subsystem
- .. One PCI Plug-in-unit with one 12-slot PCI shelf
- .. One wide SCSI StorageWorks shelf for inclusion in above PCI PIU
- .. Upgrade documentation

DA-75U9A-AC/AD/AE Dual AlphaServer 8200 to AlphaServer 8400 Upgrade, UNIX

DY-75U9A-AC/AD/AE Dual AlphaServer 8200 to AlphaServer 8400 Upgrade, OVMS

AlphaServer 8400 5/300 or 5/350 to 5/625 Upgrades

Upgrades for AlphaServer 8400 5/300 or 5/350 customers are available to upgrade current system platform to AlphaServer 8400 5/625 systems.

Upgrade kit part numbers are available to upgrade current system platform to AlphaServer 8400 5/625 systems. Upgrade part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware needed to upgrade base level AlphaServer 8400 5/300 or 5/350 systems to AlphaServer 8400 5/625 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0B, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/625 support.

Step 1—AlphaServer 8400 System Upgrades

Includes dual 612.8 MHz CPU module and clock module.

Note: Must be ordered before AlphaServer 8400 5/625 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|---|
| 75U93-AX | No license | Uni or Dual 8400 5/300 or 5/350 to Dual 8400 5/625 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—AlphaServer 8400 CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/300 or 5/350 CPUs to 5/625s.

Note: All CPUs in an AlphaServer 8400 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8400 5/300 or 5/350 to AlphaServer 8400 5/625 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

75U94-AX **From - AlphaServer 8400 5/300 or 5/350 Uni or Dual CPU module to AlphaServer 8400 5/625 Dual-CPU module.** Includes processor module with two 21164/612.8 MHz CPUs.

AlphaServer 8400 5/300 or 5/350 to 5/625 Upgrades (*continued*)

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2.

Step 3a—Memory Expansion

| | |
|----------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

Step 3b—Memory Upgrades— Field installation only (not configurable in Manufacturing)

| | |
|----------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|----------|--|

AlphaServer 8400 5/300 to 5/440 Upgrades

Upgrades for AlphaServer 8400 5/300 customers are available to upgrade current system platform to AlphaServer 8400 5/440 systems. Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8400 5/300 systems to AlphaServer 8400 5/440 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0a, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/440 support.

Step 1—AlphaServer 8400 System Upgrades

Includes dual 437 MHz CPU Module and 437 MHz clock module

Note: Must be ordered before AlphaServer 8400 5/440; SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|--|
| 75UYY-DX | OpenVMS SMP license | Uni 8400 5/300 to Dual 8400 5/440 System Upgrade |
| 75UYY-EX | DIGITAL UNIX SMP license | Uni 8400 5/300 to Dual 8400 5/440 System Upgrade |
| 75UYY-FX | No license | Dual 8400 5/300 to Dual 8400 5/440 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

AlphaServer 8400 5/300 to 5/440 Upgrades (*continued*)

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/300 CPUs to 5/440s

Note: All CPUs in an AlphaServer 8400 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8400 5/300 to AlphaServer 8400 5/440 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

75UY4-AX **From - AlphaServer 8400 5/300 Uni CPU Module to AlphaServer 8400 5/440 Dual-CPU**, requires the trade-in of one AlphaServer 8400 5/300 Uni CPU module. Includes processor module with two 21164/437 MHz CPUs, DIGITAL UNIX SMP license..

75UY5-AX **From - AlphaServer 8400 5/300 Dual CPU Module to AlphaServer 8400 5/440 Dual-CPU**, requires the trade-in of one AlphaServer 8400 5/300 Dual CPU module. Includes processor module with two 21164/437 MHz CPUs.

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. Four-way performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2 in this section.

Step 3a—Memory Expansion

| | |
|------------------------------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA ¹ | 4096 MB memory module |

1. Supported on 5/300 MHz CPUs Rev H07, H08, H09, P08, P09, P10 and all 5/350 and 5/440 MHz CPUs.

Step 3b—Memory Upgrades

Field installation only; not configurable in Manufacturing.

| | |
|-----------------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|-----------------|--|

AlphaServer 8400 5/350 to 5/440 Upgrades

Upgrades for AlphaServer 8400 5/350 customers are available to upgrade current system platform to AlphaServer 8400 5/440 systems. Upgrade kit includes all hardware items needed to upgrade base level AlphaServer 8400 5/350 systems to AlphaServer 8400 5/440 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0a, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/440 support.

Step 1—AlphaServer 8400 System Upgrades

Includes dual 437 MHz CPU Module and 437 MHz clock module.

Note: Must be ordered before AlphaServer 8400 5/440; SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|---|
| 75USS-DX | No license | Dual 8400 5/350 to Dual 8400 5/440 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/350 CPUs to 5/440s

Note: All CPUs in an AlphaServer 8400 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current AlphaServer 8400 5/350 to AlphaServer 8400 5/440 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

| | |
|----------|---|
| 75US4-AX | From - AlphaServer 8400 5/350 Uni CPU Module to AlphaServer 8400 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8400 5/350 Uni CPU module. Includes processor module with two 21164/437 MHz CPUs, DIGITAL UNIX SMP license. |
| 75US5-AX | From - AlphaServer 8400 5/350 Dual CPU Module to AlphaServer 8400 5/440 Dual-CPU , requires the trade-in of one AlphaServer 8400 5/350 Dual CPU module. Includes processor module with two 21164/437 MHz CPUs. |

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4 GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2.

Step 3a—Memory Expansion

| | |
|----------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

AlphaServer 8400 5/350 to 5/440 Upgrades (*continued*)

Step 3b—Memory Upgrades— Field installation only (not configurable in Manufacturing)

MS7CC-UB 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module

AlphaServer 8400 5/440 to 5/625 Upgrades

Upgrades for AlphaServer 8400 5/440 customers are available to upgrade current system platform to AlphaServer 8400 5/625 systems. Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level AlphaServer 8400 5/440 systems to AlphaServer 8400 5/625 systems. DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0B, and OpenVMS V6.2-1H3 or V7.1 operating system releases are required for 5/625 support.

Step 1—AlphaServer 8400 System Upgrades

Includes dual 612.8 MHz CPU module and two terminator modules. No clock module change required for 5/440 to 5/625 upgrades.

Note: Must be ordered before AlphaServer 8400 5/625 SMP upgrades can be added.

| Order Number | Operating System License Included | Type of Upgrade |
|--------------|-----------------------------------|---|
| 75U91-AX | No license | Dual 8400 5/440 to Dual 8400 5/625 System Upgrade |

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)—for upgrading additional 5/440 CPUs to 5/625s

Note: All CPUs in an AlphaServer 8400 system must be at the same speed.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current 8400 5/440 CPUs to AlphaServer 8400 5/625 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

75U92-AX **From - AlphaServer 8400 5/440 Dual CPU Module to AlphaServer 8400 5/625 Dual-CPU.**
Includes processor module with two 21164/612.8 MHz CPUs.

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in four-way interleaving. The best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2.

AlphaServer 8400 5/440 to 5/625 Upgrades (*continued*)

Step 3a—Memory Expansion

| | |
|----------|-----------------------|
| MS7CC-DA | 512 MB memory module |
| MS7CC-EA | 1024 MB memory module |
| MS7CC-FA | 2048 MB memory module |
| MS7CC-GA | 4096 MB memory module |

Step 3b—Memory Upgrades— Field installation only (not configurable in Manufacturing)

| | |
|----------|--|
| MS7CC-UB | 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module |
|----------|--|

VAXstation 4000 Board Upgrades

Upgrade kits must be installed by DIGITAL Services.

| Order Number | From | To | Includes |
|-----------------------|---|--|---|
| PV71U-BF ¹ | VAXstation 4000 Model 60 2D LCG graphics (66/72 Hz) | VAXstation 4000 Model 96 LCSPX 2D graphics (66/72 Hz) ¹ | VAXstation 4000 Model 96 CPU System enclosure and power supply 8-plane color/grayscale graphics board 2.7-m (9-ft) color/monochrome video cable Brackets for three internal SCSI devices (one removable, two fixed disks) ThinWire/Thick wire Ethernet DEC-423 serial line EIA-232D serial line with modem control Synchronous SCSI controller OpenVMS base license DIGITAL NAS 150 license Note: Mandatory return of Model 60 CPU board and LCG graphics card. |
| PV71U-BH | VAXstation 4000 Model 90/90A 2D LCSPX graphics - 66/72Hz | VAXstation 4000 Model 96 LCSPX 2D (66/72 Hz) | VAXstation 4000 Model 96 CPU DIGITAL NAS 150 license Note: Mandatory return of Model 90/90A CPU board. |

1. VAXstation Model 96 systems require minimum of 16 MBs of main memory; 8 MB memory embedded on Model 60 system board cannot be transferred. See Model 96 memory configurations. 4 MB and 16 MB SIMMs from Model 60 may be transferred to Model 96 in sets of four. Model 96 memory modules must be installed in sets of four matching value SIMMs.

MicroVAX 3100 Desktop Server Board Upgrades

Note: A non-return charge will be assessed if old CPU board is not returned to DIGITAL.

| Order Number | From | To | Includes |
|--------------|---|----------------------------------|--|
| 31JXR-AA | MicroVAX 3100 Model 40 Model 80 | MicroVAX 3100 Model 85 Server | MicroVAX 3100 Model 85 Server CPU 64 MB of memory OpenVMS base license |
| 49GAX-E9 | MicroVAX 3100 Model 40 Model 80 | MicroVAX 3100 Model 96 Server | MicroVAX 3100 Model 96 Server CPU 64 MB of memory OpenVMS base license |
| 49JAC-AA | MicroVAX 3100 Model 88 | MicroVAX 3100 Model 96 Server | MicroVAX 3100 Model 96 Server CPU OpenVMS base license |
| 49JAX-E9 | MicroVAX 3100 Model 85 Model 90 Model 95 | MicroVAX 3100 Model 96 Server | MicroVAX 3100 Model 96 Server CPU 64 MB of memory OpenVMS base license |
| 49XR-AA | MicroVAX 3100 Model 90 Model 95 | MicroVAX 3100 Model 96 Server | MicroVAX 3100 Model 96 Server CPU OpenVMS base license |

VAX 4000 Model 106A CPU Board Upgrades

| Order Number | From | To | Includes |
|--------------|--|------------------------|--|
| 53XR-BA | VAX 4000 Models 100, 100A, 105A,106A | VAX 4000 Model 106A | OpenVMS base license Note: A non-return charge will be assessed if old CPU board is not returned to DIGITAL. |

VAX 4000 Model 106A Rackmount System Upgrades

| Order Number | From | To | Includes |
|--------------|---|----------------------------------|--|
| 53XRA-BA | Rackmount VAX 4000 Models 100, 100A, 105A | Rackmount VAX 4000 Model 106A | VAX 4000 Model 106A CPU OpenVMS base license Note: Mandatory return of old CPU. |

Upgrades

VAX 4000 Models 505A/705A CPU Board Upgrades

- .. Memory must be upgraded to MS690-UC (64-Mbyte memory upgrade) or MS690-UD (128-Mbyte memory upgrade).
- .. A non-returnable charge will be assessed if old CPU board is not returned to DIGITAL.

| Order Number | From | To | Includes |
|--|---|---------------------|---|
| CPU Board Upgrades for systems with serial numbers WF04899999 or lower, and AY04700100 or lower | | | |
| 691XU-CS | VAX 4000 Model 300 | VAX 4000 Model 505A | CPU Module, BA440 backplane OpenVMS VAX base license |
| 694XR-CS | VAX 4000 Model 300 | VAX 4000 Model 705A | CPU Module, BA440 backplane OpenVMS VAX base license |
| CPU Board Upgrades for systems serial numbers WF04900000 or higher and AY04700101 or higher | | | |
| 694XR-DS | VAX 4000 Model 300 | VAX 4000 Model 705A | CPU Module OpenVMS VAX base license |
| CPU Board Upgrades for VAX 4000 Model 400, 500, 500A | | | |
| 691XU-DB | VAX 4000 Model 400,500,500A | VAX 4000 Model 505A | CPU Module OpenVMS VAX base license |
| 694XR-DB | VAX 4000 Model 400,500,500A | VAX 4000 Model 705A | CPU Module OpenVMS VAX base license |
| 694XR-JB | VAX 4000 Model 505A, VAX 4000 Model 705A 600, 600A, 700A | | CPU Module OpenVMS VAX base license |

VAX 7000 Board Upgrades

| Order Number | From | To | Includes |
|-----------------------|---|----------------------------------|---|
| 7JATB-LE | VAX 7000 Model 7xx | VAX 7000 Model 7xx+1 | CPU module OpenVMS SMP extension license |
| 7JAVB-AA ¹ | VAX 7000 Model 610 VAX 10000 Model 610 | VAX 7000 Model 710 | CPU module, VAX 7000 console kit OpenVMS base license Note: Mandatory return of Model 6xx CPU modules |
| 7JAVB-LA ¹ | VAX 7000 Model 6xx SMP System | VAX 7000 Model 7xx SMP System | CPU module OpenVMS SMP extension license Note: Mandatory return of Model 6xx CPU modules |
| 7MATA-LE | VAX 7000 Model 8xx | VAX 7000 Model 8xx+1 | CPU module OpenVMS SMP extension license |
| 7MAVA-AA | VAX 7000 Model 610/710 VAX 10000 Model 610 | VAX 7000 Model 810 | CPU module, VAX 7000 console kit OpenVMS base license Note: Mandatory return of Model 6xx CPU modules |
| 7MAVA-LA | VAX 7000 Model 6xx/7xx VAX 10000 Model 6xx | VAX 7000 Model 8xx | CPU module, VAX 7000 console kit OpenVMS SMP extension license Note: Mandatory return of Model 6xx CPU modules |

1. Use in conjunction with order number 7JAVB-AA to upgrade VAX 7000/10000 Model 6xx SMP systems to VAX 7000 Model 7xx SMP systems. For example, to upgrade a VAX 7000 Model 640 to a VAX 7000 Model 740 system, order: (1) 7JAVB-AA and (3) 7JAVB-LA.

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer 8400

Upgrades for VAX/DEC 7000 customers are available to upgrade current system platform to AlphaServer 8400 5/300, 5/440, or 5/625 systems.

Upgrades consist of replacing the current VAX/DEC 7000 System Backplane, CPU module(s), memory module(s), and I/O port module. All XMI plug-in unit(s) and disk/tapes are fully supported. In addition, adding new PCI plug-in unit options is supported.

Upgrade kit part numbers are available with OpenVMS or DIGITAL UNIX licenses and include all hardware items needed to upgrade base level VAX/DEC 7000 system to AlphaServer 8400 system.

AlphaServer 8400 requires a new System Backplane assembly, new CPU module(s), new memory module(s), and new I/O port module(s). Special allowances and trade-ins are available to handle current memory modules.

Before undertaking this step-by-step procedure, obtain an up-to-date configuration listing of the system that you plan to upgrade.

Step 1—AlphaServer 8400 5/300, 5/440, and 5/625 Upgrades

- .. 5/300 upgrades require DIGITAL UNIX V3.2B or later, and OpenVMS V6.2 or later.
- .. 5/440 upgrades require DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0A, and OpenVMS V6.2-1H3 or V7.1 operating system releases.
- .. 5/625 upgrades require DIGITAL UNIX V3.2G, DIGITAL UNIX V4.0B, and OpenVMS V6.2-1H3 or V7.1 operating system releases.
- .. Console terminal required unless available on site.
- .. Upgrade part numbers assume you start with a single CPU module VAX/DEC 7000 configuration (VAX/DEC 7610/7710/7810).
- .. Minimum system configuration must have the following: one AlphaServer 8400 Dual-CPU module, one KFTHA-AA or KFTIA-AA system I/O module, and one memory module.
 - Six slots available for additional modules (CPU modules, memory modules, or system I/O modules).
- .. CD-ROM is required—VAX 7000 upgrades require RRDCD-CA option.
 - CD-ROM requires single-ended SCSI-2 connection from either KFTIA-AA or KZMSA-AB in XMI plug-in unit, or KZPAA-AA in PCI plug-in unit.

Upgrade Systems include:

- .. AlphaServer 8400 9-slot backplane assembly.
- .. One Processor module with two Alpha microprocessor 21164 5/300, 5/440, or 5/625 CPUs. Each CPU includes 4 MB Backup cache. 5/625 CPUs clocked at 612.8 MHz for AlphaServer 8400 applications.
- .. System I/O module (KFTHA-AA) with four I/O channel connections **or** integrated I/O module (KFTIA-AA) with one I/O channel connection.
- .. No memory included (see Step 3a) or refer to the DIGITAL standard trade-in menu.
- .. Operating System Software
 - DIGITAL UNIX base license **or**
 - OpenVMS base license
- .. One year hardware product warranty.
- .. 90 day software product warranty.

| Order Number | Dual CPU | Operating System | I/O Module | Memory Notes |
|--------------|----------|------------------|------------|---|
| DA-291BU-YX | 5/300 | DIGITAL UNIX | KFTHA | No memory included; see Step 3 in this section. |
| DA-292GU-YX | 5/625 | DIGITAL UNIX | KFTHA | No memory included; see Step 3 in this section. |
| DY-291BU-YX | 5/300 | OpenVMS | KFTHA | No memory included; see Step 3 in this section. |
| DY-291BU-ZX | 5/300 | OpenVMS | KFTIA | No memory included; see Step 3 in this section. |
| DA-292FU-YX | 5/440 | DIGITAL UNIX | KFTHA | No memory included; see Step 3 in this section. |
| DY-292FU-YX | 5/440 | OpenVMS | KFTHA | No memory included; see Step 3 in this section. |
| DY-292GU-YX | 5/625 | OpenVMS | KFTHA | No memory included; see Step 3 in this section. |

Note: All upgrades require the return of upgraded hardware.

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer 8400 (*continued*)

Step 2—CPU Symmetric Multi-Processing (SMP)

- .. Order up to five additional CPU modules, for a maximum of six modules with 5/300 MHz Upgrades (total of 12 CPUs).
- .. Order up to six additional CPU modules for a maximum of seven modules with 5/440 and 5/625 MHz Upgrades (total of 14 CPUs).
- .. If more than three processor modules are in system, a minimum of two separate memory modules should be ordered for optimal system performance.
- .. Use Step 2a to “trade-in” current VAX/DEC 7000 CPUs if more than One CPU is in current VAX/DEC 7000 system.
- .. Use Step 2b to add additional AlphaServer 8400 CPU modules to the configuration.

Step 2a—CPU Symmetric Multi-Processing (SMP) Trade-ins

- .. Part numbers provide for trade-in value of current VAX/DEC 7000 CPUs to AlphaServer 8400 CPUs.
- .. All trade-in part numbers require return of hardware.
- .. One year hardware product warranty included.

AlphaServer 8400 5/440 Systems

| | |
|-----------------|---|
| 75UD4-AX | From - VAX/DEC 7000 CPU Module to DIGITAL UNIX SMP—Dual-CPU Requires trade-in of one VAX/DEC 7000 CPU module. Includes processor module with two 21164/437 MHz CPU, DIGITAL UNIX SMP extension license. |
| 75UC3-AX | From - VAX/DEC 7000 CPU Module to OpenVMS SMP—Dual-CPU Requires trade-in of one VAX/DEC 7000 CPU module. Includes processor module with two 21164/437 MHz CPU, OpenVMS SMP extension license. |
| 75UH5-AX | From - two VAX/DEC 7000 CPU Modules to DIGITAL UNIX SMP—Dual-CPU Requires trade-in of two VAX/DEC 7000 CPU modules. Includes processor module with two 21164/437 MHz CPU; DIGITAL UNIX extension license. |
| 75UG5-AX | From - two VAX/DEC 7000 CPU Module to OpenVMS SMP—Dual-CPU Requires trade-in of two VAX/DEC 7000 CPU modules. Includes processor module with two 21164/437 MHz CPU; OpenVMS SMP extension license. |

AlphaServer 8400 5/625 Systems

| | |
|-----------------|--|
| 75UE3-AX | From - one VAX/DEC 7000 CPU module to OpenVMS SMP— Dual 5/625 CPU OpenVMS SMP extension license. |
| 75UE4-AX | From - one VAX/DEC 7000 CPU module to DIGITAL UNIX SMP— Dual 5/625 CPU DIGITAL UNIX SMP extension license. |
| 75UF3-AX | From - two VAX/DEC 7000 CPU modules to OpenVMS SMP— Dual 5/625 CPU OpenVMS SMP extension license. |
| 75UF4-AX | From - two VAX/DEC 7000 CPU module to DIGITAL UNIX SMP— Dual 5/625 CPU DIGITAL UNIX SMP extension license. |

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer 8400 (*continued*)

Step 2b—CPU Symmetric Multi-Processing (SMP) Expansion

- .. Order up to five additional CPU modules, for a maximum of six modules with 5/300 MHz Upgrades (total of 12 CPUs).
- .. Order up to six additional CPU modules for a maximum of seven modules with 5/440 and 5/625 MHz Upgrades (total of 14 CPUs).
- .. Part numbers are for adding additional AlphaServer 8400 CPUs to your system configuration.

AlphaServer 8400 5/300 Systems

- | | |
|------------------|--|
| 751P2-AX | DIGITAL UNIX SMP expansion option—Uni-CPU , includes processor module with one 21164/300 MHz CPU, DIGITAL UNIX SMP extension license. |
| 751P1-AX | OpenVMS SMP expansion option—Uni-CPU , includes processor module with one 21164/300 MHz CPU, OpenVMS SMP extension license. |
| 752P2--AX | DIGITAL UNIX SMP expansion option—Dual-CPU , includes processor module with two 21164/300 MHz CPUs, DIGITAL UNIX SMP extension license. |
| 752P1-AX | OpenVMS SMP expansion option—Dual-CPU , includes processor module with two 21164/300 MHz CPUs, OpenVMS SMP extension license. |
| 752P4-AX | OpenVMS SMP expansion option—Uni-CPU to Dual-CPU , includes processor module with two 21164/300 MHz CPUs, OpenVMS SMP extension license. Requires return of AlphaServer 8400 Uni-CPU module |

AlphaServer 8400 5/350 Systems

- | | |
|-----------------|--|
| 753P2-AX | DIGITAL UNIX SMP expansion option—Uni-CPU , includes processor module with one 21164/350 MHz CPU, DIGITAL UNIX SMP extension license. |
| 754P2-AX | DIGITAL UNIX SMP expansion option—Dual-CPU , includes processor module with two 21164/350 MHz CPUs, DIGITAL UNIX SMP extension license. |
| 754P1-AX | OpenVMS SMP expansion option—Dual-CPU , includes processor module with two 21164/350 MHz CPUs, OpenVMS SMP extension license. |

AlphaServer 8400 5/440 Systems

- | | |
|------------------|--|
| 756P2 -AX | DIGITAL UNIX SMP expansion option—Dual-CPU , includes processor module with two 21164/437 MHz CPUs, DIGITAL UNIX SMP extension license. |
| 756P1-AX | OpenVMS SMP expansion option—Dual CPU , includes processor module with two 21164/437 MHz CPUs, OpenVMS SMP extension license. |

AlphaServer 8400 5/625 Systems

- | | |
|-----------------|---|
| 758P1-AX | OpenVMS SMP expansion option—Dual 5/625 CPU , includes processor module with one 21164/612.8 MHz CPU, OpenVMS SMP extension license. |
| 758P2-AX | DIGITAL UNIX SMP expansion option—Dual 5/625 CPU , includes processor module with one 21164/612.8 MHz CPU, DIGITAL UNIX SMP extension license. |

Step 3—Memory

- .. Select additional memory if required; maximum 28 GB per system.
- .. Order up to six additional memory modules, for a maximum of seven memory modules.
- .. Use Step 3a to “trade-in” your current VAX/DEC 7000 memory modules.
- .. Use Step 3b to add additional AlphaServer 8400 memory modules to your configuration.
- .. 128 MB through 2 GB memory modules have built-in two-way interleaving; additional interleaving is accomplished by adding more memory modules.
- .. 4 GB memory modules have built-in 4-way interleaving. Best performance is achieved when either two 2 GB modules are paired with one 4 GB module or one 4 GB module is paired with another 4 GB module. These sets (2 x 2 GB and 1 x 4 GB) or (2 x 4 GB) can be paired with another 8 GB memory set for a maximum of 16-way memory interleaving.
- .. Maximum of seven memory modules is reduced by one for each additional CPU module added from Step 2.

VAX/DEC 7000 In-cabinet Upgrades to AlphaServer 8400 (*continued*)

Step 3a—Memory Trade-in

- .. Part numbers provide for trade-in value of current VAX/DEC 7000 memory modules to AlphaServer 8400 memory modules.
- .. All trade-in part numbers require return of hardware.

MS7CC-UG DEC/VAX 7000 256 MB or 512 MB memory trade-in for an AlphaServer 8200/8400 1 GB module

Step 3b—Memory Expansion

MS7CC-BA 128 MB memory module
MS7CC-CA 256 MB memory module
MS7CC-DA 512 MB memory module
MS7CC-EA 1024 MB memory module
MS7CC-FA 2048 MB memory module
MS7CC-GA¹ 4096 MB memory module

1. Supported on 5/300 MHz CPUs Rev H07, H08, H09, P08, P09, P10 and all 5/350 and 5/440 MHz CPUs.

Step 3c—Memory Upgrades

Field installation only (not configurable in manufacturing).

MS7CC-UA 128 MB memory upgrade (8 MB SIMMs), upgrades 128 MB (-BA) module to a 256 MB (-CA) module
MS7CC-UB 512 MB memory upgrade (32 MB SIMMs), upgrades 512 MB (-DA) module to a 1 GB (-EA) module

Step 4—CD-ROM

- .. If EISA device support or the RAID Configuration Utility is required, select RRDCD-CA CD-ROM/floppy assembly when upgrading a VAX/DEC 7000 to an AlphaServer 8400.
- .. CD-ROM device in StorageWorks shelf driven from KZPSA-BB controller and DWZZA-VA is not supported.
- .. CD-ROM requires a single-ended SCSI-2 connection from either the KFTIA-AA or the KZMSA-AB in a XMI plug-in unit, or the KZPAA-AA in a PCI plug-in unit.
- .. All connections to CD-ROM device will stop at device; additional devices are not supported.

RRDCD-CA **AlphaServer 8400 In-cabinet CD-ROM disk**—maximum of one per system. Required if no CD-ROM device exists in upgraded system. Includes CD-ROM device, mounting hardware, BN21H-0H cable (.75 meter length cable) - order longer cable to reach XMI plug-in unit or PCI plug-in unit.
KZPAA-AA **PCI SCSI Controller**—Fast Narrow Single-Ended SCSI controller for connecting the RRDCD-CA only to the PCI plug-in unit.

Step 5—Three Phase Expansion Components

If VAX/DEC 7000 system being upgraded has one H7263 power regulator, recheck the EPU's to verify if second power regulator is needed.

H7263-AA/AB **Three Phase 48 V dc power regulator with BBU capability**—maximum three per cabinet. A second regulator may be required to supply adequate power depending on configuration. See power configuration table in the AlphaServer 8400 section. A third regulator assures N+1 power redundancy and higher availability in the event of a power regulator failure.
H7263-AC/AD Same as H7263-AA/AB except there is no built-in battery back-up (BBU) capability.

VAX/DEC 7000 In-cabinet Upgrades to AlphaServer 8400 (*continued*)

Step 6—Additional procedures needed

- .. Verify that T2028 module in DWLMA (XMI plug-in unit) is at minimum revision of “F05”. If not replace with latest revision.
- .. Recheck new configurations “EPU” value to determine if second power regulator is now required.
- .. For additional items see the AlphaServer 8400 System Ordering Menu.