COMPAQ

Compaq AlphaServer 8200/8400 and VAX/DEC 7000 Upgrades
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Systems and Options Catalog

AlphaServer 8200 5/300 or 5/350 to AlphaServer GS60 6/525 Upgrades

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AlphaServer 8200 5/300 or 5/350 to AlphaServer GS60 6/525 Upgrades

Upgrades for AlphaServer 8200 5/300 or 5/350 customers running Tru64 UNIX and OpenVMS are available to upgrade current system platform to an AlphaServer GS60 6/525 system. **Note:** Upgrades for customers running Windows NT are currently being qualified and will be available at a later date.

Upgrade kit includes all hardware needed to upgrade a base level AlphaServer 8200 5/300 or 5/350 system to an AlphaServer GS60 6/525 system. Tru64 UNIX V4.0E or OpenVMS V7.1-2 operating system releases are required for AlphaServer GS60 support.

Technical Information

- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- For Tru64 UNIX V4.0E AlphaServer GS60 and GS140 applications, the (DJ-ML200) PCI option must be at a minimum module revision of E. The (DJ-ML300-BA) daughter card on the KFTIA is not supported and must be removed.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. AlphaServer 8200 system configuration menu describes the steps necessary for an upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See Compaq AlphaServer GS60 and GS140 Installation Notes (AV-RFCCA-TE) for more information.
- **DWLPA-xx options are not supported on AlphaServer GS60 and GS140 systems.** DWLPB-xx options are supported.
- MEMORY CHANNEL options are supported on AlphaServer GS60/GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Step 1—AlphaServer 8200 5/300 or 5/350 AlphaServer GS60 6/525 Upgrades

Upgrade includes dual 6/525 MHz CPU module, clock module, and two terminator modules for Tru64 UNIX and OpenVMS system **only**. Upgrades for Windows NT are currently being qualified and will be available at a later date.

Note: Must be ordered before AlphaServer GS60 6/525 SMP upgrades can be added.

Order Number	Operating System License	Type of Upgrade
76U91-AX	No license	Dual 8200 5/300 or 5/350 to Dual GS60 6/525 System Upgrade
76U91-BX	Tru64 UNIX license	Uni 8200 5/300 or 5/350 to Dual GS60 6/525 System Upgrade
76U91-CX	OpenVMS license	Uni 8200 5/300 or 5/350 to Dual GS60 6/525 System Upgrade

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP) Upgrades

Select to upgrade additional 5/300 or 5/350 CPUs to GS60 6/525 CPUs.

Note: All CPUs in an AlphaServer GS60 system must be at the same speed.

AlphaServer 8200 5/300 or 5/350 to AlphaServer GS60 6/525 Upgrades *(continued)*

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

- All trade-in part numbers require return of upgraded hardware.
- One year hardware product warranty included.

76U92-AX	**From - AlphaServer 8200 5/300 or 5/350 Dual CPU Module to AlphaServer GS60 6/525 Dual-CPU module.** Includes processor module with two Alpha 21264 525 MHz CPUs.
76U92-BX	**From - AlphaServer 8200 5/300 or 5/350 Uni CPU Module to AlphaServer GS60 6/525 Dual-CPU module**. Includes processor module with two Alpha 21264 525 MHz CPUs and Tru64 UNIX SMP license.
76U92-CX	**From - AlphaServer 8200 5/300 or 5/350 Uni CPU Module to AlphaServer GS60 6/525 Dual-CPU module**. Includes processor module with two Alpha 21264 525 MHz CPUs and OpenVMS SMP license.

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.
- 1 GB and 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.
- Maximum of three memory modules is reduced by one for each additional CPU module added from Step 2 in this section.

MS7CC-EA	1 GB memory module
MS7CC-FA	2 GB memory module
MS7CC-GA	4 GB memory module

AlphaServer 8200 5/440 or 5/625 to AlphaServer GS60 6/525 Upgrades

Upgrades for AlphaServer 8200 5/440 or 5/625 customers running Tru64 UNIX and OpenVMS are available to upgrade current system platform to an AlphaServer GS60 6/525 system. **Note:** Upgrades for customers running Windows NT are currently being qualified and will be available at a later date.

Upgrade kit includes all hardware needed to upgrade base level AlphaServer 8200 5/440 or 5/625 system to an AlphaServer GS60 6/525 system. Tru64 UNIX V4.0E or OpenVMS V7.1-2 operating system releases are required for AlphaServer GS60 support.

Technical Information

- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- For Tru64 UNIX V4.0E AlphaServer GS60 and GS140 applications, the (DJ-ML200) PCI option must be at a minimum module revision of E. The (DJ-ML300-BA) daughter card on the KFTIA is not supported and must be removed.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. Chapter 2 describes several steps necessary for upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See Compaq AlphaServer GS60 and GS140 Installation Notes (AV-RFCCA-TE) for more information.
- **DWLPA-xx options are not supported on AlphaServer GS60 and GS140 systems.** DWLPB-xx options are supported.
- MEMORY CHANNEL options are supported on AlphaServer GS60 and GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Step 1—AlphaServer 8200 System Upgrades

Upgrade includes dual 6/525 MHz CPU module and two terminator modules for Tru64 UNIX and OpenVMS systems **only**. Upgrades for Windows NT are currently being qualified and will be available at a later date. A clock module change is not required for AlphaServer 8200 5/440 or 5/625 to AlphaServer GS60 6/525 upgrades.

Note: Must be ordered before AlphaServer GS60 6/525 SMP upgrades can be added.

Order Number	Operating System License	Type of Upgrade
3X-76U93-AX	No license	Dual 8200 5/440 to Dual GS60 6/525 System Upgrade
76U95-AX	No license	Dual 8200 5/625 to Dual GS60 6/525 System Upgrade

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP) Upgrades

Select to upgrade additional 5/400 or 5/625 CPUs to GS60 6/525 CPUs.

Note: All CPUs in an AlphaServer GS60 system must be at the same speed.

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

- All trade-in part numbers require return of hardware.
- One year hardware product warranty included.

3X-76U93-AX **From - AlphaServer 8200 5/440 Dual CPU Module to AlphaServer GS60 6/525 Dual CPU**. Includes processor module with two Alpha 21264 525 MHz CPUs.

76U96-AX **From - AlphaServer 8200 5/625 Dual CPU Module to AlphaServer GS60 6/525 Dual-CPU**. Includes processor module with two Alpha 21264 525 MHz CPUs.

AlphaServer 8200 5/440 or 5/625 to AlphaServer GS60 6/525 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.
- 1 GB and 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.
- Maximum of three memory modules is reduced by one for each additional CPU module added from Step 2.

MS7CC-EA	1 GB memory module
MS7CC-FA	2 GB memory module
MS7CC-GA	4 GB memory module

AlphaServer 8200 or AlphaServer GS60 to AlphaServer GS140 Upgrades

These options are complete box-swap system upgrades to provide AlphaServer 8200/GS60 customers greater expandability and growth. While system cabinet changes as a result of this upgrade, the existing AlphaServer 8200/GS60 CPU, CPU clock module, memory and I/O modules remain usable and are transferable. Refer to AlphaServer GS140 system menu for additional expansion options.

Technical Information

- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- For Tru64 UNIX V4.0E AlphaServer GS60 and GS140 applications, the (DJ-ML200) PCI option must be at a minimum module revision of E. The (DJ-ML300-BA) daughter card on the KFTIA is not supported and must be removed.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. Chapter 2 describes several steps necessary for upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See Compaq AlphaServer GS60 and GS140 Installation Notes (AV-RFCCA-TE) for more information.
- **DWLPA-xx options are not supported on AlphaServer GS60 and GS140 systems.** DWLPB-xx options are supported.
- MEMORY CHANNEL options are supported on AlphaServer GS60 and GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Upgrades include AlphaServer GS140 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/GS60 to AlphaServer GS140 Upgrade, Tru64 UNIX

DY-75U9A-AC/AD/AE Dual AlphaServer 8200/GS60 to AlphaServer GS140 Upgrade, OpenVMS

DN-75U9A-AC/AD/AE Dual AlphaServer 8200/GS60 to AlphaServer GS140 Upgrade, Windows NT

AlphaServer 8400 5/300 or 5/350 to AlphaServer GS140 6/525 Upgrades

Upgrades for AlphaServer 8400 5/300 or 5/350 customers running Tru64 UNIX and OpenVMS are available to upgrade current system platform to an AlphaServer GS60 6/525 system. **Note:** Upgrades for customers running Windows NT are currently being qualified and will be available at a later date.

Upgrade kit includes and all hardware needed to upgrade a base level AlphaServer 8400 5/300 or 5/350 system to an AlphaServer GS140 6/525 system. Tru64 UNIX V4.0E or OpenVMS V7.1-2 operating system releases are required for AlphaServer GS140 support.

Technical Information

- Alpha 21264 CPU module may draw more power than current CPU module(s). Refer to the EPU Power Configuration Table in the AlphaServer 8400/GS140 System and Options file to determine the need for additional power regulator.
- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- For Tru64 UNIX V4.0E AlphaServer GS60 and GS140 applications, the (DJ-ML200) PCI option must be at a minimum module revision of E. The (DJ-ML300-BA) daughter card on the KFTIA is not supported and must be removed.
- The console terminal should be used for system control functions only. The console terminal should not be used as a general purpose user terminal. High output rates to the console terminal may result in the appearance of a serial line hang. This condition causes the line to be inaccessible for system maintenance purposes. System users should be connected through network/LAT connections.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. Chapter 2 describes several steps necessary for upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See Compaq AlphaServer GS60 and GS140 Installation Notes (AV-RFCCA-TE) for more information.
- **DWLPA-xx options are not supported on AlphaServer GS60 and GS140 systems.** DWLPB-xx options are supported.
- MEMORY CHANNEL options are supported on AlphaServer GS60 and GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Step 1—AlphaServer 8400 5/300 or 5/350 to AlphaServer GS140 6/525 System Upgrades

Upgrade includes dual 6/525 MHz CPU module and clock module for Tru64 UNIX and OpenVMS systems **only**. Upgrades for Windows NT are currently being qualified and will be available at a later date.

Note: Must be ordered before AlphaServer GS140 6/525 SMP upgrades can be added.

Order Number	Operating System License	Type of Upgrade
76U91-AX	No license	Dual 8400 5/300 or 5/350 to Dual GS140 6/525 System Upgrade
76U91-DX	Tru64 UNIX license	Uni 8400 5/300 or 5/350 to Dual GS140 6/525 System Upgrade
76U91-EX	OpenVMS license	Uni 8400 5/300 or 5/350 to Dual GS140 6/525 System Upgrade

AlphaServer 8400 5/300 or 5/350 to AlphaServer GS140 6/525 Upgrades *(continued)*

Step 2—AlphaServer 8400 CPU Symmetric Multi-Processing (SMP) Upgrades

Select to upgrade additional 5/300 or 5/350 CPUs to GS140 6/525 CPUs.

Note: All CPUs in an AlphaServer GS140 system must be at the same speed.

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

- All trade-in part numbers require return of hardware.
- One year hardware product warranty included.

76U92-AX	**From - AlphaServer 8400 5/300 or 5/350 Dual CPU Module to AlphaServer GS140 6/525 Dual-CPU module.** Includes processor module with two Alpha 21264 525 MHz CPUs.
76U92-BX	**From - AlphaServer 8400 5/300 or 5/350 Uni CPU Module to AlphaServer GS140 6/525 Dual-CPU module**. Includes processor module with two Alpha 21264 525 MHz CPUs and Tru64 UNIX SMP license.
76U92-CX	**From - AlphaServer 8200 5/300 or 5/350 Uni CPU Module to AlphaServer GS140 6/525 Dual-CPU module**. Includes processor module with two Alpha 21264 525 MHz CPUs and OpenVMS SMP 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.
- 1 GB and 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.

MS7CC-EA	1 GB memory module
MS7CC-FA	2 GB memory module
MS7CC-GA	4 GB memory module

AlphaServer 8400 5/440 or 5/625 to AlphaServer GS140 6/525 Upgrades

Upgrades for AlphaServer 8400 5/440 or 5/625 customers running Tru64 UNIX and OpenVMS only are available to upgrade current system platform to an AlphaServer GS140 6/525 system. **Note:** Upgrades for customers running Windows NT are currently being qualified and will be available at a later date.

Upgrade kits include all hardware needed to upgrade base level AlphaServer 8400 5/440 or 5/625 to an AlphaServer GS140 6/525 system. Tru64 UNIX V4.0E or OpenVMS V7.1-2 operating system releases are required for AlphaServer GS140 support.

Technical Information

- Alpha 21264 CPU module may draw more power than current CPU module(s). Refer to the EPU Power Configuration Table in the AlphaServer 8400/GS140 System and Options file to determine the need for additional power regulator.
- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- For Tru64 UNIX V4.0E AlphaServer GS60 and GS140 applications, the (DJ-ML200) PCI option must be at a minimum module revision of E. The (DJ-ML300-BA) daughter card on the KFTIA is not supported and must be removed.
- The console terminal should be used for system control functions only. The console terminal should not be used as a general purpose user terminal. High output rates to the console terminal may result in the appearance of a serial line hang. This condition causes the line to be inaccessible for system maintenance purposes. System users should be connected through network/LAT connections.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. Chapter 2 describes several steps necessary for upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See Compaq AlphaServer GS60 and GS140 Installation Notes (AV-RFCCA-TE) for more information.
- **DWLPA-xx options are not supported on AlphaServer GS60 and GS140 systems.** DWLPB-xx options are supported.
- MEMORY CHANNEL options are supported on AlphaServer GS60 and GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Step 1—AlphaServer 8400 5/440 or 5/625 System Upgrades

Upgrade includes dual 6/525 MHz CPU module and two terminator modules for Tru64 UNIX and OpenVMS systems **only**. Upgrades for Windows NT are currently being qualified and will be available at a later date. A clock module change is not required for AlphaServer 8400 5/440 or 5/625 to AlphaServer GS140 6/525 upgrades.

Note: Must be ordered before AlphaServer GS140 6/525 SMP upgrades can be added.

Order Number	Operating System License	Type of Upgrade
3X-76U93-AX	No license	Dual 8400 5/440 to Dual GS140 6/525 System Upgrade
76U95-AX	No license	Dual 8400 5/625 to Dual GS140 6/525 System Upgrade

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)

Select to upgrade additional 5/440 or 5/625 CPUs to GS140 6/525 CPUs.

Note: All CPUs in an AlphaServer GS140 system must be at the same speed.

AlphaServer 8400 5/440 or 5/625 to AlphaServer GS140 6/525 Upgrades *(continued)*

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

- All trade-in part numbers require return of hardware.
- One year hardware product warranty included.

3X-76U93-AX	**From - AlphaServer 8400 5/440 Dual CPU Module to AlphaServer GS140 6/525 Dual-CPU**. Includes processor module with two Alpha 21264/525 MHz CPUs.
76U96-AX	**From - AlphaServer 8400 5/625 Dual CPU Module to AlphaServer GS140 6/525 Dual-CPU**. Includes processor module with two Alpha 21264/525 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.
- 1GB and 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.

MS7CC-EA	1 GB memory module
MS7CC-FA	2 GB memory module
MS7CC-GA	4 GB memory module

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer GS140

Upgrades for VAX/DEC 7000 customers are available to upgrade current system platform to AlphaServer GS140 6/525 systems. Upgrades consist of replacing the current VAX/DEC 7000 System Backplane, CPU module(s), memory module(s), and I/O port module. In addition, adding new PCI plug-in unit options is supported. Upgrade kit part numbers include all hardware items needed to upgrade base level VAX/DEC 7000 system to AlphaServer GS140 system.

AlphaServer GS140 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.

Technical Information

- DWLAA FutureBus+ card cage and options are not supported on the GS60/GS140 Systems. DWLAA options must be removed from the system.
- Any slot not used in the system card cage must be populated with a terminator module (E2034-AA).
- The console terminal should be used for system control functions only. The console terminal should not be used as a general purpose user terminal. High output rates to the console terminal may result in the appearance of a serial line hang. This condition causes the line to be inaccessible for system maintenance purposes. System users should be connected through network/LAT connections.
- See the OpenVMS Alpha Version 7.1-2 Release Notes and Installation Procedures before installing Open VMS V7.1-2. Chapter 2 describes several steps necessary for upgraded system to run properly.

Minimum I/O Adapter Firmware Revisions required with AlphaServer GS60 and GS140 systems

Adapter	Revision	Adapter	Revision
CIPCA	A315	KDM70	4.4
CIXCD	7	KFMSB (B01)	1.0
DEFPA	3.10	KFMSB (>B01)	2.4
DEMFA	2.1	KZMSA	5.6
DEMNA	9.4	KZPSA	A11
KZPBA	5.57		

- See the Installation Notes for Compaq AlphaServer GS60/GS140 Systems AV-RFCCA-TE for more information.
- MEMORY CHANNEL options are supported on AlphaServer GS60 and GS140 with Console Firmware V5.3-12 or later. Console Firmware V5.3-12 is available on CD-ROM (AG-RFCBB-BE), and on the Web at: http://ftp.digital.com/pub/digital/alpha/firmware/interim/gs60gs140

Step 1—AlphaServer GS140 6/525 Upgrades

- 6/525 upgrades require Tru64 UNIX V4.0E or OpenVMS V7.1-2 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 GS140 Dual-CPU module, one KFTHA-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 KZMSA-AB in XMI plug-in unit, or KZPAA-AA in PCI plug-in unit.

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer GS140 *(continued)*

Upgrade Systems include:

- AlphaServer GS140 9-slot backplane assembly.
- One Processor module with two Alpha microprocessor 21264 6/525 CPUs. Each CPU includes 4 MB Backup cache. 6/525 CPUs clocked at 525 MHz for AlphaServer GS140 applications.
- System I/O module (KFTHA-AA) with four I/O channel connections
- No memory included (see Step 3a).
- Operating System Software
  - Tru64 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-393HU-YX	6/525	Tru64 UNIX	KFTHA	No memory included; see Step 3 in this section.
DY-393HU-YX	6/525	OpenVMS	KFTHA	No memory included; see Step 3 in this section.

Note: All upgrades require the return of upgraded hardware.

Step 2—CPU Symmetric Multi-Processing (SMP)

- Order up to six additional CPU modules for a maximum of seven modules with 6/525 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 then one CPU is in current VAX/DEC 7000 system.
- Use Step 2b to add additional AlphaServer GS140 CPU modules to the configuration.

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

- All trade-in part numbers require return of hardware.
- One year hardware product warranty included.

AlphaServer GS140 6/525 Systems

3X-76UAA-AX **From - one VAX/DEC 7000 CPU module to Dual GS140 6/525 CPU** module with OpenVMS SMP extension license.

3X-76UAB-AX **From - one VAX/DEC 7000 CPU module to Dual GS140 6/525 CPU** module with Tru64 UNIX SMP extension license.

3X-76UBA-AX **From - two VAX/DEC 7000 CPU modules to Dual GS140 6/525 CPU** module with OpenVMS SMP extension license.

3X-76UBB-AX **From - two VAX/DEC 7000 CPU module to Dual GS140 6/525 CPU** module with Tru64 UNIX SMP extension license.

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

- Order up to six additional CPU modules for a maximum of seven modules with GS140 6/525 MHz Upgrades (total of 14 CPUs).
- Part numbers are for adding additional AlphaServer GS140 CPUs to your system configuration.

AlphaServer GS140 6/525 Systems

762P1-AX **OpenVMS SMP expansion option—Dual GS140 6/525 CPU**, includes processor module with one Alpha 21264/525 MHz CPU, OpenVMS SMP extension license.

762P2-AX **Tru64 UNIX SMP expansion option—Dual GS140 6/525 CPU**, includes processor module with one Alpha 21264/525 MHz CPU, Tru64 UNIX SMP extension license.

VAX/DEC 7000 In-Cabinet Upgrades to AlphaServer GS140 *(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.
- 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.

MS7CC-EA	1 GB memory module
MS7CC-FA	2 GB memory module
MS7CC-GA	4 GB memory 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 GS140.
- 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 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 GS140 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 EPUs 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 GS140 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.

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 GS140 System Ordering Menu.