Compaq AlphaServer GS60 and 8200 Rackmount
V2.5—10 February 1999
Systems and Options Catalog

Product Description

Compaq AlphaServer GS60 Rackmount systems offer 6/525 MHz 64-bit Alpha 21264 microprocessors packaged in top gun blue system cabinets. AlphaServer 8200 Rackmount systems offer 5/625 MHz 64-bit Alpha 21164 microprocessors packaged in gray system cabinets.

Compaq AlphaServer GS60 and AlphaServer 8200 rackmount systems include five slot backplane and can be configured with up to six Alpha microprocessors. Both systems feature mainframe like performance and capabilities, and high availability computing through clustering with exceptional scalability in every aspect of the system. Servers provide large I/O capacity to tackle the most demanding business applications with up to six independently powerful CPUs with their own data and address paths. Compaq AlphaServer GS60 and AlphaServer 8200 systems support up to 12 GB of error correctable memory, and 132 individual PCI slots to configure up to 85 TB of UltraSCSI storage

Compaq AlphaServer GS60 and AlphaServer 8200 Rackmount systems run OpenVMS or Tru64 UNIX operating systems and offers the reliability and availability required for today's business environments. Clusters, hot swap disks, RAID, ECC, memory and data paths, and fault management are among the features. Space for many supported options, including third party 19-inch RETMA compatibility, are available.

ServerWORKS Manager software provides advanced server and network management capabilities and is supplied with all AlphaServer systems. Simple Network Management Protocol (SNMP) enables information to pass from the managed system to the console for Tru64 UNIX, Windows NT, and OpenVMS for AlphaServers. Detailed server information is viewable, including system, network, storage, and environmental information. For more information, see the StorageWorks Software section of this catalog.

All system building blocks and options standalone as 19-inch Rackmount assemblies and plug directly into 240 V ac power strips provided with the system cabinet. Air flow is front to rear to allow ultimate flexibility in the final configuration of unique systems, and cable egress is from the rear to help management of high interface cable situations.

Note: Only the unique Rackmount features and options for Compaq AlphaServer GS60 and AlphaServer 8200 Rackmount systems are listed here. Refer to the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu for SMP expansion, memory, supported options, storage devices, and software. AlphaServer 8200 Windows NT Rackmount systems are only available as custom quotes from Compaq CustomSystems.

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Step 1—Compaq AlphaServer GS60 and AlphaServer 8200 Rackmount Systems

- Compaq AlphaServer GS60 6/525 Systems require minimum operating system support of:
  - Tru64 UNIX V4.0E
  - OpenVMS V7.1-2
- AlphaServer 8200 5/625 Systems require minimum operating system support of:
  - Tru64 UNIX V3.2G, V4.0B, or V4.0D or later
  - OpenVMS V6.2-1H3 or V7.1-1H1 or later
- Software media and documentation required for first system on site.
- Console terminal required to install system, unless terminal is available on site.
- System includes five slot centerplane—three slots are used by CPU module, memory module, and system I/O module (KFTHA-AA).
  - Two slots are available for additional CPU, memory, or system I/O module(s).
- Power Management software is included with all servers. Software communicates with recommended UPS.

Compaq AlphaServer GS60 and AlphaServer 8200 Expanded Base Server includes

- AlphaServer GS60 includes: Processor module with two Alpha microprocessor 21264 6/525 MHz CPUs; each CPU includes 4 MB Backup cache.
- AlphaServer 8200 includes: Processor module with two Alpha microprocessor 21164 5/625 MHz[1] CPUs; each CPU includes 4 MB Backup cache.
- System I/O module with four I/O channels (KFTHA-AA).
- AlphaServer GS60 includes 4 GB of memory.
- AlphaServer 8200 includes 2 GB or 4 GB of memory.
- PCI Shelf Mount Box (DWLPR-A9).
- UltraSCSI one port Single-ended adapter (KZPBA-CA).
- Storage shelf.
- 4.3 GB 3.5-inch SCSI disk (installed in BA356-JB).
- 600 MB CD-ROM drive.
- Fast Ethernet Network Interface Card.
- Universal single phase power.
- Shielded console cable included for connection to console terminal.
- Factory Installed Software (FIS):
  - Tru64 UNIX base license, Unlimited User license, Server Extension license, Internet Access Software license, **or**
  - OpenVMS base license, Enterprise Integration Package V2.0
- One year hardware product warranty.
- 90 day software product warranty.
- System installation must be ordered separately with Compaq AlphaServer GS60 and AlphaServer 8200 systems.

1. 5/625 CPUs clocked at 612.8 MHz for AlphaServer 8200 applications.

AlphaServer GS60 6/525 Dual CPU Expanded Base Servers—Blue Enclosure

Order Number	Operating System	CPU	Memory	SCSI Disk
DA-AM3GG-A9	Tru64 UNIX	Two 6/525 MHz	4 GB	4.3 GB
DY-AM3GG-A9	OpenVMS	Two 6/525 MHz	4 GB	4.3 GB

AlphaServer 8200 5/625 Dual CPU Expanded Base Servers—Gray Enclosure

Order Number	Operating System	CPU	Memory	SCSI Disk
DA-AM2GF-B9	Tru64 UNIX	Two 5/625 MHz	2 GB	4.3 GB
DA-AM2GG-B9	Tru64 UNIX	Two 5/625 MHz	4 GB	4.3 GB
DY-AM2GF-B9	OpenVMS	Two 5/625 MHz	2 GB	4.3 GB
DY-AM2GG-B9	OpenVMS	Two 5/625 MHz	4 GB	4.3 GB

Step 1a—Compaq AlphaServer GS60 and AlphaServer 8200 Rackmount System Building Blocks

System Building Blocks are an alternative to Servers listed in Step 1. They provide flexibility in configuring the Compaq AlphaServer GS60 and AlphaServer 8200 with a choice of memory and I/O options.

System Building Block Requirements

- Compaq AlphaServer GS60 6/525 SBBs require minimum operating system support of:
  - Tru64 UNIX V4.0E or OpenVMS V7.1-2
- AlphaServer 8200 5/625 SBBs require minimum operating system support of:
  - Tru64 UNIX V3.2G, V4.0B, V4.0D or later, or OpenVMS V6.2-1H3 or V7.1-1H1 or later
- Minimum of one Memory module
- Minimum of one System I/O module
- SCSI controller
- Systems require Tru64 UNIX V3.2B or later, and OpenVMS V6.2 or later
- Console terminal required unless available on site
- System includes five slot backplane—three slots are used by CPU, memory, and system I/O modules
  - Two slots available for additional CPU, memory, or system I/O module(s)
- SBB is five slot rackmount chassis with a dual CPU.
- If Factory Installed Software is required, a BA36R-AF StorageWorks Shelf, CD-ROM and system disk is required.
- If required, a cabinet and appropriate controller can be ordered separately.

Compaq AlphaServer GS60 6/525 MHz and AlphaServer 8200 5/625 MHz Dual CPU Rackmount SBB

3X-762XR-B9	Ready to mount Compaq AlphaServer GS60 rackmount chassis with dual 6/525 CPU, 240 V. No memory, no I/O, no operating system. Requires 24.5 inches of vertical rackmounting space—Blue
758XR-A9	Ready to mount AlphaServer 8200 rackmount chassis with dual 5/625 CPU, 240 V. No memory, no I/O, no operating system. Requires 24.5 inches of vertical rackmounting space—Gray.

Required (See Step 6)

DWLPR-x9 Gray **3X-DWLPR-x9 Blue**	Rackmount PCI unit.
KZPBA-CA	PCI-based one port UltraSCSI Single-ended host adapter—Uses one PCI slot
BN38C-02[2]	2 m VHDCI male to 68-pin HD male UltraSCSI cable, connects KZPBA to rear mounted storage shelf.

Step 2—Power Controllers

Two required for each system cabinet. Cabinets are equipped with two (2) H7600-AB power strips. Each H7600 requires 1.75 inches of vertical mounting space.

H7600-AB	North America 220/240 V 24 Amp Twist-Lock
H7600-BB	Universal 220/240 V 16 Amp Pin-and-Sleeve

Step 3—CPU Symmetric MultiProcessing (SMP) Expansion

See Step 3 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.

Step 4—AlphaServer Expansion Packages

Consult CSS.

Step 5—Memory

See Step 4 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.

Step 6—I/O Expansion Buses

PCI I/O buses are available on Compaq AlphaServer GS60 and AlphaServer 8200 rackmount systems. Application and system configuration constraints will determine maximum configuration. Configuration limits exist at the I/O bus level and controller level. Verify maximum number of allowed controllers as listed in Controller Configuration Table.

- Each DWLPR option contains twelve I/O slots
  12 PCI slots, or
  2 EISA—6 PCI/EISA—2 PCI slots.
- The PCI shelves connect directly to system via a hose cable to the KFTHA-AA. Maximum twelve hose connections supported per system.

DWLPR-A9	**Gray**	12 slot PCI Rackmount chassis, requires 7 inches of vertical rackmounting space.
3X-DWLPR-C9	**Blue**	
KFE70-CA[1]		PCI to EISA Bridge converts 12-slot PCI bus to 2 EISA, 6 PCI/EISA, and 2 PCI slots. Includes RX26 diskette drive, mounting hardware, and cables to mount RX26. Maximum one EISA Bridge option supported per system, requires 8.75 inches of vertical rackmounting space.
DWLPR-B9	**Gray**	12 slot PCI Rackmount chassis with KFE70-CA embedded. Contains 2 EISA, 6 PCI/EISA, and 2 PCI slots. Maximum one DWLPR-B9 or 3X-DWLPR-D9 unit supported per system, requires 8.75 inches of vertical rackmounting space.
3X-DWLPR-D9	**Blue**	

1. Maximum of one EISA bus per system.

Step 7—System I/O Modules

See Step 6 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.

Step 8—Storage Controllers

- See Step 7 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.
- BA36R-AF/AR (Wide) StorageWorks shelves and BA35R-AF/AR (Narrow) StorageWorks shelves are recommended for use with Rackmount systems. Select appropriate SCSI cables to connect from controller to shelves.

Step 9—Storage

- See Step 8 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.
- BA36R-AF and BA36R-AR wide StorageWorks shelves, and
  BA35R-AF and BA35R-AR narrow StorageWorks shelves are supported on rackmount systems.
- 8-bit narrow and 16-bit wide devices are supported on rackmount systems.
- Base system includes one StorageWorks shelf, a CD-ROM drive and one hard disk drive leaving 4 slots for 3.5-inch devices.

Step 10—Networks and Communications

- See Step 9 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.
- DWLPR-A9 (gray) or 3x-DWLPR-C9 (blue) required for PCI based options
- DWLPR-B9 (gray) or 3x-DWLPR-D9 (blue) required for EISA based options
- KFE70-CA (EISA/PCI bridge)

Step 11—Console Terminal

- Console terminal with EIA-232 25-pin DSUB connector and printer required unless otherwise available.
- Shielded console cable is included for connection to console terminal.

VT510-xx	VT510 terminal

Step 12—Expansion (Storage Expansion Cabinet and I/O Expansion Cabinet)

If expansion is required, disks, tapes, I/O chassis or additional options, select the same cabinet and power controllers as used in system cabinet and stack. 71.75-inch rack space available. Use devices with 240 V ac or 120 V/240 V ac front ends only.

Step 13—Power Expansion Components

- Base system cabinet includes two H7600-AB power strips and one power supply.
- Redundant (N+1) power supply option is not supported on Compaq AlphaServer GS60 and AlphaServer 8200 rackmount systems.
- Battery backup capability is not supported on Compaq AlphaServer GS60 and AlphaServer 8200 rackmount systems. The use of UPS system is recommended.

Step 14—Software

See Step 14 of the Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.

Step 15—Environmental Power Products

For UPS Solutions, see section following Specifications in Compaq AlphaServer GS60 and AlphaServer 8200 configuration menu.

Configuring system in H9A15 Cabinet

The H9A15 cabinet is 80 inches tall and has 79.75 inches of standard 19 inches vertical rack space.

- Compaq AlphaServer GS60 and AlphaServer 8200 Rackmount SBB is 24.75 inches and can be mounted no lower than 7 inches from the bottom of cabinet to provide bottom access to clock module replacement.
- BA36R-AF is usually above the SBB with system disk and CD-ROM.
- A PCI drawer is recommended for the bottom of the cabinet with the System Building Block above.
- Two H7600 power strips can be mounted on rear in back of system storage shelf. One power strip should be used solely for SBB with second supporting other cabinet options.
- Remaining space can be filled with options as required, or blank dress bezels will be installed.
- The items configured in cabinet with SBB are standard 19" RETMA compatible and occupy different heights and depths. See chart below.

Options	Rack Height	Depth[1]
System Building Block	24.75 in	32.00 in
PCI drawer (no EISA)	7.00 in	25.00 in
PCI drawer with EISA	8.75 in	25.00 in
BA36R-AF/AR shelves	7.00 in	10.00 in

1. Does not include cable egress allowance.

Installation Services—Compaq AlphaServer GS60 and AlphaServer 8200 Systems

- Installation Service Package or Installation and Startup Package is mandatory for all Compaq AlphaServer GS60 and AlphaServer 8200 systems.
- Consult your Compaq Customer Service Account Representative for assistance in choosing the support plan that is most appropriate.
- For more information on Compaq Services see: http://www.digital.com/services

FP-8INST-xx Installation Service Package

FP-8STAR-xx Installation Service and Startup Package

Specifications

Physical Characteristics	Operating	Shipping
Height	202.0 cm (79.5 in)	225.4 cm (88.8 in)
Width	60.0 cm (23.6 in)	91.5 cm (36.0 in)
Depth	103.6 cm (40.8 in)	121.5 cm (47.9 in)
Weight	318 kg (700 lb)	352 kg (775 lb)
Clearance	**Operating**	**Service**
Front	1.0 m 40 in	1.5 m 59 in
Rear	.75 m 29.5 in	1.0 m 40 in
Environmental	**Operating**	**Non-operating**
Temperature	10C° to 35°C (50°F to 95°F)	-40°C to 66°C (-40°F to 151°F)
Humidity	10% to 90%	10% to 95%
Altitude	0 to 2.4M (0 to 8200 ft)	9,100m (30,000 ft)
Vibration	2-22Hz @ 0.01"da min.	22-500Hz @ 0.25 g max.
Heat Dissipation		
Minimum Configuration	3200 Btu/hr, 930W	
Max Single Cabinet Config.	9100 Btu/hr, 2647W	
Power Requirements		
Nominal ac input voltage	200 V-240 V ac	
Frequency range	47-63 Hz	
Phases	Single-Phase	
Max input current-Max Config.	13.3 A rms	
Plugs from Cabinet	NEMA L6-20P (QTY=2)	
Receptacle	NEMA L6-20R (QTY=2)	
Regulatory Approvals	UL, CSA, IEC, FCC, CE	