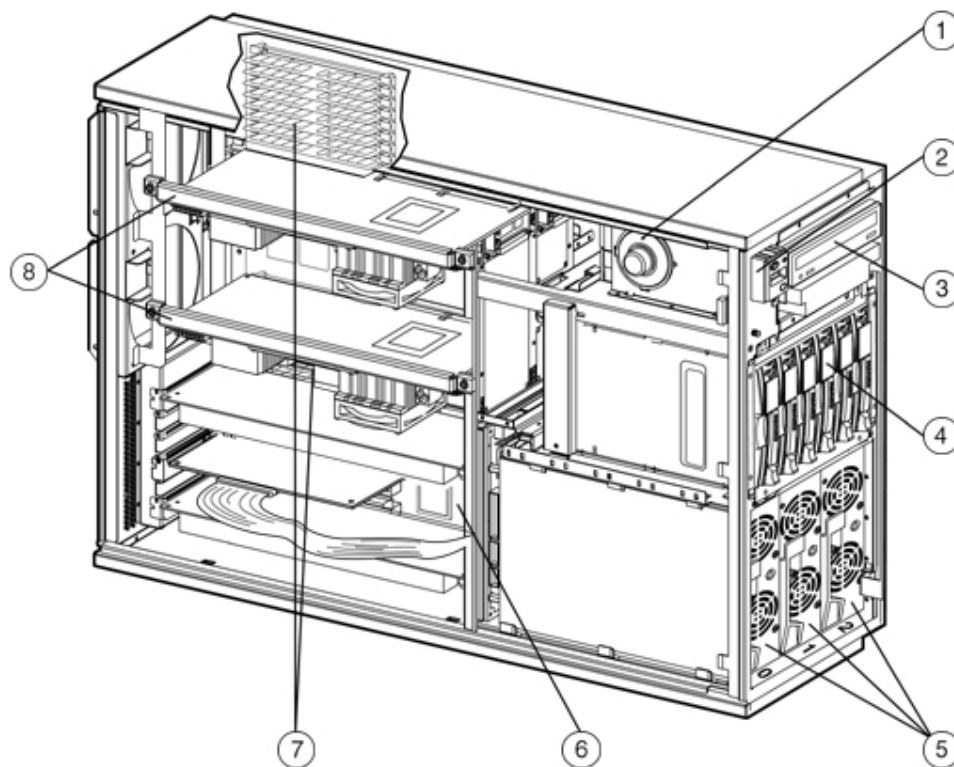


QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Overview



- 1. Speaker
- 2. Operator control panel
- 3. CD-R drive
- 4. Hard disk drives

- 5. Power supplies
- 6. PCI I/O slots
- 7. Memory
- 8. CPUs

At A Glance

AlphaServer/AlphaStation DS25 Systems include:

- Alpha 21264C 1000-MHz processor (dual processor capability) with 8-MB L2 Dual Data Rate cache
- ECC-protected memory bus and cache
- Minimum 512-MB, expandable to 16 GB using 512-MB, 1-GB, 2-GB, and 4-GB options
- Six 64-bit PCI I/O expansion slots
- Three PCI buses
 - Two 66-MHz PCI buses
 - One 33-MHz PCI bus
- Six hot swap hard disk drive bays
- Internal mass storage capacity up to 872 GB
- Integrated dual Ultra3 SCSI adapter
- Integrated dual Ethernet (10/100 and 10/100/1000) adapters
- Two 500-Watt hot pluggable power supplies with optional third for N+1 redundancy
- DVD-ROM/CD-R Combo drive
- Protected by HP Services, including a one-year on-site limited warranty, on-site with 5 x 9 next business day response

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Standard Features

| | | |
|--------------------|---|---|
| Processor | Alpha 21264C 1000-MHz processor | |
| Cache Memory | 8-MB level 2 dual data rate cache per processor | |
| Upgradability | System upgradeable to dual processing | |
| Memory | Minimum | 512-MB |
| | Maximum | 16 GB |
| Network Controller | Integrated dual Ethernet adapters (one 10/100 and one 10/100/1000) | |
| Expansion | PCI I/O slots | 6 total slots - Slots 1-4 run @ 64-bit/66 MHz - Slots 5 and 6 run @ 64-bit/33 MHz |
| Storage Controller | Integrated dual Ultra3 SCSI adapter | |
| Storage | CD-R | IDE DVD-ROM/CD-R Combo Drive |
| | Internal Hard Drives | Choice of 36.4-GB, 72.8-GB, 146-GB, or 300-GB drives |
| | Maximum Internal Storage | 872 GB |
| Interfaces | Parallel | 1 |
| | Serial | 2 |
| | Pointing Device (Mouse) | 1 |
| | Keyboard | 1 |
| | SCSI knockouts on rear of chassis | 2 SCSI knockouts, 1 used by one channel on onboard Adaptec |
| | Ethernet | 2 (10/100 and 10/100/1000) |
| Form Factor | Rackmount or Tower | |
| Manageability | Insight Manager | |
| Power Supply | Two 500-Watt hot plug power supplies, standard; optional third N+1 for redundancy hot-plug redundant power supply support; hot-plug fan support | |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Standard Features

OS Support

AlphaServer DS25 Tru64 UNIX systems include pre-installed software, Base license, Unlimited User license, Server Extension license, Internet Express, and Secure Web Server
AlphaStation DS25 Tru64 UNIX systems include pre-installed software, 2-user Base license.
AlphaServer DS25 OpenVMS systems include pre-installed software, Base license with System Manager license and Enterprise Integration Server License Package for OpenVMS
AlphaStation DS25 OpenVMS systems include pre-installed software, Base license, Concurrent Use 1-user license, NAS 150 Client license
Minimum OS support: Tru64 UNIX V5.1A NHD5, OpenVMS V7.3-1

Service and Support

Protected by HP Services including a one-year on-site hardware warranty with next business day response. Training, consulting, network integration, software support, comprehensive system maintenance and guaranteed uptime services are also available for customers requiring higher levels of service and support

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Systems

PCI Configuration Guidelines

- Modules designed for 5.0V signaling and 33-MHz bus speed can only operate in 5.0V/33-MHz slots (slots 5 and 6).
- A maximum of two 5V modules can be installed in the system.
- Modules designed for 3.3 V signaling and 66-MHz bus speed can only operate in 66-MHz slots (slots 1, 2, 3, 4).
- Universal PCI modules can operate in all slots (3.3V and 5.0V).
- Universal PCI modules can operate at a maximum bus speed of 33 MHz or 66 MHz.
- Universal PCI modules operating at 33 MHz placed in a 66-MHz slot will reduce the entire hose to operate at 33 MHz.
- Universal PCI modules capable of operating at 66 MHz when placed in a 33-MHz slot will operate at 33 MHz.

PCI Module Descriptions:

PCI modules listed in this document as 33 MHz or 66 MHz refers to the module's maximum PCI bus speed.

- Modules that can only operate at 5V are designated as 5V – 33-MHz modules.
- Universal PCI modules are designated as 3.3/5V and can be installed into 33-MHz or 66-MHz slots.

The AlphaServer DS25 provides three PCI buses (hoses) that drive the six slots. A fourth hose drives the on-board Gbit Ethernet and dual channel Ultra3 SCSI adapter.

- Hose 0 – 33 MHz driving slots 5 and 6
- Hose 3 – 66 MHz driving slots 3 and 4
- Hose 1 – 66 MHz driving slots 1 and 2

The DS25 PCI bus and slot specifications follow:

| PCI Slot | PCI Bus Speed | Signal Voltage | PCI Hose Number |
|----------|---------------|----------------|-----------------|
| 1 | 66 MHz | 3.3V | 1 |
| 2 | 66 MHz | 3.3V | 1 |
| 3 | 66 MHz | 3.3V | 3 |
| 4 | 66 MHz | 3.3V | 3 |
| 5 | 33 MHz | 5.0V | 0 |
| 6 | 33 MHz | 5.0V | 0 |

Step 1 – Select system

AlphaServer/AlphaStation DS25 systems require the **mandatory** selection of the following items:

- System memory (Step 2a)
- Pedestal/tower or rackmount bezel kit (Step 2b)
- Disk drive cage (Step 2c)
- System disk drive (Step 2d)
- Two power cords (Step 2e)
- Order country-specific keyboard and mouse only if required. (Step 14)
- Software media and documentation for first system onsite. (Step 16)

NOTES: DS25 minimum OS support - Tru64 UNIX V5.1A NHD5, OpenVMS V7.3-1.

Only 2-5-2 part numbers are factory integrated.

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Systems

| AlphaServer DS25 Systems | | |
|---------------------------|----------|--------------|
| OS | CPU | Order Number |
| Tru64 UNIX | 1000 MHz | DA-57AAB-AA |
| OpenVMS | 1000 MHz | DY-57AAB-AA |
| AlphaStation DS25 Systems | | |
| Tru64 UNIX | 1000 MHz | DA-57AAB-AW |
| OpenVMS | 1000 MHz | DY-57AAB-AW |

Step 2 – Select Mandatory Options

Step 2a – Memory – Mandatory

- System does not include memory; selection of one memory option for each system is mandatory. Up to three additional memory options can be added for a total of 16 GB. (In earlier (D*-57AAA-**) models, configurations with more than 8 GB require three power supplies; N+1 functionality is not supported in configurations with over 8 GB.)

| | |
|---|-------------|
| 512-MB memory option (4 x 128-MB DIMMs) | 3X-MS350-CA |
| 1-GB memory option (4 x 256-MB DIMMs) | 3X-MS350-DA |
| 2-GB memory option (4 x 512-MB DIMMs) | 3X-MS350-EA |
| 4-GB memory option (4 x 1-GB DIMMs) | 3X-MS350-FA |

Step 2b – Bezel Kits – Mandatory

- Pedestal/Tower kit or Rackmount kit is mandatory for each system

| | |
|---|-------------|
| Pedestal/Tower bezel kit | 3X-BA57P-PA |
| Rackmount bezel kit (M-Series Cabinets) | 3X-BA57R-RA |
| Rackmount bezel kit for 10000 Series Cabinets | 3X-BA57R-RC |

Step 2c – Disk Drive Cage – Mandatory

- Systems support one disk drive cage; disk drive cage supports six 1-inch hard disk drives or a combination of 1-inch disk drives and hot-plug Universal tape devices. Each tape device uses two slots in the BA610-6D.

| | |
|-----------------------|----------|
| 6-bay disk drive cage | BA610-6D |
|-----------------------|----------|

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Systems

Step 2d – System Disk Drive (Supported in Disk Drive Cage) – Mandatory

- Selection of one disk drive is mandatory
 - 36.4-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive 3R-A3849-AA
 - 72.8-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive 3R-A3839-AA
 - 72.8-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive 3R-A3851-AA
 - 146-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive 3R-A4945-AA
 - 146-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive 3R-A3841-AA
 - 300-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive 3R-A4952-AA
 - 300-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive 3R-A6726-AA
-

Step 2e – Power Cords – Mandatory

- Selection of two power cords is mandatory for all systems
-

| | | |
|------------------------------|--|-------------|
| Pedestal Power Cords | North America, 120V, 75-inches | BN26J-1K |
| | Australia, New Zealand, China, 2.5-meter | 3R-A6023-AA |
| | Central Europe, 2.5-meter | BN19C-2E |
| | Denmark, 2.5-meter | BN19K-2E |
| | Egypt, India, South Africa, 2.5-meter | BN19S-2E |
| | Israel, 2.5-meter | 3R-6883-AA |
| | Italy, 2.5-meter | BN19M-2E |
| | Japan, 2.5-meter | 3X-BN46F-02 |
| | Switzerland, 2.5-meter | BN19E-2E |
| | UK, Ireland, 2.5-meter | BN19A-2E |
| Republic of China | BN19H-2E | |
| Rackmount Power Cords | All Countries | BN35S-4E |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

Step 3 – Additional CPU Modules – Optional

- One 68/1000-MHz CPU included, one additional CPU supported
 - SMP upgrade includes one 68/1000-MHz CPU with 8-MB cache and Tru64 UNIX SMP license 3X-KN410-CB
 - SMP upgrade includes one 68/1000-MHz CPU with 8-MB cache and OpenVMS SMP license 3X-KN410-CC

Step 4 – Additional Power Supplies – Optional

- Two 500-watt power supplies included with system; optional third power supply provides N+1 redundancy (power cord not included, select power cord from Step 2e). Earlier (D*-57AAA-**) models with 375-watt power supplies require three power supplies when configured with greater than 8 GB of memory. N+1 functionality is not supported in earlier models in configurations with over 8 GB.
 - DS25 500-watt redundant power supply 3X-H7911-AA

Step 5 – Internal Tape Storage – Optional

- BA610-6D drive cage drives connected to integrated Ultra3 SCSI adapter supports LVD Universal tape. Each device uses two slots.
 - DAT 20/40-GB hot-plug LVD tape drive, carbon black; uses two slots in BA610-6D or 43xxx shelves (Q1546A) (cannot be sold in Europe) 3R-A4745-AA
 - DAT 36/72-GB hot-plug LVD tape drive, carbon black; uses two slots in BA610-6D or 43xxx shelves (Q1529A) (cannot be sold in Europe) 3R-A4547-AA

Step 6 – External Storage – Optional

StorageWorks Model 4314R and Model 4354R Universal Drive Shelves

- StorageWorks Model 4314R, 4314T, and 4354R Ultra3 SCSI (LVD) single-bus and split-bus Universal drive shelves; refer to StorageWorks Enclosure 4300 Family QuickSpecs when configuring shelves. When selecting a DS-SL13R-Bx split-bus shelf, two SCSI channels are required. BN38C-xx cable is required when connecting to embedded Ultra3 SCSI adapter. Note that the depth of a DS-SL13R-xx shelf does not allow front and rear mounting.
 - StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, U.S./International DS-SL13R-AA
 - StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, Japan DS-SL13R-AJ
 - StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, U.S./International DS-SL13R-BA
 - StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, Japan DS-SL13R-BJ

StorageWorks Modular Storage Array 30 (MSA30) Universal Drive Shelves



QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

- See Step 9 for rack configurations with M-Series and Series 10000 cabinets
- StorageWorks Model 4414R and 4454R Ultra320 single-bus and split-bus Universal drive shelves; refer to StorageWorks Modular Storage Array 30 Family QuickSpecs when configuring shelves. When selecting a 3R-A4076-AA split-bus shelf, two SCSI channels are required from selected storage adapters. BN38C-05 cable is required per channel if the connection is not VHDCI/VHDCI.
- MSA30 shelves are not currently supported in SCSI cluster configurations
- For OpenVMS 7.3-2, DEC-AXPVMS-VMS732_FIBRE_SCSI-V0100-4.PCSI is required to support dual-port I/O module (287483-B21) and/or the MSA30DB dual bus enclosure (3R-A4076-AA) in an OpenVMS cluster environment
- Hardware to mount into a Series 10000 cabinet is included. When mounting into an M-Series cabinet a rail kit (3R-A5281-AA/313877-B21) must be ordered separately

StorageWorks Modular Smart Array SW4414R Single Bus Ultra320 Rackmountable SCSI disk drive, 4-node Storage Enclosure (302969-B21). Includes one 12-foot VHDCI/VHDCI SCSI cable and two IEC-C13 power cords. See Supported Options List for configuration details --

http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html

3R-A4075-AA

StorageWorks Modular Smart Array SW4454R Dual Bus Ultra320 Rackmountable SCSI disk drive, 4-node Storage Enclosure (302970-B21). Includes two 12-foot VHDCI/VHDCI SCSI cables and two IEC-C13 power cords. See Supported Options List for configuration details --

http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html

3R-A4076-AA

M-series Rack Rail Kit Option

3R-A5281-AA
313877-B21

NOTE: The 3R-A4075-AA and 3R-A4076-AA enclosures are not supported in a shared-SCSI cluster using the 3X-KZPEA-DB adapter.

Step 7 – Storage Devices – Optional

| Disk Drives | | |
|--|--|-------------|
| (Supported in Model 4314R and Model 4354R Universal Drive Shelves) | 36.4-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive | 3R-A3849-AA |
| | 72.8-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive | 3R-A3839-AA |
| | 72.8-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive | 3R-A3851-AA |
| | 146-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive | 3R-A3841-AA |
| | 146-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive | 3R-A4945-AA |
| | 300-GB Ultra320 SCSI 10,000 rpm 1-inch Universal disk drive | 3R-A4952-AA |
| | 300-GB Ultra320 SCSI 15,000 rpm 1-inch Universal disk drive | 3R-A6726-AA |

UltraSCSI Configuration Rules

- UltraSCSI configurations require UltraSCSI components (controllers, adapters, shelves, disks, and cables)
- UltraSCSI adapters and RAID controllers support UltraSCSI disks at UltraSCSI speeds in UltraSCSI shelves
- Mixing faster SCSI devices with slower SCSI devices will slow that entire SCSI bus to the slower speed.

Tape Drives

- Tabletop tape drives require LVD host bus adapter and country-specific power cord
- Tape media may not be included, for more information see <http://www.compaq.com/storage/productindextape.html>



QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| | | |
|---|---|-------------|
| DAT Tape Drives | DAT 40-GB LVD tape drive, tabletop, with North America power cord | C5687D |
| | DAT 72-GB LVD tape drive, tabletop, with North America power cord | Q1523B |
| <hr/> | | |
| DAT Autoloaders | DAT 20/40-GB autoloader, external | AE313A |
| <hr/> | | |
| DLT/SDLT Tabletop Tape Drives | SDLT 600-GB external tape drive; NA | A7519B |
| | SDLT 600-GB external tape drive, WW | A7520B |
| | VS160 HH DLT 80/160GB external tape drive, NA | A7570B |
| | VS160 HH DLT 80/160GB external tape drive, WW | A7571B |
| <hr/> | | |
| 3U Rackmount Tape Drive Enclosure | 3U LVD Rackmount Tape Drive Enclosure for use in H9Axx M-Series Cabinets, 0 drives, carbon black | 274338-B21 |
| | Rackmount Kit for H9Axx M-Series Cabinets, carbon black - required for mounting 3U Rackmount Tape Drive Enclosure in M-Series cabinet | 3R-A3804-AA |
| <p>NOTE: The 3U Rackmount Tape Enclosure supports up to four internal half-height removable devices, or up to two full-height devices; select up to four DAT devices or two DLT/SDLT devices with 3U Rackmount Tape Enclosure (274338-B21) or select one of the preconfigured configurations listed below.</p> | | |
| <hr/> | | |
| MSA1000 Modular SAN Array | MSA1000 StorageWorks Modular SAN Array. For configuration details see http://h18002.www1.hp.com/alphaserver/products/storage/index.html . | 201723-B22 |
| | NOTE: Requires M-Series Rack Kit. | 313877-B21 |
| | M-series Rack Kit | 3R-A5281-AA |

Step 8 – Storage Adapters/Controllers

NOTE: Refer to the following chart when configuring adapters, shelves, and disks.

DS25 Configuration Chart for Storage Adapters

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| Adapter | | Shelf | Disk Drive | Tru64 UNIX | OpenVMS |
|-------------------------|--------|-------------------------|---|------------|---------|
| 3X-KZPCA-AA | | DS-SL13R-xx BA610-6D | 3R-A0xxx-AA 1-inch Universal 3R-A1xxx-AA 1-inch Universal 3R-A3xxx-AA 1-inch Universal | V5.1A | V7.3-1 |
| 3.3/5V | 33 MHz | | | | |
| 3X-KZPEA-DB | | DS-SL13R-xx BA610-6D | 3R-A0xxx-AA 1-inch Universal 3R-A1xxx-AA 1-inch Universal 3R-A3xxx-AA 1-inch Universal | V5.1A | V7.3-1 |
| 3.3/5V | 66 MHz | | | | |
| RAID Controllers | | | | | |
| 3X-KZPDC-BE/DF | | BA610-6D DS-SL13R-xx | 3R-A0xxx-AA 1-inch Universal 3R-A1xxx-AA 1-inch Universal 3R-A3xxx-AA 1-inch Universal | V5.1A | V7.3-1 |
| 3.3/5V | 66 MHz | | | | |

| | Maximum # Supported | | |
|---|---------------------|---------|-------------|
| | Tru64 UNIX | OpenVMS | |
| PCI-X 64-bit 144-MHz 2-GB StorageWorks Fibre Channel Host Bus Adapter - FCA2684 - single channel NOTE: For configuration details refer to the Supported Options List at http://h18002.www1.hp.com/alphaserver/options/asds25/asds25_options.html The following pointer also provides additional information regarding this FCA: http://h18006.www1.hp.com/products/storageworks/fca2684/index.html | 4 | 4 | DS-A5132-AA |
| PCI-X 64-bit 144-MHz 2-GB StorageWorks Fibre Channel Host Bus Adapter - FCA2684 - dual channel NOTE: For configuration details refer to the Supported Options List at http://h18002.www1.hp.com/alphaserver/options/asds25/asds25_options.html The following pointer also provides additional information regarding this FCA: http://h18006.www1.hp.com/products/storageworks/fca2684/index.html | 2 | 2 | DS-A5134-AA |
| Fibre Channel cable (BNGBX-xx) xx=02, 05, 15, 30, 50 meters x=1, 2, 3, 4, 5 | | | 234457-B2x |
| PCI 2-port Ultra3 SCSI (LVD2) adapter, 64-bit/66 MHz dual-channel (uses one PCI slot); includes external 68-pin VHDCI connector; HSZxx RAID controllers not supported. | 4 | 4 | 3X-KZPEA-DB |
| PCI 1-port Ultra2 SCSI (LVD) adapter, 32-bit, single-channel (uses one PCI slot); includes external 68-pin HD connector; requires BN38C-xx cable to connect adapter to Ultra2 SCSI shelf; HSZxx RAID controllers not supported. | 4 | 4 | 3X-KZPCA-AA |
| 68-pin HD male-to-VHDCI male UltraSCSI cable; xx = 02, 03, 05, 10, 20, 25 meter | | | BN38C-xx |

QuickSpecs

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Options

| | | | |
|---|---|---|-------------|
| PCI 1-port UltraSCSI differential adapter (uses one PCI slot); includes external 68-pin HD connector, requires BN38C-xx cable (2 to 25 meter) to connect adapter to differential UltraSCSI shelf or RAID controller | 4 | 4 | 3X-KZPBA-CC |
| 68-pin HD male-to-VHDCI male UltraSCSI cable; xx = 02, 03, 05, 10, 20, 25 meter | | | BN38C-xx |
| PCI 2-port PCI to Ultra3, 64-bit, 66 MHz, LVD backplane RAID controller with 128-MB cache (uses one PCI slot); requires connection to DS-SL13R-xx shelves or BA610-6D card cage. NOTE: No host-based volume shadowing or shared bus support with OpenVMS. | 4 | 4 | 3X-KZPDC-BE |
| PCI 4-port PCI to Ultra3, 64-bit, 66 MHz, LVD backplane RAID controller with 256-MB cache (uses one PCI slot); requires connection to DS-SL13R-xx shelves or BA610-6D card cage. NOTE: No host-based volume shadowing or shared bus support with OpenVMS. | 4 | 4 | 3X-KZPDC-DF |
| U320 LVD SCSI Backplane Raid Controller, 64 bit, 2 Channel | - | 4 | 3X-KZPEC-BF |
| U320 LVD SCSI Backplane Raid Controller, 64 bit, 4 Channel | - | 4 | 3X-KZPEC-DG |

Step 9 – M-series Cabinets or Rack 10000 Series

Step 9a – M-Series Cabinet – Optional

M-series enclosures require selection of the following items:

- H9A10 or H9A15 cabinet
- Rack kit for each system
- H9A10 or H9A15 rear cabinet extender
- Second PDU required with four or more systems in one cabinet
- Cabinet front door based on cabinet height
- Factory integration
- Ballast kit if two or less systems are ordered for the H9A15 cabinet
- Two power cords for each system

NOTE: For more information on M-Series Cabinet Enclosures, see <http://www.compaq.com/alphaserver/products/m-series/specs.html>

Cabinet Configuration Chart for AlphaServer DS25 (5U) with DS-SL13R (3U) StorageWorks Shelves

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| Cabinet | Rack Kit | Cabinet Height/Space | Systems | DS-SL13R Shelves | Extra PDU Required | Ballast Kit |
|-------------|-------------|----------------------|---------|------------------|--------------------|-------------|
| H9A10-ME/MF | 3X-BA57R-RA | 56-inches/33U | 1 | 8 | 3X-H7609-EB/DB | - |
| | | | 2 | 7 | 3X-H7609-EB/DB | - |
| | | | 3 | 5 | 3X-H7609-EB/DB | - |
| | | | 4 | 4 | 3X-H7609-EB/DB | - |
| | | | 5 | 2 | 3X-H7609-EB/DB | - |
| | | | 6 | 0 | 3X-H7609-EB/DB | - |
| H9A15-ME/MF | 3X-BA57R-RA | 68.25-inches/40U | 1 | 8 | 3X-H7609-EB/DB | 1 |
| | | | 2 | 7 | 3X-H7609-EB/DB | 1 |
| | | | 3 | 7 | 3X-H7609-EB/DB | - |
| | | | 4 | 6 | 3X-H7609-EB/DB | - |
| | | | 5 | 4 | 3X-H7609-EB/DB | - |
| | | | 6 | 2 | 3X-H7609-EB/DB | - |

NOTE: H9A1x-ME includes one 3X-H7609-EB PDU; H9A1x-MF includes one 3X-H7609-DB PDU -- Order additional PDUs if more are required. See ordering information on following page.

| | | |
|--------------------------|---|----------|
| M-series Cabinets | 67-inch carbon black cabinet with 56-inch or 33U of usable vertical space, 200 to 240V dual-16A controller, 16 IEC C13 outlets, two input power plug NEMA L620P, Americas, Asia Pacific; includes rear door. | H9A10-ME |
| | 67-inch carbon black cabinet with 56-inch or 33U of usable vertical space, 240V dual-16A controller, 16 IEC C13 outlets, two input power plug IEC 309, 20A, Europe; includes rear door. | H9A10-MF |
| | 79-inch carbon black cabinet with 68.25-inch or 40U of usable vertical space, 200 to 240V dual-16A controller, 16 IEC C13 outlets, two input power plug NEMA L620P, Americas, Asia Pacific; includes rear door. | H9A15-ME |
| | 79-inch carbon black cabinet with 68.25-inch or 40U of usable vertical space, 240V dual-16A controller, 16 IEC C13 outlets, two input power plug IEC 309, 20A, Europe; includes rear door. | H9A15-MF |

| | | |
|--|---|----------|
| Rear Cabinet Extender - Requires selection of one cabinet extender for each H9A10 or H9A15 cabinet | Rear cabinet extender, carbon black, for H9A10-ME/MF cabinets | H9C10-ZE |
| | Rear cabinet extender, carbon black, for H9A15-ME/MF cabinets | H9C15-ZE |

| | | |
|---|--|-------------|
| Cabinet Front Door - Requires selection of door based on cabinet height | Front door for H9A10-ME/MF cabinet enclosure | 3X-H9C10-RF |
| | Front door for H9A15-ME/MF cabinet enclosure | 3X-H9C15-RF |

| | | |
|--|--|-------------|
| Factory Integration - Required | Factory Integration of systems and storage devices assembled and configured in cabinet enclosure in predefined locations | YS-ASCAA-AA |
|--|--|-------------|

Ballast Kit - Required only if one system is ordered for the H9A15 cabinet

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

- Ballast is added to a cabinet at particular locations for specific configurations to meet safety regulations for installation, operation, and service; see Cabinet Configuration Chart.

Two 35-40 lb steel plates

H9C10-MC

| | | |
|--|---|-------------|
| Power Distribution Unit (PDU) One PDU included with cabinet (see Cabinet Configuration Chart) | Single Phase, Double Power Controller, 16 outlet North America/Japan 240V | 3X-H7609-EB |
| | Single Phase, Double Power Controller, 16 outlet, Europe 240V | 3X-H7609-DB |

| | | |
|--|--|----------|
| Rackmount Power Cords - Rackmount power cord Two required for each system, three if optional FR-H7910-AA power supply is installed | | BN35S-4E |
|--|--|----------|

| | | |
|--|--|---------------------------|
| Shelves Supported in M-series Cabinets - Optional | StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, U.S. / International | DS-SL13R-AA |
| | StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, Japan | DS-SL13R-AJ |
| | StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, U.S. / International | DS-SL13R-BA |
| | StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, Japan | DS-SL13R-BJ |
| | StorageWorks Modular Smart Array SW4414R Single Bus Ultra320 rackmountable SCSI disk drive, 4-node Storage Enclosure (302969-B21). Includes one 12-foot VHDCI/VHDCI SCSI cable and two IEC-C13 power cords. See Supported Options List for configuration details -- http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html | 3R-A4075-AA |
| | StorageWorks Modular Smart Array SW4454R Dual Bus Ultra320 rackmountable SCSI disk drive, 4-node Storage Enclosure (302970-B21). Includes two 12-foot VHDCI/VHDCI SCSI cables and two IEC-C13 power cords. See Supported Options List for configuration details -- http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html | 3R-A4076-AA |
| | M-Series Rail kit (required when mounting MSA30 enclosures (3R-A407x-AA) into an M-Series cabinet NOTE: The 3R-A4075-AA and 3R-A4076-AA enclosures are not supported in a shared-SCSI cluster using the 3X-KZPEA-DB adapter. | 3R-A5281-AA 313877-B21 |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

Step 9b – Rack 10000 G2 Series – Optional

The HP Rack 10000 Series were designed to the 19-inch RETMA standard. The Racks accommodate all HP equipment (ProLiant, Alpha Systems, StorageWorks, UPS, and PDUs) in addition to select third-party equipment. See **HP Rack 10000 G2 Series QuickSpecs** for details:

http://h18000.www1.hp.com/products/quickspecs/12402_div/12402_div.HTML

Configuration Guidelines

1. All DS/ES Base Systems require a rack kit to mount systems in a 10000 G2 Series Rack (see below).
2. All Base Systems include all required internal IEC/IEC power cords.

| | | |
|--|---|-------------|
| 10000 G2 Series Rack | 10000 G2 Series 42U Rack - mandatory selection of three-phase or two single-phase Power Distribution Units required | AF004A |
| Rack Kit – Mandatory for 10000 G2 Series Rack | Order one for each DS25 System for mounting in 10000 G2 Series Rack | 3X-BA57R-RC |
| Side Panel Kit – Mandatory Choice of Side Panel Kit or Baying Kit for 10000 G2 Series Rack | Order one per 10000 G2 Series Rack | AF054A |
| Baying Kit – Mandatory Choice of Side Panel Kit or Baying Kit for 10000 G2 Series Rack | Used to join two or more Series 10000 G2 Racks | 248931-B21 |
| Power Distribution Units – Mandatory for 10000 G2 Series Rack | | |
| Single-phase PDU | Single-phase PDU for North America/Japan 200-240V 20A input plug NEMA L620P; 16 outlets | 3X-H7609-EB |
| | Single-phase PDU for International, 240V 20A input plug IEC309, 16 outlets | 3X-H7609-DB |

| | | |
|---|--|-------------|
| Shelves Supported in Series 10000 Racks – Optional | StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, U.S./International | DS-SL13R-AA |
| | StorageWorks Model 4314R Ultra3 SCSI (LVD) single-bus Universal drive rackmount shelf, includes one power supply, Japan | DS-SL13R-AJ |
| | StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, U.S./International | DS-SL13R-BA |
| | StorageWorks Model 4354R Ultra3 SCSI (LVD) split-bus Universal drive rackmount shelf, includes two redundant power supplies, Japan | DS-SL13R-BJ |
| | StorageWorks Modular Smart Array SW4414R Single Bus Ultra320 rackmountable SCSI disk drive, 4-node Storage Enclosure (302969-B21). Includes one 12-foot VHDCI/VHDCI SCSI cable and two IEC-C13 power cords. See Supported Options List for configuration details -- http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html | 3R-A4075-AA |
| | StorageWorks Modular Smart Array SW4454R Dual Bus Ultra320 rackmountable SCSI disk drive, 4-node Storage Enclosure (302970-B21). Includes two 12-foot VHDCI/VHDCI SCSI cables and two IEC-C13 power cords. See Supported Options List for configuration details -- http://h18002.www1.hp.com/alphaserver/options/ases45/ases45_options.html | 3R-A4076-AA |



QuickSpecs

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Options

NOTE: 3R-A4075-AA and 3R-A4076-AA are not supported in a shared-SCSI cluster using the 3X-KZPEA-DB.

Step 9c – KVM (Keyboard, Video, Mouse) Switch – Optional

| | | |
|---|--|------------|
| KVM (Keyboard, Video, Mouse) Switch – Optional | The HP Server Console Switch 1 x 8 (8-port) is supported on Alpha Systems using PS/2 mouse and keyboard with VGA video – this includes support for the PS/2 interface adapter, part number 262588-B21, required for operation. The switch is supported on systems running Tru64 UNIX operating system –minimum version V5.1A and the OpenVMS systems - minimum version v7.3-2. The KVM is 1U high and can be installed in the M-Series cabinet or Series 10000 rack. Supports up to eight servers. | |
| | HP Server 1 x 8-port KVM Console Switch | 336044-B21 |
| CAT5e Cables | 3 foot (1m) – 4 pack | 263474-B21 |
| | 6 foot (2m) – 8 pack | 263474-B22 |
| | 12 foot (4m) – 8 pack | 263474-B23 |
| | 20 foot (6m) – 4 pack | 263474-B24 |
| | 40 foot (12m) – 1 pack | 263474-B25 |
| Interface Adapters | PS/2 Interface Adapter – 1 pack | 262588-B21 |
| | PS/2 Interface Adapter – 8 pack | 262587-B21 |

NOTE: Supported graphics cards - ELSA GLoria Synergy (SN-PBXGK-BB), 3DLabs Oxygen VX1 (SN-PBXGF-AB), and ATI RADEON 7500 (3X-PBXGG-AA)

For more information, refer to the Release Notes at:

http://h18002.www1.hp.com/alphaserver/download/console_switch_rn.pdf

http://h18002.www1.hp.com/alphaserver/download/html/console_switch_rn.html

Step 10 – Graphics Adapters – Optional

- RAID Configuration Utility is accessible via console port for Tru64 UNIX and OpenVMS systems; optional graphics capability available
- Select graphics adapter, monitor, and country-specific keyboard if required
- Media kit (includes RADEON 7500 card) for Tru64 UNIX (QA-62RAA-H8) and for OpenVMS (QA-62PAA-H8)

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| | Maximum # Supported | | |
|---|--|---|-------------|
| | Tru64 UNIX | OpenVMS | |
| ATI RADEON 7500 64-MB 2D/3D graphics accelerator NOTE: Only RADEON 7500 PCI cards can be used in a multi-card environment. For multi-head support, refer to Read Me First document/Release Notes. | 4 – 2D only 1 – 3D Dual head on first card only (unique video using DVI port for 2D or 3D) V5.1B NHD-7 | 4 – 2D/3D Dual head on first card only (cloned video using DVI port for 2D or 3D) V7.3-1 with Tima Kit: DEC-AXPVMS-VMS731_GRAPHICS_V0300-4.PCSI | 3X-PBXGG-AA |
| Tru64 UNIX Open 3D license for RADEON 7500 (required for 3D functionality) | | | QL-6ZRA9-AA |
| Additional Tru64 UNIX media kit for RADEON 7500 (initial kit ships with RADEON 7500 card) | | | QA-6ZRAA-H8 |
| Additional OpenVMS media kit for RADEON 7500 (initial kit ships with RADEON 7500 card) | | | QA-6ZPAA-H8 |
| PCI 32-bit, 33-MHz multi-function (single-port 10/100 Ethernet UTP/RJ45, Ultra2 SCSI LVD, and 2D graphics) adapter | 1 | 1 | 3X-DEPVZ-AA |

Step 11 – Networks and Communications – Optional

| | Maximum # Supported | | |
|--|---------------------|---------|-------------|
| | Tru64 UNIX | OpenVMS | |
| PCI to dual-port 10/100 UTP Fast Ethernet adapter | 2 | 2 | 3X-DE602-BR |
| Cable for 10BaseT Twisted Pair connection | | | BN25G-xx |
| Shielded cable for 10BaseT Twisted Pair connection | | | BN25M-xx |
| Dual-port 10/100 UTP daughter card for 3X-DE602-BR (3X-DE602-BR is a prerequisite) | 2 | 2 | 3X-DE602-TR |
| FE FX daughter card for 3X-DE602-BR (3X-DE602-BR is a prerequisite) | 2 | 2 | 3X-DE602-FR |
| PCI-X/PCI single-port 1000 Mbps (MMF with duplex-SC) Gigabit Ethernet; Tru64 UNIX V5.1B/TruCluster V5.1B supports up to eight nodes and requires: http://ftp1.support.compaq.com/public/unix/v5.1b/t64v51bb1-c0003000-16672-e-20030130.README Tru64 UNIX V5.1A/TruCluster V5.1A supports up to eight nodes and requires: T64V51AAB21AS0004-20030206.tar NOTE: Use BN34A, BN34B, or equivalent with SC connectors. | 4 | 4 | 3X-DEGXA-SR |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| | | | |
|---|---|---|-------------|
| PCI-X/PCI single-port 10/100/1000 Mbps (Twisted-Pair Copper with RJ45) Gigabit Ethernet; Tru64 UNIX V5.1B/TruCluster V5.1B supports up to eight nodes and requires: http://ftp1.support.compaq.com/public/unix/v5.1b/t64v51bb1-c0003000-16672-e-20030130.README Tru64 UNIX V5.1A/TruCluster V5.1A supports up to eight nodes and requires: T64V51AAB21AS0004-20030206.tar NOTE: Use BN25G, BN26M, BN24Q, BN28Q twisted pair RJ45 cables. | 4 | 4 | 3X-DEGXA-TR |
| r | | | |

| | | | |
|--|---|---|-------------|
| PCI (32-bit, 33-MHz) to 4-port Async Communications NIC with DB-25 octopus cable NOTE: The Tru64 UNIX driver (UNIX Tar File 4001180K.tar) is located at: http://support.digi.com/support/indexes/tru64-xr.html The OpenVMS driver kit (Filename 4001778L.bin) can be located at http://support.digi.com/support/drivers/vms/index-async.html | 4 | 4 | PBXDA-BA |
| PCI (32-bit, 33-MHz) to 8-port Async Communications NIC with DB-25 octopus cables NOTE: The Tru64 UNIX driver (UNIX Tar File 4001180K.tar) is located at: http://support.digi.com/support/indexes/tru64-xr.html The OpenVMS driver kit (Filename 4001778L.bin) is located at http://support.digi.com/support/drivers/vms/index-async.html | 4 | 4 | PBXDA-BB |
| PCI 2-port intelligent synchronous controller; the WANDD Kit version for Tru64 UNIX is V3.2-1: http://ftp1.support.compaq.com/public/unix/v5.1a/wanosf/3.2/wanosf_v32-1.README | 4 | 4 | 3X-PBXDD-AA |
| PCI 4-port intelligent synchronous controller; the WANDD Kit version for Tru64 UNIX is V3.2-1: http://ftp1.support.compaq.com/public/unix/v5.1a/wanosf/3.2/wanosf_v32-1.README | 4 | 4 | 3X-PBXDD-AB |

Step 12 – MEMORY CHANNEL – Optional

Tru64 UNIX Systems (V5.1A)

- Each system node in the cluster requires a TruCluster software license (QL-6BRAC-AA) or TruCluster Plus Software Package (QP-6R9AC-AA)

OpenVMS Systems

- OpenVMS V7.3-1 and OpenVMS Cluster license (QL-MUZAC-AA) are required

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

Configuring Information

- Memory Channel adapters (CCMAB-BA) must be configured in 5-volt PCI slots.
- Up to two PCI-to-System Area Network adapters (CCMAB-BA) are supported in a single system.
- Two-node clusters can be configured by ordering a CCMAB-BA for each node and one BN39B-04 or BN39B-10 cable; cable connects directly to CCMAB-BA in each node.
- For a two-node cluster that will not need to be rebooted when adding additional members, order one CCMAB-BA adapter and one BN39B-04 or BN39B-10 cable for each node, and one CCMHB-AA hub for the cluster.
- For three- or four- node clusters, order one CCMAB-BA adapter and one BN39B-04 or BN39B-10 cable for each node, and one CCMHB-AA hub for the cluster. If two CCMAB-BAs are configured in each system, a second CCMHB-AA is required.
- CCMHB-AA includes four CCMLB-AA line cards and supports up to four nodes; expansion up to eight system nodes can be achieved by adding up to four CCMLB-AA line cards.
- If nodes must be separated by a distance longer than standard copper cables allow the CCMFB option converts the output of the standard CCMAB controller or CCMLB line card to single-mode fiber optic cable. The fiber optic connection may be up to 2,000 meters long between two CCMAB controllers connected in virtual hub mode, or 3,000 meters between a CCMAB controller and a CCMHB hub. (The connection from the CCMHB hub to a second system may also be 3,000 meters.) The CCMFB option requires a second PCI slot in the system from which it draws power only. It is normally connected to the corresponding CCMAB controller with the short BN39B-01 cable. The CCMFB is also used in the CCMHB hub where it occupies a slot normally used by the CCMLB line card, limiting expansion to four radial fiber optic connections.
- CCMHB-BA hub expansion box provides additional slots for up to eight fiber optic connections. Two standard length single-mode fiber optic cables are available (BN34R-10 and BN34R-31); however, users normally provide this fiber optic connection. Fiber optic connectivity is completely transparent to the systems using it and has no performance impact.

NOTE: When configuring with two Memory Channel Controllers (CCMAB-BA), all nodes in a Memory Channel cluster must have the window size jumper set to the same size, specifically 128

| | | |
|--|---|----------|
| MEMORY CHANNEL Controller/ System Area Network Hub | PCI-to-System Area Network Controller, maximum two -- 5V/3.3V | CCMAB-BA |
| | System Area Network Hub with four line cards; includes BN19P-2E power cord for Canada, Japan, and U.S. - for other regions, order appropriate power cord from the following list: | CCMHB-AA |
| | Hub expansion box with no line cards | CCMHB-BA |
| | Expansion line card for CCMHB hub | CCMLB-AA |
| | 1-meter cable for CCMAB and CCMHB | BN39B-01 |
| | 4-meter cable for CCMAB and CCMHB | BN39B-04 |
| | 10-meter cable for CCMAB and CCMHB | BN39B-10 |
| | Copper-to-single mode fiber optic converter – 5V/3.3V (clock not affected); maximum two per system. | CCMFB-BA |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| | | |
|-----------------------|--|-------------|
| MEMORY CHANNEL | Australia, New Zealand, China (8121-0838) | 3R-A6023-AA |
| Power Cords | Central Europe | BN19C-2E |
| | Denmark (103541-481) | BN19K-2E |
| | Egypt, India (103541-AR1) | BN19S-2E |
| | Ireland, United Kingdom | BN19A-2E |
| | Israel | 3R-A6883-AA |
| | Italy (103541-461) | BN19M-2E |
| | Switzerland (103541-511) | BN19E-2E |

Step 13 – Monitors

- Graphics monitors other than those listed can be used if compatible with SVGA graphics ordered with system
- A video cable, 6-foot/1.8-meter length, is included with all variants of monitors
- Video extension cable required if monitor is located more than 1 meter from server
- Monitors will ship with, but not be integrated with systems.

| | | |
|---------------------|---|-------------|
| CRT Monitors | V7600 17-inch (16-inch viewable image size) 0.24mm FST multi-frequency color monitor, 2-tone (carbon/silver), VGA to 1024 x 768 @85 Hz, MPRII/TCO 99/Energy Star Compliant, Northern Hemisphere with NA power cord, VGA cable | 3R-A5853-AA |
| | Same as above, with Euro power cord | 3R-A5854-AA |
| | Same as above, Taiwan, NA power cord | PF996AA#AB0 |
| | Same as above, with PRC power cord, CCIB | 3R-A5857-AA |
| | Same as above, Southern Hemisphere with Australia/New Zealand power cord | PF996AA#ABG |

| | | |
|----------------------------|---|-------------|
| Flat Panel Monitors | L2065 20" (20.1" viewable image area) flat panel monitor 0.255mm pixel pitch, 1600 x 1200 @60 Hz, A + D, TCO 03, Energy Star compliant, 4 video input connectors, (VGA, DVI-I, composite video and s-video), NA power cord, VGA and DVI-I cables | 3R-A6701-AA |
| | L2065 20" (20.1" viewable image area) flat panel monitor 0.255mm pixel pitch, 1600 x 1200 @60 Hz, A + D, TCO 03, Energy Star compliant, 4 video input connectors, (VGA, DVI-I, composite video and s-video), Euro power cord, VGA and DVI-I cables | 3R-A6702-AA |
| | L1955, 19" (19" viewable image size) TFT flat panel monitor, 0.294mm pixel pitch, 1280 x 1024 @60Hz, multi-mode support, MPRII/TCO 03/Energy Star compliant, one VGA, one DVI-I input connector. NA power cord, VGA and DVI-D cables | PD974AA#ABA |
| | L1955, 19" (19" viewable image size) TFT flat panel monitor, 0.294mm pixel pitch, 1280 x 1024 @60Hz, multi-mode support, MPRII/TCO 03/Energy Star compliant, one VGA, one DVI-I input connector. Euro power cord, VGA and DVI-D cables | PH466A#ABB |
| | L1506, 15." (15" viewable image size) TFT flat panel monitor, 0.297 mm pixel pitch, 1024 x 768 @60 Hz, multi-mode support, MPRII/TCO99/Energy Star compliant, two video input connectors (one VGA and one DVI-I), NA power cord, VGA and DVI-I cables | 3R-A6515-AA |

QuickSpecs

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Options

L1506, 15." (15" viewable image size) TFT flat panel monitor, 0.297 mm pixel pitch, 1024 x 768 @60 Hz, multi-mode support, MPRII/TCO99/Energy Star compliant, two video input connectors (one VGA and one DVI-I), Euro power cord, VGA and DVI-I cables 3R-A6516-AA

Flat Panel Monitor – Rack Mountable TFT7210R 17" (17" viewable image area) 1U rack-mount flat panel display, 0.264mm pixel pitch, 1280 x 1024 @60/75 Hz, high and low voltage power cords, worldwide 3R-A5187-AA

Monitor Power Cords

| | |
|--|-------------|
| North American, 120 V, 75-inch | BN26J-1K |
| Australia, New Zealand, China, 2.5-meter | 3R-A6023-AA |
| Central Europe, 2.5-meter | BN19C-2E |
| Denmark, 2.5-meter | BN19K-2E |
| Egypt, India, South Africa, 2.5-meter | BN19S-2E |
| Israel, 2.5-meter | 3R-A6883-AA |
| Italy, 2.5-meter | BN19M-2E |
| Japan, 2.5-meter, Dentori approved | 3X-BN46F-02 |
| Switzerland, 2.5-meter | BN19E-2E |
| UK, Ireland, 2.5-meter | BN19A-2E |

Step 14 – Keyboards, and Mouse – Optional

Keyboards – Optional

- Select a keyboard and mouse
- All keyboards listed may not be available in all geographies
- Select an opal OpenVMS keyboard for use with VT5xx text terminals.

| Keyboard/Language | Opal | Carbon | |
|-----------------------------|-------------|-------------|-------------|
| | OpenVMS | Tru64 UNIX | OpenVMS* |
| U.S. keyboard | 3X-LK465-A2 | 3R-A6586-AA | 3X-LK464-A2 |
| Arabic keyboard | - | 3R-A6572-AA | - |
| Belgian keyboard | 3X-LK465-AB | 3R-A6573-AA | 3X-LK464-AB |
| BHCSY keyboard | - | 3R-A6574-AA | - |
| Canadian/English keyboard | 3X-LK465-AQ | - | 3X-LK464-AQ |
| Canadian/French keyboard | 3X-LK465-AC | 3R-A6575-AA | 3X-LK464-AC |
| Cyrillic keyboard (Russian) | 3X-LK465-BT | 3R-A6576-AA | 3X-LK464-BT |
| Czech keyboard | 3X-LK465-BV | 3R-A6577-AA | 3X-LK464-BV |
| Danish keyboard | 3X-LK465-AD | 3R-A6578-AA | 3X-LK464-AD |
| Dutch keyboard | 3X-LK465-AH | 3R-A6579-AA | 3X-LK464-AH |
| Finnish keyboard | 3X-LK465-AF | 3R-A6580-AA | 3X-LK464-AF |
| French keyboard | 3X-LK465-AP | 3R-A6581-AA | 3X-LK464-AP |
| German keyboard | 3X-LK465-AG | 3R-A6582-AA | 3X-LK464-AG |

QuickSpecs

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Options

| | | | |
|------------------------------|-------------|--------------|-------------|
| Greek keyboard | 3X-LK465-BH | 3R-A6583-AA | 3X-LK464-BH |
| Hebrew keyboard | 3X-LK465-AT | 3R-A6584-AA | 3X-LK464-AT |
| Hungarian keyboard | 3X-LK465-BQ | 3R-A6585-AA | 3X-LK464-BQ |
| International keyboard | - | 3R-A6586-AA | - |
| Italian keyboard | 3X-LK465-AI | 3R-A6587-AA | 3X-LK464-AI |
| Japanese keyboard | - | 3R-A6588-AA | - |
| Korean keyboard | - | 3R-A6589-AA | - |
| Latin-American keyboard | - | 3R-A6590-AA | - |
| Norwegian keyboard | 3X-LK465-AN | 3R-A6591-AA | 3X-LK464-AN |
| Polish keyboard | 3X-LK465-BP | 3R-A6592-AA | 3X-LK464-BP |
| Portuguese keyboard | 3X-LK465-AV | 3R-A6593-AA | 3X-LK464-AV |
| Romanian keyboard | 3X-LK465-BL | - | 3X-LK464-BL |
| Simplified Chinese keyboard | - | 3R-A6594 -AA | - |
| Slovak keyboard | 3X-LK465-CZ | 3R-A6595-AA | 3X-LK464-CZ |
| Spanish keyboard | 3X-LK465-AS | 3R-A6596-AA | 3X-LK464-AS |
| Swedish keyboard | 3X-LK465-AM | 3R-A6597-AA | 3X-LK464-AM |
| Swiss/French keyboard | 3X-LK465-AK | 3R-A6598-AA | 3X-LK464-AK |
| Swiss/German keyboard | 3X-LK465-AL | - | 3X-LK464-AL |
| Traditional Chinese keyboard | - | 3R-A6599-AA | - |
| Thai keyboard | - | 3R-A6600-AA | - |
| Turkish Q keyboard | 3X-LK465-BU | 3R-A6601-AA | 3X-LK464-BU |
| Turkish/F keyboard | 3X-LK465-BW | - | 3X-LK464-BW |
| UK keyboard | - | 3R-A6602-AA | 3X-LK464-A2 |
| Yugoslavian keyboard | 3X-LK465-BY | - | 3X-LK464-BY |

*OpenVMS keyboard (3X-LK464-xx) comes with PS/2 and USB connectors

| | | |
|--|--|-------------|
| Keyboard or Mouse Extension Cable | 6-foot/1.8-meter keyboard or mouse extension cable; to extend both keyboard and mouse order two cables | 3X-BC34A-06 |
|--|--|-------------|

| | | |
|--------------|-------------------------|-------------|
| Mouse | 3-button mouse – carbon | 3X-PBQWS-PS |
|--------------|-------------------------|-------------|

Step 15 – Software – Required selection of media and documentation for first system on site

- Software Processor Code = E

Tru64 UNIX

- AlphaServer DS25 Tru64 UNIX systems include Unlimited User license, Server Extension license, Internet Express, and Secure Web Server
- AlphaStation DS25 Tru64 UNIX systems include Base 2-user license

Tru64 UNIX media and online documentation on CD-ROM

QA-6ADAA-H8

Tru64 UNIX full hard copy documentation

QA-6ADAA-GZ

Tru64 UNIX Unlimited User license

QL-MT7AE-AA

Internet Express for Tru64 UNIX

QB-3NCAA-SA

TruCluster Plus Software Package, licenses for TruCluster Server, Logical Storage Manager and AdvFS Utilities

QP-6R9AC-AA



QuickSpecs

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Options

| | |
|---|-------------|
| Advanced Server for Tru64 UNIX, 25 client concurrent use license | QL-5U29M-3D |
| Advanced Server for Tru64 UNIX, 50 client concurrent use license | QL-5U29M-3E |
| Advanced Server for Tru64 UNIX, 100 client concurrent use license | QL-5U29M-3F |
| Advanced Server for Tru64 UNIX, 250 client concurrent use license | QL-5U29M-3G |
| Advanced Server for Tru64 UNIX, 500 client concurrent use license | QL-5U29M-3H |
| Layered products media and documentation for Tru64 UNIX on CD-ROM | QA-054AA-H8 |
| DECnet/OSI end-system license for Tru64 UNIX | QL-MTJAE-AA |
| DECnet/OSI extended function license for Tru64 UNIX | QL-MTKAE-AA |

OpenVMS

- AlphaServer DS25 OpenVMS systems include Base license with System Manager license and Enterprise Integration Server Package for OpenVMS Revision V3.1
- AlphaStation DS25 OpenVMS systems include Base license, Concurrent Use 1-user license, NAS 150 Client license
- Enterprise Integration Package includes licenses for TCP/IP Services for OpenVMS, DECwindows Motif for OpenVMS Alpha, DECprint Supervisor for OpenVMS Open, DECnet-Plus for OpenVMS Alpha End System, Archive/Backup System for OpenVMS Management Tools, Archive/Backup Agent for Windows NT, Office Server for OpenVMS, PATHWORKS 32, PATHWORKS V6 for OpenVMS - Advanced Server, and Office Server Client Access License

| | |
|--|-------------|
| OpenVMS media and online documentation on CD-ROM | QA-MT1AA-H8 |
| OpenVMS hard copy documentation | QA-001AA-GZ |
| Layered products media and documentation for OpenVMS on CD-ROM | QA-03XAA-H8 |

- OpenVMS Concurrent Use licenses provide the right to interactively use the operating system by the specified number of concurrent users on a designated OpenVMS system. OpenVMS Concurrent Use licenses can be moved from one system to another at user discretion and can be shared in a mixed OpenVMS VAX and OpenVMS Alpha cluster.
- OpenVMS Traditional Unlimited Use license is system specific and can only be used on one single system at a time. It cannot be shared between systems or in an OpenVMS VAX or OpenVMS Alpha Cluster.

| | |
|--|-------------|
| Concurrent Use 1-user license | QL-MT3AA-3B |
| Concurrent Use 2-user license | QL-MT3AA-3C |
| Concurrent Use 4-user license | QL-MT3AA-3D |
| Concurrent Use 8-user license | QL-MT3AA-3E |
| Concurrent Use 16-user license | QL-MT3AA-3F |
| Concurrent Use 32-user license | QL-MT3AA-3G |
| Concurrent Use 64-user license | QL-MT3AA-3H |
| Concurrent Use 128-user license | QL-MT3AA-3J |
| Concurrent Use 256-user license | QL-MT3AA-3K |
| OpenVMS Cluster license for Alpha systems | QL-MUZAC-AA |
| OpenVMS Cluster Client license for Alpha systems | QL-3MRAC-AA |
| OpenVMS Cluster Client to Full VMS Cluster Migration license | QL-6J7AC-AA |
| Enterprise Integration Server for OpenVMS media and documentation | QA-5LVAA-H8 |
| DECnet extended function license for OpenVMS | QL-MTGAE-AA |
| DECnet end-system to extended function upgrade license for OpenVMS | QL-MTHAE-AA |
| OpenVMS Volume Shadowing license | QL-2A1AE-AA |

Options

Step 16 – Hardware and Software Support Services for Tru64 UNIX and OpenVMS

- Select one of the optional HP Care Pack Service Packages described below that best supports the customer's operational requirements for system availability.
-

HP Care Pack Services

- HP Care Pack Services are available for AlphaServer systems running Tru64 UNIX or OpenVMS operating systems. HP Care Pack Services are designed for customers who require support beyond that provided by the hardware product warranty with coverage for both Principal server systems and SSPs (Subsequent System Packages) - that meet a full range of customer support requirements.
-

Program Features – Principal Server/Station

HP Support Plus

- HP Support Plus offers combined hardware and software services in one package, providing support during standard HP office hours.
-

HP Support Plus 24

- HP Support Plus 24 offers combined hardware and software services in one package to help enhance the availability and performance of your IT infrastructure 24x7.
-

HP Proactive 24

- HP Proactive 24 (P24) is a combined hardware and software support solution designed to help you get more from your IT investment. P24 improves the effectiveness, performance, and availability of the technologies in your IT infrastructure.
-

HP Critical Service

- HP Critical Service (CS) is a comprehensive hardware and software support solution, designed for organizations running business critical applications. CS provides a combination of proactive and reactive services for mission critical environments with little or no tolerance for downtime.
-

Installation

- Pre-installation review
 - Unpacking of equipment
 - Assemble and test
 - Basic product usage info
 - No software installation added
-

Installation & Startup HP O/S

- Pre-installation review
 - Unpacking of equipment
 - Assemble and test
 - Basic product usage info
 - Install operating systems
 - Product configuration
 - Print & network access
 - Orientation
-

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Options

| HP Care Pack Services for AlphaServer/AlphaStation DS25 Systems (sold via Fusion Order Management System) | | | | |
|---|--------------------|------------|--------------------|------------|
| | 1-year Package ID# | Option ID# | 3-year Package ID# | Option ID# |
| HP Support Plus | HA109A1 | 6HQ | HA109A3 | 6HQ |
| HP Support Plus 24 | HA110A1 | 6HQ | HA110A3 | 6HQ |
| HP Proactive 24 | HA111A1 | 6HQ | HA111A3 | 6HQ |
| HP Critical Service | HA112A1 | 6HQ | HA112A3 | 6HQ |

NOTES:

- AlphaServer DS25 systems include one-year parts and labor warranty with 5x9, on-site Next Business Day response.
- HP Care Pack Services include support for new HP branded hardware options internal to the AlphaServer enclosure plus a monitor (17-inch or less excluding flat panel models).
- External storage devices/cabinets carry their own level of warranty and should be quoted separately for uplifted warranty services.
- In addition to the HP Care Pack Services shown above, other service packages are available for separate hardware and software support. For more information on Hardware and Software Upfront Services and other HP service options available for AlphaServers, please consult your Sales Account Manager, HP Services Principal, or visit: <http://www.hp.com/hps/>

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Technical Specifications

| | | | | | |
|-----------------|----------------------------------|---|------------------|-----------------|-----------------|
| Pedestal | Dimensions (H x W x D) | 18.5 x 8.875 x 30.25 in (47 x 22.3 x 76.7 cm) | | | |
| | Shipping Dimensions | 24 x 26.25 x 40 in (61 x 66 x 101.6 cm) | | | |
| | Weight | Typical Configuration | 80 lb (36 kg) | | |
| | | Maximum Configuration | 88 lb (40 kg) | | |
| | Shipping Weight | Nominal | 100 lb (45 kg) | | |
| | | Maximum | 110 lb (50 kg) | | |
| | Clearances | | Operating | Service | |
| | | | Front | 15 in (38.1 cm) | 15 in (38.1 cm) |
| | | | Rear | 6 in (15 cm) | 29.5 in (75 cm) |
| | | | Left Side | None | None |
| Right Side | | | None | None | |

| | | | | |
|------------------|----------------------------------|---|-----------------------------------|--|
| Rackmount | Dimensions (H x W x D) | 8.69 x 17.5 x 29.187 in (22.0 x 44.5 x 70.5 cm) (5U) | | |
| | Shipping Dimensions | 24 x 26.25 x 40 in (61 x 66 x 101.6 cm) | | |
| | Weight | When lifting | Nominal | 80 lb (36 kg) |
| | | | Maximum | 86 lb (39 kg) |
| | | Total added to cabinet (brackets, slides, cables): | Nominal | 84 lb (38 kg) |
| | | | Maximum | 88 lb (40 kg) |
| | Shipping Weight | Nominal | 100 lb (45 kg) | |
| | | Maximum | 110 lb (50 kg) | |
| | Clearances | | Operating | Service |
| | | | See specific cabinet requirements | Minimum 4 ft (121.9 cm), 28 in (71 cm) withdrawal on rails |

| Cabinet | H9A10 M-Series | H9A15 M-Series | Series 10000 Rack (10642) |
|---|---|---|---|
| Dimensions (H x W x D) (Depth includes rear door extender) | 67 x 23.6 x 36.1 in (170 x 60 x 91.6 cm) | 79 x 23.6 x 36.1 in (200 x 60 x 91.6 cm) | 78.7 x 24 x 39.69 in (199.9 x 60.96 x 100.82 cm) |
| Shipping Dimensions | 73 x 36 x 48 in (185.5 x 91.5 x 122 cm) | 85 x 36 x 48 in (216 x 91.5 x 122 cm) | 86.22 x 32 x 48 in (219 x 81.28 x 121.92 cm) |
| Weight | 280 lb (126 kg) | 313 lb (142 kg) | 253 lb (114.84 kg) |
| Shipping Weight | 354 lb (159.3 kg) | 369 lb (167.4 kg) | 284 lb (129 kg) |
| Loading Capacity | 1,408 lb (640 kg) maximum | 1,408 lb (640 kg) maximum | 2,000 lb 909.1 kg maximum |

| | | |
|--------------------|----------------------|--|
| System Unit | Environmental | |
| | Temperature | Operating (Tower, Rackmount) 50° to 95° F (10° to 35° C) |



QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Technical Specifications

| | | | |
|--|--|--|---------------------|
| | Non-operating | 41° to 122° F (5° to 50° C) | |
| | Storage (60 days) | -40° to -151° F (-40 to -66° C) | |
| | Rate of change | 20° F/hr (11° C/hr) | |
| | NOTE: Maximum operating temperature at sea level; reduce by 1.8° F (1° C) for each 600m (2,000 ft) above sea level. | | |
| Humidity | Operating | 20% to 90%, non-condensing | |
| | Non-operating | 10% to 90%, non-condensing | |
| | Storage (60 days) | 10% to 95% | |
| Maximum Wet Bulb Temperature | Operating | 82° F (28° C) | |
| | Non-operating | 90° F (32° C) | |
| | Storage (60 days) | 115° F (46° C) | |
| Heat Dissipation | Nominal | Maximum | |
| | Tower | 550W, 1,878 BTU/hr | 780W, 2,664 BTU/hr |
| H9A10/H9A15 Cabinets | Configuration dependent | | |
| Air Flow and Quality | Intake location | Front | |
| | Exhaust location | Rear Tower, Pedestal, Rack; Rear/top H9A10/H9A15 | |
| | Particle size | N/A | |
| | Concentration | N/A | |
| | Altitude (unpressurized) | Operating | 10,000 ft (3,037 m) |
| Non-operating | | 40,000 ft (12,192 m) | |
| | NOTE: Higher altitudes are possible if maximum operating temperature is reduced (see Temperature); other restrictions may apply such as maximum permissible altitude for hard drives. | | |
| Acoustics (Declared values per ISO 9296 and ISO 7779) | | | |
| Acoustics | LWAd3B | LnAm5dBA (bystander position) | |
| Idle | 6.3 | 45 | |
| Operating | 6.4 | 46 | |
| | NOTE: Current values for specific configurations are available from HP, note that 1 B = 10 dBA. | | |
| Vibration | Operating | 10 to 500 Hz .1 G peak | |
| Shock | Operating | 10G 11ms half-sine (pedestal) | |
| | | 5G 11ms half-sine (rack) | |
| Electrical (Power supplies are universal, PFC, auto ranging, 100/240 VAC) | | | |
| Nominal Voltage (VAC) | 100 | 120 | 200 to 240 |
| Voltage Range (VAC) (temporary condition) | 90 to 100 | 110 to 128 | 180-250 |
| Power Source Phase | Single | Single | Single |
| Nominal Frequency (Hz) | 50/60 | 50/60 | 50/60 |
| Frequency Range (Hz) | 49-63 | 49-63 | 49-63 |
| RMS Current | | | |
| Pedestal and Rackmount | | | |
| Single power cord | 6.3A | 5.3A | 3.0 |
| Maximum VA | 630 | 640 | 690 |
| M-Series Cabinet (Configuration dependent) | | 120 | 220-240 |

QuickSpecs

HP AlphaServer DS25 HP AlphaStation DS25

Technical Specifications

| | | | |
|-----------------------|--------------------------|--|-----|
| Nominal voltage (VAC) | 100 | | |
| Each power cord | 24A | 24A | 16A |
| Power Cords | | | |
| Pedestal | 1 (75 in (190 cm)) | IEC 320 C13 to NEMA 5-15 (North America) or IEC 320 C13 to country-specific | |
| Rackmount | 1 (14 ft 10 in (452 cm)) | IEC 320 C13 to NEMA 5-15 (North America) or IEC 320 C13 to IEC 320 C14 (other countries) | |
| Cabinet | 2 (10 ft 10 in (330 cm)) | 120V non-removable NEMA L5-30P or 200-240V non-removable IEC 309 | |
| Regulatory | | | |
| Agency Approvals | | UL: Listed to UL1950 (3rd edition) CSA: Certified to CAN/CSA-C22.2 No. 950-M95 TUV: EN 60950/A11: 1997 VDE 0805 GS marked FCC: Part 15.B Class A CE: EN55022, EN50024, EN61000-3-2, EN61000-3-3 VCCI V-3/97.04 Class B ITE BSMI: CNS13438 C-Tick: AS/NZS 3548 (1995) AS/NZ 3260:1993 Australian/New Zealand Standard EN 60950/A11: 1997 European Norm IEC 950 (2nd edition, 4th amend) | |
| | Reviewed to | | |

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