



AlphaServer 800 Pedestal–Rackmount V2.9—05 November 1998 DIGITAL Systems and Options Catalog

Product Description

The AlphaServer 800 is an Alpha microprocessor server, available in 333 MHz, 500 MHz versions with 2MB ECC cache. Servers are available in Pedestal and Rackmount configurations with a choice of DIGITAL UNIX and OpenVMS operating systems. The AlphaServer 800 offers the following high-reliability features: hot swap drives, Remote Management Console, and ECC memory. Integrated on system motherboard is an UltraSCSI adapter, SVGA controller (TRIO-S3 with 1MB RAM), Remote Management Console, diskette controller, two serial ports, one parallel port, and keyboard and mouse interfaces.

The AlphaServer 800 systems support 8 internal storage devices, including a floppy diskette, a CD-ROM, two additional 5.25-inch removable media device bays, and four hot swap SCA-2 Ultra disk drives. System supports up to 2 GB of memory and 72 GB of internal storage with four 18 GB disks installed.

System Drawer Ordering Rules

- AlphaServer 800 Packaged Systems do not include a system disk or an Ethernet (10/100 Mbit) adapter. Selection of a system disk and a network adapter is mandatory. Users can select a 2.1 GB, 4.3 GB, 9 GB, or 18 GB disk as the system disk.
- To order a complete system, select (1) a System, (2) a System Disk, and (3) a Network Adapter.

M-series Cabinet Enclosures

- Cabinet enclosures are available in two sizes: 67-inch and 79-inch; see Cabinet Configuration Chart for maximum systems and StorageWorks shelves supported in M-series Cabinet Enclosures.

The AlphaServer 800 integrated Remote Management Console (RMC) features significantly enhances the ability to remotely manage and diagnose system conditions. The RMC allows a remote operator to monitor server voltages, temperatures, and fan, as well as manipulate the server (Power On/Off, reset, halt). An auxiliary regulator powers the RMC in the main power system that allows systems to be remotely interrogated even if systems are turned off or shut down. In the event of an alert condition, the RMC can be set up to automatically dial a user-definable pager phone or another system to make a remote operator aware of the alert condition.

ServerWORKS Manager 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 DIGITAL UNIX and OpenVMS systems. Using ServerWORKS, the system manager may build and view topological maps of the network. Detailed server information is viewable, including system, network, storage, and environmental information. Alarms may be set against critical system parameters and events. All AlphaServer systems are supplied with management tools to complement ServerWORKS Manager.

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Step 1—AlphaServer 800 Pedestal and Rackmount Package Systems

Configuration menus require the mandatory selection of:

- DIGITAL UNIX Packaged System from Step 1a, or
- OpenVMS Packaged System from Step 1b, and
- Minimum of one Ethernet Adapter and one UltraSCSI disk from Step 1c

Note: See Step 7 for M-series Cabinet Enclosure configuration rules

Pedestal and Rackmount Systems include

- Alpha microprocessor 21164 with 333 MHz CPU or 500 MHz CPU
each CPU includes 2 MB ECC onboard cache
- Pedestal enclosure with
 - Six expansion slots: three PCI and one PCI/EISA combo and two EISA
 - Integral UltraSCSI adapter (internal-only) supports internal removable media (CD-ROMs and tapes) and internal storage shelf
 - Integral S3 SVGA Graphic
 - 8 DIMM memory slots support 2 memory kits
 - Eight storage slots
One diskette drive slot with 1.44 MB floppy drive
One CD-ROM drive slot with 600 MB CD-ROM
Two additional half height (or one full height) removable media slots
Four SCA-2 Fast Wide/Ultra hard drive slots
 - Two serial ports: One serial port with full duplex asynchronous modem control; one RMC dedicated serial port with full duplex asynchronous modem control.
 - One bi-directional enhanced parallel port
 - PS/2 style keyboard port and mouse port
- 350 W switchable (120/240 V, 60/50 Hz) power supply
- 3-button mouse.
- 120 V power cord. Select country-specific power cord for all non-North American orders.
- OpenVMS variants include a 108-key, VT-style US English keyboard. Select country specific keyboard for all non-North American orders.
- DIGITAL UNIX variants include a 104/105-key PC-style US English keyboard. Select country specific keyboard for all non-North American orders.
- US English documentation.
- Integrated Advanced Server Management features, including ServerWORKS Manager kit.
- DIGITAL UNIX Unlimited User license, Server Extension license, Internet AlphaServer System software kit, or
- OpenVMS base license with System Manager license, Enterprise Integrated Package
- Hardware warranty: three-year on-site¹
- Software Warranty¹
 - 90-day SPD conformance with advisory telephone support for DIGITAL UNIX and Open VMS.

1. Service upgrades are available. See Step 10.

Note: Rackmount packaged systems must be installed in a cabinet. System can be installed in an existing cabinet or select a cabinet from Step 7.

Step 1a—DIGITAL UNIX Packaged Systems

- All DIGITAL UNIX Pedestal and Rackmount packaged systems include pre-installed DIGITAL UNIX, Base license, Unlimited User license, Server Extension license, and Internet Access Server Software (IASS) media and license.
- DIGITAL UNIX packaged systems include factory installed software (FIS) DIGITAL UNIX V4.0D on hard disk drive.
- DIGITAL UNIX variants ordered in North America include a 104/105-key PC-style US English keyboard
- Selection of a keyboard and power cord is mandatory for all non-North American variants.
- A minimum of 64 MB memory is recommended for DIGITAL UNIX
- Order DIGITAL UNIX media and documentation separately. See Step 9.

Note: Rackmount packaged systems must be installed in a cabinet. System can be installed in an existing cabinet or select a cabinet from Step 7.

Step 1a—DIGITAL UNIX Packaged Systems (*continued*)

DIGITAL UNIX Pedestal Packaged Systems

Order Number	Operating System	CPU	Memory	Disk	Ethernet	Keyboard ¹	Graphics	Monitor
PB80C-FJ	DIGITAL UNIX	333	32 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-FD	DIGITAL UNIX	333	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-FE	DIGITAL UNIX	333	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-FF	DIGITAL UNIX	333	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-FG	DIGITAL UNIX	333	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-FH	DIGITAL UNIX	333	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-FB	DIGITAL UNIX	500	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-FC	DIGITAL UNIX	500	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-FD	DIGITAL UNIX	500	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-FE	DIGITAL UNIX	500	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-FF	DIGITAL UNIX	500	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended

DIGITAL UNIX Rackmount Packaged Systems

Order Number	Operating System	CPU	Memory	Disk	Ethernet	Keyboard ¹	Graphics	Monitor
PB80S-FJ	DIGITAL UNIX	333	32 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-FD	DIGITAL UNIX	333	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-FE	DIGITAL UNIX	333	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-FF	DIGITAL UNIX	333	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-FG	DIGITAL UNIX	333	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-FH	DIGITAL UNIX	333	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-FB	DIGITAL UNIX	500	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-FC	DIGITAL UNIX	500	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-FD	DIGITAL UNIX	500	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-FE	DIGITAL UNIX	500	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-FF	DIGITAL UNIX	500	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended

1. DIGITAL UNIX variants ordered in North America include a 104/105-key PC-style US English keyboard. Select country specific keyboard for all non-North American orders.

Key: Mandatory items must be on purchase order at initial order acceptance.
Recommended items enhance system functionality.

Step 1b—OpenVMS Packaged Systems

- All packaged systems include pre-installed OpenVMS, Base license, and DIGITAL Enterprise Integration Package. See Step 9 for contents.
- DIGITAL OpenVMS packaged systems include Factory Installed Software (FIS) DIGITAL OpenVMS V7.1-1H2 on the hard disk.
- OpenVMS variants ordered in North America include a 108-key, VT-style US English keyboard.
- Selection of a keyboard and power cord is mandatory for all non-North American orders.
- Order Open VMS media and documentation separately. See Step 9.

Note: Rackmount packaged systems must be installed in a cabinet. System can be installed in an existing cabinet or select a cabinet from Step 7.

DIGITAL OpenVMS Pedestal Packaged Systems

Order Number	Operating System	CPU	Memory	Disk	Ethernet	Keyboard ¹	Graphics	Monitor
PB80C-MJ	OpenVMS	333	32 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-MD	OpenVMS	333	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-ME	OpenVMS	333	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-MF	OpenVMS	333	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-MG	OpenVMS	333	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80C-MH	OpenVMS	333	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-MB	OpenVMS	500	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-MC	OpenVMS	500	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-MD	OpenVMS	500	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-ME	OpenVMS	500	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82C-MF	OpenVMS	500	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended

DIGITAL OpenVMS Rackmount Packaged Systems

Order Number	Operating System	CPU	Memory	Disk	Ethernet	Keyboard ¹	Graphics	Monitor
PB80S-MJ	OpenVMS	333	32 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-MD	OpenVMS	333	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-ME	OpenVMS	333	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-MF	OpenVMS	333	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-MG	OpenVMS	333	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB80S-MH	OpenVMS	333	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-MB	OpenVMS	500	64 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-MC	OpenVMS	500	128 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-MD	OpenVMS	500	256 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-ME	OpenVMS	500	512 MB	Mandatory	Mandatory	Mandatory	On-board	Recommended
PB82S-MF	OpenVMS	500	1 GB	Mandatory	Mandatory	Mandatory	On-board	Recommended

1. Open VMS variants ordered in North America include a 108-key, VT-style US English keyboard. Select country specific keyboard for all non-North American orders.

Key: Mandatory items must be on purchase order at initial order acceptance.
Recommended items enhance system functionality.

Step 1c—Mandatory Options

Selection of a System Disk Drive and a Network Adapter is **mandatory**. Additional disks and network adapters are supported, select as required.

Select one System Disk Drive—Mandatory

4.3 GB disk drive is recommended as System Disk. If more than one size of disk is ordered the Operating System will be factory installed on the smallest disk.

Order Number	System Disk and Minimum O/S version supported	DIGITAL UNIX	OpenVMS
RZ1BB-SB	2.1 GB 7200 RPM UltraSCSI disk	V4.0B	V6.2-1H3
RZ1CB-SB	4.3 GB 7200 RPM UltraSCSI disk	V4.0B	V6.2-1H3
RZ1DF-SB¹	9.1 GB 7200 RPM UltraSCSI disk	V4.0B	V6.2-1H3
RZ1EF-SB²	18.2 GB 7200 RPM UltraSCSI disk	V4.0B	V6.2-1H3

1. KZPAC RAID Array 230/Plus Controller supports 9 GB Drives—for configuration information on getting around the 32 GB Logical Drive Limit of the KZPAC, see the *Systems and Option Catalog* file for DIGITAL Storage RAID Controllers dated 10 September 1998 and Customer Update dated 15 August 1997 at:
<http://webir.das.dec.com/info/CU5911/CU5911HM.HTM>
2. Not supported on KZPAC-xx PCI-based RAID controllers.

Select one Network Adapter—Mandatory

Order Number	Network Adapter and Minimum O/S version supported	DIGITAL UNIX	OpenVMS
KZPCM-DA	PCI-based dual-port UltraSCSI Single-ended adapter and 10/100 Mbit Ethernet combo adapter, uses 1 PCI slot	V4.0D	V7.1-1H1
DE500-AA	10/100 Ethernet adapter UTP	V4.0B	V6.2-1H3
DE500-BA	Same as -AA above with cluster failover	V4.0D	V7.1-1H1
DE504-BA	10/100-Mbit Quad Ethernet, High-connectivity with 4 channels	V4.0D	V7.1-1H1

Step 2—Memory

- System supports two memory kits for a maximum of 2 GB of memory.
- Packaged systems include one memory kit.
- Each kit includes four industry-standard DIMMs with ECC support.

PB8MA-AB	32 MB (4 x 8 MB DIMMs) memory kit
PB8MA-AC	64 MB (4 x 16 MB DIMMs) memory kit
PB8MA-AD	128 MB (4 x 32 MB DIMMs) memory kit
PB8MA-AE	256 MB (4 x 64 MB DIMMs) memory kit
PB8MA-AF	512 MB (4 x 128 MB DIMMs) memory kit
PB8MA-AG	1 GB (4 x 256 MB DIMMs) memory kit

Step 3—Storage

Select additional storage devices as required. See Storage Devices section for more information.

Step 3a—Internal Storage

- An integral UltraSCSI adapter is included in each system to support a maximum of seven internal devices, four SCA-2 disk drives plus three removable devices.
- Internal Storage included
 - One 600 MB 12X CD-ROM drive
 - One 1.44 MB diskette drive in dedicated slot
- Additional Internal Storage supported
 - Three hard disk drive bays
 - Two removable 5.25-inch half-height removable media bays, or
One removable 5.25-inch full-height removable media bay

Internal Disk Drives

- Selection of one System Disk Drive is **mandatory**, see Step 1c.
- Up to three additional hard disk drives are supported internally.

RZ1BB-SB	2.1 GB 7200 RPM UltraSCSI SCA-2 3.5 x 1-inch hard disk drive
RZ1CB-SB	4.3 GB 7200 RPM UltraSCSI SCA-2 3.5 x 1-inch hard disk drive
RZ1DF-SB	9.0 GB 7200 RPM UltraSCSI SCA-2 3.5 x 1.6" hard disk drive
RZ1EF-SB¹	18.2 GB 7200 RPM UltraSCSI SCA-2 3.5 x 1.6" hard disk drive

1. Not supported on KZPAC-xx PCI-based RAID controllers.

Internal Removable Media Devices

- All Pedestal and Rackmount packaged systems include one 600 MB CD-ROM drive.
- System supports two additional 5.25-inch half-height removable media devices, **or** one additional 5.25-inch full-height removable media device.

RRD47-AB	600 MB 5.25 inch half-height 32X CD-ROM drive
PBXTZ-AA	2.0 GB 5.25 inch half-height SCSI QIC tape drive (TZK11)
TLZ09-LK	8.0 GB 5.25 inch x 1.6-inch SCSI 4 mm DAT drive, embedded
TLZ10-LK	12/24 GB 4MM DAT SCSI Tape Drive, embedded

Internal SCSI Cable Kits

PB8HA-DA	Internal 68-pin HD SCSI cable. Connects 16-bit wide SCSI adapters and controllers, KZPAC-xx, KZPCM-DA, or KZPBA-CA to internal storage assembly. Maximum one per system.
BC25V-1H	Internal UltraSCSI cable breakout assembly kit. Connects the third port of the KZPAC-CA/CB to one of the two expansion breakout slots on back of AlphaServer 800.

Step 3b—Storage Adapters/Controllers

- All systems include an integral UltraSCSI adapter to support a maximum of seven internal devices; four SCA-2 hard disk drives and three removable media devices.
- If the internal drives are connected to a PCI-based RAID controller (KZPAC-xx) instead of the integral Ultra SCSI adapter, Fault Management must be disabled when the RCU (Raid Configuration Utility) is executed.
 - PB8HA-DA cable is required to connect optional PCI-based RAID controller to internal disk drives.
- Maximum number of KZPAC PCI-based RAID controllers supported is four.
- Charts indicate minimum level of operating system supported.
 - Note:** Minimum operating system level support for DIGITAL UNIX with MEMORY CHANNEL is V4.0B.
- Refer to the Supported Options List for O/S support http://www.digital.com/alphaserver/tech_docs/alphasrv800/docs/supported_options.html
- The following adapters and controllers are supported.
- SCSI cables are not included and must be ordered separately.
- External DSSI cables are not included and must be ordered separately.

Step 3b—Storage Adapters/Controllers (continued)

		Maximum # Supported	
Order Number	Description	DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KZPCM-DA	PCI-based dual-port UltraSCSI Single-ended adapter and 10/100Mbit Ethernet Combo adapter, uses 1 PCI slot. Internal 68-pin and 50-pin HD connectors and two external 68-pin VHDCI connectors.	2	2
BN37A-02	2 meter VHDCI male to VHDCI male UltraSCSI cable for external connections. Required for each UltraSCSI StorageWorks shelf attached to KZPCM.		
PB8HA-DA	Internal 68-pin HD SCSI cable. Connects 16-bit wide SCSI controller KZPCM to internal storage assembly, maximum one per system.		

		Maximum # Supported	
Order Number	Description	DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KZPBA-CA	PCI-based one-port UltraSCSI Single-ended adapter, internal 68-pin and 50-pin HD connectors and external 68-pin HD connector.	2	2
BN38C-02	2 meter 68-pin HD male to VHDCI male UltraSCSI cable. Required for each external UltraSCSI shelf attached to KZPBA.		
PB8HA-DA	Internal 68-pin HD SCSI cable. Connects 16-bit wide SCSI controller KZPBA to internal storage assembly, maximum one per system.		
KZPBA-CB ¹	PCI-based one port UltraSCSI Differential adapter, 68-pin HD connector	2	2
BN38C-02	2 meter 68-pin HD male to VHDCI male UltraSCSI cable. Required for each external UltraSCSI shelf attached to KZPBA.		

1. DIGITAL UNIX and OpenVMS operating systems currently support the KZPBA-CB adapter via direct attachment in existing environments. Multi-host shared SCSI bus configurations using the KZPBA-CB adapter are supported on OpenVMS systems. Multi-host configurations are not currently supported on DIGITAL UNIX systems. For a complete list of restrictions, refer to Supported Options List at:
http://www.digital.com/alphaserver/tech_docs/alphasrv800/docs/supported_options.html

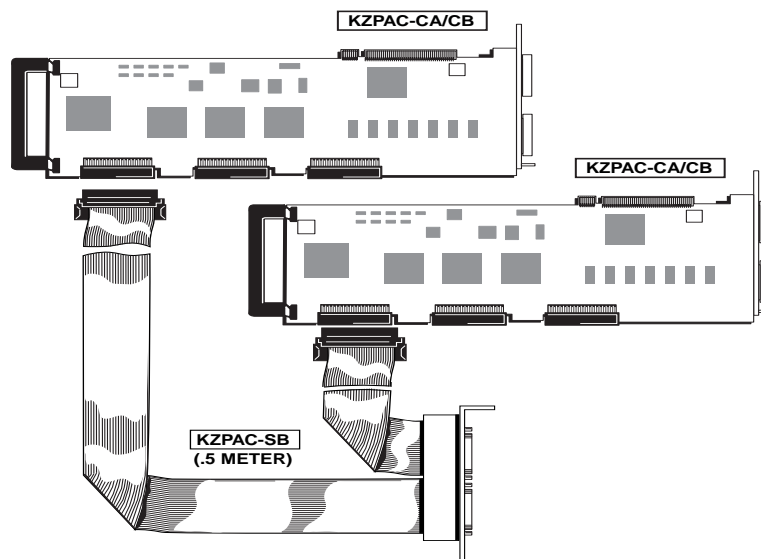
		Maximum # Supported	
Order Number	Description	DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KZPAC-AA ^{2,3}	PCI-based one-port UltraSCSI RAID controller with 4 MB cache memory, includes RAID Array 230/Plus Subsystem software and documentation kit for DIGITAL UNIX and OpenVMS. 68-pin HD connector for internal connection and 68-pin VHDCI bulkhead connector for external connection. Tape drives are not supported. KZPAC-xx requires PB8HA-DA SCSI cable kit for connection to internal storage assembly. If the internal drives are connected to the KZPAC Fault Management must be disabled when RCU is executed.	4	4
KZPSC-UB ⁴	Cache battery-backup for KZPAC controller		
PB8HA-DA	Internal 68-pin HD SCSI cable. Connects 16-bit wide SCSI controller KZPAC to internal storage assembly, maximum one per system.		
BN37A-02	2 meter VHDCI male to VHDCI male UltraSCSI cable for external connections. Required for each UltraSCSI StorageWorks shelf attached to KZPAC.		

2. 18.2 GB disk drives are not supported on KZPAC-xx PCI-based RAID controllers.
3. KZPAC RAID Array 230/Plus Controller supports 9 GB Drives—for configuration information on getting around the 32 GB Logical Drive Limit of the KZPAC, see the *Systems and Option Catalog* file for DIGITAL Storage RAID Controllers dated 10 September 1998 and Customer Update dated 15 August 1997 at:
<http://webir.das.dec.com/info/CU5911/CU5911HM.HTM>
4. KZPSC-UB is recommended for KZPAC RAID controllers.

Step 3b—Storage Adapters/Controllers (*continued*)

Order Number	Description	Maximum # Supported	
		DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KZPAC-CA ^{1,2}	PCI-based three-port UltraSCSI RAID controller with 4 MB cache memory , includes RAID Array 230/Plus Subsystem Software and documentation kit for DIGITAL UNIX and OpenVMS. Tape drives are not supported. SCSI cable is required for each active port. BN31K-0E or KZPAC-SB or BC25V-1H must be ordered for connection of third port to bulkhead breakout. KZPAC-xx requires PB8HA-DA SCSI cable kit for connection to internal storage assembly. If the internal drives are connected to the KZPAC Fault Management must be disabled when RCU is executed.	2	2
KZPAC-CB ^{1,2}	Same as KZPAC-CA with 8 MB cache memory	2	2
KZPSC-UB ³	Cache battery-backup for KZPAC controller		
MS100-BB	8 MB EDRAM cache memory replacement, upgrades KZPAC-CA to KZPAC-CB		
PB8HA-DA	Internal 68-pin HD SCSI cable. Connects 16-bit wide SCSI controller KZPAC to internal storage assembly, maximum one per system.		
BN37A-xx	VHDCI male to VHDCI male UltraSCSI cable for external connections. Required for each UltraSCSI StorageWorks shelf attached to KZPAC.		
BN31S-1E	1.5 meter VHDCI to 68-pin HD SCSI cable for external connections. Required for each Fast-10 StorageWorks shelf attached to KZPAC.		
BC25V-1H	UltraSCSI cable breakout assembly kit. Connects internal third port of KZPAC-CA/CB to one of the two external bulkhead breakout slots.		
BN31K-0E	SCSI cable/bulkhead assembly kit with one port for KZPAC-CA/CB, allows connection of one third-port output using one PCI bulkhead slot.		
KZPAC-SB	SCSI cable/bulkhead assembly kit with two ports for KZPAC-CA/CB, allows connection of two third-port outputs using one PCI bulkhead slot.		

- 18.2 GB disk drives are not supported on KZPAC-xx PCI-based RAID controllers.
- KZPAC RAID Array 230/Plus Controller supports 9 GB Drives—for configuration information on getting around the 32 GB Logical Drive Limit of the KZPAC, see the *Systems and Option Catalog* file for DIGITAL Storage RAID Controllers dated 10 September 1998 and Customer Update dated 15 August 1997 at: <http://webir.das.dec.com/info/CU5911/CU5911HM.HTM>
- KZPSC-UB is recommended for KZPAC RAID controllers.



Step 3b—Storage Adapters/Controllers (continued)

		Maximum # Supported	
Order Number	Description	DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KZPSA-BB	PCI-based one-port Fast Wide Differential (FWD) SCSI adapter with 68-pin HD external connector. Supports Single-Ended storage devices via the DWZZA or DWZZB signal converters. Internal hard disk drives are not supported on KZPSA adapter.	4	4
BN21K-02	2 meter SCSI cable 68-pin HD straight male connector with thumb latches and one 68-pin HD right angle male connector with screw fasteners.		
BN31G-xx	SCSI Cable 68-pin HD straight connector at each end; -xx denotes length of cable		
BN21W-0B	SCSI Cable 68-pin HD SCSI "Y" Cable		
DWZZB-xx	SCSI bus signal converter. 16-bit differential to 16-bit Single-Ended		
KZPAA-AA	PCI-based one-port Fast Narrow Single-Ended (FNSE) SCSI adapter with 50-pin external connector	4	4
BN21N-02	2 meter 8-bit to 16-bit SCSI cable, connects KZPAA to 16-bit Fast-10 SCSI StorageWorks shelf.		

DSSI Controllers

		Maximum # Supported	
Order Number	Description	DIGITAL UNIX V4.0B	OpenVMS V7.1-1H1
KFPSA-AA	PCI-based one-port DSSI adapter (OpenVMS systems only)	—	4
BC29S-xx	For KFPSA PCI based DSSI controller. KFPSA to any external "Micro-Ribbon" DSSI right-angle connection (all other DSSI systems and storage devices requiring right-angle connection) requires BC29S-xx DSSI cable.		
BC29S-09	For KFPSA PCI based DSSI controller. Order BC29S-09 DSSI cable for HSD10 in BA36R-Ax shelves		

Step 3c—External Tape Expansion

- External tape drives are also supported on optional PCI-based SCSI adapters.
 - KZPAA-AA—maximum bus length including cable and tape device cannot exceed 3.0 meters.
 - KZPSA-BB—maximum bus length including cable and tape device cannot exceed 25.0 meters.
- External tape drives are not supported on KZPAC-xx UltraSCSI RAID controllers on systems running DIGITAL UNIX or OpenVMS.

External Tapes

Operating System Supported		DIGITAL UNIX	OpenVMS
TLZ09-DB	4.0/8.0 GB 4 mm DAT tabletop tape drive with 50-pin LD SCSI port. Includes BN23G-01 with one male 50-pin LD connector and one male 50-pin HD connector.	V4.0B	V7.1-1H1
TLZ9L-DB^{1,2}	32/64 GB 4 mm DAT tabletop autoloader with 50-pin LD SCSI port. Includes BN23G-01 cable with one male 50-pin LD connector and one male 50-pin HD connector.	V4.0B	V7.1-1H1
DS-TLZ10-DB	12/24 4mm DAT SCSI tabletop tape drive. Requires SCSI cable BN23G-01 (for 50-pin HD host) or BN31W-01 (for 68-pin HD host)	V4.0B	V7.1-1H1

- Includes four cartridge loader. Larger magazines are supported.
- Base operating systems support sequential back-up mode only; additional software is required for random access backup. See Storage Devices section for details.

Step 3c—External Tape Expansion (continued)

Operating System Supported		DIGITAL UNIX	OpenVMS
TSZ07-CA/FA	40/140 MB 1600 b/in tabletop tape drive (SE/DIFF). Requires country kit which includes cables (TSZK7-xx; see StorageWorks tape device section).	V4.0B	V7.1-1H1
TSZ07-AA/DA	40/140 MB 1600 b/in rackmountable tape drive. Requires country kit which includes cables (TSZK7-xx; see StorageWorks tape device section).	V4.0B	V7.1-1H1
TSZ07-BA/EB	40/140 MB 1600 b/in tape drive in (H9642/H9A10) cabinet. Includes SCSI cable (see StorageWorks tape device section).	V4.0B	V7.1-1H1
DS-TZ89N-TA	35/70 single-ended DLT tabletop tape drive with 68-pin HD female connector. Requires BN21K-xx SCSI cable.	V4.0B	V7.1-1H1
TZK11-DA	2.0 GB QIC tabletop tape drive. Includes SCSI terminator, and 3 foot SCSI cable.	V4.0B	V7.1-1H1
DS-TZS20-DB	25/50GB AIT (8 mm) tabletop tape drive; #277 blue. SCSI cable not included. Requires BN21N-01 for 50-pin HD host, or BN31G-01 for 68-pin HD host SCSI cable.	V4.0B	V7.1-1H1

SCSI Cables for External Tapes

BN23G-01	3-foot molded SCSI cable. 50-pin Single-Ended SCSI cable (one 50-pin HD straight male connector with thumb latches and one 50-pin LD straight male connector with bale locks.)
BN23G-0E	1.5 foot molded SCSI cable. 50-pin Single-Ended SCSI cable (one 50-pin HD straight male connector with thumb latches and one 50-pin LD straight male connector with bale locks.)
BN21K-xx	Single-Ended SCSI cable 68-pin HD straight male connector with thumb latches and one 68-pin HD right angle male connector with screw fasteners.

Step 4—Monitors

- Graphics monitors other than those listed below can be used if compatible with SVGA graphics ordered with a system.
- Higher resolutions are available with optional PCI graphics adapters. See Step 5.

Note: Selection of a video extension cable and a country specific power cord is **mandatory** for all monitor variants.
See Step 4a for video extension cable.
See Step 4b for country specific power cords.

SN-VRQV5-24/23	15" (13.8" viewable image size) Corporate Series auto-scan color monitor, flat square Invar CRT, 0.28 mm dot pitch, VGA to 1024 x 768 @ 75 Hz, TCO 95, MPRII, Energy Star, attached 1.8 meter video cable. Requires mandatory selection of video extension cable and country specific power cords for all variants. –24 = Northern Hemisphere without power cord –23 = Southern Hemisphere without power cord
SN-VRQP7-24/23	17" (16.0" viewable image size) professional series auto-scanning color monitor, Trinitron CRT, 0.25 mm aperture grill pitch, VGA to 1280 x 1024 at 75 Hz, TCO 95, MPR-II, Energy Star, attached 1.8 meter video cable. Requires mandatory selection of video extension cable and country specific power cords for all variants. –24 = Northern Hemisphere without power cord. –23 = Southern Hemisphere without power cord..
SN-VRQP1-24/23	21" (19.6" viewable image size) auto-scanning color monitor, Trinitron CRT, 0.25 mm aperture grill pitch, VGA to 1600 x 1200 at 75 Hz NI, TCO 95, Energy Star, includes a 1.8 meter video cable. Requires mandatory selection of video extension cable and country specific power cords for all variants. –24 = Northern Hemisphere without power cord. –23 = Southern Hemisphere without power cord.

Step 4a—Video Extension Cable

BN39C-02	1.8 meter video extension cable—mandatory for each monitor ordered
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Step 4b—Monitor Power Cords

BN26J-1K	North America
BN19H-2E	Australia, New Zealand, 2.5 meters long
BN19C-2E	Central Europe, 2.5 meters long
BN19A-2E	UK, Ireland, 2.5 meters long
BN19E-2E	Switzerland, 2.5 meters long
BN19K-2E	Denmark, 2.5 meters long
BN19Z-2E	Italy, 2.5 meters long
BN19S-2E	Egypt, India, South Africa, 2.5 meters long
BN18L-2E	Israel, 2.5 meters long

Step 5—Graphics Adapters

- Select only if additional graphics card is required.
- All systems include onboard SVGA with 1 MB video RAM. On-board SVGA must be disabled when using multi-headed graphics options.
- Maximum of one PB2GA-JD supported per system. Onboard SVGA must be disabled.

PB2GA-JC	PCI-based 1 MB DRAM graphics adapter
PB2GA-JD	PCI-based 2-MB DRAM graphics adapter

Step 6—Networks and Communications

Refer to the Supported Options List for O/S support, restrictions, and maximum number of options supported per system at http://www.digital.com/alphaserver/tech_docs/alphasrv800/docs/supported_options.html

DE500-AA	PCI-based 10/100 Mbit Fast Ethernet adapter (Twisted Pair)
DE500-FA	PCI-based 10/100 Mbit Ethernet adapter MMF
DE504-BA	PCI-based 10/100 Mbit quad channel Ethernet adapter Cat 5 UTP
DE450-CA	PCI-based 10 Mbit Ethernet adapter (Twisted Pair, Thick wire, ThinWire)
DEFPA-AB	PCI-based FDDI adapter, single attachment station (SAS), multi-mode fiber (MMF); maximum supported is four, DIGITAL UNIX and OpenVMS
DEFPA-DB	PCI-based FDDI adapter, dual attachment station (DAS), multi-mode fiber (MMF); maximum supported is four, DIGITAL UNIX and OpenVMS
DEFPA-UB	PCI-based FDDI adapter, SAS, TP-PMD, requires BN25H-xx; maximum supported is four, DIGITAL UNIX and OpenVMS
DGLPA-FA	PCI-based ATMworks 351 adapter, MMF SC connector
DGLPA-UA	PCI-based ATMworks 351 adapter, UTP CAT 5 with RJ45 connector
PBXDA-AA	PCI-based 4-port asynchronous communications controller—not supported in PCI/EISA combo slot
PBXDA-AB	PCI-based 8-port asynchronous communications controller—not supported in PCI/EISA combo slot

Step 6—Networks and Communications (continued)

PBXDP-AA	PCI-based 2-port synchronous communications controller, maximum two
PBXDP-AB	PCI-based 4-port synchronous communications controller, maximum two
PBXDP-AC	PCI-based 8-port synchronous communications controller, maximum two
SN-PBXNP-AC	PCI-based Token Ring Adapter, maximum four, DIGITAL UNIX and OpenVMS
CXI01-AA	ISA-based asynchronous MUX adapter, 16 lines – expandable to 64 lines; DIGITAL UNIX not supported in bottom EISA/ISA slot
CXI01-AB	ISA-based Asynchronous 16-port XEM expansion for CXI01-AA
CXI01-AC	ISA-based asynchronous MUX cable converter RJ45 to DB25
CXI01-AF	Eight pack RJ45-MJ11 converters for Asynchronous MUX adapter

Step 7—Cabinet Enclosures and Accessories

- Rackmount Packaged Systems must be installed in a cabinet.
- System can be installed in an existing cabinet or select an M-series Cabinet Enclosure.
- Select Cabinet Enclosure based on number of System Drawers and StorageWorks Shelves supported.

M-series Top Gun Blue Cabinet Enclosures are available in two sizes:

- 67” high Cabinet Enclosure (H9A10-xx) 31U or 54.2” of usable vertical space
- 79” high Cabinet Enclosure (H9A15-xx) 38U or 66.5” of usable vertical space

Cabinet Configuration Chart

Cabinet Enclosure	Mounting Kit	Cabinet Height and Space		Drawers	Shelves	Ballast Kit
H9A10-MC/MD	Included in Rackmount System	54.2 inches	31U	1	6	2
				2	6	1
				3	6	
				4	2	
				5	0	
H9A15-MC/MD	Included in Rackmount System	66.5 inches	38U	2 ¹	6	2
				3	6	
				4	6	
				5	6	
				5	4	

1. Cabinet supports a minimum of **two** AlphaServer 800 systems, **one** system is **not** supported in H9A15-xx cabinets.

M-series Cabinet Enclosure Options

M-series Cabinet Enclosures require the **mandatory** selection of:

- H9A10 or H9A15 Cabinet, 120V or 240V variant
- Cabinet front door based on cabinet height
- Factory Integration
- Ballast kits as required

Cabinet Enclosures

H9A10-MC	120 V dual 24 A controller, each with 10 NEMA 5-15R outlets, input power plug NEMA L5-30P, Americas, Asia Pacific Includes rear door, top fan tray, and 2 H7600-AA power distribution units
H9A10-MD	240 V dual 16 A controller, each with 12 IEC C13 outlets, input power plug IEC 309, 16A, Europe Includes rear door, top fan tray, and 2 H7600-DB power distribution units
H9A15-MC	120 V dual 24 A controller, each with 10 NEMA 5-15R outlets, input power plug NEMA L5-30P, Americas, Asia Pacific Includes rear door, top fan tray, and 2 H7600-AA power distribution units
H9A15-MD	240 V dual 16 A controller, each with 12 IEC C13 outlets, input power plug IEC 309, 16A, Europe Includes rear door, top fan tray, and 2 H7600-DB power distribution units

For custom integration of systems, options, and additional Digital and third party devices, or for other cabinets, doors, and trim kits of a different color, contact Digital CustomSystems at 1-800-DIGITAL, or contact your local authorized Digital Certified Integration Partner.

Step 7—Cabinet Enclosures and Accessories (*continued*)

Cabinet Front Door

H9C10-TF Top Gun Blue front door for H9A10-MC/MD Cabinet Enclosure

H9C15-TF Top Gun Blue front door for H9A15-MC/MD Cabinet Enclosure

Factory Integration

YS-ASCAA-AA Factory Integration of systems and storage devices assembled and configured in cabinet enclosure in pre-defined locations

Ballast Kit

Ballast is dead weight that is added to a cabinet at specific locations for specific configurations to meet safety regulations for installation, operation, and service. It is required in H9A15 cabinets where only one System Drawer is installed. Refer to Cabinet Configuration Chart for ballast kit requirements.

H9C10-MC Two 35-40 lbs. steel plates

For additional information on M-series Cabinet Enclosures visit www.digital.com/alphaserver/products/m-series.html

DIGITAL CustomSystems Support

Cabinets containing systems and storage must be assembled by qualified assemblers: Digital Manufacturing, Digital's Customs Systems Group, or an authorized Digital Certified Integration Partner.

For custom integration of systems, options, and additional Digital and third party devices, or for other cabinets, doors, and trim kits of a different color, contact Digital CustomSystems at 1-800-DIGITAL, or contact your local authorized Digital Certified Integration Partner.

Step 8—Keyboards and Power Cords

Keyboards

System ordered in the Americas and Asia Pacific includes keyboard, mouse and power cords. Select country-specific keyboard for all Pedestal and Cabinet systems in other countries. All keyboards are opal grey.

DIGITAL UNIX Keyboard	OpenVMS Keyboard	Country
SN-LKQ47-AA	LK461-AA	US/English
SN-LKQ47-AB	LK461-AB	Belgian
SN-LKQ47-AC	LK461-AC	Canadian/French
SN-LKQ47-AD	LK461-AD	Danish
SN-LKQ47-AE		UK
SN-LKQ47-AF	LK461-AF	Finnish
SN-LKQ47-AG	LK461-AG	German
	LK461-AH	Dutch
SN-LKQ47-AI	LK461-AI	Italian
SN-LKQ47-AK	LK461-AK	Swiss/French
	LK461-AL	Swiss/German
SN-LKQ47-AM	LK461-AM	Swedish
SN-LKQ47-AN	LK461-AN	Norwegian
SN-LKQ47-AP	LK461-AP	French
	LK461-AQ	Canadian/English
SN-LKQ47-AR		Latin-American
SN-LKQ47-AS	LK461-AS	Spanish
	LK461-AT	Hebrew
		Brazil
SN-LKQ47-AV	LK461-AV	Portuguese
SN-LKQ47-AX		Bheshy
SN-LKQ47-BA		International
SN-LKQ47-BH	LK461-BH	Greek
SN-LKQ47-BI		Taiwanese
SN-LKQ47-BK		Korean
	LK461-BL	Romanian
SN-LKQ47-BP	LK461-BP	Polish
SN-LKQ47-BQ	LK461-BQ	Hungarian
SN-LKQ47-BR		Arabic
SN-LKQ47-BT	LK461-BT	Cyrillic
SN-LKQ47-BU	LK461-BU	Turkish
SN-LKQ47-BV	LK461-BV	Czech
	LK461-BW	Turkish-French
	LK461-BY	Yugoslavian
SN-LKQ47-CB		Thai
SN-LKQ47-CZ	LK461-CZ	Slovak

Step 8—Power Cords and Keyboards (*continued*)

Pedestal Power Cords

- North American variants include (North American, Japan) power cord. If another power cord is selected, both power cords ship with system.
- Selection of a power cord is mandatory for all non-North American orders.

BN26J-1K	North America
BN19H-2E	Australia, New Zealand, 2.5 meters long
BN19C-2E	Central Europe, 2.5 meters long
BN19A-2E	UK, Ireland, 2.5 meters long
BN19E-2E	Switzerland, 2.5 meters long
BN19K-2E	Denmark, 2.5 meters long
BN19Z-2E	Italy, 2.5 meters long
BN19S-2E	Egypt, India, South Africa, 2.5 meters long
BN18L-2E	Israel, 2.5 meters long

Rackmount Power Cords

- North American variants include BN20Z-4E 120 V (North American, Japan) power cord. If another power cord is selected, both power cords ship with system.
- Selection of a power cord is mandatory for all non-North American orders.

Note: AlphaServer 800 Pedestal system power cords are less than 15-feet long and are not supported in cabinet enclosures.

BN20Q-4E	15-foot (4.5 m) 240 V, North American, 50 Hz power cord connects system to power distribution unit located inside cabinet
BN20Z-4E	15-foot (4.5 m) 120 V, 60 Hz power cord connects system to power distribution unit located inside cabinet
BN35S-4E	15-foot (4.5 m) 240 V, European IEC C13, 50 Hz power cord connects system to power distribution unit located inside cabinet

Pedestal to Rackmount Conversion Kit

PB8HA-BA	AlphaServer 800 Pedestal to Rackmount conversion kit. Includes bezel, slide rails and mounting hardware necessary for mounting system in any cabinet equipped with industry-standard RETMA or METRIC rails. Rackmount power cords must be ordered separately.
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Step 8—Power Cords and Keyboards (*continued*)

Mouse and Extension Cable Kit

PBXWS-WA	3-button mouse (included with all systems, order as spare or replacement)
2T-450KM-AA	Extension cable kit for VGA, PC style keyboard, and mouse, for use with Rackmount systems.

Step 9—Software

DIGITAL UNIX

Software Processor Code = E

- DIGITAL UNIX packaged systems include DIGITAL UNIX base license, Server Extension , Internet AlphaServer Software kit and Unlimited User license.
- DIGITAL UNIX packaged systems require operating system media and documentation for first system on site.

DIGITAL UNIX Media and Documentation—required for first system on site

QA-MT4AA-H8	DIGITAL UNIX media and on-line documentation on CD-ROM
QA-MT4AA-GZ	DIGITAL UNIX full hardcopy documentation

StorageWorks Software Packages for DIGITAL UNIX

QB-5RXAE-AA	StorageWorks Software Package (includes licenses for Logical Storage Manager and AdvFS Utilities).
QB-5RYAE-AA	StorageWorks Software Package (includes licenses for Logical Storage Manager and AdvFS Utilities plus Networker Save and Restore).

TruCluster Available Server License

QL-05SAE-AA	TruCluster Available Server License
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DIGITAL UNIX Software Layered Products Library CD-ROM

QA-054AA-H8	Layered products media and documentation for DIGITAL UNIX on CD-ROM
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DECnet for DIGITAL UNIX

QL-MTJAE-AA	DECnet/OSI end-system license for DIGITAL UNIX
QL-MTKAE-AA	DECnet/OSI extended function license for DIGITAL UNIX

OpenVMS

Software Processor Code = E.

- OpenVMS Concurrent Use Licenses are not specific to a single system and can be moved between systems at user discretion.
- OpenVMS Concurrent Use Licenses can also be shared in a mixed OpenVMS VAX and OpenVMS Alpha Cluster.

OpenVMS Concurrent Use Licenses

QL-MT3AA-3B	OpenVMS Concurrent Use 1-user license
QL-MT3AA-3C	OpenVMS Concurrent Use 2-user license
QL-MT3AA-3D	OpenVMS Concurrent Use 4-user license
QL-MT3AA-3E	OpenVMS Concurrent Use 8-user license
QL-MT3AA-3F	OpenVMS Concurrent Use 16-user license
QL-MT3AA-3G	OpenVMS Concurrent Use 32-user license
QL-MT3AA-3H	OpenVMS Concurrent Use 64-user license
QL-MT3AA-3J	OpenVMS Concurrent Use 128-user license
QL-MT3AA-3K	OpenVMS Concurrent Use 256-user license
QL-MT2AE-AA	OpenVMS Traditional unlimited user license

Step 9—Software (*continued*)

OpenVMS layered products

QL-MUZAE-AA	OpenVMS Cluster License
QL-2A1AE-AA	Volume Shadowing License

OpenVMS media and documentation—required for first system on site

QA-MT1AA-H8	OpenVMS media and on-line documentation CD-ROM (V7.1)
QA-MT1AG-H8	OpenVMS media and on-line documentation CD-ROM (V6.2-1H3) ²
QA-MT1AD-H8	OpenVMS media and on-line documentation CD-ROM (V7.1-1H1) ¹
QA-001AA-GZ	OpenVMS hardcopy documentation

1. Required to run Ultra SCSI.

2. UltraSCSI is not currently supported on OpenVMS V6.2-1H3. OpenVMS V6.2-1H3 runs in Fast-10 SCSI Mode.

OpenVMS Layered Products CD-ROM

QA-03XAA-H8 ¹	Layered products media and documentation for OpenVMS on CD-ROM
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1. Includes DIGITAL Enterprise Integration Package for OpenVMS media and documentation.

DECnet for OpenVMS

QL-MTGAE-AA	DECnet extended function license for OpenVMS
QL-MTHAE-AA	DECnet end-system to extended function upgrade license for OpenVMS

DSSI Information

EK-410AB-MG	DSSI VMScluster Installation Guide
EK-D4AXP-TS	DSSI VMScluster Troubleshooting Guide

Step 10—Hardware and Software Supplemental Support Services

Hardware—Americas and Asia Pacific only

- Systems include three-year hardware warranty, on-site with 5 x 9, 24-hour response time.
- Select optional Hardware Supplemental Support Services if required.
- Select optional Hardware Installation.

FM-CH4HR-36	5 x 9, 4-hour response time
FM-CH512-36	5 x 12, 4-hour response time
FM-CH616-36	6 x 16, 4-hour response time
FM-CH724-36	7 x 24, 4-hour response time
FM-CHXHW-60	Years 1-5, next day, Onsite
FM-CH4HR-60	Years 1-5, 5x9, 4-hour response time
FM-CH512-60	Years 1-5, 5x12, 4-hour response time
FM-CH616-60	Years 1-5, 6x16, 4-hour response time
FM-CH724-60	Years 1-5, 7x24, 4-hour response time
FM-24INT-IN	Hardware Installation

Step 10—Hardware and Software Supplemental Support Services (*continued*)
Software—Americas and Asia Pacific only

DIGITAL UNIX and OpenVMS systems include 90-day Conformance to SPD and Telephone Advisory Support. Select optional Software Supplemental Support Services, if required.

FM-80BUS-12	12-month Full Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BUS-36	36-month Full Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BUS-60	60-month Full Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BUN-12	12-month Node Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BUN-36	36-month Node Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BUN-60	60-month Node Software Supplemental Support for DIGITAL UNIX AlphaServer 800 systems
FM-80BVS-12	12-month Software Supplemental Support for OpenVMS AlphaServer 800 systems
FM-80BVS-36	36-month Software Supplemental Support for OpenVMS AlphaServer 800 systems
FM-80BVS-60	60-month Software Supplemental Support for OpenVMS AlphaServer 800 systems
FM-80BVN-12	12-month Node Software Supplemental Support for OpenVMS AlphaServer 800 systems
FM-80BVN-36	36-month Node Software Supplemental Support for OpenVMS AlphaServer 800 systems
FM-80BVN-60	60-month Node Software Supplemental Support for OpenVMS AlphaServer 800 systems

Step 10a—Hardware and Software Supplemental Support Services (Europe only)

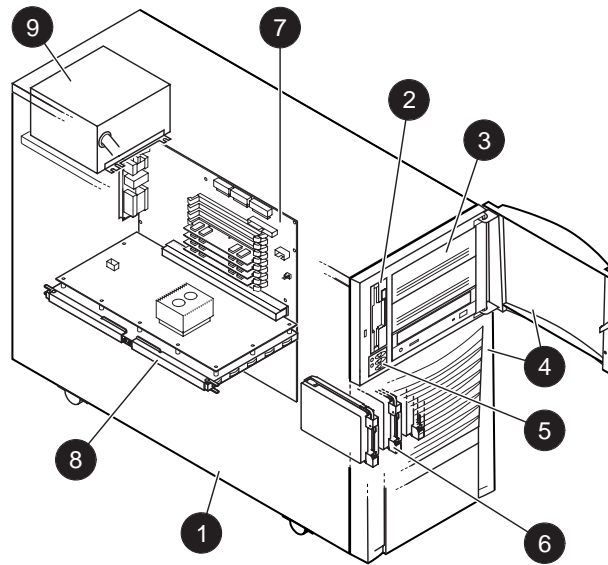
Europe does not have specific part numbers for Hardware and Software Supplemental Support Services. Prices can be quoted using the Excelerator tool; contact MCS Sales in your country for information on Hardware and Software Supplemental Support Services.

Step 11—CPU Upgrades

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

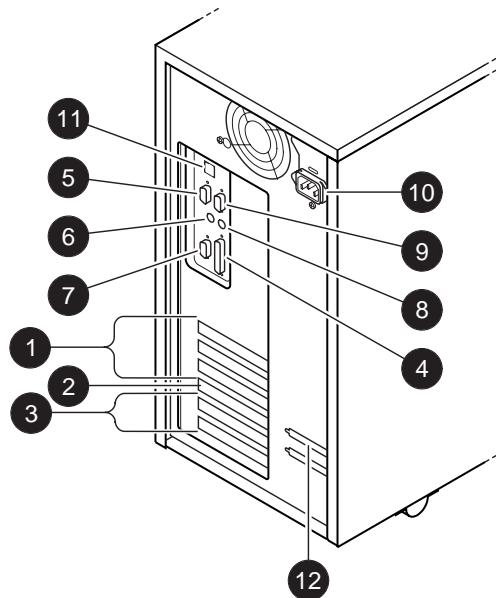
AlphaServer 800 Pedestal–Rackmount

AlphaServer 800 System Diagram–Side View



- | | |
|---|----------------------|
| 1. Removable side cover of system enclosure | 6. Hard disk drives |
| 2. Floppy diskette drive | 7. System board |
| 3. Removable media drives | 8. CPU daughter card |
| 4. Lower and upper doors | 9. Power supply |
| 5. Control panel | |

AlphaServer 800 System Diagram – Rear of Enclosure



- | | |
|-----------------------------|--|
| 1. Three 32-bit PCI slots | 7. VGA port |
| 2. One 64-bit PCI/EISA slot | 8. Keyboard port |
| 3. Two EISA slots | 9. Remote console modem port |
| 4. Parallel port | 10. Power inlet |
| 5. Serial port | 11. Serial port/terminal port (MMJ with data leads only) |
| 6. Mouse port | 12. SCSI breakouts |

AlphaServer 800 Pedestal–Rackmount

AlphaServer 800 Pedestal System Specifications

Shipping Dimension		
Height	47 cm (18.5 in.)	
Width	60 cm (23.6 in.)	
Depth	77.5 cm (30.5 in.)	
Weight	33 kg (73 LB) typical 37 kg (82 LB) maximum	
Installed Dimensions		
Height	45 cm (17.1 in.)	
Width	22.6 cm (8.9 in.)	
Depth	65.8 cm (25.9 in.)	
Weight	24.5 kg (54 LB) typical 28 kg (62 LB) maximum	
Clearances	Operating	Service
Front	75 cm (29.5 in.)	75 cm (29.5 in.)
Rear	15 cm (5.9 in.)	75 cm (29.5 in.)
Left side	None	75 cm (29.5 in.)
Right side	None	5 cm (2 in.)
Environmental		
Temperature	Operating ¹	10–40° C (50–104° F)
	Nonoperating	Not tested
	Storage (60 days)	-40–66° C (-40–151° F)
	Rate of change	11° C/hr (20° F/hr)
Relative humidity	Operating	20–80%
	Nonoperating	20–80%
	Storage (60 days)	10–95%
	Rate of change	20%/hr
Maximum wet bulb temperature	Operating	28° C (82° F)
	Storage (60 days)	46° C (115° F)
Minimum dew point temperature	Operating	2° C (36° F)
	Storage (60 days)	Not tested
Maximum heat dissipation	380 Watt	
	1297 Btu/hr	
Air flow and quality	Intake location	Front
	Exhaust location	Rear
	Particle size	N/A
	Concentration	N/A
Altitude	Operating ²	3097 m (10,000 ft)
	Nonoperating	12190 m (40,000 ft)
Mechanical shock	Operating	7.5 G 10 ms
	Nonoperating	20 G peak 30 ms
Vibration	Operating	10-500 Hz .1 G peak
Acoustics	Operating	LNPEc (BELs) 6.0 MAX per ISO 7779
Electrical—Power Supplies are universal 120/240 Vac		
Nominal ac voltage	100-120 V ac	220-240 Vac
Operating Voltage range	90-128 V ac	180-256 Vac
Power source phase	Single	Single
Nominal frequency	50/60 Hz	50/60 Hz
Frequency range	49/51/59-61 Hz	49-51/59-61 Hz
RMS current at nominal voltage (steady state)		
Maximum Power Consumption (Watts)	7.0 Amps 380 Watts	3.0 Amps
Power cord	Type	IEC 320 C13
	Length	190 cm (75 in.)
	US plug	NEMA 5-15

AlphaServer 800 Pedestal System Specifications (*continued*)**Regulatory**

Agency approvals	UL Listed to UL1950 (3 rd edition) CSA Certified to CAN/CSA-C22.2 No. 950-M95 TUV EN 60950 GS marked CB Certification pending FCC (Class B) Part 15, Subpart B (CFR 54,1995) EMC Directive 89/336/EEC EN 55022:1994 Class B EN 50082-1 1992 Light Industrial CE Class B VCCI Class II ITE AS/NZS 3548:1992 (Class B)
Reviewed to	AS 3260:1993 Australian/New Zealand Standard EN 60 950: 1995 European Norm IEC 950

1. Maximum operating temperature at Sea Level. Reduce by 1 C (1.8 F) for each 600 m (2000 ft) above Sea Level.
2. Higher altitudes are possible if maximum operating temperature is reduced (see Temperature, above); other restrictions may apply, such as maximum permissible altitude for hard drives.

AlphaServer 800 Rackmount System Specifications

Shipping Dimension

Same as Pedestal

Installed Dimensions

Height	22 cm (8.6 in.) fits 8.75 in. [5U] standard EIA 310D
Width	standard EIA 310D (RETMA)
Depth	63.8 cm (25.1 in.)
Weight	24.5 kg (54 LB) typical 28 kg (62LB) maximum

Clearances**Service**

Front	See requirements of specific cabinet
Rear	Slides forward 68.6 cm (27 in.)
Sides	then accessible from the top

Environmental

Temperature	
Operating	10–35° C (50–95° F)
Nonoperating	Not tested
Storage (60 days)	-40–66° C (-40–151° F) 11 c/hr (20 F/HR)
Relative humidity	
Operating	20–80%
Nonoperating	20–80%
Storage (60 days)	10–95%
Rate of change	20%/hr
Air flow and quality	
Intake location	Front
Exhaust location	Rear

Electrical—Power Supplies are universal 120/240 V ac

Same as Pedestal

Regulatory

Same as Pedestal

Uninterruptable Power Supplies**Prestige 1250EXT**

UPS offerings include EIA232 port for local or network monitoring and plug-in battery extension provisions to increase run time up to two hours. For complete protection, UPS products should be used with data line surge protectors and UPS monitoring software.

Solutions for Pedestal Systems

4N-AEABF-AA	Prestige 1250EXT, 1250 VA/900W, 1 phase, 50/60 Hz, 120V 6-foot cord with 5-15P plug, (4) 5-15R receptacle, 9 minutes battery at full UPS load.
4N-AEABF-BF	Prestige 1250EXT, 1250 VA/900W, 1 phase, 50/60 Hz, 200-240V in/out selectable. Uses system power cord for detachable IEC320 input connection at UPS. Includes (3) IEC320 10A output receptacles, (2) output jumpers with IEC320 connectors to system.
4N-AEABF-BB	Extension pack for 120V 60 Hz models, up to four packs at 30 minutes per pack supported
4N-AEABF-BD	Extension pack for 240V 50 Hz models, up to four packs at 30 minutes per pack supported
4N-AEAE0-PA	Hot-swap Power-Pass Module for 60 Hz UPS with (7) 5-15R Surge Protected outlets.
4N-AEAE0-PB	Hot-swap Power-Pass Module for 50 Hz UPS with (6) IEC320, 10A surge protected outlets.
4N-AEWAR-G1	Prestige 5 year on-site exchange warranty upgrade (US only).

Rackmount UPS

UPS Model	Application	Type	Receptacle module
4N-AEAAH-FA 60Hz	Rackmount UPS, supports up to 5 systems	3kVA Custom RM ¹	Included ²
4N-AEAAH-FB 50Hz	Rackmount UPS, supports up to 5 systems	3kVA Custom RM ¹	Included
4N-AEAAJ-CL³ 60Hz	Out of Cabinet UPS	6kVA Prestige ⁴	Included
4N-AEAAJ-CU 50Hz	Out of Cabinet UPS	6kVA Prestige ⁴	Hardwired

1. Factory installation must be specified at time of order. Up to two UPS systems, one UPS for up to 5 fully configured systems. Recommended UPS distribution option combines multiple UPS input plugs into a single L6-30P plug-in connection to simplify future UPS add-on. Order 4NAEAAH-FF 60 Hz; 4N-AEAAH-FG 50 Hz).

2. Includes six IEC receptacle strips for connection to IEC plugs in cabinet.

3. 208-120/208V shown; order 4N-AEAAJ-CT for 240-120/240V models

4. Optional mobile stacker with seismic mounting provision for 6kVA Prestige (4N-AEACH-HD)

4N-AEAAJ-CL	Prestige 6 kVA (4 kW), single phase, 60Hz, 208-120/208V, 6 ft. cord with L6-30P and (2) L6-30R, (8) 5-15R receptacle. Modular hot-swap design with 7 minute battery at full UPS load, extendible plug and play batteries and receptacle provisions. Substitute -CT for 240V 240/120V operation.
4N-AEAAJ-CU	Prestige 6 kVA (4 kW) 50Hz package, single phase, 50Hz, 200-240V in/out selectable, hardwired input/output.
4N-AEWAR-G3/G4	Prestige 5 year on-site exchange warranty upgrade for 4N-AEAAH-CM/CT. G4 provides on-site remedial and start-up service.

UPS Monitoring and Unattended Shutdown Software (for above UPS systems only) is included in ServerWORKS Kits shipping with all AlphaServers. Order Cable Kit separately.

4N-ONLIN-NT Cable Kit for DIGITAL UNIX

4N-ONLIS-FE Cable Kit for OpenVMS

Network Management or multi system shutdown (via SNMP or ServerWORKS Manager) for DIGITAL UNIX and OpenVMS requires Network Adapter option.

60 Hz Applications	50 Hz Application	Network Adapter Option
4N-AEAE0-DB/DD	4N-AEAE0-DB/DD	Prestige 3 kVA RM, DB=Twisted pair; DD=ThinWire
4N-AEAE0-DA/DC	4N-AEAE0-DB/DD	Prestige 6 kVA and PUPS Plus UPS, DA/DB=Twisted pair; DC=ThinWire

Note: Multiple system shutdown via OpenVMS requires multi-port hardware option (RN-JMIU4-AB). Ports can be daisy chained.