



AlphaServer 1000A Rackmount Systems

V2.5—01 December 1998

DIGITAL Systems and Options Catalog

Product Description

The AlphaServer 1000A is an Alpha microprocessor server, available in 333 MHz and 400 MHz versions with 2MB ECC cache, and a 500 MHz version with 8 MB ECC cache. All are available in Rackmount systems with a choice of three popular operating systems: DIGITAL UNIX, OpenVMS, and Microsoft Windows NT Server. The AlphaServer 1000A offers the following high-reliability features: heat sensor, fan failure and power supply sensors, and ECC memory. Integrated on system motherboard are fast wide single-ended SCSI-2 controller, diskette controller, two serial ports, one parallel port, and keyboard and mouse controller.

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, Windows NT, and OpenVMS for AlphaServers. Using ServerWORKS, the system manager can 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. These include storage and application and database management tools. For more information, see the StorageWorks Software section of this catalog.

The AlphaServer 1000A Rackmount System offers up to six internal storage devices including a floppy diskette drive, a CD-ROM, one additional 5.25-inch removable media bay, and three wide and/or narrow disk drives. The system supports up to 12.9 GB of internal storage with three 4.3 GB disks.

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Step 1—AlphaServer 1000A Rackmount Systems

- Windows NT Packaged systems
 - North American variants include Windows NT license, media (CD-ROM) kit North American English.
 - Selection of language specific Windows NT license, media (CD-ROM) kit is mandatory for all non-North American variants; see Step 8 in this section.
- DIGITAL UNIX and OpenVMS Packaged systems include Factory Installed Software (FIS) on hard disk drive.
- Uninterruptable Power Supplies (UPS) are available; see UPS Information following System Specifications.
- Options ordered that are factory installable, will be factory installed unless specified as spares.

Note: AlphaServer 1000A rackmount systems do not support dual power supply configurations.

Rackmount Systems include

- Alpha microprocessor 21164
 - 333 MHz CPU with 2 MB ECC onboard cache, or
 - 400 MHz CPU with 2 MB ECC onboard cache, or
 - 500 MHz CPU with 8 MB ECC onboard cache
- Rackmount enclosure with:
 - Seven PCI slots
Two EISA slots
 - Integral Fast Wide Single-Ended SCSI-2 controller supports wide and narrow devices
 - 20 SIMM memory slots support 4 memory options
 - Six storage slots:
 - One diskette drive slot
 - One CD-ROM drive slot
 - One additional removable media slot
 - Three fixed wide and/or narrow hard disk drive slots
 - 450 W self-sensing, self-switching (120/240 V, 60/50 Hz) power supply
 - Two serial ports, support full duplex asynchronous modem control
 - One bi-directional enhanced parallel port
 - PS/2-style keyboard port and mouse port
- 1.44 MB diskette drive in dedicated slot
- 3-button mouse
- 15-foot power cord (120 V/240 V as appropriate)
- Rackmount hardware (shelf and rails)
- English language documentation kit
- EISA Configuration Utility (ECU)
- Integrated advanced server management features, including ServerWORKS Manager kit
- Hardware warranty: three-year on-site¹
- Software warranty:¹
 - 90-day SPD conformance with advisory telephone support for DIGITAL UNIX and OpenVMS
 - Warranty on Microsoft's Windows NT Server 4.0 is conformance to the written material accompanying the software for a period of ninety days
- Windows NT Server 4.0 plus 10-client access license, media (CD-ROM) kit or²
- DIGITAL UNIX Unlimited User license, Server Extension license, or
- OpenVMS base license with System Manager license, Enterprise Integration Package

1. Service upgrades are available; see Step 12 in this section.

2. Windows NT language specific media kit is mandatory for non-North American variants; see Step 3 in this section.

Rackmount Packaged Systems include

- PCI-based Fast 100 Ethernet (Twisted Pair)—uses one PCI slot
- One wide hard disk drive, see below
- One memory option, see below
- 600 MB CD-ROM—uses one removable media slot
- North American Windows NT and DIGITAL UNIX variants include a 101-key, PC-style, U.S. English keyboard.
- North American OpenVMS variants include a 108-key, VT-style, U.S. English keyboard.
- Select country-specific keyboard for non-North American variants; see Step 3 in this section.
- Systems include a 120V or 240V power cord depending on variant chosen.
- Cabinet enclosure available separately, see Step 9 in this section.

Note: Selection of graphics option is mandatory for Windows NT Rackmount Packaged Systems

5/333 Rackmount Packaged Systems								
Order Number	Operating System	O/S Media	Power cord	Keyboard	Memory	Disk	Graphics	Monitor
PB76P-AA	Windows NT	Included	120 V	Included	64 MB	1.05 GB	Mandatory	Required
PB76P-AB	Windows NT	Mandatory	240 V	Required	64 MB	1.05 GB	Mandatory	Required
PB76P-AC	Windows NT	Included	120 V	Included	256 MB	1.05 GB	Mandatory	Required
PB76P-AD	Windows NT	Mandatory	240 V	Required	256 MB	1.05 GB	Mandatory	Required

Step 1—AlphaServer 1000A Rackmount Systems (*continued*)

5/333 Rackmount Packaged Systems								
Order Number	Operating System	O/S Media	Power cord	Keyboard	Memory	Disk	Graphics	Monitor
PB76P-FE	DIGITAL UNIX	FIS	120 V	Included	64 MB	2.1 GB	Recommended	Recommended
PB76P-FF	DIGITAL UNIX	FIS	240 V	Recommended	64 MB	2.1 GB	Recommended	Recommended
PB76P-FG	DIGITAL UNIX	FIS	120 V	Included	256 MB	2.1 GB	Recommended	Recommended
PB76P-FH	DIGITAL UNIX	FIS	240 V	Recommended	256 MB	2.1 GB	Recommended	Recommended
PB76P-ME	OpenVMS	FIS	120 V	Included	64 MB	2.1 GB	Recommended	Recommended
PB76P-MF	OpenVMS	FIS	240 V	Recommended	64 MB	2.1 GB	Recommended	Recommended
PB76P-MG	OpenVMS	FIS	120 V	Included	256 MB	2.1 GB	Recommended	Recommended
PB76P-MH	OpenVMS	FIS	240 V	Recommended	256 MB	2.1 GB	Recommended	Recommended

5/400 Rackmount Packaged systems								
Order Number	Operating System	O/S Media	Power cord	Keyboard	Memory	Disk	Graphics	Monitor
PB78P-AA	Windows NT	Included ¹	120 V	Included	128 MB	2.1 GB	Mandatory	Required
PB78P-AB	Windows NT	Mandatory	240 V	Required	128 MB	2.1 GB	Mandatory	Required
PB78P-AC	Windows NT	Included ¹	120 V	Included	256 MB	2.1 GB	Mandatory	Required
PB78P-AD	Windows NT	Mandatory	240 V	Required	256 MB	2.1 GB	Mandatory	Required
PB78P-FE	DIGITAL UNIX	FIS	120 V	Included	128 MB	2.1 GB	Recommended	Recommended
PB78P-FF	DIGITAL UNIX	FIS	240 V	Recommended	128 MB	2.1 GB	Recommended	Recommended
PB78P-FG	DIGITAL UNIX	FIS	120 V	Included	256 MB	2.1 GB	Recommended	Recommended
PB78P-FH	DIGITAL UNIX	FIS	240 V	Recommended	256 MB	2.1 GB	Recommended	Recommended
PB78P-ME	OpenVMS	FIS	120 V	Included	128 MB	2.1 GB	Recommended	Recommended
PB78P-MF	OpenVMS	FIS	240 V	Recommended	128 MB	2.1 GB	Recommended	Recommended
PB78P-MG	OpenVMS	FIS	120 V	Included	256 MB	2.1 GB	Recommended	Recommended
PB78P-MH	OpenVMS	FIS	240 V	Recommended	256 MB	2.1 GB	Recommended	Recommended

5/500 Rackmount Packaged systems								
Order Number	Operating System	O/S Media	Power cord	Keyboard	Memory	Disk	Graphics	Monitor
PB79P-AA	Windows NT	Included ¹	120 V	Included	128 MB	4.3 GB	Mandatory	Required
PB79P-AB	Windows NT	Mandatory	240 V	Required	128 MB	4.3 GB	Mandatory	Required
PB79P-AC	Windows NT	Included ¹	120 V	Included	256 MB	4.3 GB	Mandatory	Required
PB79P-AD	Windows NT	Mandatory	240 V	Required	256 MB	4.3 GB	Mandatory	Required
PB79P-FA	DIGITAL UNIX	FIS	120 V	Included	128 MB	4.3 GB	Recommended	Recommended
PB79P-FB	DIGITAL UNIX	FIS	240 V	Recommended	128 MB	4.3 GB	Recommended	Recommended
PB79P-FC	DIGITAL UNIX	FIS	120 V	Included	256 MB	4.3 GB	Recommended	Recommended
PB79P-FD	DIGITAL UNIX	FIS	240 V	Recommended	256 MB	4.3 GB	Recommended	Recommended
PB79P-MA	OpenVMS	FIS	120 V	Included	128 MB	4.3 GB	Recommended	Recommended
PB79P-MB	OpenVMS	FIS	240 V	Recommended	128 MB	4.3 GB	Recommended	Recommended
PB79P-MC	OpenVMS	FIS	120 V	Included	256 MB	4.3 GB	Recommended	Recommended
PB79P-MD	OpenVMS	FIS	240 V	Recommended	256 MB	4.3 GB	Recommended	Recommended

1. Windows NT Server license, media (CD-ROM) kit North American English.

Key: Mandatory items must be on purchase order at initial order acceptance

Required items are essential for full system operation

Recommended items enhance system functionality

FIS = Factory Installed Software

Step 2—Memory

- Packaged Systems include one 64 MB, 128 MB, or 256 MB memory kit.
- System supports up to four memory kits (each kit includes industry-standard SIMMs and ECC support).
- System supports maximum of 1 GB memory

PB7MA-CB	32 MB 70ns (8 MB SIMMs) memory kit
PB7MA-CC	64 MB 70ns (16 MB SIMMs) memory kit
PB7MA-CD	128 MB 70ns (32 MB SIMMs) memory kit
PB7MA-CE	256 MB 70ns (64 MB SIMMs) memory kit

Step 3—Monitors

- Windows NT systems require a graphics monitor to run all functions.
- EISA Configuration Utility (ECU) is accessible via the console port for DIGITAL UNIX and OpenVMS systems. Optional graphics capability is available. Select graphics adapter, monitor, and country specific keyboard for DIGITAL UNIX and OpenVMS systems if required.
- Graphics monitors other than those listed below can be used if compatible with graphics adapter included with 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 3a for video extension cable.
See Step 3b 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 3a—Video Extension Cable

BN39C-02	1.8 meter video extension cable—mandatory for each monitor ordered
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Step 3b—Monitor Power Cords

Systems ordered in the Americas and AP include a BN26J-1K 120 V (North American, Japan) power cords. Order a country specific power cords for all other systems ordered.

BN26J-1K	North American, Japan, 120 V, 75-inches long
BN19H-2E	Australia, New Zealand, 2.5m long
BN19C-2E	Central Europe, 2.5 m long
BN19A-2E	UK, Ireland, 2.5 m long
BN19E-2E	Switzerland, 2.5 m long
BN19K-2E	Denmark, 2.5 m long

Step 3b—Monitor Power Cords (*continued*)

BN19Z-2E	Italy, 2.5 m long
BN19S-2E	Egypt, India, South Africa, 2.5 m long
BN18L-2E	Israel, 2.5 m long

Step 3c—Keyboards

Some variants include a keyboard (see Step 1 of this section). For these variants, if an additional keyboard is ordered, both keyboards ship with system. All keyboards are opal grey.

Windows NT Keyboard	DIGITAL UNIX Keyboard	OpenVMS Keyboard	Country
SN-LKQ97-AA	SN-LKQ47-AA	LK461-AA	US/English
SN-LKQ97-AB	SN-LKQ47-AB	LK461-AB	Belgian
SN-LKQ97-AC	SN-LKQ47-AC	LK461-AC	Canadian/French
SN-LKQ97-AD	SN-LKQ47-AD	LK461-AD	Danish
SN-LKQ97-AE	SN-LKQ47-AE		UK
	SN-LKQ47-AF	LK461-AF	Finnish
SN-LKQ97-AG	SN-LKQ47-AG	LK461-AG	German
SN-LKQ97-AH		LK461-AH	Dutch
SN-LKQ97-AI	SN-LKQ47-AI	LK461-AI	Italian
SN-LKQ97-AJ			Japanese
SN-LKQ97-AK	SN-LKQ47-AK	LK461-AK	Swiss/French
		LK461-AL	Swiss/German
SN-LKQ97-AM	SN-LKQ47-AM	LK461-AM	Swedish
SN-LKQ97-AN	SN-LKQ47-AN	LK461-AN	Norwegian
SN-LKQ97-AP	SN-LKQ47-AP	LK461-AP	French
		LK461-AQ	Canadian/English
SN-LKQ97-AR	SN-LKQ47-AR		Latin-American
SN-LKQ97-AS	SN-LKQ47-AS	LK461-AS	Spanish
		LK461-AT	Hebrew
SN-LKQ97-AU			Brazil
SN-LKQ97-AV	SN-LKQ47-AV	LK461-AV	Portuguese
SN-LKQ97-AX	SN-LKQ47-AX		Bhcsy
SN-LKQ97-BA	SN-LKQ47-BA		International
SN-LKQ97-BH	SN-LKQ47-BH	LK461-BH	Greek
SN-LKQ97-BI	SN-LKQ47-BI		Taiwanese
SN-LKQ97-BK	SN-LKQ47-BK		Korean
		LK461-BL	Romanian
SN-LKQ97-BP	SN-LKQ47-BP	LK461-BP	Polish
SN-LKQ97-BQ	SN-LKQ47-BQ	LK461-BQ	Hungarian
SN-LKQ97-BR	SN-LKQ47-BR		Arabic
SN-LKQ97-BT	SN-LKQ47-BT	LK461-BT	Cyrillic
SN-LKQ97-BU	SN-LKQ47-BU	LK461-BU	Turkish
SN-LKQ97-BV	SN-LKQ47-BV	LK461-BV	Czech
		LK461-BW	Turkish-French
		LK461-BY	Yugoslavian
SN-LKQ97-CB	SN-LKQ47-CB		Thai
SN-LKQ97-CZ	SN-LKQ47-CZ	LK461-CZ	Slovak

Step 3d—Mouse and Extension Cable Kit

Three button mouse is included with all systems, order as spare or replacement.

SN-PBQWS-WA	Three 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 4—Storage

Configuration Rules for Rackmount Internal Storage

- Integral Fast Wide Single Ended (FWSE) SCSI-2 controller supports maximum of five wide and/or narrow devices:
 - Two internal narrow 5.25-inch removable media devices.
 - Three narrow or wide 3.5-inch internal hard disk drives (each narrow drive ordered requires a wide to narrow SCSI adapter (PBXKP-BA)).
 - Rackmount enclosure supports six storage devices: one dedicated diskette drive slot, two removable media slots, three 3.5-inch internal hard disk drives.
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Step 4a—Internal Storage

- Rackmount Packaged systems include:
 - 1.44 MB diskette drive in dedicated slot.
 - One CD-ROM drive
 - One 1.05 GB, 2.1 GB, or 4.3 GB wide hard drive (see Step 1)

Removable Media Devices

PBXRZ-DA	600 MB 5.25-inch half-height 12 X CD-ROM drive (RRD46)
PBXTZ-AA	2.0 GB 5.25-inch half-height SCSI QIC tape drive (TZK11)
PBXTL-DA	8.0 GB 5.25-inch x 1.6-inch SCSI 4 mm DAT drive (TLZ09)
TLZ10-LG	12/24 GB 5.25-inch 4 mm DAT SCSI tape drive Frost White

Rackmount Hard Disk Drives—factory or field installed

PBXRZ-JC	2.1 GB 7200 RPM Narrow SCSI Disk Drive (RZ28L)
PBXRZ-NB	4.3 GB 7200 RPM Narrow SCSI Disk Drive (RZ29L)
PBXRZ-SA	9.1 GB 7200 RPM Narrow SCSI Disk Drive (RZ40)
PBXRW-JC	2.1 GB 7200 RPM Wide UltraSCSI Disk Drive (RZ1BB)
PBXRW-NB	4.3 GB 7200 RPM Wide UltraSCSI Disk Drive (RZ1CB)
RZ1CF-WA	4.3 GB 7200 RPM Wide UltraSCSI Disk Drive

Step 4b—Storage Controller

- KZPSA-BB PCI-based one-port Fast Wide Differential SCSI controller supports externally connected wide disks in BA356/BA36R with DWZZB signal converter.
- SCSI cables are not included and must be ordered separately.
- External DSSI cables are not included and must be ordered separately.

SCSI Controllers

KZPAA-AA	PCI-based one-port high-performance Fast Narrow Single Ended (FNSE) SCSI-2 controller
BN21H-xx	Connects from KZPAA-AA to narrow StorageWorks enclosures and narrow StorageWorks rackmount shelves.
BN21H-02	Connects from KZPAA-AA to narrow StorageWorks enclosures and narrow StorageWorks rackmount shelves
KZPSA-BB	PCI-based one-port high-performance Fast Wide Differential (FWD) SCSI controller. Supports external disks only.
BN21K-02	Connects from KZPSA to DWZZB-VW in wide StorageWorks enclosures and wide StorageWorks rackmount shelves

DSSI Controllers

KFPSA-AA	PCI-based single-DSSI controller (OpenVMS systems only). See Step 4f in this section.
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Step 4c—External Tape Expansion

- External tape drives are also supported on optional PCI-based SCSI controllers.
 - 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.
- Each tabletop tape device requires high density 50-pin to low density 50-pin SCSI cable (BN23G-0E). External Tapes supported on Windows NT Servers

TZK11-VA	2.0 GB QIC SCSI tape drive in 5.25-inch carrier
TZK11-DA	2.0 GB QIC SCSI tabletop tape drive
TLZ09-VA	8 GB 4 mm DAT 93 MB/min (compressed) 5.25-inch narrow SCSI tape drive in StorageWorks carrier
TLZ09-DB	8 GB 4 mm DAT 93 MB/min (compressed) 5.25-inch narrow tabletop tape drive
DS-TLZ10-VA	12/24 GB 4 mm DAT narrow SCSI tape drive in StorageWorks carrier
DS-TLZ10-DB	12/24 GB 4 mm DAT Tabletop narrow single-ended SCSI drive
TZ88N-VA	20/40 GB DLT 3 MB/s SCSI cartridge tape drive in 5.25-inch StorageWorks carrier
TZ88N-TA	20/40 GB DLT 3 MB/s SCSI cartridge tabletop tape drive
DS-TZ89N-VW	35/70 GB 5.25 inch single-ended SCSI DLT in StorageWorks carrier
DS-TZ89N-TA	35/70 GB DLT Tabletop narrow single-ended SCSI drive
TKZ9E-VA¹	2/5/7/10/14 GB 8 mm Helical Scan 5.25-inch SCSI tape drive in StorageWorks carrier

1. Supported on DIGITAL UNIX and OpenVMS systems only.

Step 4d—External Disk Expansion

- External BA35R Rackmount StorageWorks shelves are supported on all Fast SCSI-2 controllers.
- External BA36R Rackmount StorageWorks shelves are supported on Fast Wide SCSI controller.
- AlphaServer 1000 Rackmount systems provide four SCSI expansion ports on rear panel of system.
- Order BN21H-02 cable to connect a single BA35R StorageWorks shelf to controllers.
- Order BN31*-xx cable to connect a single BA36R StorageWorks shelf to controllers.

StorageWorks BA35R/BA36R 8-bit and 16-bit Rackmount Shelves

BA36R-AF	Front mount BA356 Rackmount StorageWorks Shelf, BA35R-MH 16-bit I/O module, BA35X-HF power supply
BA36R-AR	Rear mount BA356 Rackmount StorageWorks Shelf, BA35R-MH 16-bit I/O module, BA35X-HF power supply
BA35R-SF	Front Mount BA356 Rackmount StorageWorks Shelf, BA35X-MG 8-bit I/O module, BA35X-HF power supply
BA35R-SR	Rear Mount BA356 Rackmount StorageWorks Shelf, BA35X-MG 8-bit I/O module, BA35X-HF power supply
DWZZB-VW	Bi-directional SCSI signal converter and bus extender kit. A 16-bit Fast Wide Differential SCSI-2 on one end and an 8-bit or 16-bit Fast Wide Single-Ended SCSI-2 on the other end. Requires BN21K-** cable.

1. See *Storage Devices* for additional ordering information for StorageWorks modular storage expansion and supported devices.

Hard Disk Drives for Rackmount StorageWorks Shelves (External Only)¹

- Wide drives require wide controller to operate in 16-bit wide mode.
- Wide drives are supported in BA36R Rackmount StorageWorks shelves
- Narrow drives are supported in BA35R Rackmount StorageWorks shelves

DS-RZ29L-VA	4.3 GB Narrow SCSI Disk Drive, SBB
DS-RZ40 -VA	9.1 GB Narrow SCSI Disk Drive, SBB
DS-RZ28L-VA	2.1 GB 5400 RPM Narrow SCSI Disk Drive, SBB
DS-RZ1BB-VW	2.1 GB 7200 RPM Wide SCSI Disk Drive, SBB
DS-RZ1CF-VW	4.3 GB 7200 RPM Wide SCSI Disk Drive, SBB
DS-RZ1DF-VW	9.1 GB 7200RPM UltraSCSI Disk Drive, SBB

1. Wide drives operate in 8-bit narrow mode when connected to integral Fast Narrow Single Ended SCSI-2 controller

Step 4e—DSSI Cables

KFPSA PCI based DSSI controller cables:

- KFPSA to any external Pin-Socket DSSI connection requires BC22Q-xx.
- KFPSA to any external Micro-Ribbon DSSI straight connection (all other DSSI systems and storage devices requiring straight connection) requires BC21Q-xx.
- 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.
- Order BC29S-09 DSSI cable for HSD10 in BA36R-Ax shelves.
- Order BC29U-02 DSSI cable for HSD10 in adjacent BA36R-Ax shelves.
- Order BC29V-06 DSSI cable for HSD10 in non-adjacent BA36R-Ax shelves.

Step 5—Graphics Adapters

Note: Selection of graphics option is mandatory for Windows NT Pedestal Packaged Systems.

- EISA Configuration Utility (ECU) is accessible via the console port for DIGITAL UNIX and OpenVMS systems
- Optional graphics capability is available. Select graphics adapter, monitor, and country specific keyboard for DIGITAL UNIX and OpenVMS systems if required

BB2GA-JC	PCI-based 1MB DRAM graphics adapter 1024 x 768
BB2GA-JD	PCI-based 2MB DRAM graphics adapter 1024 x 768

Step 6—Networks and Communications

- Packaged systems include PCI-based Fast 100 Ethernet (Twisted Pair) controller (DE500-AA), uses one PCI slot.
- All options use one slot except DEFEA-DA which uses two slots.
- Select networking cable for Ethernet controller.
 - BN26K-xx for 10BaseT (twisted pair)

DE500-AA	PCI-based Fast Ethernet network interface card (see PCI Option Slot Table)
DE450-CA	PCI-based DIGITAL Etherworks 32-bit network interface card (twisted pair, Thick wire, ThinWire)
DEFPA-AB¹	PCI-based DEC FDDIcontroller, Single Attachment; maximum seven on OpenVMS and Windows NT, four on DIGITAL UNIX.
DEFPA-DB	PCI-based DEC FDDIcontroller, Dual Attachment, maximum seven on OpenVMS and Windows NT, four on DIGITAL UNIX.
DEFPA-UB	PCI-based DEC FDDI (UTP) controller; maximum seven on OpenVMS and Windows NT, four on DIGITAL UNIX.
DEFEA-AA²	EISA-based DEC FDDIcontroller, single attachment
DEFEA-DA²	EISA-based DEC FDDIcontroller, dual attachment (requires two slots)
DEFEA-UA²	EISA-based DEC FDDI (UTP) controller
CXI01-AA	ISA Async MUX Adapter, 16 lines—expandable to 64 lines; Windows NT and DIGITAL UNIX only

1. Supported as data device only
2. Support maximum two per system only.

Step 7—Additional Power Supply—Pedestal Systems Only¹

Note: AlphaServer 1000A Rackmount and Cabinet systems do not support dual power supply configurations

- Additional power supply may be added to AlphaServer 1000A Pedestal system for n+1 redundancy.
- Country specific power cord must be ordered separately, see Step 10 of this section.

H7290-AA 450 W Redundant Power Supply Option

1. See UPS information following System Specifications.

Step 8—Printers and Remote Console

KCRCM is an EISA form-factor card that allows a remote user to gain access to system's console terminal port to reset, halt, and power cycle the system. It functions independently of operating system.

KCRCM-AA	Remote System access for 110V North American
KCRCM-BA	Remote System access for 220V Europe
KCRCM-CA	Remote System access for 220V UK
KCRCM-DA	Remote System access for 240V Australia/New Zealand

Systems include two EIA-232 asynchronous serial ports with 9-pin D-subminiature connectors.

Select serial printers as required. A 9-pin to MMJ adapter (H8571-J) is required for each connection. A cable must be ordered unless otherwise provided.

Step 9—Software

- North American variants of Windows NT Packaged systems include Windows NT license, media (CD-ROM) kits (see Step 1). **Note:** Selection of language specific Windows NT media kit is mandatory for non North American variants.
- Order documentation kit if required.

Windows NT Server plus 10-client access license, media (CD-ROM) kits

QB-23CAA-SB	Windows NT Server license, media kit North American English
QB-23C8A-SB	Windows NT Server license, media kit International English
QB-23CPA-SB	Windows NT Server license, media kit French
QB-23CGA-SB	Windows NT Server license, media kit German
QB-23CSA-SB	Windows NT Server license, media kit Spanish
QB-23CUA-SB	Windows NT Server license, media kit Italian
QB-23CJA-SB	Windows NT Server license, media kit Japanese
QB-23CMA-SB	Windows NT Server license, media kit Swedish
QB-23CHA-SB	Windows NT Server license, media kit Dutch
QB-23CVA-SB	Windows NT Server license, media kit Brazilian/Portuguese
QB-23C4A-SB	Windows NT Server license, media kit Korean
QB-23C3A-SB	Windows NT Server license, media kit Taiwanese
QB-23C2A-SB	Windows NT Server license, media kit PRC Chinese

DIGITAL UNIX

Software Processor Code = E

- DIGITAL UNIX Packaged systems include Traditional 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

DIGITAL UNIX Layered Products 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

Step 9—Software (continued)

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

OpenVMS Media and Documentation

QA-MT1AA-H8	OpenVMS media and on-line documentation CD-ROM
QA-001AA-GZ	OpenVMS hardcopy documentation

OpenVMS Layered Products CD-ROM

QA-03XAA-H8¹	Layered products media and documentation for OpenVMS on CD-ROM
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1. Includes DIGITAL Enterprise Integration Server 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 VMSccluster Installation Guide
EK-D4AXP-TS	DSSI VMSccluster Troubleshooting Guide

Step 10—Cabinet Enclosure

Select cabinet enclosure for AlphaServer 1000A Rackmount systems, if required.

- H9A10 19-inch EIA Cabinet Enclosure
 - Outside: 66.9-inches high
 - Internal usable rackmountable space: 59.5-inches high, 19-inches wide, 30.8-inches deep
- H9A15 19-inch EIA Cabinet Enclosure
 - Outside: 78.7-inches high
 - Internal usable rackmountable space: 71.75-inches high, 19-inches wide, 29.75-inches or 37.12-inches deep
- H9A11 19-inch EIA Cabinet Enclosure
 - Outside: 43.3-inches high
 - Internal usable rackmountable space: 36.75-inches high, 19-inches wide, 29.75-inches or 37.15-inches deep

H9A10-CE	120V EIA Cabinet assembly, dual power controllers, RETMA rails
H9A10-CJ	240V EIA Cabinet assembly, dual power controllers, EIA standard rails
H9A10-CG	120V EIA Cabinet assembly, dual power controllers, swing front door, RETMA rails
H9A10-CK	240V EIA Cabinet assembly, dual power controllers, swing front door, EIA standard rails
H9A10-AB	EIA Cabinet assembly, no power controller, swing rear door
H9A10-AD	EIA Cabinet assembly, no power controller, swing front and rear doors
H9A15-BA/BB	120 V/240 V EIA Cabinet assembly, 29.75 inches deep, dual power controllers, swing rear door
H9A15-BC/BD	120 V/240 V EIA Cabinet assembly, 29.75 inches deep, dual power controllers, swing front and rear doors
H9A15-CA/CB	120 V/240 V EIA Cabinet assembly, 37.12 inches deep, dual power controllers, swing rear door
H9A15-BE	EIA Cabinet assembly, 29.75 inches deep, no power controller, swing rear door
H9A11-BA/BB	120V/240 V EIA Cabinet assembly 30.8 inches deep, one power controller, lift-off rear door
H9A11-BE	EIA Cabinet assembly, 30.8 inches deep, no power controller, lift-off rear door

Power Distribution Units for Cabinets with No Power Controller

H7600-AA	Power Distribution Unit 100V-120V, 50-60 Hz, 24A 5 duplex 5-15R outlets, L5-30 power plug, 2 pole 15A circuit breaker, for use in 19-inch cabinets with RETMA rails. Requires two ac outlets, 120V 60 Hz, NEMA L5-30R.
H7600-AB	Power Distribution Unit 200V-240V, 50-60 Hz, 16A 5 duplex 6-15R outlets, L6-30 power plug, 2 pole 20A circuit breaker, for use in 19-inch cabinets with RETMA rails. Requires two ac outlets, 240V 50/60 Hz, NEMA L6-20R.
H7600-DB	Power Distribution Unit, 200V-240V, 50-60 Hz, 16A 12 IEC 320 C13 outlets, IEC 309 power plug, 2 pole 16A circuit breaker, for use in 19-inch cabinets with EIA/ANSI (RETMA) rails.

Step 11—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.

FM-MK4HR-36	5 x 9, 4-hour response time
FM-MK512-36	5 x 12, 4-hour response time
FM-MK616-36	6 x 16, 4-hour response time
FM-MK724-36	7 x 24, 4-hour response time
FM-MKXHW-60	Years 1-5, next day, onsite
FM-MK4HR-60	Years 1-5, 5.x.9, 4-hour response time
FM-MK512-60	Years 1-5, 5 x 12, 4-hour response time
FM-MK616-60	Years 1-5, 6 x 16, 4-hour response time
FM-MK724-60	Years 1-5, 7 x 24, 4-hour response time

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.
- Software service upgrades for Windows NT include advisory and remedial software support for the time period indicated.
- Software service upgrades for DIGITAL UNIX include advisory and remedial software support with new version license rights for operating system for time period indicated.
- Software service upgrades for OpenVMS include advisory and remedial software support with new version license rights for operating system and Enterprise Integration Package for time period indicated.

FM-MKOSF-12	12-month Software Supplemental Support for DIGITAL UNIX AlphaServer 1000A systems
FM-MKOSF-36	36-month Software Supplemental Support for DIGITAL UNIX AlphaServer 1000A systems
FM-MKOSF-60	60-month Software Supplemental Support for DIGITAL UNIX AlphaServer 1000A systems
FM-MKVMS-12	12-month Software Supplemental Support for OpenVMS AlphaServer 1000A systems
FM-MKVMS-36	36-month Software Supplemental Support for OpenVMS AlphaServer 1000A systems
FM-MKVMS-60	60-month Software Supplemental Support for OpenVMS AlphaServer 1000A systems

Step 11a—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.

AlphaServer 1000A Rackmount Systems

AlphaServer 1000A Rackmount System Specifications

Shipping Dimension		
Height	26.7 cm (10.5 in)	
Width	48.2 cm (19.0 in)	
Depth	63.5 cm (25.0 in) system chassis 73.7 cm (29.0 in) system chassis & rackmount hardware	
Weight	29 kg (65 lb)	
Clearances		Service
Front	124.04 cm (50.0 in)	
Rear	61.0 cm (24.0 in)	
Sides	None	
Environmental		
Temperature		
Operating	10°C–35°C (50°F–95°F)	
Nonoperating	Not tested	
Storage (60 days)	-40°C–66°C (-40°F–151°F)	
Relative humidity		
Operating	20%–80%	
Nonoperating	10%–95%	
Storage (60 days)	20%/hr	
Rate of change		
Air flow and quality		
Intake location	Front	
Exhaust location	Rear	
Electrical—Power Supplies are universal 120/240 V ac		
Nominal ac voltage	100-120 V ac	220-240 V ac
Operating Voltage range	90-128 V ac	180-256 V ac
Power source phase	Single	Single
Nominal frequency	60 Hz	50 Hz
Frequency range	59-61 Hz	49-51 Hz
Maximum inrush current	50 Amps	50 Amps
RMS current at nominal voltage (steady state)		
Single power supply	8.0 Amps	4.0 Amps
Power cord		
	Type	IEC 320 C13
	Length	4.57 m (15 ft)
	U.S. plug	NEMA 5-15
Regulatory		
Agency approvals	UL Listed to UL1950 (2nd edition) CSA Certified to CAN/CSA-C22.2 No. 950-M89 TUV EN 60950 VDE 0805 GS marked ZH1/618 EMCO-TSE (74-SEC), Summary of Nordic deviations FCC 15J Part 15 Class A verified CE Class A verified VCCI Class II ITE	
Reviewed to	AD 3260 Australian Standard AS/NZS 3260:1963, Australian/New Zealand Standard EN 60 950: January 1993 European Norm IEC 950 (2 nd edition)	

Uninterruptable Power Supplies

Prestige 1250EXT

UPS offerings include EIA232 port for local or network monitoring. For complete protection, UPS products should be used with data line surge protectors and UPS monitoring software.

4N-AEABF-AA	Prestige 1250EXT, 1250 VA/900W, 1 phase, 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 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-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 (U.S. only).

Data Surge Protection

4N-GA249-AB¹	Surge protector, modem connection, wall plug-in
4N-GA249-CA¹	Surge protector, 10BaseT connection, wall plug-in
4N-GA245-xx	Surge Protector, multi-port connection, din rail/rackmount

1. Additional plug-in data modules (4N-GA240-xx) available.