

digital

AlphaServer 4000 systems

Outstanding performance, value, reliability, and scalability in midrange servers

ALPHA™
GENERATION

The AlphaServer 4000 and 4100 systems offer an affordable means of migrating legacy applications to the powerful 64-bit Alpha processor.

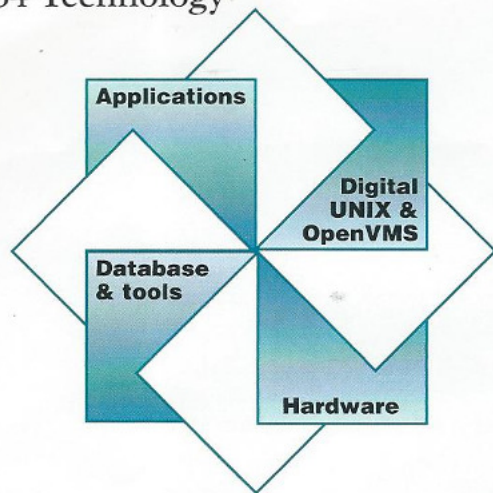
Take advantage of Very Large Memory (VLM64) and outstanding application performance at a midrange price with the AlphaServer™ 4000 and 4100 systems. Start with the affordable AlphaServer 4000 midrange system — it meets many customers' needs, and is field upgradeable to the full scalability and performance of an AlphaServer 4100 system. Both provide the speed, high availability, and reliability you want for your 64-bit mission-critical applications, as well as very flexible growth options to meet your expanding business needs.

Benefits and features

- Industry-leading 64-bit Alpha processors with symmetric multiprocessing (SMP).
- Outstanding performance and value — 7598 tpmC® @ \$152 tpmC.
- Family scalability providing VLM64 power for mission-critical applications.
 - > AlphaServer 4000 systems
 - 2 CPUs and 4 GB of memory
 - > AlphaServer 4100 systems
 - 4 CPUs and 8 GB of memory
- Innovative system drawer design optimizes configuration flexibility.
- Only proven 64-bit solution.
- 8 64-bit PCI I/O slots providing high bandwidth that "speed matches" the power of Alpha processing.
- System clustering capability to create larger, highly available computing environments.
- Digital UNIX®, OpenVMS™, or Microsoft® Windows NT™ Servers, for access to thousands of applications.
- 3-year on-site hardware warranty, next-business-day response.
- Best applications:
 - > Database server
 - > Business application server
 - > PC LAN consolidation
 - > Internet server
 - > Technical application server
 - > Decision support
 - > Workgroup applications



VLM64 Technology



If your business applications require exceptional performance, high system availability, and data integrity, as well as high memory capacity and scalability, consider the flexible family of the AlphaServer 4000 and 4100 systems.

With up to 2 CPUs and 4 GB of memory, AlphaServer 4000 systems will match many of your current applications' needs. Designed for growth, they are field upgradeable so you can easily expand to the power and capacity of the 4 CPU/8 GB AlphaServer 4100 midrange system. You can also take advantage of their pedestal, cabinet, and system drawer's innovative packaging to achieve the best performance and value.

Redefine the midrange

The AlphaServer 4000 and 4100 systems bring the latest in high-performance power of the 64-bit Alpha processor to your small- to medium-size business or large corporate department at an affordable price.

The AlphaServer 4000 system is a lower-cost entry configuration, offering up to 2 SMP processors, that provides you what you need today for scalability and application growth. With a clear upgrade path to

more power and capacity, it's fully expandable to a top-of-the-line AlphaServer 4100 system. This combination of choice and flexibility lets you buy what you need today and build for future growth.

AlphaServer 4000 and 4100 systems offer outstanding performance and value. Now you can have industry-leading performance — 7598 tpmC @ \$152 tpmC. Their synchronous system bus gives a boost to speed and performance, providing up to 1.1 GB/sec bandwidth. Both the AlphaServer 4000 and 4100 systems are the only midrange servers to offer VLM64 capability. The built-in scalability of the AlphaServer 4000 system lets you expand to the full function of the AlphaServer 4100 system — up to 8 GB of memory and 4 CPUs.

High availability and data integrity for memory-intensive applications also set them apart from other midrange systems. For the most demanding applications, the AlphaServer 4000 and 4100 provide 64-bit PCI I/O bandwidth. The result? Higher speed, capacity, scalability, efficiency, and throughput are balanced in design for fast, predictable response time and maximum application performance.

Digital's exclusive VLM64 technology gives you high-performance 64-bit computing in every direction to meet your most demanding business needs.

For an array of applications

For commercial environments, the AlphaServer 4000 and 4100 systems can be used as high-performance database servers, business application servers, for LAN server consolidation, or for communications and Internet server applications.

To run a broad range of commercial applications, you can choose between three operating systems — Digital UNIX, OpenVMS, and Windows NT Server — which support thousands of business applications.

Digital's software partners, including Microsoft, INFORMIX®, ORACLE®, SYBASE® and Software AG, ensure the availability of complete solutions for the AlphaServer 4000 and 4100 systems.

For data management and decision support, the AlphaServer 4000 and 4100 systems speed through your data. And for financial applications, including A/P, A/R, G/L, asset management, payroll, and applications suites, the AlphaServer 4000 and 4100 systems perform like no other.

For enterprise applications, Digital's exclusive VLM64 capability addresses up to 8 GB of data. This allows you to place entire applications and huge portions of your database into physical memory, and with minimal disk I/O, perform data acquisition and financial modeling quickly and efficiently. The VLM64 capability makes database operations occur hundreds

of times faster than they would on other midrange servers.

The VLM64 technology is most useful with Digital's complete 64-bit computing environment, which includes the AlphaServer system, operating system, database, applications, and development tools. This incomparable environment is available only from Digital.

In addition to their outstanding commercial capabilities, the AlphaServer 4000 and 4100 systems provide advanced performance features that are demanded by technical/scientific environments. VLM64, 64-bit PCI, low memory latency, and 64-bit Alpha power combine to support 3D rendering, publishing preprocess, CAD, GIS and CASE applications.

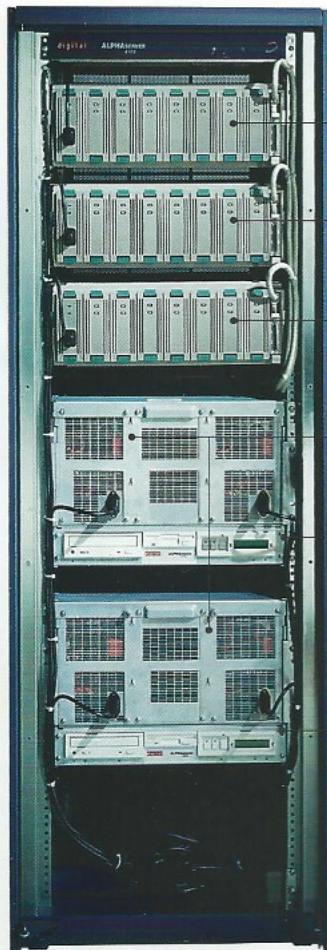
Flexible, unbounded design

Pedestal and cabinet versions allow mix-and-match flexibility. All AlphaServer 4000 and 4100 systems' components fit in a rackmounted system drawer in both cabinet and pedestal configurations.

Systems management

All AlphaServer midrange systems include as standard ManageWorks™ software — industry-leading systems management tools, based on an object-oriented interface. Now you can manage your AlphaServer 4000 and 4100 systems with an innovative solution that easily integrates with Digital's POLYCENTER™ network management tool.

Fully scalable in flexible packages, the AlphaServer 4000 and 4100 systems are powerhouses for future growth.



StorageWorks™ shelves

- Standard components
- 240 GB max in cab storage
- >7.5 TB external

Standard drawer (up to 4 per rack)

- Up to 4 processors >(2 on 4000)
- Up to 8 GB memory >(4 GB on 4000)
- 8 64-bit PCI slots
- Up to 3 power supplies (N+1)

Operator Control Panel

- 3.5" 1.44MB floppy
- CD-ROM

Rely on them

AlphaServer 4000 and 4100 systems are fully clusterable from departmental to large clusters. Their advanced memory, cache, and system bus capabilities, as well as hot swap RAID subsystems, make clustered computing environments highly available.

Auto reboot, thermal management, and optional redundant N+1 power supplies are provided. To secure your data are ECC-protected cache, memory, and system bus. High performance RAID subsystems cost-effectively organize your disk data, improving performance, data integrity, and security.

Industry-standard PCI

Eight industry-standard expansion slots — five dedicated PCI and three combination PCI/EISA slots — let you configure the AlphaServer 4000 and 4100 systems using low-cost,

industry-standard I/O devices that give you the performance and availability your mission-critical applications require. At the same time, Digital is the first to offer 64-bit PCI technology for increased bandwidth, future growth, and investment protection.

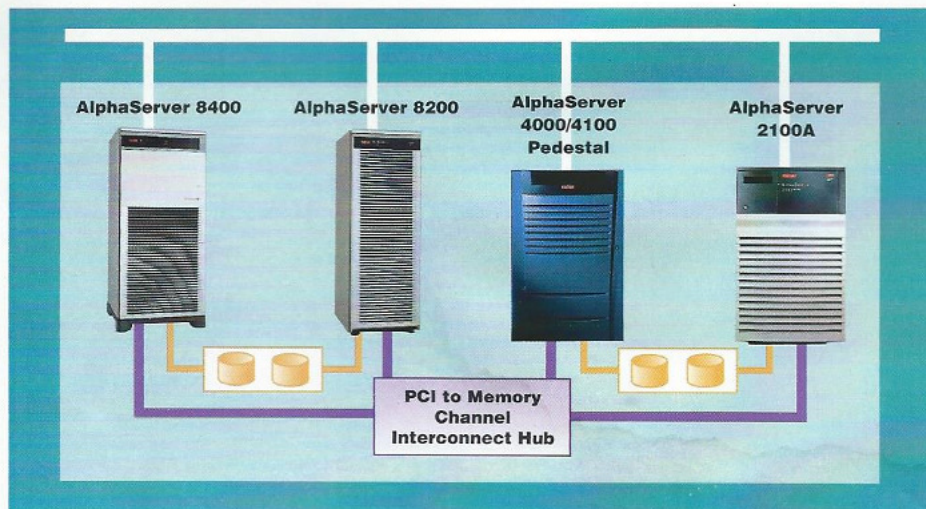
3-year on-site warranty

The AlphaServer 4000 and 4100 systems come with a 3-year hardware warranty. As a result, if your system should need service during the full three years after purchase, you can count on Digital to be on your site the next business day. Digital also offers a same-day, 4-hour-response-time upgrade through our acclaimed Multivendor Customer Services organization.

A range of services

Digital and its partners offer the broadest range of multivendor support services in the industry. For training, consulting, network integration, software support, and comprehensive system maintenance, Digital, with its partners, is the single-source solution to meet your needs.

Cluster AlphaServer 4000 and 4100 systems running Digital UNIX, OpenVMS, or Windows NT to set up a highly reliable, highly available environment with outstanding growth capability.



Your next step

To learn more about the AlphaServer 4000 and 4100 systems, call 1-800-DIGITAL via a touchtone phone in the U.S. or Canada, or 1-908-885-6426 from other regions. For online product information (including how to order), visit our AlphaServer Web site at http://www.digital.com/info/alpha_server or our Digital Home Page at <http://www.digital.com>



AlphaServer 4000 systems	4000 5/300, 5/400	4100 5/300E, 5/300, 5/400
CPU Features		
No. of processors	Up to 2	Up to 4
Alpha CPU/clock speed	21164/300 MHz, 400 MHz	21164/300 MHz, 300 MHz, 400 MHz
Cache size on chip	8 KB I-cache, 8 KB D-cache, 96 KB secondary	8 KB I-cache, 8 KB D-cache, 96 KB secondary
On-board cache (per processor)	2 MB, 4 MB	N/A, 2 MB, 4 MB
Upgradeable in pedestal and cabinet	CPU, memory, storage	CPU, memory, storage
Performance		
tpmC @ \$/tpmC		7598 @ \$152 (5/400) ¹ , 7985 @ \$173 (5/400) ²
SPECint95 [®] /SPECfp95 [®]	8.11/12.7, 12e/17e	7.15/12.0, 8.11/12.7, 12e/17e
SPECfp95 SMP	16.7, N/A	18.4, 21.8, 29e
SPECint_rate95 [®]	144, N/A	216, 278, 367e
SPECfp_rate95 [®]	200, N/A	243, 303, 397e
SPECweb96 [®] ³	974, (5/400)	
LINPACK 1000 X 1000	775, 1,019	N/A, 1,380, 1,841
I/O		
Max. memory	4 GB	8 GB
Max. storage, internal (pedestal/cabinet)	90 GB/240 GB	90 GB/240 GB
Total storage ⁴	7.5 TB	7.5 TB
Max. I/O throughput	PCI: 500 MB/sec.	PCI: 500 MB/sec.
I/O support	8 64-bit PCI slots (including 3 shared EISA or PCI slots)	
Internal Storage	21 hot swap disks for 90 GB (cabinet: 56 hot swap disks for 240 GB), floppy disk, CD-ROM, RAID 0, 1, 0+1, 5	
Options		
Networking	Ethernet, Fast Ethernet, FDDI, Token Ring, synchronous comms., ATM ³	
Storage	Fast SCSI-2, FW SCSI-2, FWD SCSI-2, RAID, CI, DSSI (OpenVMS only)	
Availability features		
	System auto reboot, thermal management, optional redundant power system (N+1), remote system management, RAID, disk hot swap, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, optional uninterruptible power supply	
OpenVMS clusters	Ethernet, DSSI, SCSI, FDDI, CI	
UNIX TruClusters	Memory Channel [™]	
AdvantageCluster (UNIX)	DECsafe [™] ASE, SCSI	
Windows NT Cluster	Ethernet, FDDI, SCSI	
Operating systems	Digital UNIX, OpenVMS, Microsoft Windows NT Server	
Operating environment		
Temperature	10°C to 35°C (50°F to 95°F)	10°C to 35°C (50°F to 95°F)
Relative humidity	20% to 90% (non-condensing)	20% to 90% (non-condensing)
Power supply	450W	
Enclosure characteristics		
Height	75 cm (29.5 in.)	170.2 cm (67.0 in.)
Width	49 cm (19.3 in.)	60.0 cm (23.6 in.)
Depth	90 cm (35.4 in.)	97 cm (38.2 in.)
Weight	113.6 kg (250 lbs.)	350.9 kg (772 lbs.)
Warranty	Hardware: three-year, on-site, with 5x9, 24-hour response time for system drawer and contents. Software: 90-day SPD conformance, with advisory telephone support.	

¹ Using four 5/400 MHz CPUs, 4 GB, SYBASE v11 and Digital UNIX v3.2F.

² Using four 5/400 MHz CPUs, 4 GB, Oracle Rdb v7.0 and OpenVMS v7.1.

³ Using 2 5/400 MHz CPUs and 1 GB.

⁴ Using HSZ40 external arrays and 4.3 GB drives.

⁵ UNIX 4.0A or greater, available Q4 calendar year 96.

Features may differ among operating environments. Performance may vary depending on configuration, application, and operating environment.

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