HP AlphaServer systems comparison chart for your mission-critical applications

Building on more than a decade of technology leadership, HP AlphaServer systems are synchronized with today's fast-paced and ever-changing business environment to deliver a demonstrable return on your IT investment. HP AlphaServer systems—with industry-leading operating system choices of OpenVMS and Tru64 UNIX®—offer rock-solid reliability, greater price/performance, unparalleled security, improved application availability and performance, simplified management, and increased flexibility. HP AlphaServer systems continue to offer attractive top-of-the-line solutions to help you capitalize on change.

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AlphaServer systems

AlphaServer GS1280 system

CPU features	
Number of processors	2 to 64
CPU/clock speed	AlphaChip EV7z/1.3 GHz, EV7/1.15 GHz
Level 2 cache size on chip	1.75 MB ECC, 7-way set associative
Performance	
SPECint_2000	994
SPECint_rate_2000	732 (64 CPU)
SPECfp_2000	1,684
SPECfp_rate_2000	1,236 (64 CPU)
STREAMS Triad, MB/sec	440,000 (64 CPU)
SPECompMpeak	62,127 (64 CPU)
LINPACK	141,700 (N x N, 64P)
SPECweb99	–
TPC-C @ $/tpmC/availability	–
Configurations	
Packaging	Rack-mount
Maximum memory	Up to 512 GB (8 GB/processor); RAID memory optional
Maximum internal disk storage	18.6 TB
Maximum I/O bandwidth	222 GB/sec
I/O support	Up to 512 PCI-X slots, 192 PCI slots, 64 AGP 4X slots
Reliability/high-availability features	Auto reboot, thermal management, remote system management, RAID storage, hot-swap drives, RAID memory, ECC memory, ECC cache, SMP CPU failover, error logging, hot-swap redundant power and cooling. Also with rack-mount: multiple systems, multiple power sources, dual-ported storage, hard partitions
I/O options	Ethernet, Fast Ethernet, Gigabit Ethernet, FDDI, sync. comm., async. comm., ATM, FW SCSI-2, FWD SCSI-2, Ultra2 SCSI, Ultra3 SCSI, RAID, Fibre Channel, CI (OpenVMS)
Software	
Operating systems	Tru64 UNIX (maximum SMP configuration is 64 processors) OpenVMS (maximum SMP configuration is 32 processors)
Standard software	Internet-Energized, HP Insight Manager
Clustering software • When configured with Tru64 UNIX and TruCluster, AlphaServer systems provide automated failover and 99.999% availability and allow single system management of multiple servers. • OpenVMS Clusters can link together up to 96 AlphaServer or HP VAX systems spanning up to 500 miles into a virtual system that can share resources and ensure access to information and applications 24 hours a day, 365 days a year.	TruCluster, OpenVMS Clusters

AlphaServer ES80 system	AlphaServer ES47 system
2, 4, 6 or 8	2 tower, 2 or 4 rack
AlphaChip EV7/1.15 GHz, 1.0 GHz	AlphaChip EV7/1.15 GHz, 1.0 GHz
1.75 MB ECC, 7-way set associative	1.75 MB ECC, 7-way set associative
882	882
81 (8 CPU)	40 (4 CPU)
1,494	1,494
136 (8 CPU)	68 (4 CPU)
49,700 (8 CPU)	24,700 (4 CPU)
12,282 (64 CPU)	6,941 (64 CPU)
15,620 (N x N, 8 CPU)	7,926 (N x N, 4 CPU)
–	–
–	–
Rack-mount	Tower, 4U or 8U rack-mount
Up to 64 GB (8 GB/processor); RAID memory optional	Up to 32 GB (8 GB/processor); RAID memory optional
2.3 TB	Tower: 292 GB; rack: 1.17 TB
24.5 GB/sec	12.3 GB/sec
Up to 52 PCI-X slots, 12 PCI slots, 8 AGP 4X slots	Tower: 5 PCI-X slots, 1 AGP 4X slot; Rack: Up to 26 PCI-X slots, 6 PCI slots, 4 AGP 4X slots
Auto reboot, thermal management, remote system management, RAID storage, hot-swap drives, RAID memory, ECC memory, ECC cache, SMP CPU failover, error logging, hot-swap redundant power and cooling. Also with rack-mount: multiple systems, multiple power sources, dual-ported storage, hard partitions	Auto reboot, thermal management, remote system management, RAID storage, hot-swap drives, RAID memory, ECC memory, ECC cache, SMP CPU failover, error logging, hot-swap redundant power and cooling. Also with rack-mount: multiple systems, multiple power sources, dual-ported storage, hard partitions
Ethernet, Fast Ethernet, Gigabit Ethernet, FDDI, sync. comm., async. comm., ATM, FW SCSI-2, FWD SCSI-2, Ultra2 SCSI, Ultra3 SCSI, RAID, Fibre Channel, CI (OpenVMS)	Ethernet, Fast Ethernet, Gigabit Ethernet, FDDI, sync. comm., async. comm., ATM, FW SCSI-2, FWD SCSI-2, Ultra2 SCSI, Ultra3 SCSI, RAID, Fibre Channel, CI (OpenVMS)
Tru64 UNIX, OpenVMS, Linux	Tru64 UNIX, OpenVMS, Linux
Internet-Energized, HP Insight Manager	Internet-Energized, HP Insight Manager
TruCluster, OpenVMS Clusters	TruCluster, OpenVMS Clusters

AlphaServer systems

AlphaServer ES45 system

CPU features	
Number of processors	Up to 4
CPU/clock speed	AlphaChip EV68/1.25 GHz
Cache size on board	16 MB ECC DDR per processor
Performance	
SPECint_2000	928
SPECint_rate_2000	42 (4 CPU)
SPECfp_2000	1,365
SPECfp_rate_2000	50 (4 CPU)
STREAMS Triad, MB/sec	3,584 (4 CPU)
SPECompMpeak	–
LINPACK	6,847 (1000 x 1000, 4 CPU)
SPECweb99	5,094 (4 CPU)
TPC-C @ $/tpmC/availability	56,375 @ $9.39/tmpC/August 2002
Configurations	
Packaging	Tower, 8U rack-mount, pedestal
Maximum memory	Model 1: 16 GB ECC Model 2, 3: 32 GB ECC
Maximum internal disk storage	Tower: 1.7 TB based on 146 GB drives; Pedestal: 5.8 TB; rack: 22.2 TB
Maximum I/O bandwidth	1.85 GB/sec
I/O support	Model 1: 6 64-bit PCI slots, 1 AGP 4X slot Model 2, 3: 10 64-bit PCI slots
Reliability/high-availability features	Auto reboot, thermal management, remote system management, RAID, hot-swap drives, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, hot-swap redundant power and cooling, optional Uninterruptible Power Supply (UPS). Also with rack-mount: multiple systems, multiple power sources, dual-ported storage
I/O options	Ethernet, Fast Ethernet, Gigabit Ethernet, FDDI, sync. comm., async. comm., ATM, FWD SCSI-2, Ultra2 SCSI, RAID, Fibre Channel, CI (OpenVMS)
Software	
Operating systems	Tru64 UNIX, OpenVMS
Standard software	Internet-Energized, HP Insight Manager, UPS Power Management
Clustering software • When configured with Tru64 UNIX and TruCluster, AlphaServer systems provide automated failover and 99.999% availability and allow single system management of multiple servers. • OpenVMS Clusters can link together up to 96 AlphaServer or HP VAX systems spanning up to 500 miles into a virtual system that can share resources and ensure access to information and applications 24 hours a day, 365 days a year.	TruCluster, OpenVMS Clusters

AlphaServer DS25 system	AlphaServer DS15 system
Up to 2	1
AlphaChip EV68/1.0 GHz	AlphaChip EV68/1.0 GHz
8 MB ECC DDR per processor	2 MB ECC
678	631
15.5	6.87
985	876
21.5	9.43
–	1,538.65
–	–
–	1,475
–	–
–	–
Tower, 5U rack-mount	3U rack-mount, desktop
16 GB ECC	4 GB ECC
876 GB	Up to 4 bays/436 GB
1.85 GB/sec	528 MB/sec
6 64-bit PCI slots	4 64-bit/33 MHz slots or 2 64-bit/66 MHz slots
Auto reboot, thermal management, remote system management, RAID, disk hot-swap, hot-swap power, hot-swap cooling, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, optional Uninterruptible Power Supply (UPS). Also with rack-mount: multiple systems, multiple power sources, dual-ported storage	Optional front access storage cage, auto reboot, thermal management, remote system management, RAID, memory failover, ECC memory, ECC cache, ECC system bus, error logging. Also with rack-mount: multiple systems, multiple power sources, dual-ported storage
1 10/100 Fast Ethernet and 1 Gigabit Ethernet on motherboard 2 Ultra3 SCSI ports on motherboard Optional: Ethernet, Fast Ethernet, Gigabit Ethernet, FDDI, sync. comm., async. comm., ATM, FWD SCSI-2, Ultra2 SCSI, Ultra3 SCSI, RAID, Fibre Channel	2 10/100 Fast Ethernet on motherboard 2 Ultra SCSI ports on motherboard Optional: Ethernet, Fast Ethernet, FDDI, sync. comm., async. comm., ATM, FW SCSI-2, Ultra SCSI, Ultra2 SCSI and Ultra3 SCSI, RAID, CD-ROM
Tru64 UNIX, OpenVMS	Tru64 UNIX, OpenVMS
Internet-Energized, HP Insight Manager, UPS Power Management	Internet-Energized, HP Insight Manager
TruCluster, OpenVMS Clusters	TruCluster, OpenVMS Clusters

AlphaServer systems

AlphaServer TS15 system—NEBS certified

CPU features	
Number of processors	1
CPU/clock speed	AlphaChip EV68/1 GHz
Cache size on board	2 MB ECC
Performance	
SPECint_2000	631
SPECint_rate_2000	6.87
SPECfp_2000	876
SPECfp_rate_2000	9.43
STREAMS Triad, MB/sec	1,538.65
SPECompMpeak	–
LINPACK	1,475
SPECweb99	–
TPC-C @ $/tpmC/availability	–
Configurations	
Packaging	3U rack-mount, desktop
Maximum memory	4 GB ECC
Maximum internal disk storage	Up to 4 bays/436 GB
Maximum I/O bandwidth	528 MB/sec
I/O support	4 64-bit/33 MHz slots or 2 64-bit/66 MHz slots
Reliability/high-availability features	Optional front access storage cage, auto reboot, thermal management, remote system management, RAID, memory failover, ECC memory, ECC cache, ECC system bus, error logging. Also with rack-mount: multiple systems, multiple power sources, dual-ported storage
I/O options	2 10/100 Fast Ethernet on motherboard; 2 Ultra SCSI ports on motherboard Optional: Ethernet, Fast Ethernet, FDDI, sync. comm., async. comm., ATM, FW SCSI-2, Ultra SCSI, Ultra2 SCSI, Ultra3 SCSI, RAID, CD-ROM, 2D Graphics, 10/100 Ethernet Telco modules: IN7 (SS7 connectivity); voice modules (T1/E1 ISDN) Manageability: IPFM (Intelligent Peripheral Fault Manager)
Software	
Operating systems	Tru64 UNIX, OpenVMS
Standard software	Internet-Energized, HP Insight Manager
Clustering software • When configured with Tru64 UNIX and TruCluster, AlphaServer systems provide automated failover and 99.999% availability and allow single system management of multiple servers. • OpenVMS Clusters can link together up to 96 AlphaServer or HP VAX systems spanning up to 500 miles into a virtual system that can share resources and ensure access to information and applications 24 hours a day, 365 days a year.	TruCluster, OpenVMS Clusters

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