

Alpha System Comparison Chart



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	AlphaServer 300 4/266	AlphaServer 400 4/233	AlphaServer 1000A 5/333 & 5/400		AlphaServer 2000 5/300 & 5/375	
CPU Features	4/266	4/233	5/333	5/400	5/300	5/375
Number of Processors	1	1	1	1	up to 2	Up to 2
CPU/ Clock Speed	21064A/ 266 MHz	21064A/ 233 MHz	21164/ 333 MHz	21164A/ 400 MHz	21164/ 291MHz	21164/ 375 MHz
Cache Size (on chip/on board)/ per processor	16 KB I, 16 KB D/ 2 MB	8 KB I, 8 KB D/ 512 KB	8 KB I, 8 KB D, 96 KB comb./ 2 MB	8 KB I, 8 KB D, 96 KB comb./ 2 MB	8 KB I, 8 KB D, 96 KB comb./ 4 MB	8 KB I, 8 KB D, 96 KB comb./ 8 MB
Performance	4/266	4/233	5/333	5/400	5/300	5/375
tpmC @ \$/tpmC	-	-	-	-	-	-
SPECint95	5.18	4.28 est.	10.1	11.5	8.02	11.5
SPECfp95 1 CPU	6.27	4.32 est.	10.6	11.1	9.64	15.1
SPECfp95 SMP	-	-	-	-	13.9 (2 CPU)	-
SPECint_rate95	46.6	38.5 est.	90.7	104	125 (2 CPU)	204 (2 CPU)
SPECfp_rate95	56.4	38.8 est.	95.7	99.6	161 (2 CPU)	258 (2 CPU)
SPECweb96	421	-	-	790	-	-
LINPACK 1000x1000	193.2	138.4	345.8	380.8	up to 663.5	-
I/O Features						
Max Memory	512 MB	384 MB	1 GB		1 GB	
Max Disk (in cabinet/total)	6.6 GB/ 66.6 GB	17.2 GB / 90 GB	30 GB / 440 GB		34.4 GB / over 4 TB	
Peak System Bus Bandwidth	533 MB/s	267 MB/s	533 MB/s		667 MB/s	
Max I/O Bandwidth	132 MB/s	132 MB/s	132 MB/s		132 MB/s PCI; 33 MB/s EISA	
I/O Support	1 PCI slot, 1 ISA slot, 1 PCI/ISA slot, 2 serial ports, 1 parallel port, Ethernet, FDDI, Token Ring, Prestoserve, FWD SCSI-2, RAID, synch & asynch comm	2 PCI slots, 3 ISA slots, 1 PCI/ISA slot, FWD SCSI-2, Ethernet, FDDI, synch & asynch comm, Token Ring	7 PCI, 2 EISA slots, FWD SCSI-2, RAID, Ethernet, DSSI, FDDI, Token Ring, Prestoserve, synch & asynch comm.		3 PCI slots, 7 EISA slots, Fast SCSI-2, FW SCSI-2, FWD SCSI-2, RAID, Ethernet, DSSI, CI, FDDI, Token Ring, Prestoserve, synch & asynch comm,	
High Availability Features						
OpenVMS Clusters	Ethernet, FDDI, SCSI	Ethernet, FDDI, SCSI	Ethernet, DSSI, FDDI, SCSI		Ethernet, DSSI, FDDI, SCSI, CI	
UNIX Clusters	TruCluster Available Server	TruCluster Available Server	TruCluster Available Server		TruCluster Available Server & Production Server, Parallel Software Environment with PCI Memory Channel	
Windows NT Clusters	n/a	Ethernet, FDDI, SCSI	Ethernet, FDDI, SCSI		Ethernet, FDDI, SCSI	
High Availability Features	Auto reboot, system management, optional external disk hot swap, error logging, optional UPS	Auto reboot, system management, optional external disk hot swap, memory failover, error logging, optional UPS	Auto reboot, thermal management, optional redundant power system, remote system management, RAID, disk hot swap, memory failover, ECC memory, ECC cache, error logging, optional UPS.		Auto reboot, thermal management, optional redundant power system, remote system management, RAID, disk hot swap, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, optional UPS.	
Software Features						
Operating Systems	Digital UNIX, OpenVMS, Windows NT					
Packaging						
Enclosures	Desktop	Mini-Tower	Pedestal, Rackmount, Cabinet		Pedestal	
Height, width, depth, weight	H: 10 cm (4 in), W: 43 cm (17 in), D: 41 cm (16 in), W: 11 kg (25 lbs)	H: 43 cm (17 in), W: 18 cm (7 in), D: 43 cm (17 in), W: 12 kg (28 lbs)	Pedestal: H: 46 cm (18.1 in), W: 35.8 cm (14.1 in), D: 58.6 cm (23.1 in), W: 39 kg (86 lbs)		H: 60.5 cm (23.8 in), W: 43 cm (16.9 in), D: 65 cm (25.6 in), W: 54 kg (109 lbs)	

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All AlphaServer systems come with **free** ServerWORKS server management software and **free** Internet software.

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

¹Linpack 1000x1000. ²Linpack NxN. ³ Measured on a 350 MHz system. ⁴7,598 using four 5/400 MHz CPUs, 3 GB, SYBASE v11, and Digital UNIX v3.2F.

⁵7,985 using four 5/400 MHz CPUs, 4 GB, Oracle Rdb v7.0, and OpenVMS v7.1

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	AlphaServer 4000/4100 5/300 & 5/400				AlphaServer 8200 5/300 & 5/440		AlphaServer 8400 5/300 & 5/440	
CPU Features	4000/4100 5/300		4000/4100 5/400		5/300	5/440	5/300	5/440
Number of Processors	4000: up to 2 4100: up to 4		4000: up to 2 4100: up to 4		up to 6	up to 6	up to 12	up to 12
CPU/ Clock Speed	21164/ 300 MHz		21164A/ 400 MHz		21164/ 300 MHz	21164A/ 437 MHz	21164/ 300 MHz	21164A/ 437 MHz
Cache Size (on chip/on board)/ per processor	8 KB I , 8 KB D, 96 KB comb./ 2 MB		8 KB I, 8 KB D, 96 KB comb./ 4 MB		8 KB I, 8 KB D, 96 KB comb./ 4 MB		8 KB I, 8 KB D, 96 KB comb./ 4 MB	
Performance	4000/4100 5/300		4000/4100 5/400		5/300	5/440	5/300	5/440
tpmC @ \$/tpmC	-		4100: 7,598 @ \$152 ⁴ (4 CPU) 4100: 7,985 @ \$173 ⁵ (4 CPU)		-	-	11,014 @ \$222 (10 CPU)	14,176 @ \$198 ³ (10 CPU), 30,390 @ \$305 ³ (TruCluster)
	4000 5/300	4100 4/300	4000 5/400	4100 5/400				
SPECint95	8.11	8.11	12.1	12.1	7.43	13.6	7.43	13.6
SPECfp95 1 CPU	12.7	12.7	17.2	17.2	12.4	17.0	12.4	17.0
SPECfp95 SMP	16.7 (2 CPU)	21.8 (4 CPU)	24.2 (2 CPU)	33.4 (4 CPU)	-	34.3 (6 CPU)	-	42.6 (8 CPU)
SPECint_rate95	144 (2 CPU)	278 (4 CPU)	211 (2 CPU)	422 (4 CPU)	388 (6 CPU)	701 (6 CPU)	767 (12 CPU)	1,358 (12 CPU)
SPECfp_rate95	200 (2 CPU)	303 (4 CPU)	275 (2 CPU)	439 (4 CPU)	420 (6 CPU)	588 (6 CPU)	919 (12 CPU)	1,118 (12 CPU)
SPECweb96	-	-	1,157 (1 CPU)	-	-	-	-	-
LINPACK	775 ¹	1,380 ¹	1,019 ¹	1,841 ¹	2,445 ²	3,337 ²	4,996 ²	6,654 ²
I/O Features								
Max Memory	4000: 4 GB, 4100: 8 GB				12 GB		28 GB	
Max Disk (in cabinet/total)	Pedestal: 90 GB/ over 7.5 TB; Cabinet: 240 GB / over 7.5 TB				160 GB/ over 39 TB		192 GB/ over 39 TB	
Peak System Bus Bandwidth	1.1 GB/s				2.1 GB/s		2.1 GB/s	
Max I/O Bandwidth	500 MB/s				1,200 MB/s		1,200 MB/s	
I/O Support	8 PCI slots (3 can be used for EISA options), FWD SCSI-2, RAID, Ethernet, Fast Ethernet, DSSI, CI, FDDI, Token Ring, synch & asynch comm, ATM , Prestoserve. (Note: 64-bit PCI slots will accept and improve performance of 32-bit PCI options.)				132 PCI slots, 8 EISA slots, Ethernet, Fast Ethernet, CI, FDDI, Token Ring, IPI, synch & asynch comm, FWD SCSI-2, RAID, DSSI, Prestoserve, HiPPI, Fibre Channel, ATM, Mainframe channel connect		144 PCI slots, 8 EISA slots, XMI, Futurebus+®, CI, Ethernet, Fast Ethernet, FDDI, Token Ring, IPI, synch & asynch comm, FWD SCSI-2, RAID, DSSI, Prestoserve, HiPPI, Fibre Channel, ATM, Mainframe channel connect	
High Availability Features								
OpenVMS Clusters	Ethernet, DSSI, FDDI, SCSI, CI				Ethernet, DSSI, FDDI, SCSI, CI		Ethernet, DSSI, FDDI, SCSI, CI	
UNIX Clusters	TruCluster Available & Production Server, Parallel Software Environment with PCI Memory Channel				TruCluster Available and Production Server, Parallel Software Environment with PCI Memory Channel			
Windows NT Clusters	Ethernet, FDDI, SCSI				n/a		n/a	
High Availability Features	Auto reboot, thermal management, optional redundant power system, remote system management, RAID, disk hot swap, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, optional UPS. Also with CAB: multiple systems, multiple power sources, dual-ported storage, optional integrated UPS				Auto reboot, thermal management, optional redundant power system, remote system management, RAID, disk hot swap, memory failover, ECC memory, ECC cache, ECC system bus, SMP CPU failover, error logging, optional UPS			
Software Features								
Operating Systems	Digital UNIX, OpenVMS, Windows NT				Digital UNIX, OpenVMS, Windows NT (future)			
Packaging								
Enclosures	Pedestal, Cabinet, System Drawers (4000 upgrades to 4100 within the enclosure)				Cabinet, Rackmount		Cabinet, Rackmount	
Height, Width, Depth, Weight	Pedestal: H: 75 cm (29.5 in), W: 49 cm (19.3 in), D: 90 cm (35.4 in), W: 113.6 kg (250 lbs). Cabinet: H: 170.2 cm (67 in), W: 60 cm (23.6 in), D: 97 cm (38.2 in), W: 350.9 kg (772 lbs).				H: 170 cm (67 in), W: 60 cm (23.6 in), D: 92.5 cm (36.4 in), W: 272 kg (600 lbs)		H: 170 cm (67 in), W: 80 cm (31.5 in), D: 87.5 cm (34.4 in), W: 408 kg (900 lbs)	

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