



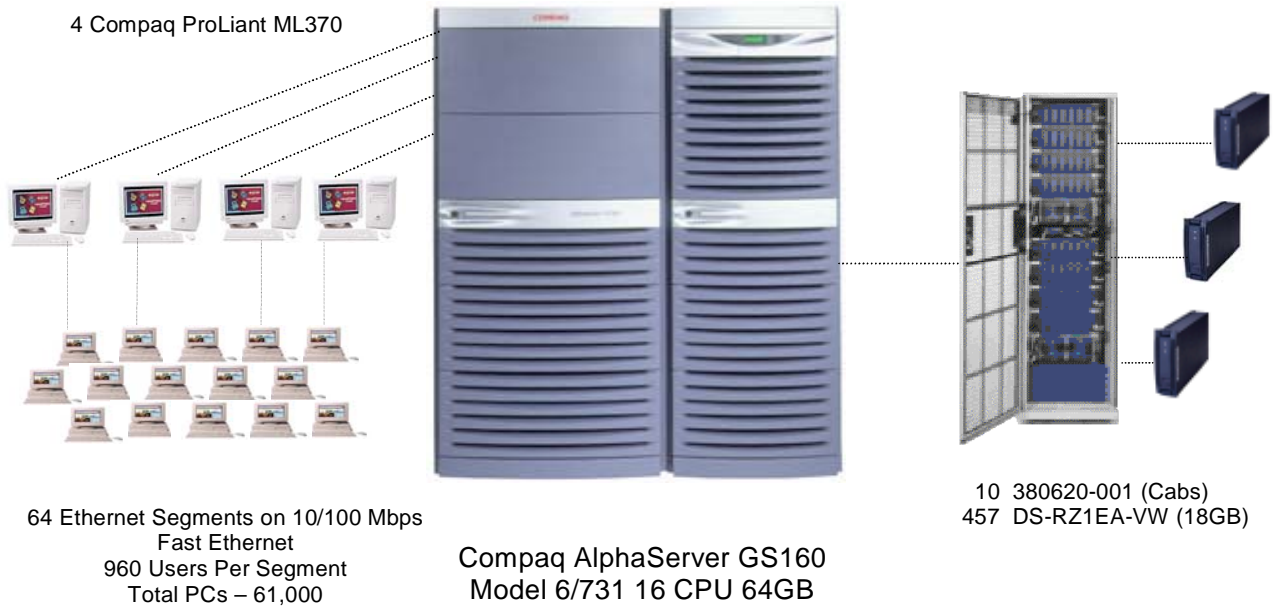
Compaq AlphaServer GS160
Model 6/731

TPC-C Rev. 3.5

16 CPU Client/Server System

Report Date: November 8, 2000

Total System Cost		TPC-C Throughput		Price/Performance		Availability Date			
\$3,965,442		71,863.02		\$55.18		February 2, 2001			
Processors		Database		Operating System		Other Software		Number of Users	
(16) 731MHz Alphachip 21264A		Oracle V8.1.7 Enterprise Edition for Tru64 UNIX		Compaq Tru64 UNIX V5.1		Compaq DB Web Connector V1.1		61,000	



System Components Database Server, Compaq AlphaServer GS160 Model 6/731			Client Components (Each of 4) Compaq ProLiant ML370	
	Qty	Type	Qty	Type
Processors	16	6/731 MHz Alphachip 21264A	2	600 MHz Intel Pentium III
Cache Memory		4MB Cache/CPU		512KB Cache/CPU
Memory	16	4 GB Memory	1	128MB Memory
Total Memory	64	GB Memory	2	256MB Memory
Disk Controllers	16	Fiber Storage Controllers		640 Total Memory
Disks	457	18 GB Disks	1	18GB Disk
Total Disk Storage	8226	GB		



**AlphaServer GS160
Model 6/731
16 CPU C/S System**

**TPC-C REV 3.5 EXECUTIVE SUMMARY
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Report Date: Nov. 8, 2000

Description	Part Number	Third Party Brand	Unit Price Pricing	Qty	Extended Price	5 yr. Maint. Price
Server Hardware						
Compaq AS GS160 6/731 PKG M16 U 120/208	DA-160CC-AA		1 366,000	1	366,000	237,508
GS160/320 6/731 SMP Upg, Unix	3X-KN8AA-AD		1 23,000	15	345,000	Inc.
GS80/160/320 4GB Mem Module	3X-MS8AA-DB		1 61,000	15	915,000	Inc.
1600W Power Converter 48V	H7506-AA		1 10,000	4	40,000	Inc.
GS160/320 I/O Module to PCI	3X-KFWHA-AA		1 3,000	3	9,000	Inc.
10 Meter Cable	BN39B-10		1 420	8	3,360	Inc.
GS80/160/320 PCI Expan 14 Slot	3X-DWWPA-BA		1 12,000	3	36,000	Inc.
GS80/160/320 Expansion Cab	H9A20-AA		1 5,000	1	5,000	Inc.
65 Bit Fibre Channel HBA	DS-KGPSA-CA		1 4,000	16	64,000	Inc.
15M Fibre Op Cable 50/125	234457-B23		1 227	76	17,252	Inc.
PCI to GbE SX Adapter	DEGPA-SA		1 1,949	4	7,796	Inc.
SC-SC Dual FO Cbl, MM, PP, 4.5M	BN34B-4E		1 96	4	384	Inc.
ESA 12000 Storage Array	380600-001		1 55,639	10	556,390	108,150
18.2GB 7200rpm UW SCSI Disk**	DS-RZ1EA-VW		1 1,195.45	503	601,311	Spared
16 Port Fabric Switch	DS-DSGGB-AB		1 35,714	8	285,712	107,968
Short Wave Optical GBIC	380561-B21		1 492	96	47,232	0
12/24GB 4mm DAT Tape	TLZ10-LB		1 1,135	1	1,135	1,274
GS/Rtr 8-P Fast Ethernet 16mb Line Card	DGSRT-AB		1 5,995	4	23,980	8,096
VT510, WHITE, NORTH AMER, NO KEY	VT510-AA		1 395	1	395	0
US & Canada/English KB	PCXLA-NA		1 25	1	25	0
Subtotal					3,324,972	462,996
Server Software						
5YR TRU64UNIX BRZ9x5	FM-W16U9-60		1 34,074	1		34,074
5YR GS160/320 TRU64 UNIX SMP	FM-W16SM-60		1 2,592	15		38,880
5YR Tru64Unix O/S & LP	FM-CDDST-60		1 13,624	1		13,624
HSG80 ACSsf All Lic/PCRM Pkg	128697-B21		1 7,000	40	280,000	
5YR 5x9 HS*80 SW Dual Controller	FM-DBAL6-60		1 9,360	20		187,200
5YR 5x9 HS*80 Platform SW	FM-PBAT1-60		1 1,514	20		30,280
Tru64 UNIX Alpha CDRM	QA-MT4AA-H8		1 395	1	395	
Oracle v 8.1.7 Enterprise Edition for Tru64 UNIX	Oracle		2 463,834	1	463,834	463,834
Subtotal					744,229	767,892
Client Hardware						
Compaq ML370T01 P600-256 128 US	195293-001		1 3,855	4	15,420	10,960
Processor 600Mhz	128292-B21		1 1,005	4	4,020	Inc.
256MB 100Mhz SDRAM Dimm	128278-B21		1 1,205	8	9,640	Inc.
Ethernet Dual Channel	338456-B21		1 285	20	5,700	Inc.
NC 3132 10/100 Card	338456-B22		1 227	12	2,724	Inc.
Gigabit Daughter Card (Upgrade)	338456-B23		1 570	4	2,280	Inc.
18GB 7200 RPM Ultra2 Universal Hard Drive	388144-B22			4	2,224	Inc.
SC-SC DUAL FO Cbl, MM, PP, 4.5M	BN34B-4E		1 96	4	384	Inc.
V700 15" Color Monitor**	325900-001		1 125	6	750	Spared
Subtotal					43,142	10,960
Client Software						
Application Optimizer WNT Server Edition	QB-641AA-SA		1 450	4	1,800	1,440
Subtotal					1,800	1,440
User Connectivity						
8 Port Desktop Hub**	CT1008D/P		3 18.00	8390	151,020	Spared
Subtotal					151,020	
Notes:** 10% Spares						
ICS Discount: 38% on Server Hardware/Software based on volume.					(\$1,387,118)	
ICS Discount: 20% on FM and FR numbers based on volume.						(\$155,891)
Subtotal					\$2,878,045	\$1,087,397
Five Year Cost of Ownership						\$3,965,442
1=IC System Solutions, 2=Oracle, 3= NetCruiser Technologies					tpmC Rating:	71,863.02
Audited by InfoSizing (www.infosizing.com)					\$ / tpmC:	\$55.18
Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.						

Numeric Quantities Summary
AlphaServer GS160 Model 6/731 16 CPU Client Server System

MQTH

MQTH, computed Maximum Qualified Throughput	71,863
% throughput difference, reported and reproducibility runs	1.024%

Response Times in seconds

Transaction	90th percentile	Average	Maximum
New-Order	2.344	1.179	7.483
Payment	2.218	1.193	7.191
Order-Status	2.176	1.102	6.783
Delivery (interactive)	1.604	0.753	5.407
Delivery (deferred)	1.078	0.619	6.546
Stock-Level	2.202	1.139	7.423
Menu	1.688	0.750	6.121

Transaction Mix in percent of total transactions

Transaction	Total Occurrences	Percentage
New-Order	8623563	44.976%
Payment	8245592	43.005%
Order-Status	767635	4.004%
Delivery (interactive)	768672	4.009%
Stock-Level	768119	4.006%

Keying/Think Times in seconds

Transaction	Minimum	Average	Maximum
New-Order	18.000/0.000	18.001/12.003	18.155/119.976
Payment	3.000/0.000	3.001/12.003	3.110/119.999
Order-Status	2.000/0.000	2.001/10.001	2.108/ 99.627
Delivery (interactive)	2.000/0.000	2.001/ 5.003	2.109/ 49.894
Stock-Level	2.000/0.000	2.001/ 5.004	2.102/ 50.007

Emulation Delay in seconds

Transaction	Response Time	Menu Response Time
New-Order	0.10	0.10
Payment	0.10	0.10
Order-Status	0.10	0.10
Delivery (interactive)	0.10	0.10
Stock-Level	0.10	0.10

Test Duration

Ramup up time	60:00 minutes
Measurement interval	120:00.00 minutes
Number of checkpoints	4
Number of New Order transactions	8623563
Number of transactions (all types) completed in measurement interval	19173581