ALR	ALR Revolution 6X6 Client/Server	TPC-C Rev. 3.3
		Report Date: 09-Jul-1997

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$513,001	**10,665.53 tpmC**	**$48.10 per tpmC**	**30-Nov-1997**

Processors	Database Manager	Operating System	Other Software	Number of Users
6 Pentium® Pro 200 MHz 512KB L2 cache	Microsoft SQL Server 6.5 Enterprise Edition	Microsoft NT Server 4.0 Enterprise Edition	Microsoft IIS. Tuxedo 6.3 CFS	**9,000**

5 x Aquanta DM/6 Clients

ALR Revolution 6X6

9,000 NetPC's

10mbit Ethernet

100 mbit Ethernet

1 Inbuilt SCSI Controller + 1 x 4GB Hot-Pluggable Internal SCSI Disk

7 x SCSI RAID Controllers

105 x 4GB + 30 x 9GB Hot-Pluggable External SCSI Disks
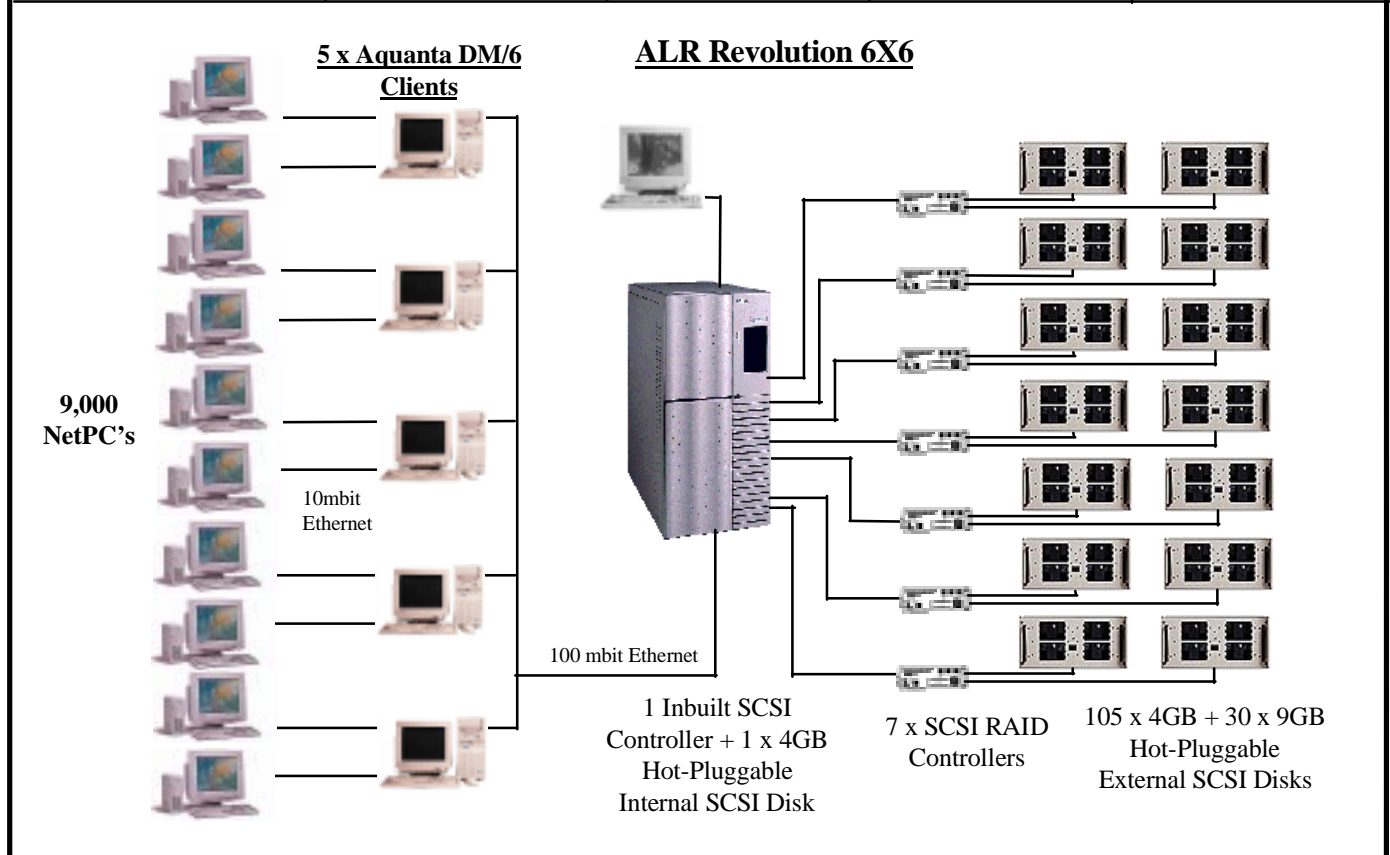
System Components	**Server**		**Clients**	
	Quantity	Type	Quantity	Type
Processors	6	200 MHz Pentium® Pro with 512KB Level 2 Cache	5	200MHz Pentium® Pro with 256KB Level 2 Cache
Memory	1	4096MB	5	256MB
Disk Controllers	7 1	SCSI RAID Inbuilt SCSI	5	Inbuilt IDE
Disk Drives	106 30	4GB 9GB	5	1.5GB
Total Storage		684 GB		7.5GB
CD-ROM / Tape	1	CD-ROM Drive	5	CD-ROM Drive

Advanced Logic Research, Inc. FDR Pricing		ALR Revolution 6X6 Client/Server				TPC-C Rev 3.3 7/9/97
Description	**Part Number**	**Third Party** **Brand Pricing**	**Unit List** **Price**	**Qty.**	**Extended** **Price**	**5 Years** **Maint.**
Server Hardware						
Revolution 6X6 200/512 Model B (includes 1 CPU)	74636602		$14,995	1	$14,995	$25,093
200-MHz 512KB Pentium Pro Proc Upgrade Kit	12968621		$1,819	4	$7,278	
Tri-6 CPU Module (includes 1 200-MHz/512 CPU)	12900150-21		$2,595	1	$2,595	
ECC Memory Board, 0-MB memory	(included w/ 74636602)		$0	1	$0	
DIMM, 256-MB	34327602		$3,739	16	$59,824	
3-ch ADAC PCI SCSI Cacheing RAID Ctlr	11900984		$1,315	7	$9,205	
VGA Card	(included w/ 74636602)		$0	1	$0	
12X CD-ROM Drive	(included w/ 74636602)		$0	1	$0	
10/100 PCI Network Interface Card	(included w/ 74636602)		$0	1	$0	
Quick Hot Swap Cage Kit 6D	(included w/ 74636602)		$0	1	$0	
Quick Hot Swap Drawer II	11910190		$1,795	16	$28,720	
4-GB SCA F/W Ultra SCSI-2	11351430		$1,179	106	$124,974	
9-GB SCA F/W Ultra SCSI-2	11351910		$1,936	30	$58,080	
14-Inch Color Monitor	11001034		$295	1	$295	
Keyboard	(included w/ 74636602)		$0	1	$0	
Mouse, 2-button PS/2	11600203		$26	1	$26	
Rack Cabinet (44U)	11910170		$2,195	3	$6,585	
Rack Coupling Kit (44U)	82321506		$165	2	$330	
Rack Cabinet Bezel Kit (44U)	(included w/ 11910170)		$0	3	$0	
Rack Stabilizer Kit (44U)	(included w/ 11910170)		$0	3	$0	
Rack Cabinet Side Panel Kit (44U)	82321503		$245	1	$245	
Rack Cabinet Filler Panels (2U)	82321203		$22	6	$132	
				Subtotal	**$313,284**	**$25,093**
Server Software						
Microsoft NT Server 4.0 Enterprise Edition, incl 25 CALs		Microsoft	2	$3,999	1	$3,999	$0
Microsoft SQL Server 6.5 Enterprise Edtion, unlimited user license		Microsoft	2	$28,999	1	$28,999	$10,475
				Subtotal	**$32,998**	**$10,475**
Client Hardware						
SYS: Aquanta DM/6 II, 0 Proc, 0MB Mem	CMT60072-ZFA	Unisys	1	$628	5	$3,140	$5,550
PROC:1x200MHz PentiumPro/256KB Cache	PRC6200-256	Unisys	1	$842	5	$4,210	
MEM: 64 MB Memory Upgrade	MTP6-64M	Unisys	1	$746	20	$14,920	
CTRL: VGA, 64-bit with 2MB	PCV102-PCI	Unisys	1	$135	5	$675	
DISK: 1.6GB IDE 3.5 Internal	HDI1600-5	Unisys	1	$236	5	$1,180	
CDROM: Twelve Speed IDE	CDR1200-AI	Unisys	1	$160	5	$800	
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH101007-PCI	Unisys	1	$119	5	$595	
ETHERNET: 10Mbit/sec, PCI 32-bit	ETH101-PCI	Unisys	1	$163	10	$1,630	
MONITOR:14-inch Color	EVG142-COL	Unisys	1	$264	5	$1,320	
KEYBD: 104 Key Spacesaver	PCK104-SKB	Unisys	1	$31	5	$155	
MOUSE: 2 Button PS2	PWM1-PS2	Unisys	1	$22	5	$110	
				Subtotal	**$28,735**	**$5,550**
Client Software						
Microsoft Windows NT Server 4.0, incl 5 CALs		Microsoft	2	$809	5	$4,045	$0
Microsoft SQL Workstation w/ Programmer's Toolkit		Microsoft	2	$499	1	$499	$0
Microsoft Visual C++ 32-bit edition (subscription)		Microsoft	2	$499	1	$499	$0
TUXEDO Core Functional Services 6.3 for NT		BEA	3	$3,000	5	$15,000	$11,250
				Subtotal	**$20,043**	**$11,250**
User Connectivity						
Ethernet Hub, 8-Port 100TX TrueFast (+ 10% spares)	NX-H8TX	Netlux	4	$399	3	$1,197	Spared
Ethernet Hub, 8-Port 10Base-T (+ 10% spares)	NX-H9+	Netlux	4	$52	1238	$64,376	Spared
				Subtotal	**$65,573**	**$0**
				Total	**$460,633**	**$52,368**

Notes:

1. All Microsoft maintenance is covered by the maintenance cost of Microsoft SQL Server.
2. 10% or minimum 2 spares are added in place of on-site service (products have a five
   year return-to-vendor warranty).
3. Pricing: 1=Unisys, 2=Microsoft, 3=BEA, 4=Netlux

Five Year Cost of Ownership	**$513,001**
TPC-C Throughput	**10,665.53**
$/tpmC	**$48.10**

The benchmark results and test methodology were audited by Richard Gimarc of Performance Metrics, Inc.

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 assumption 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 benchmarks specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org.

NUMERICAL QUANTITIES SUMMARY
ALR Revolution 6X6 Client/Server
Microsoft SQL Server 6.5 Enterprise Edition

MQTh, Computed Maximum Qualified Throughput: **10665.53**

% throughput difference, reported & reproducibility runs: 0.04%

Transaction Mix

New Order	44.78%
Payment	43.03%
Delivery	4.06%
Stock-Level	4.07%
Order-Status	4.07%

Response Times

Transaction	Average	Maximum	90th %ile
New-Order	1.27	16.30	2.63
Payment	1.31	15.12	2.60
Delivery	0.45	6.61	0.70
Stock-Level	2.32	15.72	4.00
Order Status	1.62	17.61	3.01
Menu	0.20	1.40	0.30
Delivery (Deferred)	0.84	7.19	1.19

Response time delay added for emulated components (seconds)

RT Response time	0.1
Menu Response time	0.1

Keying/Think Time Times (seconds)

Transaction	Minimum	Average	Maximum
New-Order	18.00/0	18.01/12.24	19.12/120
Payment	3.00/0	3.01/12.19	4.14/120
Delivery	2.00/0	2/5.07	3.08/50
Stock-Level	2.00/0	2/5.07	3.04/50
Order-Status	2.00/0	2/10.11	3.02/100

Test Duration

Ramp up time	33 minutes
Measurement interval (M)	30 minutes
Transactions (all types) completed during measurement interval	714574
Ramp-down time	16 minutes

Checkpointing:

Number of checkpoints	1
Checkpoint interval	30 minutes