	ALR Revolution 6X6 **Client/Server**	TPC-C Rev. 3.3
		Report Date: 19-Dec-1997

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$463,821	**13,089.30 tpmC**	**$35.44 per tpmC**	**31-Dec-1997**

Processors	Database Manager	Operating System	Other Software	Number of Users
6 Pentium® Pro 200 MHz 1MB L2 cache	Microsoft SQL Server 6.5 Enterprise Edition	Microsoft NT Server 4.0 Enterprise Edition	Microsoft IIS 3.0 Tuxedo 6.3 CFS	**10,650**

6 x Aquanta DM/6 II Clients   **ALR Revolution 6X6**

10,650 NetPC's

10mbit Ethernet

100 mbit Ethernet

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

7 x SCSI RAID Controllers

81 x 4GB + 57 x 9GB Hot-Pluggable External SCSI Disks
2 x Uninteruptable Power Supplies
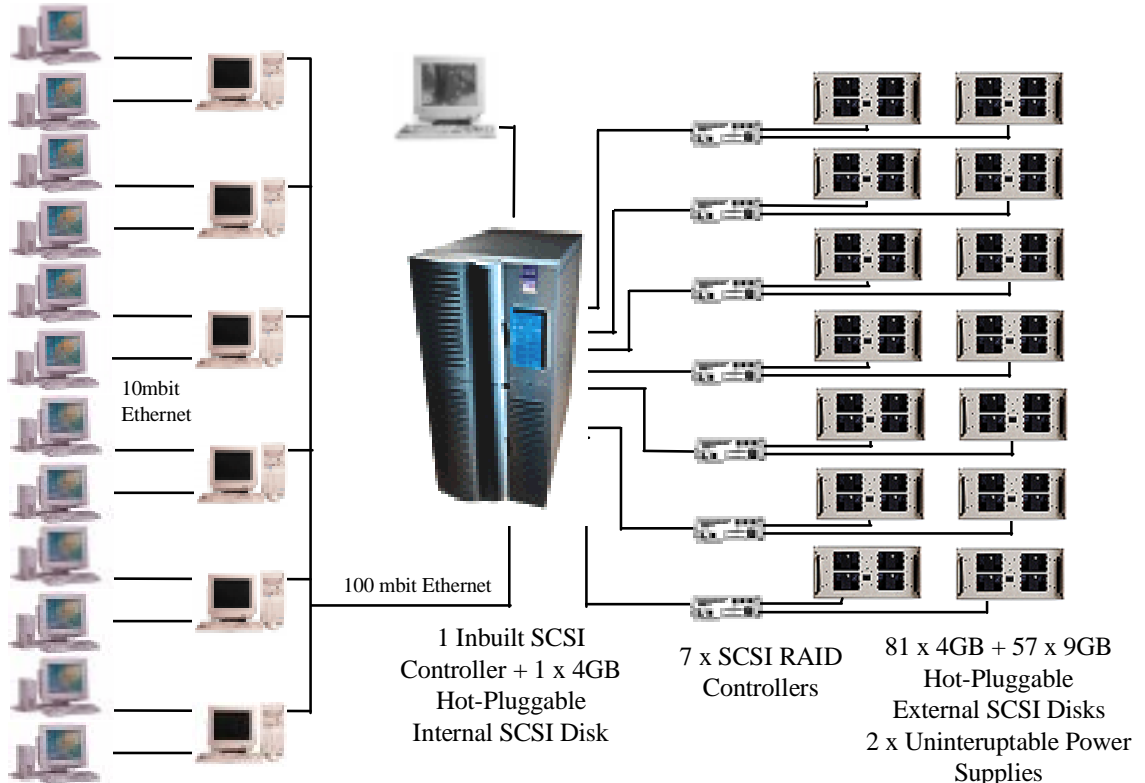
System Components	Server		Clients	
	Quantity	Type	Quantity	Type
Processors	6	200 MHz Pentium® Pro with 1MB Level 2 Cache	6	200MHz Pentium® Pro with 256KB Level 2 Cache
Memory	1	4096MB	6	256MB
Disk Controllers	7 1	SCSI RAID Inbuilt SCSI	6	Inbuilt IDE
Disk Drives	82 57	4GB 9GB	6	1.5GB
Total Storage		813.47 GB		7.5GB
CD-ROM / Tape	1	CD-ROM Drive	6	CD-ROM Drive

Advanced Logic Research, Inc.		ALR Revolution 6X6 (1MB L2) Client/Server				TPC-C Rev 3.3 19-Dec-1997
Description	**Part Number**	**Third Party Brand Pricing**	**Unit List Price**	**Qty.**	**Extended Price**	**5 Years Maint.**
Server Hardware						
Revolution 6X6 200/1M Model 1-128 (incl 1 CPU)	74636701		$10,717	1	$10,717	$20,079
PPRO 200/1M CPU Module Kit	12968612		$3,715	4	$14,860	
Tri-6 CPU Module (includes 1 200-MHz/1M CPU)	12968613		$3,934	1	$3,934	
ECC Memory Board, 0-MB memory	(included w/ 74636701)		$0	1	$0	
DIMM, 256-MB	34327500		$1,563	16	$25,007	
3-ch ADAC PCI SCSI Cacheing RAID Ctlr	11900984		$1,315	7	$9,205	
VGA Card	(included w/ 74636701)		$0	1	$0	
10/100 PCI Network Interface Card	CP000169		$290	1	$290	
Quick Hot Swap Cage Kit 6D	(included w/ 74636701)		$0	1	$0	
Quick Hot Swap Drawer II, w/ cables 7U	11910190		$1,795	16	$28,720	
4-GB SCA +10%spares	11351430		$750	91	$68,250	spared
9-GB SCA +10%spares	11351910		$1,395	54	$75,330	spared
9-GB SCA +10%spares	11351930		$1,695	10	$16,950	spared
14-Inch Color Monitor	11001034		$261	1	$261	
Keyboard	(included w/ 74636701)		$0	1	$0	
Mouse, 2-button PS/2	11600203		$21	1	$21	
Smart UPS 2200R	13001405		$1,546	2	$3,092	
Rack Cabinet (44U)	11910170		$2,002	3	$6,006	
Rack Coupling Kit (44U)	82321506		$150	2	$301	
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		$223	1	$223	
Rack Cabinet Filler Panels (2U)	82321203		$21	6	$123	
				Subtotal	**$263,290**	**$20,079**
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	$896	6	$5,376	$4,908
PROC:1x200MHz PentiumPro/256KB Cache	PRC6200-256	Unisys 1	$727	6	$4,362	
MEM: 64 MB Memory Upgrade	MTP6-64M	Unisys 1	$634	24	$15,216	
CTRL: VGA, 64-bit with 2MB	PCV102-PCI	Unisys 1	$123	6	$738	
DISK: 1.6GB IDE 3.5 Internal	HDI1600-5	Unisys 1	$234	6	$1,404	
CDROM: Twelve Speed IDE	CDR1200-AI	Unisys 1	$126	6	$756	
ETHERNET: 100Mbit/sec, PCI 32-bit	ETH101007-PCI	Unisys 1	$120	6	$720	
ETHERNET: 10Mbit/sec, PCI 32-bit	ETH101-PCI	Unisys 1	$133	12	$1,596	
MONITOR:14-inch Color	EVG142-COL	Unisys 1	$245	6	$1,470	
KEYBD: 104 Key Spacesaver	PCK104-SKB	Unisys 1	$34	6	$204	
MOUSE: 2 Button PS2	PWM1-PS2	Unisys 1	$26	6	$156	
				Subtotal	**$31,998**	**$4,908**
Client Software						
Microsoft Windows NT Server 4.0, incl 5 CALs		Microsoft 2	$809	6	$4,854	
Microsoft SQL Workstation w/ Programmer's Toolkit		Microsoft 2	$499	1	$499	
Microsoft Visual C++ 32-bit edition (subscription)		Microsoft 2	$499	1	$499	
TUXEDO Core Functional Services 6.3 for NT		BEA 3	$3,000	6	$18,000	$13,500
				Subtotal	**$23,852**	**$13,500**
User Connectivity						
Ethernet Hub, 8-Port 100TX TrueFast+10% spares	NX-H8TX	Netlux 4	$299	3	$897	spared
Ethernet Hub, 16-Port 10Base-T + 1-Port BNC+10% spares	NX-H16EZ	Netlux 4	$84	736	$61,824	spared
				Subtotal	**$62,721**	**$0**
				Total	**$414,859**	**$48,962**

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 onsite 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	**$463,821**
TPC-C Throughput	**13,089.30**
$/tpmC	**$35.44**

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

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

MQTh, Computed Maximum Qualified Throughput: **13089.30**

% throughput difference, reported & reproducibility runs: 0.20%

Transaction Mix

New Order	44.75%
Payment	43.17%
Delivery	4.04%
Stock-Level	4.03%
Order-Status	4.01%

Response Times

Transaction	Average	Maximum	90th %ile
New-Order	0.54	5.24	0.78
Payment	0.56	5.20	0.71
Delivery	0.39	4.64	0.70
Stock-Level	2.31	7.81	3.80
Order Status	1.07	6.25	1.60
Menu	0.22	3.59	0.30
Delivery (Deferred)	3.42	16.82	9.73

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	18.01/12.03	19.19/120.4
Payment	3.00/0	3/12.04	4.24/120.4
Delivery	2.00/0	2/5.08	3.15/50.7
Stock-Level	2.00/0	2/5.06	3.15/50.7
Order-Status	2.00/0	2/10.08	3.13/100.91

Test Duration

Ramp up time	93 minutes
Measurement interval (M)	30 minutes
Transactions (all types) completed during measurement interval	877586
Ramp-down time	23 minutes

Checkpointing:

Number of checkpoints	1
Checkpoint interval	30 minutes