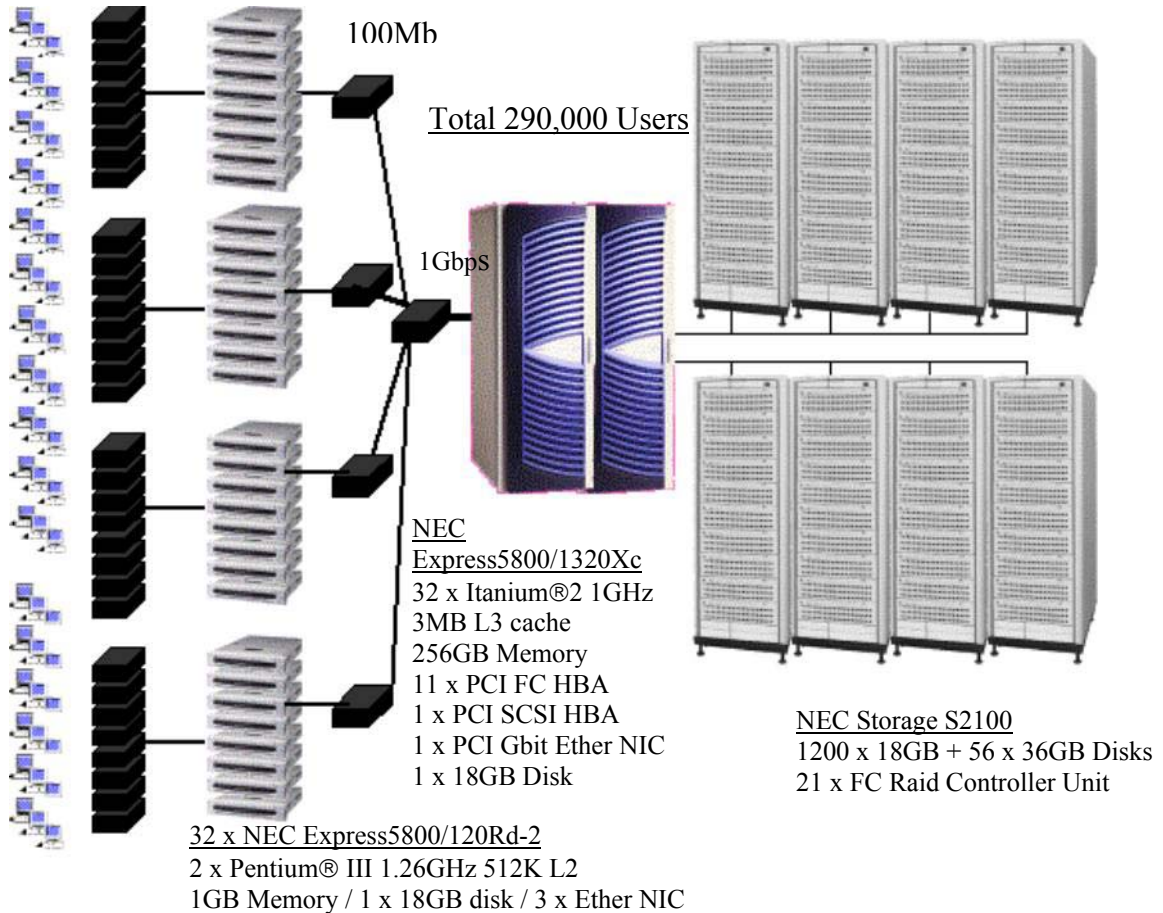




# NEC Express5800/1320Xc C/S with Express5800/120Rd-2

**TPC-C Rev.5.0**  
**Reported Date**  
**Dec 12, 2002**

<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price/Performance</b>	<b>Availability Date</b>
<b>\$ 4,409,084</b>	<b>342,746.25 tpmC</b>	<b>\$12.86 per tpmC</b>	<b>March 31, 2003</b>
<b>Processors</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>
32 Intel Itanium®2 1GHz for Server 64 Intel Pentium®III 1.26GHz for Client	Microsoft SQL Server 2000 Enterprise Edition(64-bit)	Microsoft Windows .NET Server 2003 Datacenter Edition	Windows 2000 Server Microsoft VC++ Microsoft COM+
<b>Number of Users</b>			
<b>290,000</b>			



System Component	Server		Each Client	
<b>Processors</b>	32	Itanium®2 1GHz	2	Pentium® III 1.26GHz
<b>Cache</b>		3MB L3 Cache		512KB L2 Cache
<b>Memory</b>		1 GB x 256		512MB x 2
<b>Disk Controllers</b>	11 1	QLA2200F Adaptec 39160	1	On-board SCSI
<b>Disk Drives</b>	1 1,200 56	18GB (16.6GB Usable) 18GB (16.6GB Usable) 36GB (33.2GB Usable)	1	18GB
<b>Total Storage</b>		23,634GB		18GB
<b>Others</b>	1 1	DVD-ROM Drive 1Gbps Ether NIC	1 2 1	CD-ROM Drive On-board Ether controller External Ether controller



**NEC Express5800/1320Xc**  
C/S with Express5800/120Rd-2

TPC-C REV 5.0

Report Date:

12/12/02

Description	Part Number	Third Party Brand	Pricing	Unit Price	Qty	Extended Price	3-yr Mnt. Price
<b>Server Hardware</b>							
Express5800/1320Xc system	050-02170-001	NEC	1	1,396,490	1	1,396,490	983,806
Base Original 32	Included	NEC	1	-	1	-	-
Cell Card Original	Included	NEC	1	-	8	-	-
CPU(1GHz/3MB)	Included	NEC	1	-	32	-	-
Memory(4GB)	Included	NEC	1	-	64	-	-
Base PCI Box	Included	NEC	1	-	3	-	-
Core PCI Box(Windows Model)	Included	NEC	1	-	1	-	-
PCI Cable(2.5m)	Included	NEC	1	-	6	-	-
PCI Cable(3.0m)	Included	NEC	1	-	2	-	-
Expansion Cabinet	Included	NEC	1	-	1	-	-
18GB 10K rpm HDD	Included	NEC	1	-	1	-	-
Gbit Ether NIC	Included	NEC	1	-	1	-	-
Mouse/Keyboard	Included	NEC	1	-	1	-	-
SCSI HBA with VHDCI cables	Included	NEC	1	-	1	-	-
Windows .NET Server 2003, Datacenter Edition	Included	NEC	1	-	1	-	-
NEC AccuSync50 (15" monitor)	AS50	NEC	3	135	1	135	-
FC HBA QLA2200 (+2 spares)	QLA2200F-CK	Qlogic	3	1,060	13	13,780	-
FC Cable 10M SC-SC (+2 spares)	050-02059-000	NEC	1	200	3	600	-
<b>Subtotal</b>						1,411,005	983,806
<b>Disk Subsystem</b>							
NEC Storage S2100 Basic Unit	050-02055-000	NEC	1	44,021	21	924,441	222,825
2 RAID_Cntrl, 512MB Cache, 1DE, 3 x 18GB Drive							
1GB(2 x 512MB) PC133 SDRAM memory,	062-02029-000	NEC	1	999	4	3,996	-
S2100 DE (including 2 FC DB9-DB9 cables)	050-02056-000	NEC	1	6,016	70	421,120	-
18GB 10k rpm FC HDD (+10% spares)	050-02057-000	NEC	1	450	1254	564,300	-
36GB 10K rpm FC HDD (+10% spares)	050-02058-000	NEC	1	815	62	50,530	-
42U Rackframe	050-01790-000	NEC	1	1,799	11	19,789	-
FC Cable 10M SC-SC (+10% spares)	050-02059-000	NEC	1	200	24	4,800	-
<b>Subtotal</b>						1,988,976	222,825
<b>Server Software</b>							
SQL Server2000 Ent. Edition(64-bit) ,Processor License	810-00560	Microsoft	2	16,541	32	529,312	5,850
<b>Subtotal</b>						529,312	5,850
<b>Client Hardware</b>							
NEC Express5800/120Rd-2							
Base System with 1 x Pentium III 1.26GHz/512KB	850156001	NEC	1	2,349	32	75,168	-
1 x Pentium III 1.26GHz/512KB BTO Option	062-02025-000	NEC	1	699	32	22,368	-
1GB(2 x 512MB) PC133 SDRAM memory,	062-02029-000	NEC	1	999	32	31,968	-
1 x 18.2GB 10K rpm Ultra160 HDD,	062-02011-000	NEC	1	339	32	10,848	-
CD-ROM, 2 x On-board LAN, KB/MS	Included	NEC	1	-	32	-	-
3 years of warranty service to 4-hour response, 7x24	WG-0000-1095-7244	NEC	1	1,399	32	-	44,768
NEC AccuSync50 (15" monitor)	AS50	NEC	3	135	32	4,320	-
42U Rackframe	050-01790-000	NEC	1	1,799	2	3,598	-
Intel PRO/100 S Server Adapter *	PILA8470C3	Intel	3	69	1	69	-
Intel PRO/100 S Server Adapter, 5-pack *	PILA8470C3PAK5	Intel	3	277	7	1,939	-
Fast Ether Cable 25' RJ45-RJ45 (+10% spares)	C5E-114GY-25FB	AESP	3	11	110	1,210	-
<b>Subtotal</b>						151,488	44,768
<b>Client Software</b>							
Windows2000 Server, Server License	C11-00821	Microsoft	2	738	32	23,616	(Included)
Visual C++ .NET Standard	254-00170	Microsoft	2	109	1	109	(Included)
<b>Subtotal</b>						23,725	
<b>User Connectivity</b>							
24-port Fast Ether Switch w/ 2 optional uplink (+2 spare)	AT-8224XL-10	Allied Telesyn	4	649	3	1,947	-
1-port 1000BASE-SX expansion module (+2 spares)	AT-A15/SX	Allied Telesyn	4	325	3	975	-
16-port Fast Ether Switch (+2 spares)	AT-FS716	Allied Telesyn	4	115	6	690	-
<b>Subtotal</b>						3,612	0
<b>TOTAL</b>						4,108,118	1,257,249
NEC brand total(Pricing 1-NEC)						3,530,016	1,251,399
NEC brand Large Purchase Cash Prepay Discount(-20%)						(706,003)	(250,280)
<b>Notes:</b>						3-Yr. Cost of Ownership: <b>\$4,409,084</b>	
Client software maintenance is covered by the maintenance costs of Microsoft SQL Server						tpmC Rating: <b>342746.25</b>	
Pricing: 1-NEC 2-Microsoft 3-CDW 4-Allied Telesyn						<b>\$ / tpmC: 12.860</b>	
* = These include 10% spare for "Intel PRO/100 S Server Adapter"							
<b>Results and methodology audited by Francois Raab of InfoSizing, Inc. (www.sizing.com)</b>							
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 reflects 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.							

## Numerical Quantities Summary

<b>MQTh, Computed Maximum Qualified Throughput</b>		342,746.25 tpmC	
<b><u>Response Times(in seconds)</u></b>	<b><u>90%</u></b>	<b><u>Average</u></b>	<b><u>Maximum</u></b>
New-Order	3.43	1.69	30.43
Payment	3.36	1.63	26.27
Stock-Level	3.72	1.88	28.92
Delivery(interactive portion)	0.11	0.10	5.25
Delivery(deferred portion)	0.27	0.19	16.03
Order-status	3.46	1.69	28.02
Menu	0.11	0.10	5.29
<b>Response time delay added for emulated components</b>			0.1
<b><u>Transaction Mix , in percent of total transaction</u></b>			
New-Order			44.85%
Payment			43.06%
Order-Status			4.02%
Delivery			4.04%
Stock-Level			4.03%
<b><u>Keying/Think Times (in seconds)</u></b>	<b><u>Min.</u></b>	<b><u>Average</u></b>	<b><u>Max</u></b>
New-Order	18.00 0.00	18.02 12.07	18.06 120.72
Payment	3.00 0.00	3.02 12.08	3.07 120.72
Order-Status	2.00 0.00	2.02 10.09	2.06 100.71
Delivery	2.00 0.00	2.02 5.08	2.06 50.71
Stock-Level	2.00 0.00	2.02 5.06	2.06 50.71
<b><u>Test Duration</u></b>			
Ramp-up time			60 minutes
Measurement interval			120 minutes
Number of checkpoints			4
Checkpoint interval			30 minutes
Number of transactions (all types) completed in measurement interval			95,419,807