## NEC Express5800/140Hc

### C/S with 5 Express5800/120Lf

<table>
<thead>
<tr>
<th>Total System Cost</th>
<th>TPC-C Throughput</th>
<th>Price/Performance</th>
<th>Availability Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>$310,721</td>
<td>48,150.72 tpmC</td>
<td>$6.45 per tpmC</td>
<td>July 31, 2002</td>
</tr>
</tbody>
</table>

### System Component

<table>
<thead>
<tr>
<th>Processors</th>
<th>Database Manager</th>
<th>Operating System</th>
<th>Other Software</th>
<th>Number of Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x 2 Intel Pentium III 1.0GHz for Client</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total 38500 Users**

**Disk Subsystem**

- 17 x NEC 3U Disk Expansion Unit
- 179 x 18GB Disks

### System Details

<table>
<thead>
<tr>
<th>System Component</th>
<th>Server</th>
<th>Each Client</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processors</td>
<td>4 Intel Xeon MP 1.6GHz 1MB L3 Cache</td>
<td>2 Intel Pentium III 1.0GHz 256KB L2 Cache</td>
</tr>
<tr>
<td>Cache</td>
<td>1MB L3 Cache</td>
<td>1GB</td>
</tr>
<tr>
<td>Memory</td>
<td>8GB</td>
<td>1GB</td>
</tr>
<tr>
<td>Disk Controllers</td>
<td>6 x Mylex eXtremeRAID2000 Onboard SCSI</td>
<td>1 On-board SCSI</td>
</tr>
<tr>
<td>Disk Drives</td>
<td>18GB</td>
<td>18GB</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>18GB</td>
<td>18GB</td>
</tr>
<tr>
<td>Total Storage</td>
<td>3,073 GB</td>
<td>18GB</td>
</tr>
<tr>
<td>Others</td>
<td>CD-ROM Drive</td>
<td>1 CD-ROM Drive On-board Ether NIC</td>
</tr>
<tr>
<td></td>
<td>On-board 1Gbps Ether NIC</td>
<td>2 On-board Ether NIC</td>
</tr>
</tbody>
</table>
## TPC-C REV 5.0 Report

**Report Date:** June 20, 2002

### Server Hardware
- **Base system with 1 x Pentium Xeon 1.6GHz/1MB:**
  - Part Number: NS240000255
  - Brand: NEC
  - Pricing: $8,900
  - Qty: 1
  - Extended 3-yr Mnt. Price: $2,136

- **Pentium Xeon 1.6GHz/1MB BTO Option:**
  - Part Number: 062-02066-000
  - Brand: NEC
  - Pricing: $5,499
  - Qty: 1
  - Extended 3-yr Mnt. Price: $16,497

- **4GB (4 x 1GB DDR200 DIMM) memory,** **18GB 10K rpm HHD,** **On-board Gbit Ether LAN,** **CD-ROM, On-board LAN, KB/MS:**
  - Part Number: Included
  - Brand: NEC
  - Pricing: $0
  - Qty: 1
  - Extended 3-yr Mnt. Price: $0

- **20/40GB SCSI DDS-4 DAT Internal Drive:**
  - Part Number: ADT-4010-IN-00
  - Brand: NEC
  - Pricing: $949
  - Qty: 1
  - Extended 3-yr Mnt. Price: $949

- **NEC AccuSync50 (15" monitor):**
  - Part Number: AS50
  - Brand: NEC
  - Pricing: $369
  - Qty: 1
  - Extended 3-yr Mnt. Price: $369

### Disk Subsystem
- **Extreme RAID2000 4channel controller (+2 spares):**
  - Part Number: E2000-4-32NB
  - Brand: Mylex
  - Pricing: $1,427
  - Qty: 3
  - Extended 3-yr Mnt. Price: $11,416

- **3U Disk Expansion Unit ST1430(+2 spares):**
  - Part Number: NDE-1430-00-00
  - Brand: NEC
  - Pricing: $2,299
  - Qty: 1
  - Extended 3-yr Mnt. Price: $43,681

- **18GB 15k rpm HDD:(+10% spares):**
  - Part Number: 062-02118-000
  - Brand: NEC
  - Pricing: $486
  - Qty: 1
  - Extended 3-yr Mnt. Price: $95,742

### Server Software
- **SQL Server2000 Ent. Edition, Unlimited Client Licenses:**
  - Part Number: 810-00846
  - Brand: Microsoft
  - Pricing: $16,541
  - Qty: 2
  - Extended 3-yr Mnt. Price: $66,164

- **Windows2000 Advanced Server, 25 Client Licenses:**
  - Part Number: C10-00475
  - Brand: Microsoft
  - Pricing: $2,399
  - Qty: 2
  - Extended 3-yr Mnt. Price: $3,690

### Client Hardware
- **NEC Express5800/120Lf System:**
  - Part Number: 850151001
  - Brand: NEC
  - Pricing: $1,899
  - Qty: 1
  - Extended 3-yr Mnt. Price: $9,495

- **1 x Pentium III 1GHz/256KB memory,** **1 x 18GB 10K rpm HHD,** **CD-ROM, 2 x On-board LAN, KB/MS:**
  - Part Number: Included
  - Brand: NEC
  - Pricing: $0
  - Qty: 1
  - Extended 3-yr Mnt. Price: $0

- **NEC AccuSync50 (15" monitor):**
  - Part Number: AS50
  - Brand: NEC
  - Pricing: $1,599
  - Qty: 1
  - Extended 3-yr Mnt. Price: $3,198

### Client Software
- **Windows2000 Server:**
  - Part Number: C11-00821
  - Brand: Microsoft
  - Pricing: $738
  - Qty: 2
  - Extended 3-yr Mnt. Price: $3,690

- **Visual C++ Professional 6.0:**
  - Part Number: 048-00317
  - Brand: Microsoft
  - Pricing: $549
  - Qty: 2
  - Extended 3-yr Mnt. Price: $549

### User Connectivity
- **Allied Telesyn 6-port Gigabit Switch (+2spare):**
  - Part Number: AT-9006T
  - Brand: Allied Telesyn
  - Pricing: $2,190
  - Qty: 3
  - Extended 3-yr Mnt. Price: $6,570

### Notes:
- All Microsoft maintenance is covered by the maintenance costs of Microsoft SQL Server.
- 3-Yr. Cost of Ownership: $310,721
- TPC-Rating: 48150.72
- $/tpmC: 6.45

**Audited by Francois Raab and Bradley Askins, InfoSizing, 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 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.
### Numerical Quantities Summary

<table>
<thead>
<tr>
<th>Response Times (in seconds)</th>
<th>90%</th>
<th>Average</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>New-Order</td>
<td>0.70</td>
<td>0.42</td>
<td>6.72</td>
</tr>
<tr>
<td>Payment</td>
<td>0.58</td>
<td>0.31</td>
<td>6.20</td>
</tr>
<tr>
<td>Stock-Level</td>
<td>2.30</td>
<td>1.63</td>
<td>7.77</td>
</tr>
<tr>
<td>Delivery (interactive portion)</td>
<td>0.11</td>
<td>0.10</td>
<td>1.09</td>
</tr>
<tr>
<td>Delivery (deferred portion)</td>
<td>1.08</td>
<td>0.58</td>
<td>3.95</td>
</tr>
<tr>
<td>Order-status</td>
<td>0.62</td>
<td>0.34</td>
<td>6.79</td>
</tr>
<tr>
<td>Menu</td>
<td>0.11</td>
<td>0.10</td>
<td>2.62</td>
</tr>
</tbody>
</table>

Response time delay added for emulated components 0.1

**Transaction Mix, in percent of total transaction**

- New-Order: 44.93%
- Payment: 43.05%
- Order-status: 4.00%
- Delivery: 4.01%
- Stock-level: 4.01%

**Keying/Think Times (in seconds)**

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Average</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>New-Order</td>
<td>18.00</td>
<td>18.02</td>
<td>18.04</td>
</tr>
<tr>
<td>Payment</td>
<td>3.00</td>
<td>3.02</td>
<td>3.04</td>
</tr>
<tr>
<td>Stock-Level</td>
<td>2.00</td>
<td>2.02</td>
<td>2.04</td>
</tr>
<tr>
<td>Delivery</td>
<td>2.00</td>
<td>2.02</td>
<td>2.04</td>
</tr>
<tr>
<td>Order-status</td>
<td>2.00</td>
<td>2.02</td>
<td>2.04</td>
</tr>
</tbody>
</table>

**Test Duration**

- Ramp-up time: 50 minutes
- Measurement interval: 120 minutes
- Number of checkpoints: 4
- Checkpoint interval: 30 minutes
- Number of transactions (all types) completed in measurement interval: 13,377,224