## NEC Corporation

Express5800/120Rj-2  
(Intel Xeon X5260)

<table>
<thead>
<tr>
<th>SPECint®2006</th>
<th>27.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_base2006</td>
<td>22.6</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 9006  
**Test date:** Feb-2008  
**Test sponsor:** NEC Corporation  
**Hardware Availability:** Jan-2008  
**Tested by:** NEC Corporation  
**Software Availability:** Nov-2007

### Hardware

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon X5260</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>3.33 GHz, 6 MB L2, 1333 MHz bus</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>3333</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>4 cores, 2 chips, 2 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>6 MB I+D on chip per chip</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>None</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1x146.5 GB SAS, 15000RPM</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

| Operating System             | SUSE Linux Enterprise Server 10 (x86_64) SP1,                        |
|                              | Kernel 2.6.16.46-0.12-smp                                          |
| Compiler                    | Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: l_cc_p_10.1.008 |
| Auto Parallel               | Yes                                                                 |
| File System                 | ext2                                                                |
| System State                | Run level 3 (multi-user)                                            |
| Base Pointers               | 32-bit                                                              |
| Peak Pointers               | 32/64-bit                                                           |
| Other Software              | MicroQuill SmartHeap library 8.1                                    |
|                             | binutils-2.17.tar.gz, Version 2.17                                  |

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**SPECint2006 = 27.0**

**SPECint_base2006 = 22.6**
SPEC CINT2006 Result

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(Intel Xeon X5260)

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SPECint_base2006 = 22.6

CPU2006 license: 9006
Test sponsor: NEC Corporation
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Results Table

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<th>Benchmark</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
<th>Peak Seconds</th>
<th>Peak Ratio</th>
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<td>21.7</td>
<td>453</td>
<td>21.6</td>
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<td>21.5</td>
<td>362</td>
<td>27.0</td>
<td>362</td>
<td>27.0</td>
</tr>
<tr>
<td>401.bzip2</td>
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<td>18.1</td>
<td>536</td>
<td>18.0</td>
<td>537</td>
<td>18.0</td>
<td>496</td>
<td>19.5</td>
<td>496</td>
<td>19.5</td>
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<tr>
<td>403.gcc</td>
<td>500</td>
<td>16.1</td>
<td>502</td>
<td>16.0</td>
<td>501</td>
<td>16.1</td>
<td>397</td>
<td>20.3</td>
<td>396</td>
<td>20.3</td>
</tr>
<tr>
<td>429.mcf</td>
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<td>24.9</td>
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<td>24.9</td>
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<td>24.9</td>
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<td>24.6</td>
<td>371</td>
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<td>482</td>
<td>21.8</td>
<td>482</td>
<td>21.7</td>
<td>482</td>
<td>21.8</td>
<td>436</td>
<td>24.1</td>
<td>436</td>
<td>24.1</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>533</td>
<td>17.5</td>
<td>534</td>
<td>17.5</td>
<td>533</td>
<td>17.5</td>
<td>307</td>
<td>30.4</td>
<td>307</td>
<td>30.4</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>621</td>
<td>19.5</td>
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<td>19.5</td>
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<td>19.3</td>
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<td>21.5</td>
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<td>64.1</td>
<td>323</td>
<td>64.1</td>
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<tr>
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<td>597</td>
<td>37.1</td>
</tr>
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<td>15.4</td>
<td>406</td>
<td>15.4</td>
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<td>16.6</td>
</tr>
<tr>
<td>473.astar</td>
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<td>16.2</td>
<td>434</td>
<td>16.2</td>
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<td>16.1</td>
<td>400</td>
<td>17.6</td>
<td>396</td>
<td>17.7</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>243</td>
<td>28.4</td>
<td>243</td>
<td>28.4</td>
<td>243</td>
<td>28.4</td>
<td>243</td>
<td>28.4</td>
<td>243</td>
<td>28.4</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores

Platform Notes

Bios settings:
Intel SpeedStep Technology: Disabled

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode

The NEC Express5800/120Rh-1(Intel Xeon Processor X5260),
the NEC Express5800/120Rj-2(Intel Xeon Processor X5260),
the Bull NovaScale R440 E1 (Intel Xeon X5260, 3.33GHz) and
the Bull NovaScale R460 E1 (Intel Xeon X5260, 3.33GHz) models are electronically equivalent.
The results have been measured on a NEC Express5800/120Rj-2(Intel Xeon Processor X5260) model.

Base Compiler Invocation

C benchmarks:
    icc

Continued on next page
**SPEC CINT2006 Result**

**NEC Corporation**

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| SPECint2006 = | 27.0 |
| SPECint_base2006 = | 22.6 |

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### Base Compiler Invocation (Continued)

C++ benchmarks:
- icpc

### Base Portability Flags

- `400.perlbench`: `-DSPEC_CPU_LINUX_IA32`
- `462.libquantum`: `-DSPEC_CPU_LINUX`
- `483.xalancbmk`: `-DSPEC_CPU_LINUX`

### Base Optimization Flags

**C benchmarks:**
- `-fast`  
- `-vec-guard-write`  
- `-parallel`  
- `-par-runtime-control`

**C++ benchmarks:**
- `-xT`  
- `-ipo`  
- `-O3`  
- `-no-prec-div`  
- `-Wl,-z,muldefs`  
- `-L/opt/SmartHeap_8.1/lib -lsmartheap`

### Base Other Flags

**C benchmarks:**
- `403.gcc`: `-Dalloca=_alloca`

### Peak Compiler Invocation

**C benchmarks (except as noted below):**
- `icc`

- `401.bzip2`:
  - `/opt/intel/cce/10.1.008/bin/icc`
  - `-L/opt/intel/cce/10.1.008/lib`
  - `-I/opt/intel/cce/10.1.008/include`

- `456.hmmer`:
  - `/opt/intel/cce/10.1.008/bin/icc`
  - `-L/opt/intel/cce/10.1.008/lib`
  - `-I/opt/intel/cce/10.1.008/include`

**C++ benchmarks:**
- icpc
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Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
-prefetch
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32
403.gcc: -fast -inline-calloc -opt-malloc-options=3
429.mcf: -fast -prefetch
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec-div -ansi-alias
456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
-auto-ilp32
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap
483.xalancbmk: basepeak = yes
# NEC Corporation

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## Peak Other Flags

**C benchmarks:**

403.gcc: -Dalloca=_alloca

The flags file that was used to format this result can be browsed at  

You can also download the XML flags source by saving the following link:  