SPEC® CFP2006 Result

NEC Corporation
Express5800/120Li
(Intel Xeon processor 5130)

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

SPECfp®_rate2006 = 36.7
SPECfp_rate_base2006 = 35.6

Hardware

- CPU Name: Intel Xeon 5130
- CPU Characteristics: 2.00 GHz, 4 MB L2, 1333 MHz bus
- CPU MHz: 2000
- FPU: Integrated
- CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
- CPU(s) orderable: 1,2 chips
- Primary Cache: 32 KB I + 32 KB D on chip per core
- Secondary Cache: 4 MB I+D on chip per chip

Operating System:
64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64

Software

- Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l_cc_c_9.1.049
- Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package ID: l_fc_c_9.1.045
- Auto Parallel: No
- File System: ext2

Test date: Oct-2007
Hardware Availability: May-2007
Software Availability: Apr-2007

Continued on next page
SPEC CFP2006 Result

NEC Corporation
Express5800/120Li
(Intel Xeon processor 5130)

SPECfp_rate2006 = 36.7
SPECfp_rate_base2006 = 35.6

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2007
Hardware Availability: May-2007

System State: Multiuser, Runlevel 3
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Software Availability: Apr-2007

Other Software: None

L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x146.5 GB SAS, 15000RPM
Other Hardware: None

Operating System Notes
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs

General Notes
The system bus runs at 1333 MHz
All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path for include and library files.

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>4</td>
<td>1685</td>
<td>32.3</td>
<td>1685</td>
<td>32.3</td>
<td>1686</td>
<td>32.2</td>
<td>1685</td>
<td>32.3</td>
<td>1686</td>
<td>32.2</td>
</tr>
<tr>
<td>416.gamess</td>
<td>4</td>
<td>1434</td>
<td>54.6</td>
<td>1433</td>
<td>54.7</td>
<td>1434</td>
<td>54.6</td>
<td>1433</td>
<td>54.7</td>
<td>1434</td>
<td>54.6</td>
</tr>
<tr>
<td>433.milc</td>
<td>4</td>
<td>1699</td>
<td>21.6</td>
<td>1698</td>
<td>21.6</td>
<td>1697</td>
<td>21.6</td>
<td>1697</td>
<td>21.6</td>
<td>1697</td>
<td>21.6</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>4</td>
<td>997</td>
<td>36.5</td>
<td>996</td>
<td>36.6</td>
<td>997</td>
<td>36.5</td>
<td>997</td>
<td>36.5</td>
<td>997</td>
<td>36.5</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>4</td>
<td>593</td>
<td>48.1</td>
<td>592</td>
<td>48.1</td>
<td>592</td>
<td>48.1</td>
<td>592</td>
<td>48.1</td>
<td>592</td>
<td>48.1</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>4</td>
<td>1097</td>
<td>43.6</td>
<td>1102</td>
<td>43.4</td>
<td>1102</td>
<td>43.4</td>
<td>1102</td>
<td>43.4</td>
<td>1102</td>
<td>43.4</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>4</td>
<td>1640</td>
<td>22.9</td>
<td>1639</td>
<td>22.9</td>
<td>1639</td>
<td>22.9</td>
<td>1639</td>
<td>22.9</td>
<td>1639</td>
<td>22.9</td>
</tr>
<tr>
<td>444.namd</td>
<td>4</td>
<td>766</td>
<td>41.9</td>
<td>765</td>
<td>41.9</td>
<td>765</td>
<td>41.9</td>
<td>765</td>
<td>41.9</td>
<td>765</td>
<td>41.9</td>
</tr>
<tr>
<td>447.dealII</td>
<td>4</td>
<td>727</td>
<td>63.0</td>
<td>726</td>
<td>63.0</td>
<td>726</td>
<td>63.0</td>
<td>726</td>
<td>63.0</td>
<td>726</td>
<td>63.0</td>
</tr>
<tr>
<td>450.soplex</td>
<td>4</td>
<td>1274</td>
<td>26.2</td>
<td>1273</td>
<td>26.2</td>
<td>1273</td>
<td>26.2</td>
<td>1273</td>
<td>26.2</td>
<td>1273</td>
<td>26.2</td>
</tr>
<tr>
<td>453.povray</td>
<td>4</td>
<td>389</td>
<td>54.7</td>
<td>389</td>
<td>54.6</td>
<td>389</td>
<td>54.6</td>
<td>389</td>
<td>54.6</td>
<td>389</td>
<td>54.6</td>
</tr>
<tr>
<td>454.calculix</td>
<td>4</td>
<td>796</td>
<td>41.5</td>
<td>796</td>
<td>41.5</td>
<td>796</td>
<td>41.5</td>
<td>796</td>
<td>41.5</td>
<td>796</td>
<td>41.5</td>
</tr>
<tr>
<td>465.tonto</td>
<td>4</td>
<td>1004</td>
<td>39.2</td>
<td>1003</td>
<td>39.2</td>
<td>1003</td>
<td>39.2</td>
<td>1003</td>
<td>39.2</td>
<td>1003</td>
<td>39.2</td>
</tr>
<tr>
<td>470.lbm</td>
<td>4</td>
<td>2983</td>
<td>18.4</td>
<td>2982</td>
<td>18.4</td>
<td>2982</td>
<td>18.4</td>
<td>2982</td>
<td>18.4</td>
<td>2982</td>
<td>18.4</td>
</tr>
<tr>
<td>481.wrf</td>
<td>4</td>
<td>1144</td>
<td>39.0</td>
<td>1143</td>
<td>39.0</td>
<td>1143</td>
<td>39.0</td>
<td>1143</td>
<td>39.0</td>
<td>1143</td>
<td>39.0</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>4</td>
<td>2085</td>
<td>37.4</td>
<td>2081</td>
<td>37.5</td>
<td>2079</td>
<td>37.5</td>
<td>2079</td>
<td>37.5</td>
<td>2079</td>
<td>37.5</td>
</tr>
</tbody>
</table>

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

Express5800/120Li  
(Intel Xeon processor 5130)

<table>
<thead>
<tr>
<th>SPECfp_rate2006</th>
<th>36.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_rate_base2006</td>
<td>35.6</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 9006  
**Test date:** Oct-2007  
**Test sponsor:** NEC Corporation  
**Hardware Availability:** May-2007  
**Tested by:** NEC Corporation  
**Software Availability:** Apr-2007

### Base Compiler Invocation

- C benchmarks: `icc`
- C++ benchmarks: `icpc`
- Fortran benchmarks: `ifort`
- Benchmarks using both Fortran and C: `icc ifort`

### Base Portability Flags

- 410.bwaves: `-DSPEC_CPU_LP64`
- 416.gamess: `-DSPEC_CPU_LP64`
- 433.milc: `-DSPEC_CPU_LP64`
- 434.zeusmp: `-DSPEC_CPU_LP64`
- 435.gromacs: `-DSPEC_CPU_LP64` `-nofor_main`
- 436.cactusADM: `-DSPEC_CPU_LP64` `-nofor_main`
- 437.leslie3d: `-DSPEC_CPU_LP64`
- 444.namd: `-DSPEC_CPU_LP64`
- 447.dealII: `-DSPEC_CPU_LP64`
- 450.soplex: `-DSPEC_CPU_LP64`
- 453.povray: `-DSPEC_CPU_LP64`
- 454.calculix: `-DSPEC_CPU_LP64` `-nofor_main`
- 459.GemsFDTD: `-DSPEC_CPU_LP64`
- 465.tonto: `-DSPEC_CPU_LP64`
- 470.lbm: `-DSPEC_CPU_LP64`
- 481.wrf: `-DSPEC_CPU_LP64` `-DSPEC_CPU_CASE_FLAG` `-DSPEC_CPU_LINUX`
- 482.sphinx3: `-DSPEC_CPU_LP64`

### Base Optimization Flags

- C benchmarks: `-fast`
- C++ benchmarks: `-fast`
- Fortran benchmarks: `-fast`
- Benchmarks using both Fortran and C: `-fast`
SPEC CFP2006 Result

NEC Corporation
Express5800/120Li
(Intel Xeon processor 5130)

SPECfp_rate2006 = 36.7
SPECfp_rate_base2006 = 35.6

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2007
Hardware Availability: May-2007
Software Availability: Apr-2007

Peak Compiler Invocation

C benchmarks:
/opt/intel/cc/9.1.049/bin/icc -I/opt/intel/cc/9.1.049/include
-L/opt/intel/cc/9.1.049/lib

C++ benchmarks (except as noted below):
icpc
450.soplex: /opt/intel/cc/9.1.049/bin/icpc
-I/opt/intel/cc/9.1.049/include -L/opt/intel/cc/9.1.049/lib

Fortran benchmarks (except as noted below):
ifort
434.zeusmp: /opt/intel/fc/9.1.045/bin/ifort
-I/opt/intel/fc/9.1.045/include -L/opt/intel/fc/9.1.045/lib

Benchmarks using both Fortran and C:
icc ifort

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64 -nofor_main
441.namd: -DSPEC_CPU_LP64
444.povray: -DSPEC_CPU_LP64
453.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
433.milc: -prof_gen(pass 1) -prof_use(pass 2) -fast
470.lbm: Same as 433.milc
482.sphinx3: -fast

C++ benchmarks:

Continued on next page
SPEC CFP2006 Result

NEC Corporation

Express5800/120Li
(Intel Xeon processor 5130)

SPECfp_rate2006 = 36.7
SPECfp_rate_base2006 = 35.6

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Oct-2007
Hardware Availability: May-2007
Software Availability: Apr-2007

Peak Optimization Flags (Continued)

444.namd: basepeak = yes
447.dealII: -prof_gen(pass 1) -prof_use(pass 2) -fast
450.soplex: Same as 447.dealII
453.povray: Same as 447.dealII

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: basepeak = yes
434.zeusmp: -fast
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: -prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:
435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast
436.cactusADM: basepeak = yes
454.calculix: Same as 435.gromacs
481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/NEC-ic91-FP-linux-flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/NEC-ic91-FP-linux-flags.xml

SPEC and SPECfp are registered trademarks of the Standard Performance
Evaluation Corporation. All other brand and product names appearing in
this result are trademarks or registered trademarks of their respective
holders.

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Originally published on 27 November 2007.