



# SPEC® CFP2006 Result

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## NEC Corporation

Express5800/120Ri-2  
(Intel Xeon processor 5130)

**SPECfp®2006 = 13.5**

**SPECfp\_base2006 = 13.0**

CPU2006 license: 9006

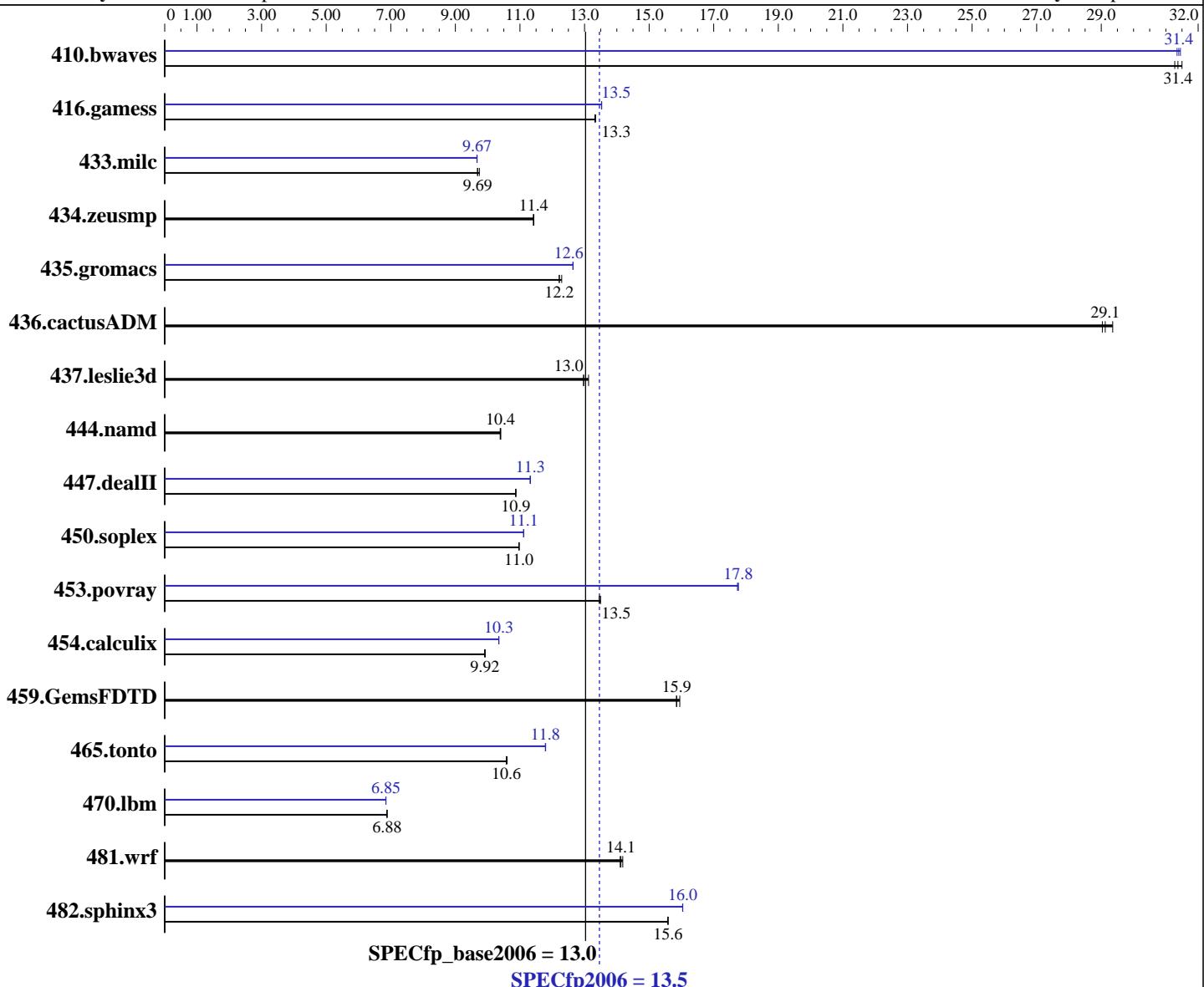
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



### 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

### Software

Operating System: Windows Server 2003, Standard x64 Edition Service Pack1  
Compiler: Intel C++ Compiler for EM64T version 9.1 Build 20070322, Package-ID W\_CC\_C\_9.1.037  
Intel Fortran Compiler for EM64T version 9.1 Build 20070322, Package-ID W\_FC\_C\_9.1.037  
Auto Parallel: Microsoft Visual Studio 2005 (libr. & linker)  
File System: Yes NTFS

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L3 Cache: None  
Other Cache: None  
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x73.2 GB SAS, 15000RPM  
Other Hardware: None

System State: Default  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	431	31.5	<b>433</b>	<b>31.4</b>	435	31.3	<b>433</b>	<b>31.4</b>	434	31.3	432	31.5
416.gamess	1468	13.3	<b>1469</b>	<b>13.3</b>	1470	13.3	<b>1447</b>	<b>13.5</b>	<b>1447</b>	<b>13.5</b>	1448	13.5
433.milc	942	9.74	948	9.69	<b>947</b>	<b>9.69</b>	950	9.67	949	9.67	<b>949</b>	<b>9.67</b>
434.zeusmp	796	11.4	<b>797</b>	<b>11.4</b>	797	11.4	<b>796</b>	<b>11.4</b>	<b>797</b>	<b>11.4</b>	797	11.4
435.gromacs	581	12.3	<b>584</b>	<b>12.2</b>	585	12.2	<b>565</b>	<b>12.6</b>	<b>565</b>	<b>12.6</b>	565	12.6
436.cactusADM	407	29.4	412	29.0	<b>410</b>	<b>29.1</b>	407	29.4	412	29.0	<b>410</b>	<b>29.1</b>
437.leslie3d	716	13.1	725	13.0	<b>725</b>	<b>13.0</b>	716	13.1	725	13.0	<b>725</b>	<b>13.0</b>
444.namd	772	10.4	771	10.4	<b>771</b>	<b>10.4</b>	772	10.4	771	10.4	<b>771</b>	<b>10.4</b>
447.dealII	1053	10.9	<b>1052</b>	<b>10.9</b>	1052	10.9	1011	11.3	<b>1011</b>	<b>11.3</b>	1010	11.3
450.soplex	760	11.0	760	11.0	<b>760</b>	<b>11.0</b>	<b>750</b>	<b>11.1</b>	750	11.1	750	11.1
453.povray	395	13.5	394	13.5	<b>394</b>	<b>13.5</b>	300	17.8	<b>300</b>	<b>17.8</b>	300	17.7
454.calculix	833	9.91	832	9.92	<b>832</b>	<b>9.92</b>	<b>797</b>	<b>10.3</b>	797	10.3	798	10.3
459.GemsFDTD	665	15.9	<b>669</b>	<b>15.9</b>	670	15.8	<b>665</b>	<b>15.9</b>	<b>669</b>	<b>15.9</b>	670	15.8
465.tonto	928	10.6	930	10.6	<b>930</b>	<b>10.6</b>	834	11.8	835	11.8	<b>835</b>	<b>11.8</b>
470.lbm	1996	6.88	<b>1996</b>	<b>6.88</b>	1996	6.88	2006	6.85	<b>2006</b>	<b>6.85</b>	2006	6.85
481.wrf	788	14.2	<b>791</b>	<b>14.1</b>	792	14.1	788	14.2	<b>791</b>	<b>14.1</b>	792	14.1
482.sphinx3	1250	15.6	<b>1251</b>	<b>15.6</b>	1251	15.6	<b>1215</b>	<b>16.0</b>	<b>1215</b>	<b>16.0</b>	1215	16.0

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

## General Notes

The Express5800/120Rg-1(Intel Xeon Processor 5130) and the Express5800/120Ri-2(Intel Xeon Processor 5130) models are electronically equivalent. The results have been measured on a Express5800/120Ri-2(Intel Xeon Processor 5130) model.

## Base Compiler Invocation

C benchmarks:

  icl -Qvc8 -Qc99

C++ benchmarks:

  icl -Qvc8

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**Test date:** Oct-2007

**Hardware Availability:** May-2007

**Software Availability:** Apr-2007

## Base Compiler Invocation (Continued)

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc8 -Qc99 ifort

## Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
    433.milc: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
    437.leslie3d: -DSPEC_CPU_P64
        444.namd: -DSPEC_CPU_P64 /TP
    447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
        -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
    450.soplex: -DSPEC_CPU_P64
    453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
    454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
        -Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
    465.tonto: -DSPEC_CPU_P64
        470.lbm: -D_Complex= -DSPEC_CPU_P64
    481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

```

## Base Optimization Flags

C benchmarks:

```
-fast -Qparallel -F950000000          -link -FORCE:MULTIPLE
```

C++ benchmarks:

```
-fast -Qparallel -Qcxx-features -F950000000
    -link -FORCE:MULTIPLE
```

Fortran benchmarks:

```
-fast -Qparallel -F950000000          -link -FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:

```
-fast -Qparallel -F950000000          -link -FORCE:MULTIPLE
```



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## Peak Compiler Invocation

C benchmarks:

`icl -Qvc8 -Qc99`

C++ benchmarks:

`icl -Qvc8`

Fortran benchmarks:

`ifort`

Benchmarks using both Fortran and C:

`icl -Qvc8 -Qc99 ifort`

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

`-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F950000000  
      -link -FORCE:MULTIPLE`

C++ benchmarks:

`444.namd: basepeak = yes`

`447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features  
                  -F950000000 -link -FORCE:MULTIPLE`

`450.soplex: Same as 447.dealII`

`453.povray: Same as 447.dealII`

Fortran benchmarks:

`410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel  
                  -F950000000 -link -FORCE:MULTIPLE`

`416.gamess: -fast -F950000000 -link -FORCE:MULTIPLE`

`434.zeusmp: basepeak = yes`

`437.leslie3d: basepeak = yes`

`459.GemsFDTD: basepeak = yes`

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## Peak Optimization Flags (Continued)

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000  
-link -FORCE:MULTIPLE

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-win-flags.html>

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

<http://www.spec.org/cpu2006/flags/NEC-ic91-FP-win-flags.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.

Report generated on Tue Jul 22 14:24:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 27 November 2007.