



# SPEC® CFP2006 Result

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## NEC Corporation

Express5800/i110Rh-1  
(Intel Xeon processor 3040)

SPECfp®2006 = 12.3

SPECfp\_base2006 = 12.0

CPU2006 license: 9006

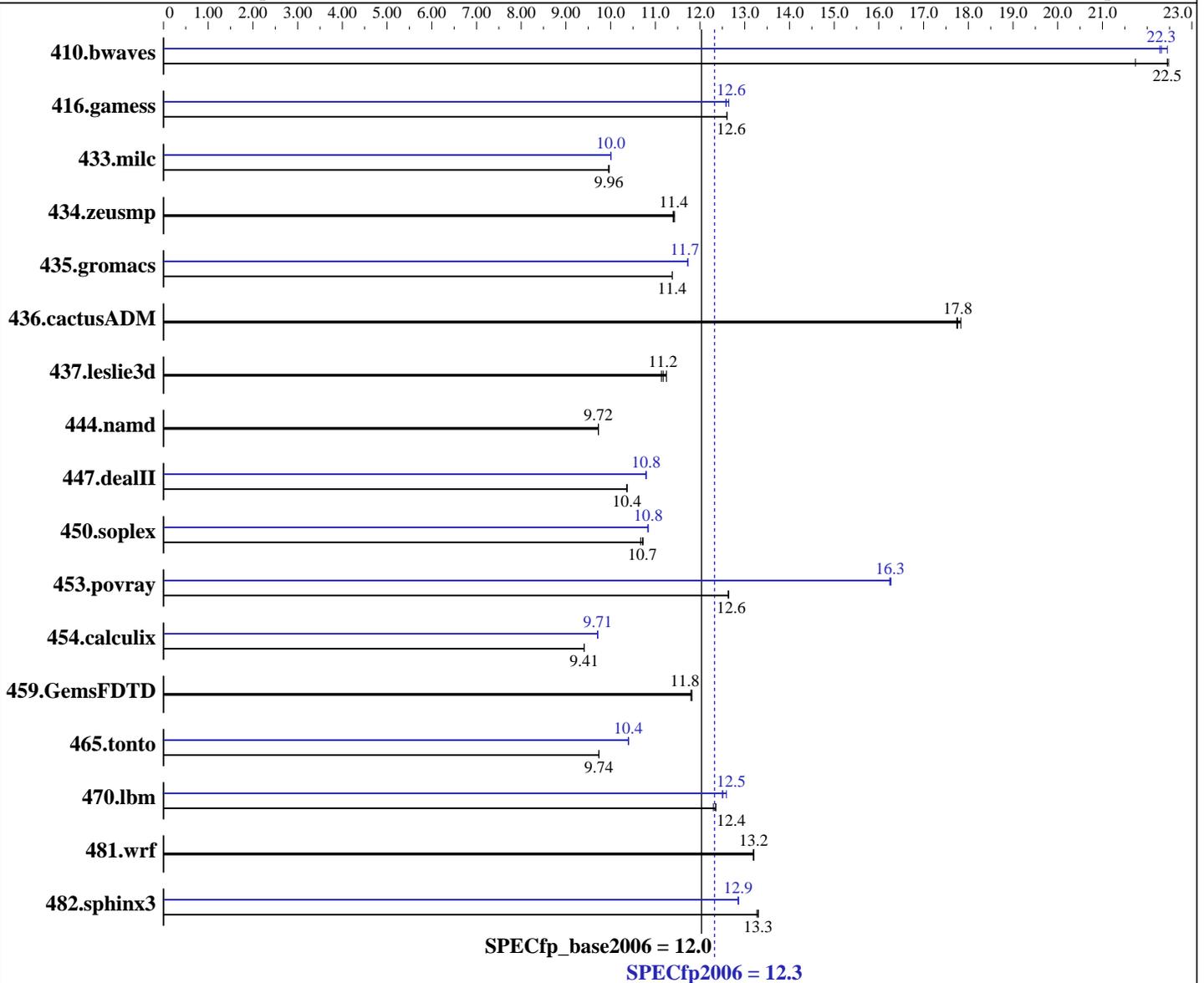
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Nov-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



**Hardware**

CPU Name: Intel Xeon 3040  
 CPU Characteristics: 1.86 GHz, 2 MB L2, 1066 MHz bus  
 CPU MHz: 1866  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 2 MB I+D on chip per chip

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**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  
 Microsoft Visual Studio 2005 (libr. & linker)  
 Auto Parallel: Yes  
 File System: NTFS

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L3 Cache: None  
Other Cache: None  
Memory: 4 GB (4x1 GB PC2-5300E, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x80 GB SATAII, 7200RPM  
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	625	21.7	605	22.5	<b>605</b>	<b>22.5</b>	605	22.5	610	22.3	<b>609</b>	<b>22.3</b>
416.gamess	1553	12.6	<b>1553</b>	<b>12.6</b>	1554	12.6	1549	12.6	1556	12.6	<b>1556</b>	<b>12.6</b>
433.milc	<b>922</b>	<b>9.96</b>	922	9.95	921	9.97	918	10.0	917	10.0	<b>917</b>	<b>10.0</b>
434.zeusmp	798	11.4	<b>797</b>	<b>11.4</b>	796	11.4	798	11.4	<b>797</b>	<b>11.4</b>	796	11.4
435.gromacs	627	11.4	<b>628</b>	<b>11.4</b>	628	11.4	609	11.7	609	11.7	<b>609</b>	<b>11.7</b>
436.cactusADM	<b>673</b>	<b>17.8</b>	670	17.8	674	17.7	<b>673</b>	<b>17.8</b>	670	17.8	674	17.7
437.leslie3d	836	11.2	844	11.1	<b>841</b>	<b>11.2</b>	836	11.2	844	11.1	<b>841</b>	<b>11.2</b>
444.namd	825	9.73	825	9.72	<b>825</b>	<b>9.72</b>	825	9.73	825	9.72	<b>825</b>	<b>9.72</b>
447.dealII	1104	10.4	<b>1104</b>	<b>10.4</b>	1104	10.4	1060	10.8	<b>1060</b>	<b>10.8</b>	1060	10.8
450.soplex	781	10.7	<b>779</b>	<b>10.7</b>	777	10.7	<b>769</b>	<b>10.8</b>	770	10.8	769	10.8
453.povray	421	12.6	<b>421</b>	<b>12.6</b>	421	12.6	328	16.2	327	16.3	<b>327</b>	<b>16.3</b>
454.calculix	877	9.41	877	9.41	<b>877</b>	<b>9.41</b>	<b>850</b>	<b>9.71</b>	850	9.70	849	9.71
459.GemsFDTD	899	11.8	898	11.8	<b>898</b>	<b>11.8</b>	899	11.8	898	11.8	<b>898</b>	<b>11.8</b>
465.tonto	1011	9.73	1010	9.74	<b>1010</b>	<b>9.74</b>	947	10.4	<b>946</b>	<b>10.4</b>	946	10.4
470.lbm	1117	12.3	<b>1112</b>	<b>12.4</b>	1112	12.4	1099	12.5	<b>1098</b>	<b>12.5</b>	1091	12.6
481.wrf	847	13.2	846	13.2	<b>846</b>	<b>13.2</b>	847	13.2	846	13.2	<b>846</b>	<b>13.2</b>
482.sphinx3	1469	13.3	1465	13.3	<b>1466</b>	<b>13.3</b>	1515	12.9	1517	12.8	<b>1516</b>	<b>12.9</b>

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

## General Notes

The system bus runs at 1066 MHz  
All binaries were built with 64-bit Intel compiler.

## Base Compiler Invocation

C benchmarks:  
icl -Qvc8 -Qc99

C++ benchmarks:  
icl -Qvc8

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## 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).

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