SPEC® CFP2006 Result

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NEC Corporation

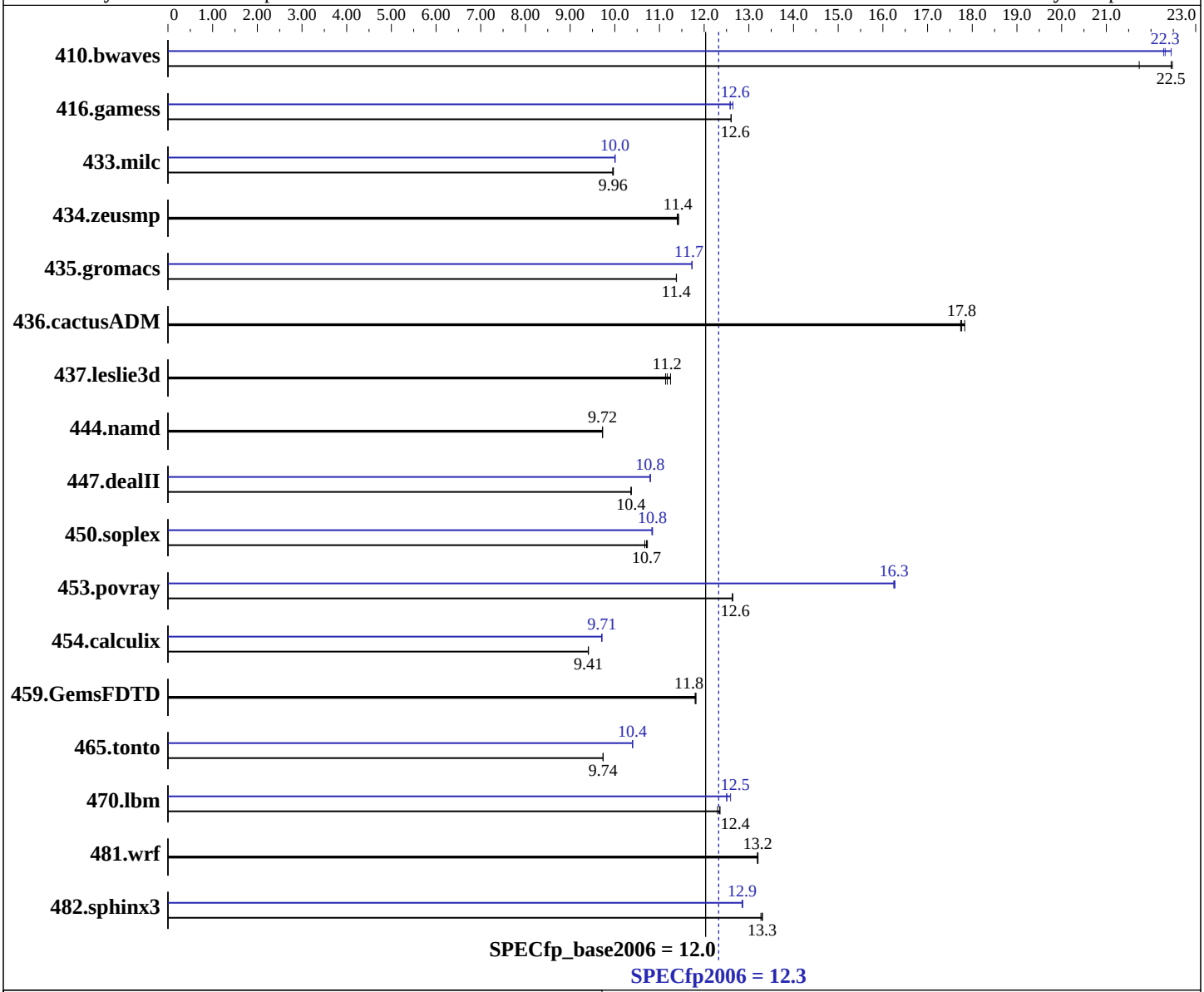
Express5800/i110Rh-1
(Intel Xeon processor 3040)

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	**605**	**22.5**	605	22.5	610	22.3	**609**	**22.3**
416.gamess	1553	12.6	**1553**	**12.6**	1554	12.6	1549	12.6	1556	12.6	**1556**	**12.6**
433.milc	**922**	**9.96**	922	9.95	921	9.97	918	10.0	917	10.0	**917**	**10.0**
434.zeusmp	798	11.4	**797**	**11.4**	796	11.4	798	11.4	**797**	**11.4**	796	11.4
435.gromacs	627	11.4	**628**	**11.4**	628	11.4	609	11.7	609	11.7	**609**	**11.7**
436.cactusADM	**673**	**17.8**	670	17.8	674	17.7	**673**	**17.8**	670	17.8	674	17.7
437.leslie3d	836	11.2	844	11.1	**841**	**11.2**	836	11.2	844	11.1	**841**	**11.2**
444.namd	825	9.73	825	9.72	**825**	**9.72**	825	9.73	825	9.72	**825**	**9.72**
447.dealII	1104	10.4	**1104**	**10.4**	1104	10.4	1060	10.8	**1060**	**10.8**	1060	10.8
450.soplex	781	10.7	**779**	**10.7**	777	10.7	**769**	**10.8**	770	10.8	769	10.8
453.povray	421	12.6	**421**	**12.6**	421	12.6	328	16.2	327	16.3	**327**	**16.3**
454.calculix	877	9.41	877	9.41	**877**	**9.41**	**850**	**9.71**	850	9.70	849	9.71
459.GemsFDTD	899	11.8	898	11.8	**898**	**11.8**	899	11.8	898	11.8	**898**	**11.8**
465.tonto	1011	9.73	1010	9.74	**1010**	**9.74**	947	10.4	**946**	**10.4**	946	10.4
470.lbm	1117	12.3	**1112**	**12.4**	1112	12.4	1099	12.5	**1098**	**12.5**	1091	12.6
481.wrf	847	13.2	846	13.2	**846**	**13.2**	847	13.2	846	13.2	**846**	**13.2**
482.sphinx3	1469	13.3	1465	13.3	**1466**	**13.3**	1515	12.9	1517	12.8	**1516**	**12.9**

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
```

Continued on next page

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

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

Continued on next page

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 other inquiries, please contact webmaster@spec.org.

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