SPEC® CFP2006 Result

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NEC Corporation

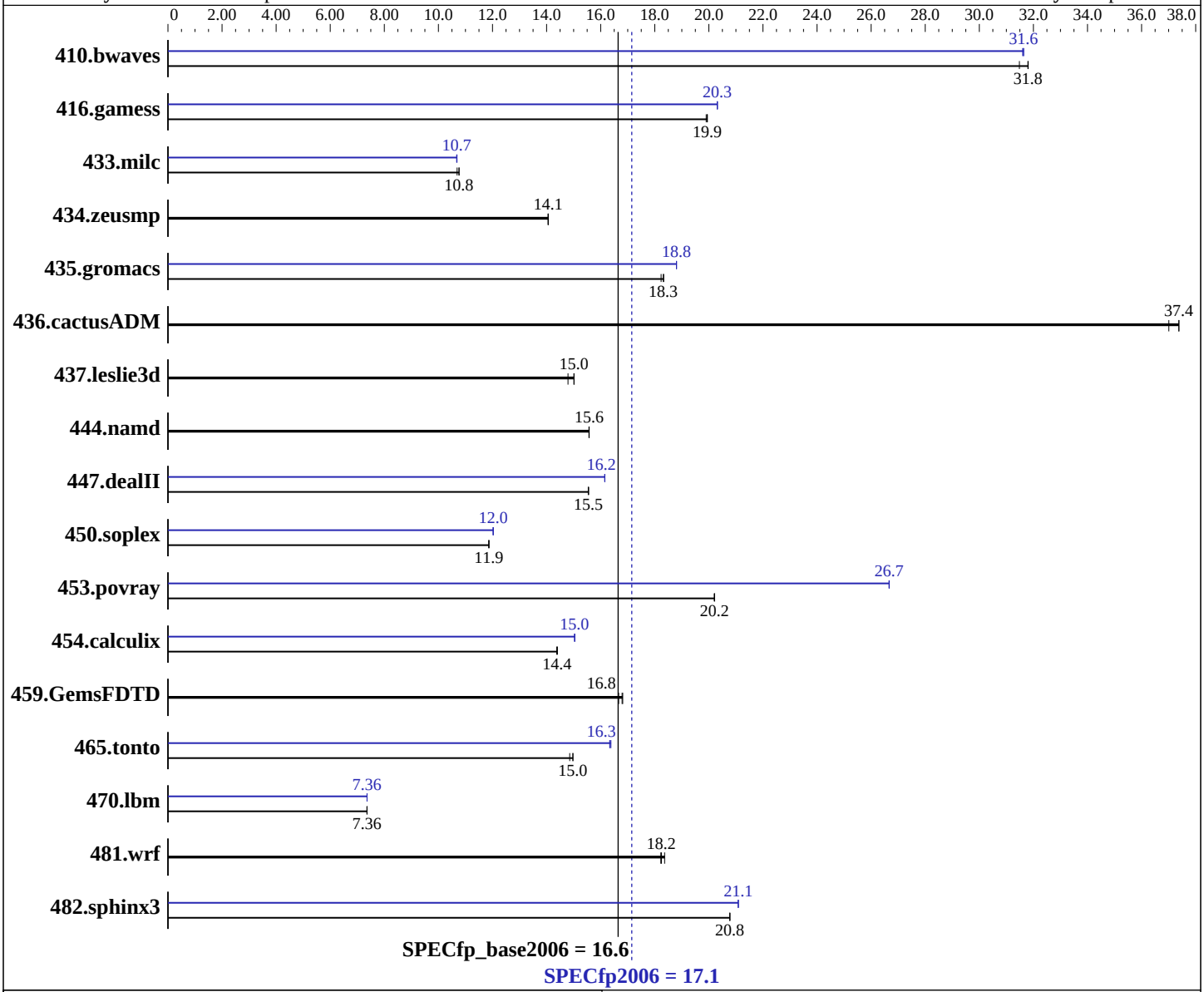
Express5800/120Bb-6
(Intel Xeon processor 5160)

SPECfp®2006 = 17.1

SPECfp_base2006 = 16.6

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 5160
CPU Characteristics:	3.00 GHz, 4 MB L2, 1333 MHz bus
CPU MHz:	3000
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

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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: 8 GB (4x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x36.3 GB SAS, 10000RPM
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	**427**	**31.8**	427	31.8	432	31.5	**430**	**31.6**	430	31.6	430	31.6
416.gamess	982	19.9	**982**	**19.9**	984	19.9	964	20.3	964	20.3	**964**	**20.3**
433.milc	853	10.8	**853**	**10.8**	859	10.7	860	10.7	859	10.7	**860**	**10.7**
434.zeusmp	647	14.1	**647**	**14.1**	647	14.1	647	14.1	**647**	**14.1**	647	14.1
435.gromacs	**390**	**18.3**	390	18.3	392	18.2	**380**	**18.8**	380	18.8	380	18.8
436.cactusADM	**320**	**37.4**	320	37.4	323	37.0	**320**	**37.4**	320	37.4	323	37.0
437.leslie3d	626	15.0	**626**	**15.0**	636	14.8	626	15.0	**626**	**15.0**	636	14.8
444.namd	**515**	**15.6**	515	15.6	515	15.6	**515**	**15.6**	515	15.6	515	15.6
447.dealII	736	15.6	736	15.5	**736**	**15.5**	708	16.2	**708**	**16.2**	708	16.2
450.soplex	703	11.9	**703**	**11.9**	703	11.9	693	12.0	694	12.0	**693**	**12.0**
453.povray	263	20.2	263	20.2	**263**	**20.2**	200	26.7	199	26.7	**199**	**26.7**
454.calculix	574	14.4	**573**	**14.4**	573	14.4	549	15.0	549	15.0	**549**	**15.0**
459.GemsFDTD	631	16.8	**632**	**16.8**	637	16.7	631	16.8	**632**	**16.8**	637	16.7
465.tonto	657	15.0	**657**	**15.0**	662	14.9	**602**	**16.3**	601	16.4	602	16.3
470.lbm	1868	7.36	1866	7.36	**1866**	**7.36**	1866	7.36	1866	7.36	**1866**	**7.36**
481.wrf	608	18.4	**612**	**18.2**	613	18.2	608	18.4	**612**	**18.2**	613	18.2
482.sphinx3	938	20.8	**938**	**20.8**	938	20.8	**924**	**21.1**	924	21.1	924	21.1

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

Base Compiler Invocation

C benchmarks:
```
icl -Qvc8 -Qc99
```

C++ benchmarks:
```
icl -Qvc8
```

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

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Peak Compiler Invocation (Continued)

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

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

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Peak Optimization Flags (Continued)

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.

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