SPEC® CFP2006 Result

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Fujitsu Siemens Computers

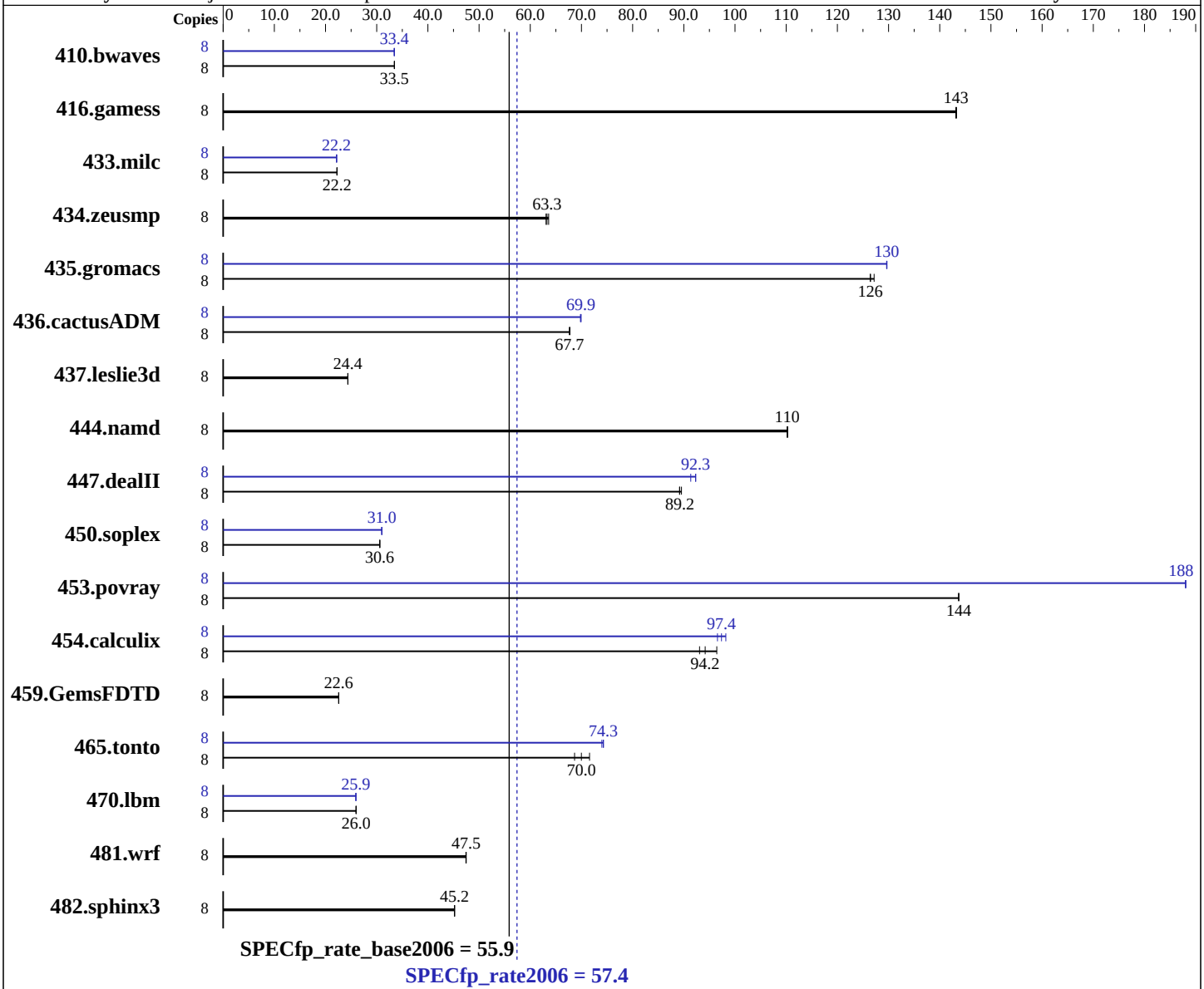
CELSIUS R640, Intel Xeon X5355 processor

SPECfp®_rate2006 = 57.4

SPECfp_rate_base2006 = 55.9

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Feb-2007
Hardware Availability: Nov-2006
Software Availability: Nov-2006



Hardware

CPU Name:	Intel Xeon X5355
CPU Characteristics:	Dual Core, 2.66 GHz
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System:	Windows XP, 64 bit Edition
Compiler:	Intel C++ Compiler for EM64T-based applications - version 9.1, Build 20061104 Intel Fortran Compiler for EM64T-based applications - version 9.1, Build 20061104 Microsoft Visual Studio 2005 (for libraries)
Auto Parallel:	No
File System:	NTFS

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: SATA II 7200 rpm
Other Hardware: None

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	**3249**	**33.5**	3251	33.4	3247	33.5	8	**3251**	**33.4**	3253	33.4	3249	33.5
416.gamess	8	1094	143	**1094**	**143**	1093	143	8	1094	143	**1094**	**143**	1093	143
433.milc	8	3300	22.3	3303	22.2	**3301**	**22.2**	8	3311	22.2	**3315**	**22.2**	3315	22.2
434.zeusmp	8	1154	63.1	**1151**	**63.3**	1145	63.6	8	1154	63.1	**1151**	**63.3**	1145	63.6
435.gromacs	8	**452**	**126**	449	127	452	126	8	441	130	**441**	**130**	440	130
436.cactusADM	8	1411	67.7	1413	67.6	**1412**	**67.7**	8	**1368**	**69.9**	1370	69.8	1367	69.9
437.leslie3d	8	**3086**	**24.4**	3086	24.4	3086	24.4	8	**3086**	**24.4**	3086	24.4	3086	24.4
444.namd	8	582	110	**582**	**110**	582	110	8	582	110	**582**	**110**	582	110
447.dealII	8	1022	89.5	1026	89.2	**1026**	**89.2**	8	991	92.3	1002	91.4	**992**	**92.3**
450.soplex	8	**2180**	**30.6**	2180	30.6	2180	30.6	8	**2152**	**31.0**	2152	31.0	2153	31.0
453.povray	8	296	144	296	144	**296**	**144**	8	226	188	**226**	**188**	226	188
454.calculix	8	709	93.1	**701**	**94.2**	684	96.4	8	672	98.2	**678**	**97.4**	683	96.6
459.GemsFDTD	8	**3759**	**22.6**	3760	22.6	3758	22.6	8	**3759**	**22.6**	3760	22.6	3758	22.6
465.tonto	8	**1125**	**70.0**	1100	71.6	1147	68.7	8	1059	74.3	1064	74.0	**1060**	**74.3**
470.lbm	8	4232	26.0	**4232**	**26.0**	4232	26.0	8	4239	25.9	4238	25.9	**4238**	**25.9**
481.wrf	8	**1882**	**47.5**	1884	47.4	1882	47.5	8	**1882**	**47.5**	1884	47.4	1882	47.5
482.sphinx3	8	**3449**	**45.2**	3451	45.2	3447	45.2	8	**3449**	**45.2**	3451	45.2	3447	45.2

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

Platform Notes

```
BIOS default settings have been used, except:
High Bandwith Option Enabled
```

General Notes

```
'start /b /wait /affinity' command is used to bind CPU(s) to processes


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http://www.fujitsu-siemens.com/countries
```

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 -F950000000
```

C++ benchmarks:
```
-fast -Qcxx-features -F950000000
```

Fortran benchmarks:
```
-fast -F950000000
```

Continued on next page

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
`-fast -F950000000`

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:

433.milc: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

470.lbm: `Same as 433.milc`

482.sphinx3: `basepeak = yes`

C++ benchmarks:

444.namd: `basepeak = yes`

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

450.soplex: `Same as 447.dealII`

453.povray: `Same as 447.dealII`

Fortran benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

410.bwaves: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

416.gamess: `basepeak = yes`

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`

436.cactusADM: `Same as 435.gromacs`

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/CPU2006_flags.20090714.20.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.20.xml`

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