SPEC® CFP2006 Result

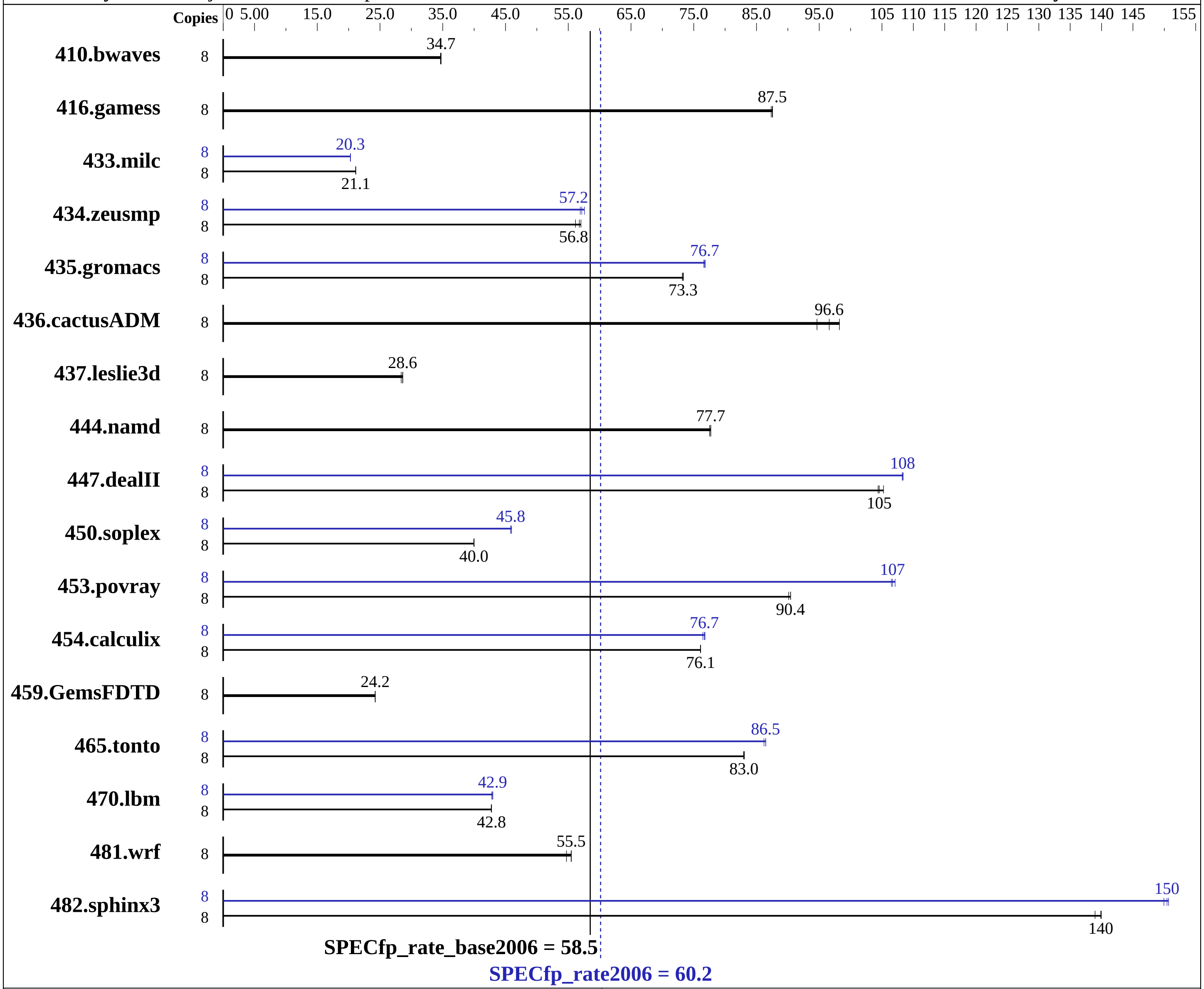
Fujitsu Siemens Computers

PRIMERGY TX600 S3, Intel Xeon processor 7140M, 3.40 GHz

SPECfp®_rate2006 = 60.2

SPECfp_rate_base2006 = 58.5

CPU2006 license: 22		**Test date:**	Apr-2007
Test sponsor:	Fujitsu Siemens Computers	**Hardware Availability:**	Dec-2006
Tested by:	Fujitsu Siemens Computers	**Software Availability:**	Feb-2007



Hardware

CPU Name:	Intel Xeon 7140M
CPU Characteristics:	800 MHz system bus
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1,2,4 chips
Primary Cache:	12 K micro-ops I + 16 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core

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Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
Compiler:	Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047 Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package ID: l_fc_p_9.1.043
Auto Parallel:	No
File System:	ReiserFS

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L3 Cache:	16 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (16x2 GB DDR2 PC2-3200R, 1 rank, CAS 3-3-3, with ECC)
Disk Subsystem:	Fujitsu MAS3735NC (SCSI 73GB 15 krpm)
Other Hardware:	None
System State:	Multiuser, Runlevel 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	None

Results Table

Benchmark	Base Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
410.bwaves	8	3139	34.6	3131	34.7	**3131**	**34.7**	8	3139	34.6	3131	34.7	**3131**	**34.7**
416.gamess	8	1793	87.3	**1790**	**87.5**	1789	87.6	8	1793	87.3	**1790**	**87.5**	1789	87.6
433.milc	8	3475	21.1	**3475**	**21.1**	3480	21.1	8	3624	20.3	3620	20.3	**3620**	**20.3**
434.zeusmp	8	1296	56.2	1277	57.0	**1282**	**56.8**	8	**1274**	**57.2**	1279	56.9	1264	57.6
435.gromacs	8	781	73.2	**779**	**73.3**	779	73.4	8	**744**	**76.7**	746	76.6	744	76.8
436.cactusADM	8	973	98.2	**990**	**96.6**	1010	94.6	8	973	98.2	**990**	**96.6**	1010	94.6
437.leslie3d	8	2650	28.4	2627	28.6	**2629**	**28.6**	8	2650	28.4	2627	28.6	**2629**	**28.6**
444.namd	8	828	77.5	826	77.7	**826**	**77.7**	8	828	77.5	826	77.7	**826**	**77.7**
447.dealII	8	877	104	**875**	**105**	870	105	8	**845**	**108**	846	108	844	108
450.soplex	8	1670	39.9	1668	40.0	**1670**	**40.0**	8	1451	46.0	1456	45.8	**1455**	**45.8**
453.povray	8	472	90.1	**471**	**90.4**	471	90.4	8	400	107	397	107	**399**	**107**
454.calculix	8	867	76.1	868	76.1	**867**	**76.1**	8	863	76.5	859	76.8	**861**	**76.7**
459.GemsFDTD	8	**3502**	**24.2**	3502	24.2	3504	24.2	8	**3502**	**24.2**	3502	24.2	3504	24.2
465.tonto	8	949	83.0	**948**	**83.0**	948	83.1	8	910	86.5	**910**	**86.5**	913	86.2
470.lbm	8	2569	42.8	**2570**	**42.8**	2573	42.7	8	**2560**	**42.9**	2557	43.0	2569	42.8
481.wrf	8	**1611**	**55.5**	1633	54.7	1610	55.5	8	**1611**	**55.5**	1633	54.7	1610	55.5
482.sphinx3	8	1114	140	**1115**	**140**	1122	139	8	**1037**	**150**	1040	150	1035	151

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

General Notes

```
The system bus runs at 800 MHz

All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path for include and library files.

BIOS configuration:
```

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General Notes (Continued)

```
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable

This result was measured on the PRIMERGY RX600 S3. The PRIMERGY RX600 S3 and
the PRIMERGY TX600 S3 are electronically equivalent.

For information about Fujitsu Siemens Computers in your country please see:
http://www.fujitsu-siemens.com/countries
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Fortran benchmarks:
`ifort`

Benchmarks using both Fortran and C:
`icc ifort`

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
`-fast`

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Base Optimization Flags (Continued)

C++ benchmarks:
 -fast

Fortran benchmarks:
 -fast

Benchmarks using both Fortran and C:
 -fast

Peak Compiler Invocation

C benchmarks:
 /opt/intel/cc/9.1.047/bin/icc -I/opt/intel/cc/9.1.047/include -L/opt/intel/cc/9.1.047/lib

C++ benchmarks (except as noted below):
 icpc

450.soplex: /opt/intel/cc/9.1.047/bin/icpc -I/opt/intel/cc/9.1.047/include -L/opt/intel/cc/9.1.047/lib

Fortran benchmarks (except as noted below):
 ifort

434.zeusmp: /opt/intel/fc/9.1.043/bin/ifort -I/opt/intel/fc/9.1.043/include -L/opt/intel/fc/9.1.043/lib

Benchmarks using both Fortran and C:
 icc ifort

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

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Hardware Availability: Dec-2006
Software Availability: Feb-2007

Peak Optimization Flags

C benchmarks:

433.milc: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast`

470.lbm: `Same as 433.milc`

482.sphinx3: `-fast`

C++ benchmarks:

444.namd: `basepeak = yes`

447.dealII: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast`

450.soplex: `Same as 447.dealII`

453.povray: `Same as 447.dealII`

Fortran benchmarks:

410.bwaves: `basepeak = yes`

416.gamess: `basepeak = yes`

434.zeusmp: `-fast`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast`

Benchmarks using both Fortran and C:

435.gromacs: `-prof_gen`(pass 1) `-prof_use`(pass 2) `-fast`

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/CPU2006_flags.20090714.09.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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