SPEC® CFP2006 Result

Fujitsu Siemens Computers

PRIMERGY TX600 S3, Intel Xeon processor 7120M, 3.0 GHz

SPECfp®_rate2006 = 32.2

SPECfp_rate_base2006 = 31.7

CPU2006 license: 22

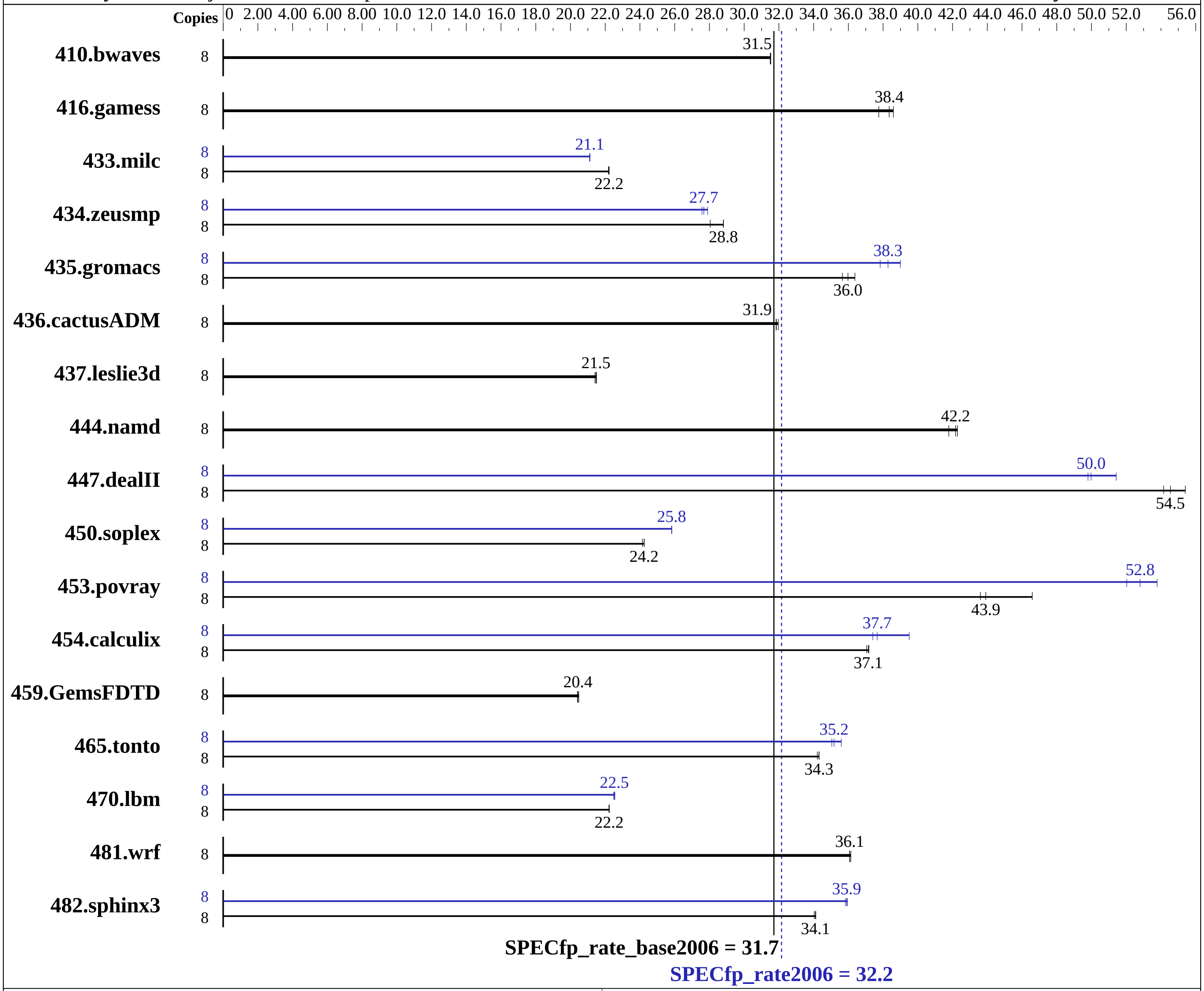
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Jun-2007

Hardware Availability: Aug-2006

Software Availability: Mar-2007



Hardware

CPU Name:	Intel Xeon 7120M
CPU Characteristics:	800 MHz system bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip, 2 threads/core
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:	4 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (16x2 GB DDR2 PC2-3200R, 2 rank, CAS 3-3-3, with ECC)
Disk Subsystem:	Seagate ST973401SS (SAS 73GB 10 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							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3451	31.5	**3449**	**31.5**	3448	31.5	8	3451	31.5	**3449**	**31.5**	3448	31.5
416.gamess	8	4149	37.8	4059	38.6	**4084**	**38.4**	8	4149	37.8	4059	38.6	**4084**	**38.4**
433.milc	8	3305	22.2	**3305**	**22.2**	3310	22.2	8	3477	21.1	3481	21.1	**3479**	**21.1**
434.zeusmp	8	**2527**	**28.8**	2595	28.0	2527	28.8	8	2610	27.9	**2630**	**27.7**	2640	27.6
435.gromacs	8	1602	35.7	**1588**	**36.0**	1570	36.4	8	1510	37.8	**1492**	**38.3**	1465	39.0
436.cactusADM	8	2991	32.0	**3001**	**31.9**	3002	31.8	8	2991	32.0	**3001**	**31.9**	3002	31.8
437.leslie3d	8	3512	21.4	**3503**	**21.5**	3498	21.5	8	3512	21.4	**3503**	**21.5**	3498	21.5
444.namd	8	**1521**	**42.2**	1517	42.3	1536	41.8	8	**1521**	**42.2**	1517	42.3	1536	41.8
447.dealII	8	**1678**	**54.5**	1690	54.2	1652	55.4	8	1780	51.4	1838	49.8	**1831**	**50.0**
450.soplex	8	2752	24.2	2763	24.1	**2753**	**24.2**	8	**2583**	**25.8**	2584	25.8	2583	25.8
453.povray	8	976	43.6	913	46.6	**969**	**43.9**	8	**806**	**52.8**	791	53.8	818	52.0
454.calculix	8	1781	37.1	**1777**	**37.1**	1775	37.2	8	**1753**	**37.7**	1671	39.5	1764	37.4
459.GemsFDTD	8	4161	20.4	**4155**	**20.4**	4145	20.5	8	4161	20.4	**4155**	**20.4**	4145	20.5
465.tonto	8	2301	34.2	**2294**	**34.3**	2294	34.3	8	2212	35.6	2246	35.0	**2238**	**35.2**
470.lbm	8	4943	22.2	4948	22.2	**4946**	**22.2**	8	**4880**	**22.5**	4873	22.6	4889	22.5
481.wrf	8	2472	36.1	**2477**	**36.1**	2477	36.1	8	2472	36.1	**2477**	**36.1**	2477	36.1
482.sphinx3	8	4569	34.1	4581	34.0	**4572**	**34.1**	8	4351	35.8	4338	35.9	**4343**	**35.9**

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

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

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`

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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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