SPEC® CFP2006 Result

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Fujitsu Siemens Computers

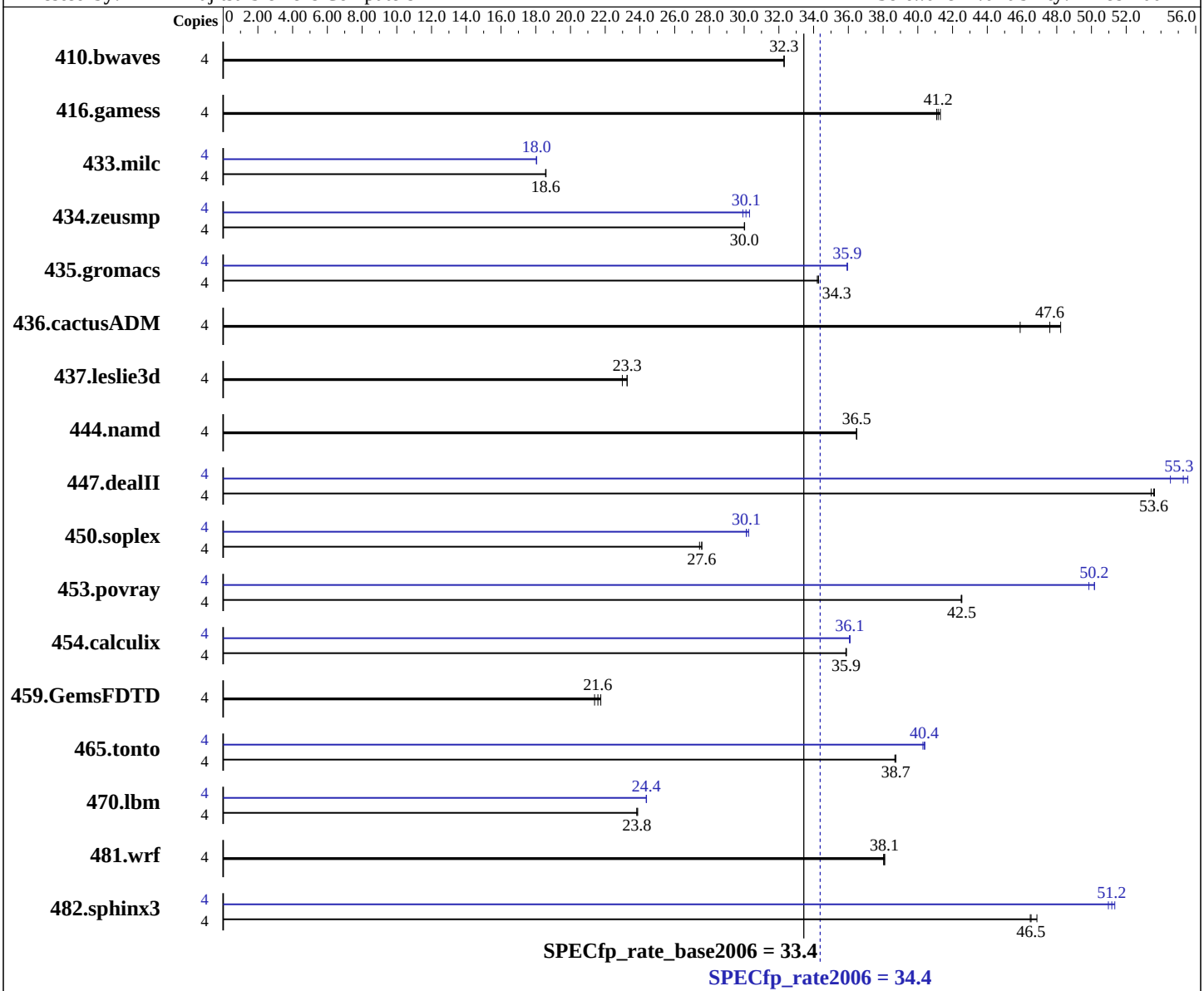
PRIMERGY TX600 S3, Intel Xeon processor 7130M, 3.20 GHz

SPECfp®_rate2006 = 34.4

SPECfp_rate_base2006 = 33.4

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

Test date: May-2007
Hardware Availability: Aug-2006
Software Availability: Feb-2007



Hardware

CPU Name:	Intel Xeon 7130M
CPU Characteristics:	800 MHz system bus
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 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: 8 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	4	1683	32.3	**1683**	**32.3**	1683	32.3	4	1683	32.3	**1683**	**32.3**	1683	32.3
416.gamess	4	1896	41.3	1906	41.1	**1902**	**41.2**	4	1896	41.3	1906	41.1	**1902**	**41.2**
433.milc	4	1975	18.6	**1977**	**18.6**	1977	18.6	4	**2035**	**18.0**	2035	18.0	2035	18.0
434.zeusmp	4	1212	30.0	**1213**	**30.0**	1213	30.0	4	1216	29.9	**1209**	**30.1**	1201	30.3
435.gromacs	4	835	34.2	833	34.3	**833**	**34.3**	4	795	35.9	**795**	**35.9**	794	36.0
436.cactusADM	4	1042	45.9	**1004**	**47.6**	991	48.2	4	1042	45.9	**1004**	**47.6**	991	48.2
437.leslie3d	4	1636	23.0	**1616**	**23.3**	1616	23.3	4	1636	23.0	**1616**	**23.3**	1616	23.3
444.namd	4	879	36.5	**879**	**36.5**	880	36.5	4	879	36.5	**879**	**36.5**	880	36.5
447.dealII	4	853	53.6	**854**	**53.6**	856	53.4	4	**828**	**55.3**	824	55.5	839	54.5
450.soplex	4	1216	27.4	**1211**	**27.6**	1210	27.6	4	1102	30.3	**1107**	**30.1**	1107	30.1
453.povray	4	**500**	**42.5**	501	42.5	500	42.5	4	427	49.9	424	50.2	**424**	**50.2**
454.calculix	4	919	35.9	**920**	**35.9**	920	35.9	4	**915**	**36.1**	914	36.1	915	36.1
459.GemsFDTD	4	**1967**	**21.6**	1984	21.4	1952	21.7	4	**1967**	**21.6**	1984	21.4	1952	21.7
465.tonto	4	**1016**	**38.7**	1016	38.7	1018	38.7	4	974	40.4	**975**	**40.4**	977	40.3
470.lbm	4	2307	23.8	2302	23.9	**2306**	**23.8**	4	**2255**	**24.4**	2256	24.4	2254	24.4
481.wrf	4	**1173**	**38.1**	1175	38.0	1173	38.1	4	**1173**	**38.1**	1175	38.0	1173	38.1
482.sphinx3	4	1677	46.5	**1676**	**46.5**	1664	46.9	4	1529	51.0	**1524**	**51.2**	1518	51.3

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)

```
Hyper-Threading Technology = Disable
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

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

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Peak Portability Flags (Continued)

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 other inquiries, please contact webmaster@spec.org.

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