SPEC® CFP2006 Result

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Fujitsu Siemens Computers

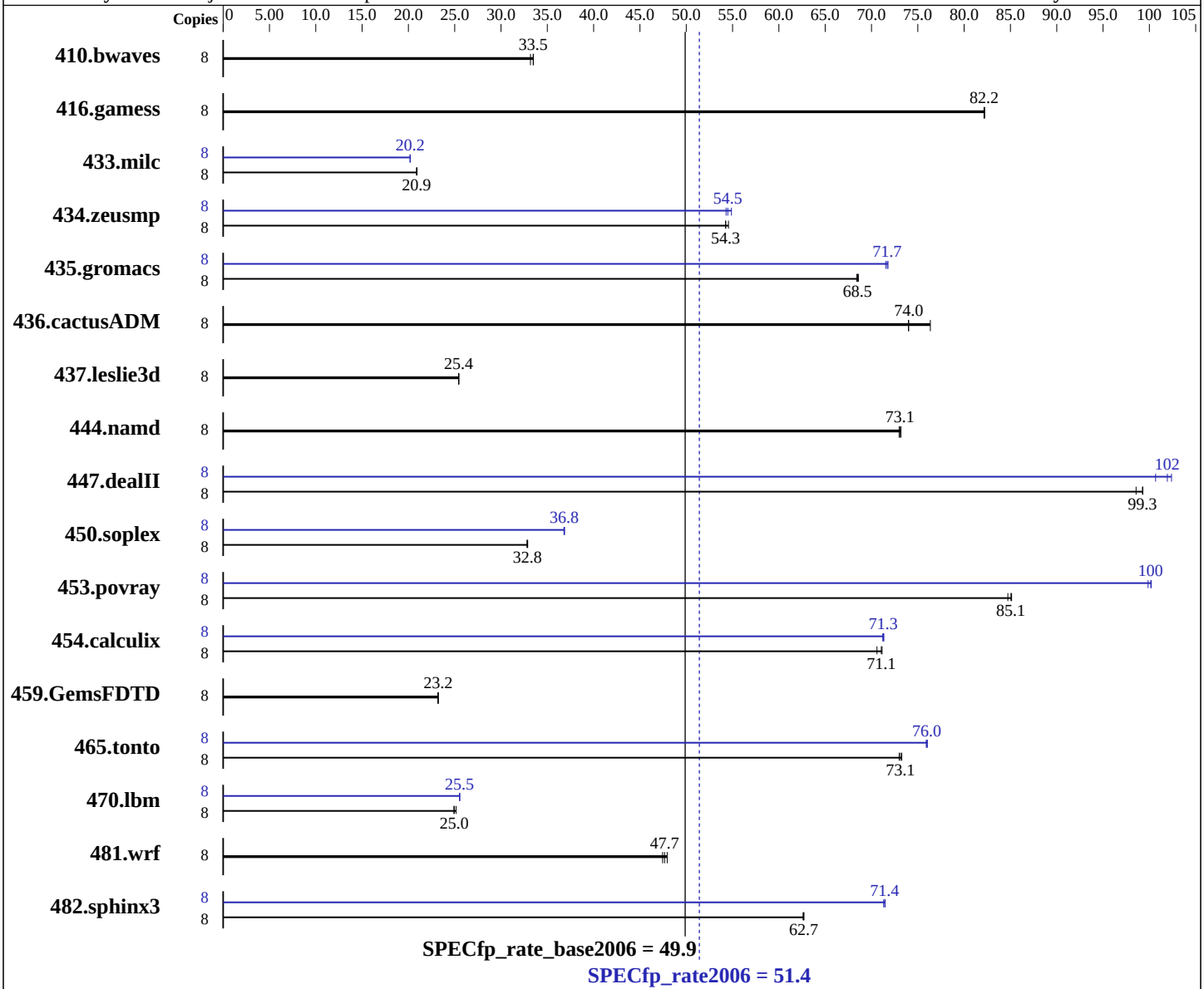
PRIMERGY TX600 S3, Intel Xeon processor 7130M, 3.20 GHz

SPECfp®_rate2006 = 51.4

SPECfp_rate_base2006 = 49.9

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:	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: 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	8	**3247**	**33.5**	3277	33.2	3247	33.5	8	**3247**	**33.5**	3277	33.2	3247	33.5
416.gamess	8	1907	82.1	1905	82.2	**1906**	**82.2**	8	1907	82.1	1905	82.2	**1906**	**82.2**
433.milc	8	3516	20.9	**3515**	**20.9**	3508	20.9	8	**3638**	**20.2**	3635	20.2	3639	20.2
434.zeusmp	8	**1342**	**54.3**	1342	54.3	1334	54.6	8	1341	54.3	1327	54.9	**1336**	**54.5**
435.gromacs	8	835	68.4	833	68.6	**834**	**68.5**	8	796	71.8	799	71.5	**797**	**71.7**
436.cactusADM	8	**1292**	**74.0**	1292	74.0	1252	76.4	8	**1292**	**74.0**	1292	74.0	1252	76.4
437.leslie3d	8	**2957**	**25.4**	2957	25.4	2956	25.4	8	**2957**	**25.4**	2957	25.4	2956	25.4
444.namd	8	877	73.2	**878**	**73.1**	879	73.0	8	877	73.2	**878**	**73.1**	879	73.0
447.dealII	8	**922**	**99.3**	929	98.6	922	99.3	8	894	102	909	101	**898**	**102**
450.soplex	8	2034	32.8	2029	32.9	**2031**	**32.8**	8	1813	36.8	**1811**	**36.8**	1810	36.9
453.povray	8	500	85.1	502	84.7	**500**	**85.1**	8	426	99.9	**425**	**100**	425	100
454.calculix	8	928	71.1	935	70.6	**929**	**71.1**	8	925	71.3	927	71.2	**926**	**71.3**
459.GemsFDTD	8	**3657**	**23.2**	3661	23.2	3654	23.2	8	**3657**	**23.2**	3661	23.2	3654	23.2
465.tonto	8	1074	73.3	**1076**	**73.1**	1079	73.0	8	1037	75.9	**1036**	**76.0**	1035	76.0
470.lbm	8	**4403**	**25.0**	4413	24.9	4371	25.1	8	**4306**	**25.5**	4303	25.5	4306	25.5
481.wrf	8	**1875**	**47.7**	1864	47.9	1883	47.4	8	**1875**	**47.7**	1864	47.9	1883	47.4
482.sphinx3	8	**2488**	**62.7**	2490	62.6	2487	62.7	8	**2183**	**71.4**	2187	71.3	2181	71.5

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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