SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp®\_rate2006 =$ 71.0

$SPECfp\_rate\_base2006 =$ 68.2

CPU2006 license: 19	**Test date:** Mar-2009
Test sponsor: Fujitsu	**Hardware Availability:** Jun-2009
Tested by: Fujitsu	**Software Availability:** Feb-2009

Copies — scale 0 to 120

- **410.bwaves** 4 / 4 — 115 / 111
- **416.gamess** 4 / 4 — 61.4 / 60.7
- **433.milc** 4 — 81.7
- **434.zeusmp** 4 / 4 — 61.9 / 61.0
- **435.gromacs** 4 / 4 — 54.2 / 53.3
- **436.cactusADM** 4 / 4 — 65.3 / 63.6
- **437.leslie3d** 4 — 66.2
- **444.namd** 4 / 4 — 44.2 / 43.6
- **447.dealII** 4 / 4 — 86.5 / 78.8
- **450.soplex** 4 / 4 — 63.8 / 61.9
- **453.povray** 4 / 4 — 84.5 / 66.4
- **454.calculix** 4 / 4 — 67.5 / 67.5
- **459.GemsFDTD** 4 / 4 — 68.5 / 63.6
- **465.tonto** 4 / 4 — 66.2 / 61.5
- **470.lbm** 4 / 4 — 81.5 / 77.0
- **481.wrf** 4 — 96.7
- **482.sphinx3** 4 — 70.7

SPECfp_rate_base2006 = 68.2

SPECfp_rate2006 = 71.0

Hardware

CPU Name: Intel Xeon E5502
CPU Characteristics:
CPU MHz: 1867
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.080, l_cprof_p_11.0.080
Auto Parallel: No
File System: ext3
System State: Multi-User Run Level 3
Base Pointers: 64-bit

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp\_rate2006 =$ 71.0

$SPECfp\_rate\_base2006 =$ 68.2
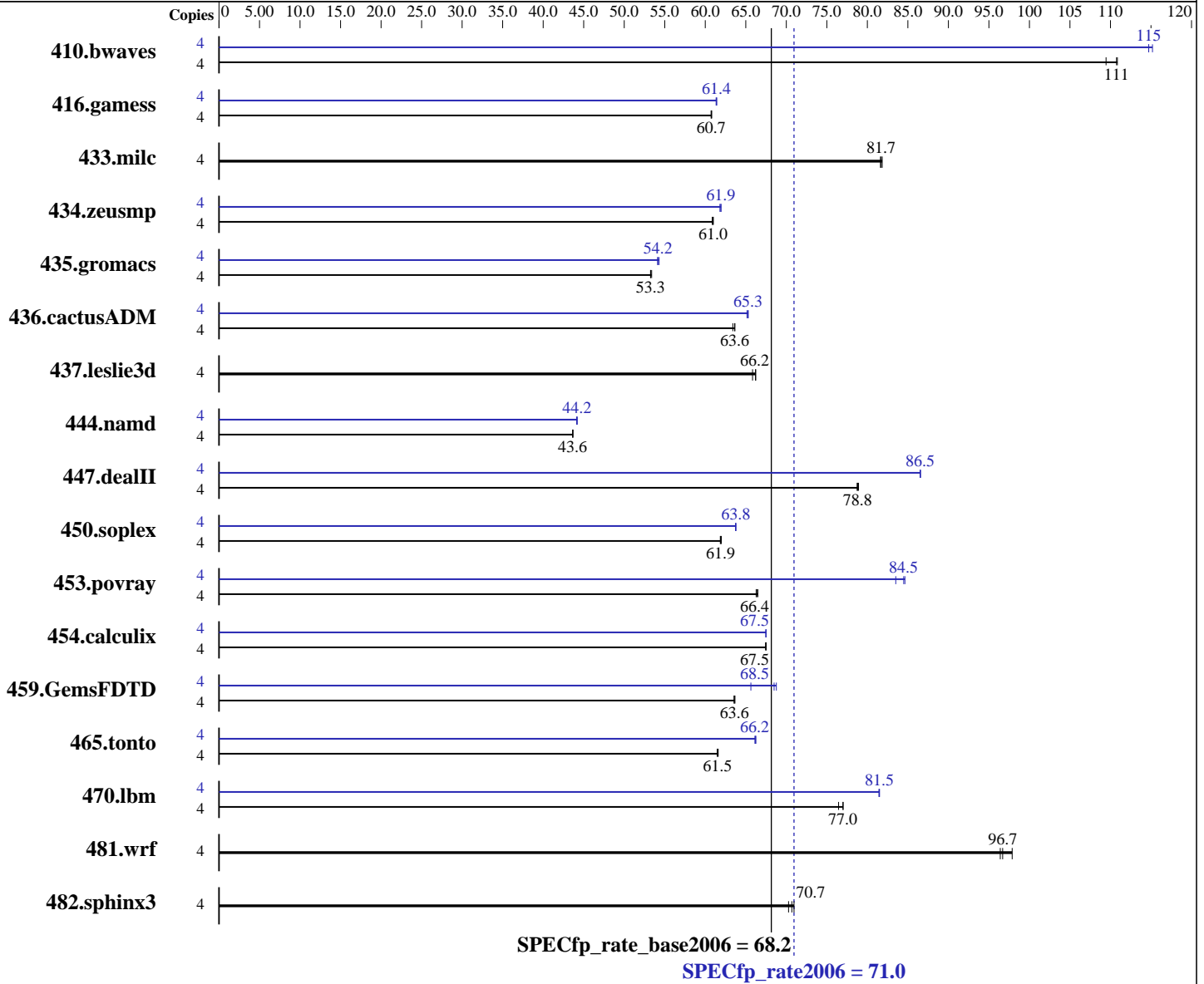
CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

L3 Cache:	4 MB I+D on chip per chip
Other Cache:	None
Memory:	48 GB (12x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes)
Disk Subsystem:	1 x SATA, 250 GB, 7200 RPM
Other Hardware:	None

Peak Pointers:	32/64-bit
Other Software:	Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	497	109	490	111	**491**	**111**	4	472	115	474	115	**474**	**115**
416.gamess	4	**1290**	**60.7**	1290	60.7	1288	60.8	4	**1276**	**61.4**	1275	61.4	1277	61.3
433.milc	4	449	81.8	**449**	**81.7**	450	81.6	4	449	81.8	**449**	**81.7**	450	81.6
434.zeusmp	4	**597**	**61.0**	598	60.9	597	61.0	4	589	61.8	588	61.9	**588**	**61.9**
435.gromacs	4	**536**	**53.3**	536	53.2	535	53.4	4	528	54.1	526	54.3	**527**	**54.2**
436.cactusADM	4	751	63.6	**751**	**63.6**	754	63.4	4	732	65.3	**732**	**65.3**	734	65.1
437.leslie3d	4	571	65.8	568	66.2	**568**	**66.2**	4	571	65.8	568	66.2	**568**	**66.2**
444.namd	4	**735**	**43.6**	734	43.7	735	43.6	4	**726**	**44.2**	727	44.1	726	44.2
447.dealII	4	581	78.7	580	78.9	**581**	**78.8**	4	**529**	**86.5**	529	86.5	529	86.6
450.soplex	4	**539**	**61.9**	538	62.0	539	61.9	4	523	63.8	**523**	**63.8**	523	63.7
453.povray	4	320	66.5	**321**	**66.4**	321	66.3	4	255	83.5	**252**	**84.5**	251	84.6
454.calculix	4	489	67.5	489	67.5	**489**	**67.5**	4	489	67.5	**489**	**67.5**	489	67.5
459.GemsFDTD	4	667	63.7	**667**	**63.6**	668	63.6	4	647	65.6	617	68.8	**620**	**68.5**
465.tonto	4	639	61.6	**640**	**61.5**	640	61.5	4	**595**	**66.2**	594	66.2	595	66.1
470.lbm	4	714	77.0	**714**	**77.0**	719	76.4	4	674	81.5	**675**	**81.5**	675	81.4
481.wrf	4	463	96.4	**462**	**96.7**	457	97.9	4	463	96.4	**462**	**96.7**	457	97.9
482.sphinx3	4	1109	70.3	1099	71.0	**1103**	**70.7**	4	1109	70.3	1099	71.0	**1103**	**70.7**

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

Submit Notes

    The config file option 'submit' was used.
     numactl was used to bind copies to the cores

Operating System Notes

    'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

    The system automatically configures the memory to run at 800 MHz.

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp_rate2006 = $ 71.0

$SPECfp_rate_base2006 = $ 68.2

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

General Notes

For information about Fujitsu please visit: http://www.fujitsu.com

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:
    -xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:
    -xSSE4.2 -ipo -O3 -no-prec-div -static

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp\_rate2006 =$ 71.0

$SPECfp\_rate\_base2006 =$ 68.2

CPU2006 license: 19	**Test date:** Mar-2009
Test sponsor: Fujitsu	**Hardware Availability:** Jun-2009
Tested by: Fujitsu	**Software Availability:** Feb-2009

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Peak Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks (except as noted below):
```
icpc
```
```
450.soplex: icpc -m32
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icc ifort
```

Peak 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
        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
```

Peak Optimization Flags

C benchmarks:

```
433.milc: basepeak = yes
```

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp_rate2006 = $ 71.0

$SPECfp_rate_base2006 = $ 68.2

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Peak Optimization Flags (Continued)

```
   470.lbm: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
            -auto-ilp32
```

```
  482.sphinx3: basepeak = yes
```

C++ benchmarks:

```
   444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
             -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
             -fno-alias -auto-ilp32
```

```
  447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -unroll2 -ansi-alias -scalar-rep-
```

```
  450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -opt-malloc-options=3
```

```
  453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -unroll4 -ansi-alias
```

Fortran benchmarks:

```
  410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
```

```
  416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -unroll2 -Ob0 -ansi-alias -scalar-rep-
```

```
  434.zeusmp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
```

```
  437.leslie3d: basepeak = yes
```

```
 459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -unroll2 -Ob0 -opt-prefetch
```

```
   465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
              -unroll4 -auto
```

Benchmarks using both Fortran and C:

```
  435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
               -opt-prefetch -auto-ilp32
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY TX200 S5, Intel Xeon E5502, 1.86 GHz

$SPECfp\_rate2006 = 71.0$

$SPECfp\_rate\_base2006 = 68.2$

Peak Optimization Flags (Continued)

436.cactusADM: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2)
`-no-prec-div`(pass 2) `-static`(pass 2) `-prof-use`(pass 2)
`-unroll2 -opt-prefetch -auto-ilp32`

454.calculix: `-xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32`

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.04.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.04.xml`

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

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 23:49:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 May 2009.