



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

## SPECfp<sup>®</sup>\_rate2006 = 206

## CELSIUS R670, Intel Xeon W5580

## SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

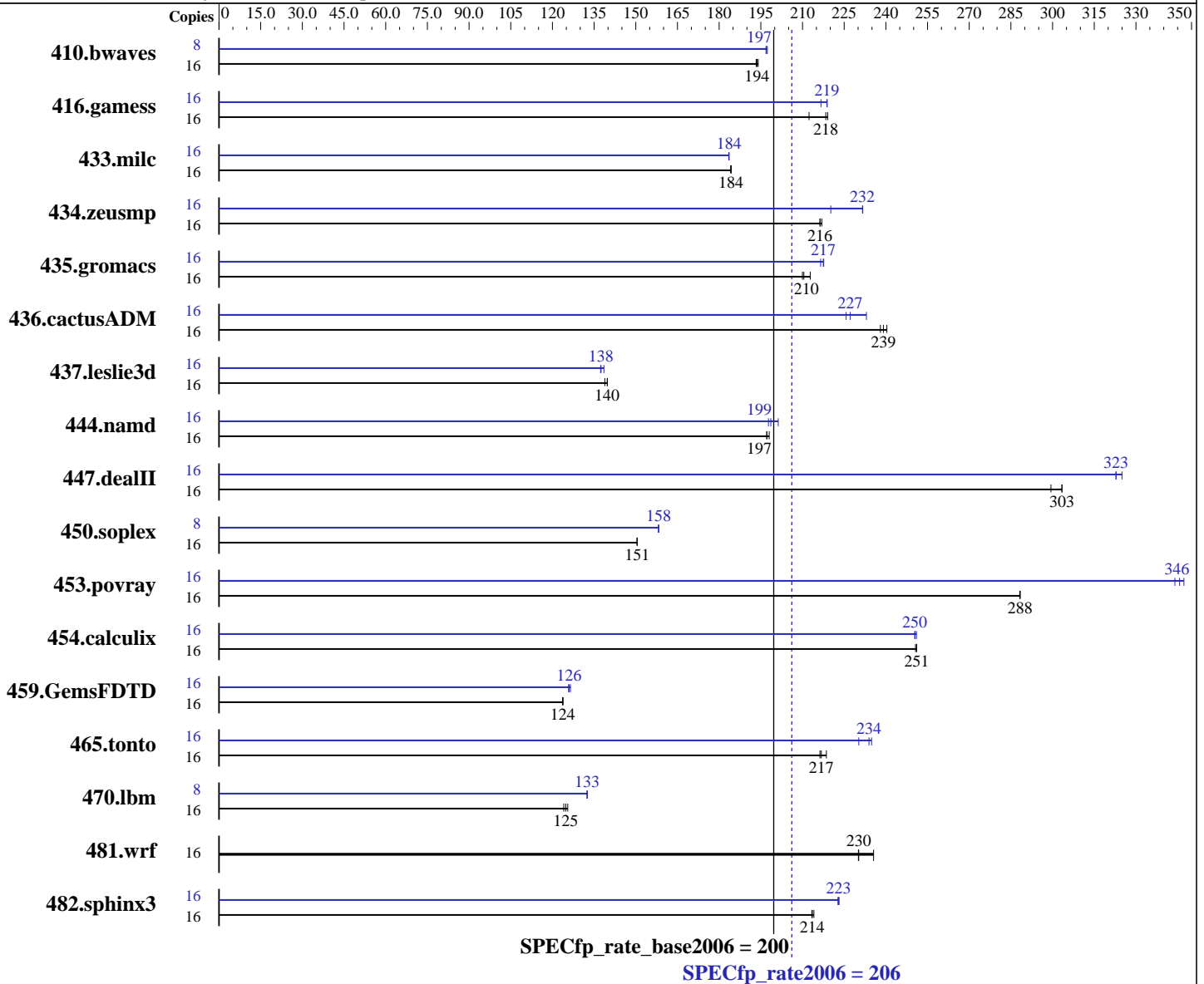
Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon W5580  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz  
 CPU MHz: 3200  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
 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

SPECfp\_rate2006 = 206

CELSIUS R670, Intel Xeon W5580

SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 48 GB (12x4 GB PC3 10600R, 2 rank, CL9-9-9, ECC)  
Disk Subsystem: 1 x SATA II, 400 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	16	1120	194	<u>1123</u>	<u>194</u>	1125	193	8	552	197	551	197	<u>552</u>	<u>197</u>
416.gamess	16	<u>1435</u>	<u>218</u>	1430	219	1475	212	16	<u>1432</u>	<u>219</u>	1446	217	1431	219
433.milc	16	797	184	798	184	<u>797</u>	<u>184</u>	16	800	184	800	183	<u>800</u>	<u>184</u>
434.zeusmp	16	673	216	<u>673</u>	<u>216</u>	671	217	16	628	232	661	220	<u>629</u>	<u>232</u>
435.gromacs	16	<u>543</u>	<u>210</u>	544	210	537	213	16	528	217	<u>525</u>	<u>217</u>	525	218
436.cactusADM	16	<u>800</u>	<u>239</u>	795	240	803	238	16	821	233	847	226	<u>842</u>	<u>227</u>
437.leslie3d	16	<u>1077</u>	<u>140</u>	1083	139	1076	140	16	<u>1094</u>	<u>138</u>	1095	137	1086	139
444.namd	16	<u>651</u>	<u>197</u>	651	197	648	198	16	638	201	649	198	<u>646</u>	<u>199</u>
447.dealII	16	<u>603</u>	<u>303</u>	603	303	611	299	16	563	325	<u>567</u>	<u>323</u>	567	323
450.soplex	16	886	151	887	150	<u>886</u>	<u>151</u>	8	<u>422</u>	<u>158</u>	422	158	422	158
453.povray	16	295	288	295	288	<u>295</u>	<u>288</u>	16	245	347	<u>246</u>	<u>346</u>	247	344
454.calculix	16	<u>526</u>	<u>251</u>	527	251	526	251	16	<u>527</u>	<u>250</u>	527	250	526	251
459.GemsFDTD	16	1371	124	<u>1372</u>	<u>124</u>	1373	124	16	1349	126	1342	126	<u>1347</u>	<u>126</u>
465.tonto	16	720	219	<u>726</u>	<u>217</u>	728	216	16	684	230	<u>673</u>	<u>234</u>	670	235
470.lbm	16	1772	124	<u>1761</u>	<u>125</u>	1751	126	8	830	132	829	133	<u>829</u>	<u>133</u>
481.wrf	16	759	236	777	230	<u>776</u>	<u>230</u>	16	759	236	777	230	<u>776</u>	<u>230</u>
482.sphinx3	16	1462	213	1457	214	<u>1460</u>	<u>214</u>	16	1397	223	1400	223	<u>1399</u>	<u>223</u>

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  
using following bind list:  
bind = 0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15

## Operating System Notes

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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 206

CELSIUS R670, Intel Xeon W5580

SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## Platform Notes

BIOS configuration:  
Memory speed set to "Max Performance" (Switch in "Advanced Memory Options")

## 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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 206

CELSIUS R670, Intel Xeon W5580

SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## 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

Benchmarks using both Fortran and C:

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

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc

450.soplex: icpc -m32

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: ifort -m32

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  
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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 206

CELSIUS R670, Intel Xeon W5580

SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## Peak Portability Flags (Continued)

465.tonto: -DSPEC\_CPU\_LP64  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

433.milc: -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

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

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

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: -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 -opt-prefetch

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 206

CELSIUS R670, Intel Xeon W5580

SPECfp\_rate\_base2006 = 200

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## Peak Optimization Flags (Continued)

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

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>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.  
Report generated on Tue Jul 22 23:15:37 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 31 March 2009.