



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

### SPECfp<sup>®</sup>\_rate2006 = 205

### PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz

### SPECfp\_rate\_base2006 = 198

CPU2006 license: 19

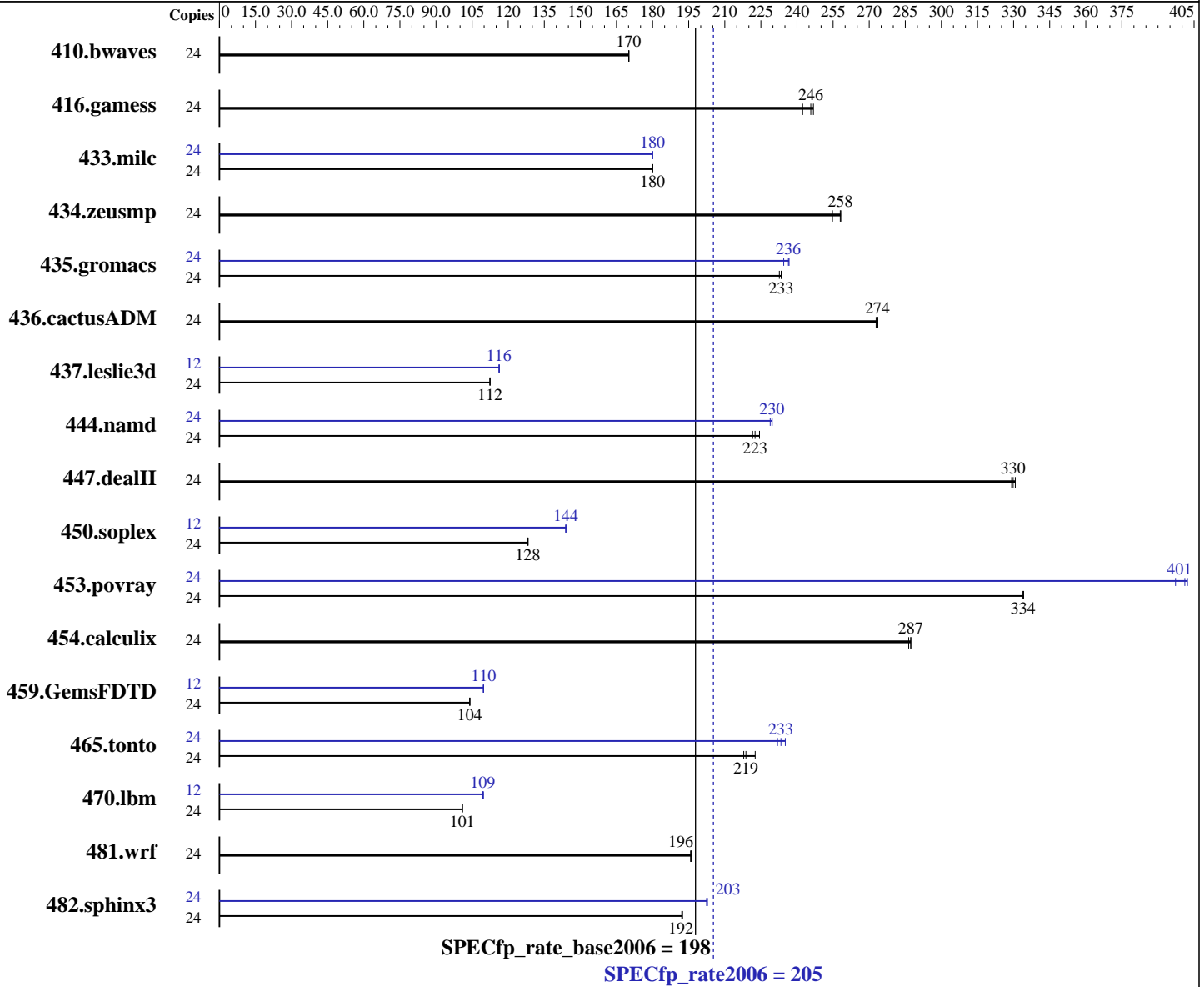
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jun-2010

Hardware Availability: Oct-2010

Software Availability: Jan-2010



#### Hardware

CPU Name: Intel Xeon L5640  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 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 11 (x86\_64), Kernel 2.6.27.19-5-default  
 Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l\_cproc\_p\_11.1.064, l\_cprof\_p\_11.1.064  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-User Run Level 3

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp\_rate2006 = 205

PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz

SPECfp\_rate\_base2006 = 198

CPU2006 license: 19

Test date: Jun-2010

Test sponsor: Fujitsu

Hardware Availability: Oct-2010

Tested by: Fujitsu

Software Availability: Jan-2010

L3 Cache: 12 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 SSD SATA, 64 GB  
 Other Hardware: None

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	24	<b><u>1918</u></b>	<b><u>170</u></b>	1918	170	1916	170	24	<b><u>1918</u></b>	<b><u>170</u></b>	1918	170	1916	170
416.gamess	24	1939	242	<b><u>1912</u></b>	<b><u>246</u></b>	1904	247	24	1939	242	<b><u>1912</u></b>	<b><u>246</u></b>	1904	247
433.milc	24	1224	180	1224	180	<b><u>1224</u></b>	<b><u>180</u></b>	24	<b><u>1224</u></b>	<b><u>180</u></b>	1224	180	1225	180
434.zeusmp	24	846	258	857	255	<b><u>847</u></b>	<b><u>258</u></b>	24	846	258	857	255	<b><u>847</u></b>	<b><u>258</u></b>
435.gromacs	24	<b><u>734</u></b>	<b><u>233</u></b>	737	233	734	233	24	724	237	731	234	<b><u>725</u></b>	<b><u>236</u></b>
436.cactusADM	24	<b><u>1049</u></b>	<b><u>274</u></b>	1048	274	1051	273	24	<b><u>1049</u></b>	<b><u>274</u></b>	1048	274	1051	273
437.leslie3d	24	2006	112	<b><u>2006</u></b>	<b><u>112</u></b>	2007	112	12	970	116	<b><u>971</u></b>	<b><u>116</u></b>	971	116
444.namd	24	858	224	869	222	<b><u>865</u></b>	<b><u>223</u></b>	24	838	230	<b><u>838</u></b>	<b><u>230</u></b>	841	229
447.dealII	24	834	329	830	331	<b><u>832</u></b>	<b><u>330</u></b>	24	834	329	830	331	<b><u>832</u></b>	<b><u>330</u></b>
450.soplex	24	1561	128	1561	128	<b><u>1561</u></b>	<b><u>128</u></b>	12	694	144	<b><u>695</u></b>	<b><u>144</u></b>	696	144
453.povray	24	<b><u>382</u></b>	<b><u>334</u></b>	382	334	382	334	24	321	397	<b><u>318</u></b>	<b><u>401</u></b>	317	402
454.calculix	24	691	286	689	287	<b><u>689</u></b>	<b><u>287</u></b>	24	691	286	689	287	<b><u>689</u></b>	<b><u>287</u></b>
459.GemsFDTD	24	<b><u>2447</u></b>	<b><u>104</u></b>	2448	104	2447	104	12	<b><u>1160</u></b>	<b><u>110</u></b>	1160	110	1162	110
465.tonto	24	1084	218	<b><u>1079</u></b>	<b><u>219</u></b>	1061	223	24	1018	232	<b><u>1012</u></b>	<b><u>233</u></b>	1004	235
470.lbm	24	3264	101	<b><u>3268</u></b>	<b><u>101</u></b>	3270	101	12	1503	110	<b><u>1506</u></b>	<b><u>109</u></b>	1507	109
481.wrf	24	1367	196	<b><u>1368</u></b>	<b><u>196</u></b>	1369	196	24	1367	196	<b><u>1368</u></b>	<b><u>196</u></b>	1369	196
482.sphinx3	24	2432	192	<b><u>2432</u></b>	<b><u>192</u></b>	2435	192	24	2307	203	2311	202	<b><u>2308</u></b>	<b><u>203</u></b>

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

BIOS configuration:  
Data Reuse Optimization = Disable  
Performance/Power Setting = Traditional



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 205

PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz

SPECfp\_rate\_base2006 = 198

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

Test date: Jun-2010  
Hardware Availability: Oct-2010  
Software Availability: Jan-2010

## General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>  
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

Fortran benchmarks:  
ifort -m64

Benchmarks using both Fortran and C:  
icc -m64 ifort -m64

## 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 205

PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz

SPECfp\_rate\_base2006 = 198

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jun-2010

Hardware Availability: Oct-2010

Software Availability: Jan-2010

## Base Optimization Flags (Continued)

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 -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## 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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 205**

**PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz**

**SPECfp\_rate\_base2006 = 198**

**CPU2006 license:** 19

**Test date:** Jun-2010

**Test sponsor:** Fujitsu

**Hardware Availability:** Oct-2010

**Tested by:** Fujitsu

**Software Availability:** Jan-2010

## 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 -opt-prefetch

470.lbm: -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 -ansi-alias -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.dealIII: basepeak = yes

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: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

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

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 -inline-calloc -opt-malloc-options=3

### 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 205**

PRIMERGY BX922 S2, Intel Xeon L5640, 2.27 GHz

**SPECfp\_rate\_base2006 = 198**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Jun-2010

**Hardware Availability:** Oct-2010

**Software Availability:** Jan-2010

## Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic11.1-linux64-revE.20100708.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100708.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 Wed Jul 23 11:21:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 20 July 2010.