



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp<sup>®</sup>2006 = **70.9**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_base2006 = **66.7**

CPU2006 license: 19

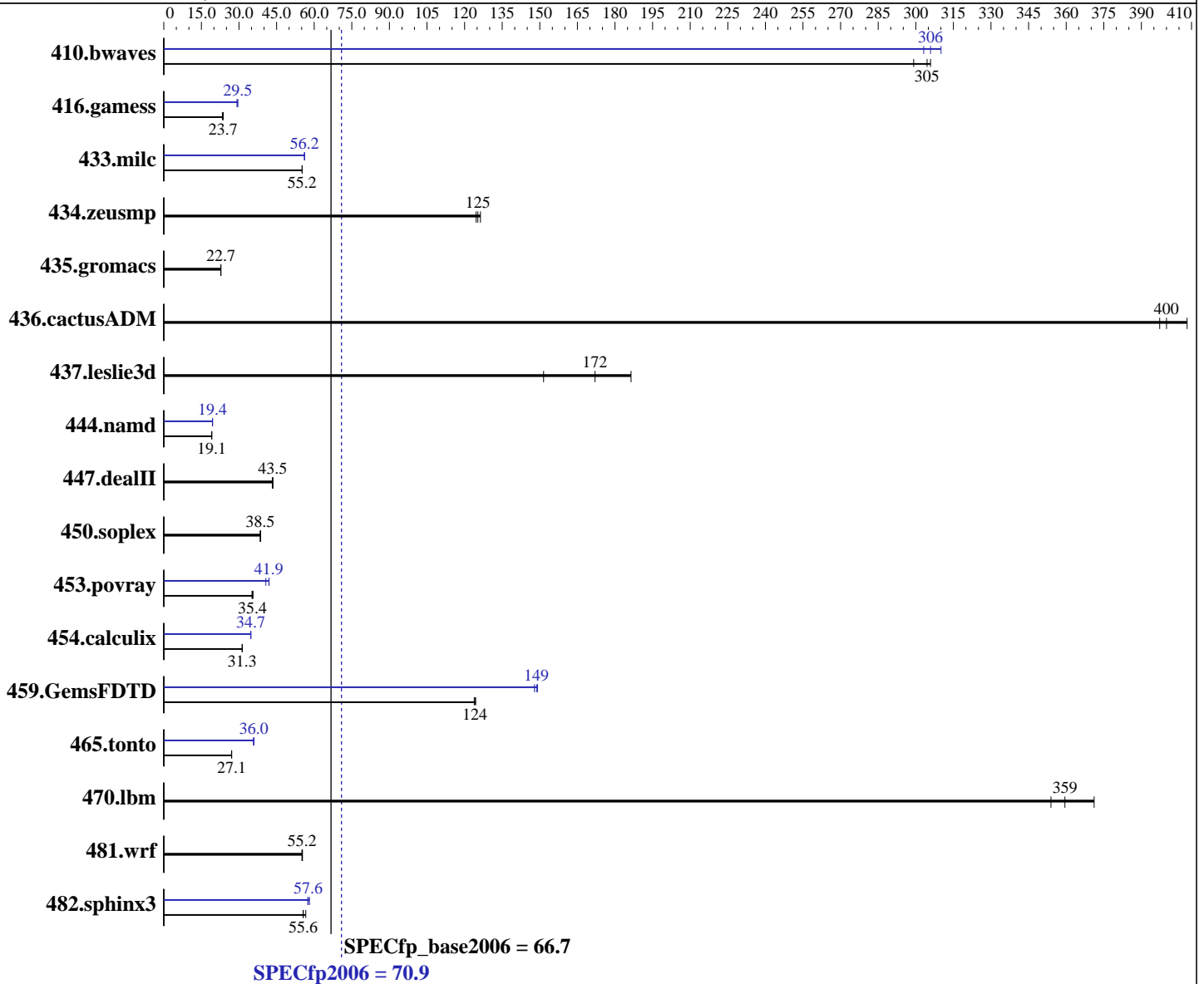
Test date: Feb-2012

Test sponsor: Fujitsu

Hardware Availability: Mar-2012

Tested by: Fujitsu

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2650  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 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: Red Hat Enterprise Linux Server release 6.2 (Santiago)  
 2.6.32-220.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;  
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp2006 = **70.9**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_base2006 = **66.7**

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)  
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM  
 Other Hardware: None

System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	45.4	299	44.4	306	<b>44.6</b>	<b>305</b>	43.8	310	<b>44.4</b>	<b>306</b>	44.8	303
416.gamess	838	23.4	<b>828</b>	<b>23.7</b>	827	23.7	671	29.2	664	29.5	<b>664</b>	<b>29.5</b>
433.milc	<b>166</b>	<b>55.2</b>	166	55.2	166	55.1	164	56.1	163	56.2	<b>163</b>	<b>56.2</b>
434.zeusmp	73.0	125	<b>72.6</b>	<b>125</b>	72.0	126	73.0	125	<b>72.6</b>	<b>125</b>	72.0	126
435.gromacs	313	22.8	<b>314</b>	<b>22.7</b>	314	22.7	313	22.8	<b>314</b>	<b>22.7</b>	314	22.7
436.cactusADM	29.3	408	<b>29.9</b>	<b>400</b>	30.1	397	29.3	408	<b>29.9</b>	<b>400</b>	30.1	397
437.leslie3d	50.4	186	62.0	152	<b>54.6</b>	<b>172</b>	50.4	186	62.0	152	<b>54.6</b>	<b>172</b>
444.namd	419	19.1	419	19.1	<b>419</b>	<b>19.1</b>	<b>413</b>	<b>19.4</b>	413	19.4	413	19.4
447.dealII	<b>263</b>	<b>43.5</b>	264	43.3	263	43.5	<b>263</b>	<b>43.5</b>	264	43.3	263	43.5
450.soplex	<b>217</b>	<b>38.5</b>	216	38.6	217	38.5	<b>217</b>	<b>38.5</b>	216	38.6	217	38.5
453.povray	<b>150</b>	<b>35.4</b>	149	35.6	151	35.2	127	42.0	131	40.7	<b>127</b>	<b>41.9</b>
454.calculix	<b>263</b>	<b>31.3</b>	264	31.2	263	31.3	237	34.8	<b>238</b>	<b>34.7</b>	238	34.7
459.GemsFDTD	<b>85.5</b>	<b>124</b>	85.7	124	85.3	124	71.2	149	71.8	148	<b>71.4</b>	<b>149</b>
465.tonto	364	27.0	363	27.1	<b>364</b>	<b>27.1</b>	273	36.0	<b>273</b>	<b>36.0</b>	275	35.7
470.lbm	37.0	371	<b>38.2</b>	<b>359</b>	38.8	354	37.0	371	<b>38.2</b>	<b>359</b>	38.8	354
481.wrf	<b>202</b>	<b>55.2</b>	203	55.1	202	55.3	<b>202</b>	<b>55.2</b>	203	55.1	202	55.3
482.sphinx3	344	56.6	<b>350</b>	<b>55.6</b>	351	55.6	335	58.1	<b>338</b>	<b>57.6</b>	339	57.4

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

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

BIOS configuration:  
 Intel HT Technology = Disable  
 Frequency Floor Override = Enable

## General Notes

Environment variables set by runspec before the start of the run:  
 KMP\_AFFINITY = "granularity=fine,scatter"  
 LD\_LIBRARY\_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 70.9**

**PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz**

**SPECfp\_base2006 = 66.7**

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

**Test date:** Feb-2012  
**Hardware Availability:** Mar-2012  
**Software Availability:** Dec-2011

## General Notes (Continued)

OMP\_NUM\_THREADS = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

This result was measured on the PRIMERGY RX350 S7. The PRIMERGY RX350 S7 and the PRIMERGY TX300 S7 are electronically equivalent.

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

## 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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 70.9**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_base2006 = 66.7**

CPU2006 license: 19

Test date: Feb-2012

Test sponsor: Fujitsu

Hardware Availability: Mar-2012

Tested by: Fujitsu

Software Availability: Dec-2011

## Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

## Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32  
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
-parallel

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 70.9**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_base2006 = 66.7**

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

**Test date:** Feb-2012  
**Hardware Availability:** Mar-2012  
**Software Availability:** Dec-2011

## Peak Optimization Flags (Continued)

C++ benchmarks:

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

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

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

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel  
-static

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc  
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp2006 = 70.9

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_base2006 = 66.7

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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 v1.2.  
Report generated on Thu Jul 24 07:45:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 10 April 2012.