



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp®2006 = 36.9

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

SPECfp\_base2006 = 34.3

CPU2006 license: 19

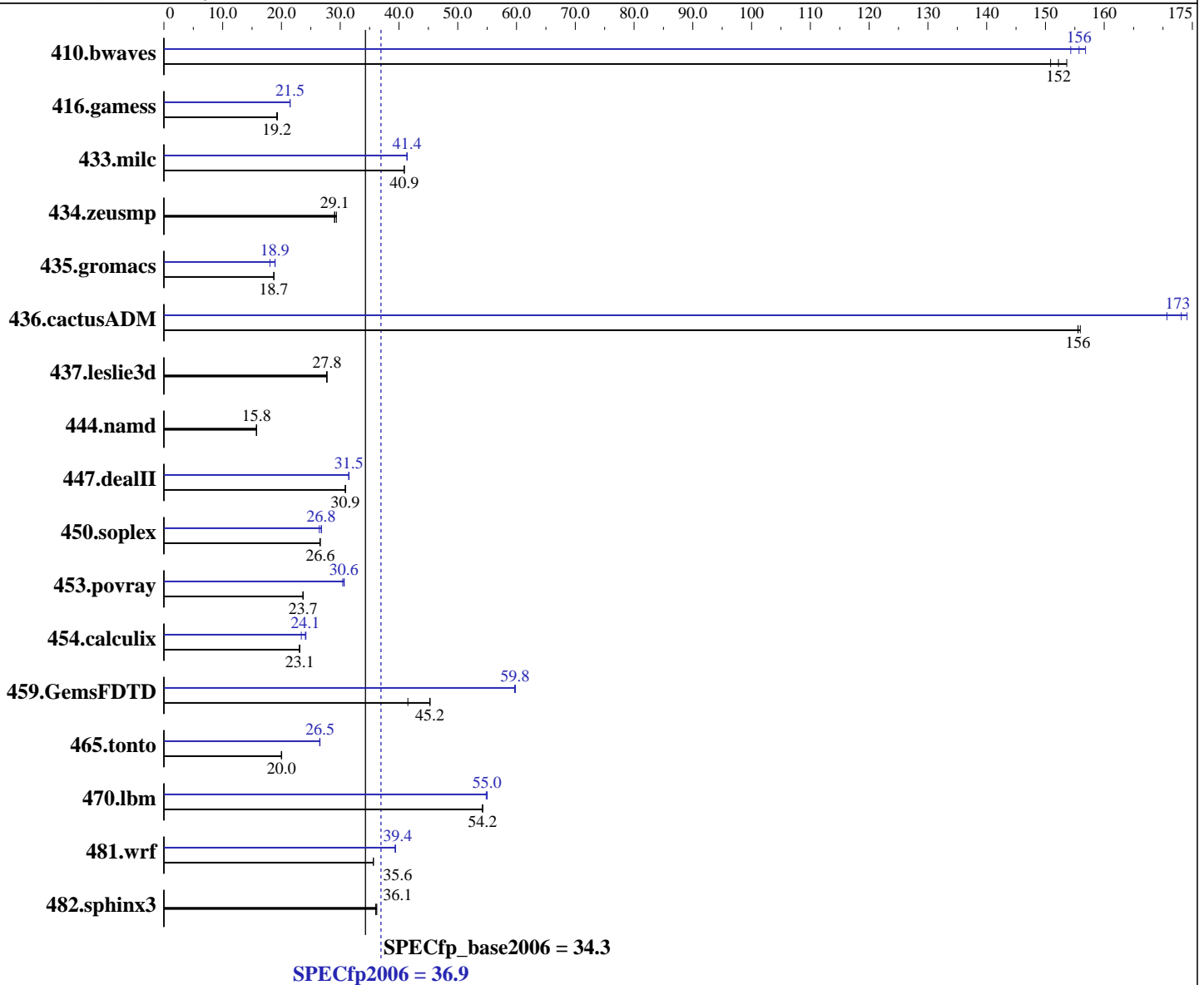
Test date: Apr-2010

Test sponsor: Fujitsu

Hardware Availability: May-2010

Tested by: Fujitsu

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon E5620  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.67 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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 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: Yes  
 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

SPECfp2006 = **36.9**

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

SPECfp\_base2006 = **34.3**

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2010

Hardware Availability: May-2010

Software Availability: Jan-2010

L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 48 GB (6x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes)  
Disk Subsystem: 1 x SSD, 64 GB  
Other Hardware: None

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

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<b>89.3</b>	<b>152</b>	90.1	151	88.5	154	<b>87.3</b>	<b>156</b>	88.1	154	86.7	157
416.gamess	1013	19.3	1019	19.2	<b>1018</b>	<b>19.2</b>	912	21.5	<b>912</b>	<b>21.5</b>	912	21.5
433.milc	<b>224</b>	<b>40.9</b>	224	40.9	225	40.9	<b>222</b>	<b>41.4</b>	222	41.4	222	41.4
434.zeusmp	310	29.4	313	29.0	<b>313</b>	<b>29.1</b>	310	29.4	313	29.0	<b>313</b>	<b>29.1</b>
435.gromacs	381	18.7	382	18.7	<b>382</b>	<b>18.7</b>	396	18.0	<b>378</b>	<b>18.9</b>	377	18.9
436.cactusADM	76.8	156	<b>76.8</b>	<b>156</b>	76.6	156	70.0	171	68.6	174	<b>69.0</b>	<b>173</b>
437.leslie3d	<b>339</b>	<b>27.8</b>	339	27.8	340	27.7	<b>339</b>	<b>27.8</b>	339	27.8	340	27.7
444.namd	508	15.8	510	15.7	<b>509</b>	<b>15.8</b>	508	15.8	510	15.7	<b>509</b>	<b>15.8</b>
447.dealII	371	30.9	370	30.9	<b>370</b>	<b>30.9</b>	363	31.5	<b>364</b>	<b>31.5</b>	364	31.5
450.soplex	313	26.6	<b>314</b>	<b>26.6</b>	314	26.5	<b>312</b>	<b>26.8</b>	311	26.8	316	26.4
453.povray	<b>225</b>	<b>23.7</b>	224	23.7	225	23.7	173	30.7	<b>174</b>	<b>30.6</b>	175	30.4
454.calculix	357	23.1	358	23.0	<b>357</b>	<b>23.1</b>	341	24.2	<b>343</b>	<b>24.1</b>	353	23.4
459.GemsFDTD	234	45.3	<b>235</b>	<b>45.2</b>	256	41.5	<b>178</b>	<b>59.8</b>	178	59.7	177	59.8
465.tonto	<b>492</b>	<b>20.0</b>	492	20.0	491	20.0	370	26.6	<b>371</b>	<b>26.5</b>	371	26.5
470.lbm	<b>253</b>	<b>54.2</b>	254	54.2	253	54.2	<b>250</b>	<b>55.0</b>	250	55.0	251	54.8
481.wrf	<b>313</b>	<b>35.6</b>	313	35.6	313	35.6	284	39.4	284	39.4	<b>284</b>	<b>39.4</b>
482.sphinx3	<b>540</b>	<b>36.1</b>	538	36.2	541	36.0	<b>540</b>	<b>36.1</b>	538	36.2	541	36.0

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

## Platform Notes

The system automatically configures the memory to run at 1067 MHz.

BIOS configuration:

Data Reuse Optimization = Disable

Intel HT Technology = Disable

Turbo Boost Technology: Performance/Power Setting = Traditional



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 36.9**

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

**SPECfp\_base2006 = 34.3**

CPU2006 license: 19

Test date: Apr-2010

Test sponsor: Fujitsu

Hardware Availability: May-2010

Tested by: Fujitsu

Software Availability: Jan-2010

## General Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter  
KMP\_STACKSIZE set to 200M  
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

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp2006 = 36.9

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

SPECfp\_base2006 = 34.3

CPU2006 license: 19

Test date: Apr-2010

Test sponsor: Fujitsu

Hardware Availability: May-2010

Tested by: Fujitsu

Software Availability: Jan-2010

## Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

## 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: `-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)  
-ansi-alias`

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)  
-parallel -ansi-alias -auto-ilp32`

482.sphinx3: `basepeak = yes`

C++ benchmarks:

444.namd: `basepeak = yes`

447.dealIII: `-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- -auto-ilp32`

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp2006 = 36.9

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

SPECfp\_base2006 = 34.3

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2010

Hardware Availability: May-2010

Software Availability: Jan-2010

## Peak Optimization Flags (Continued)

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 -auto-ilp32

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  
-parallel

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: basepeak = yes

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 -parallel

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)  
-inline-calloc -opt-malloc-options=3 -auto -unroll4

### 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 -parallel -auto-ilp32

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

481.wrf: Same as 454.calculix

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.20100330.02.html>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp2006 = 36.9

PRIMERGY BX920 S2, Intel Xeon E5620, 2.40 GHz

SPECfp\_base2006 = 34.3

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2010

Hardware Availability: May-2010

Software Availability: Jan-2010

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.02.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 09:26:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 25 May 2010.