



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

SPECfp®2006 = 39.8

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon X3470)

SPECfp\_base2006 = 37.8

CPU2006 license: 9016

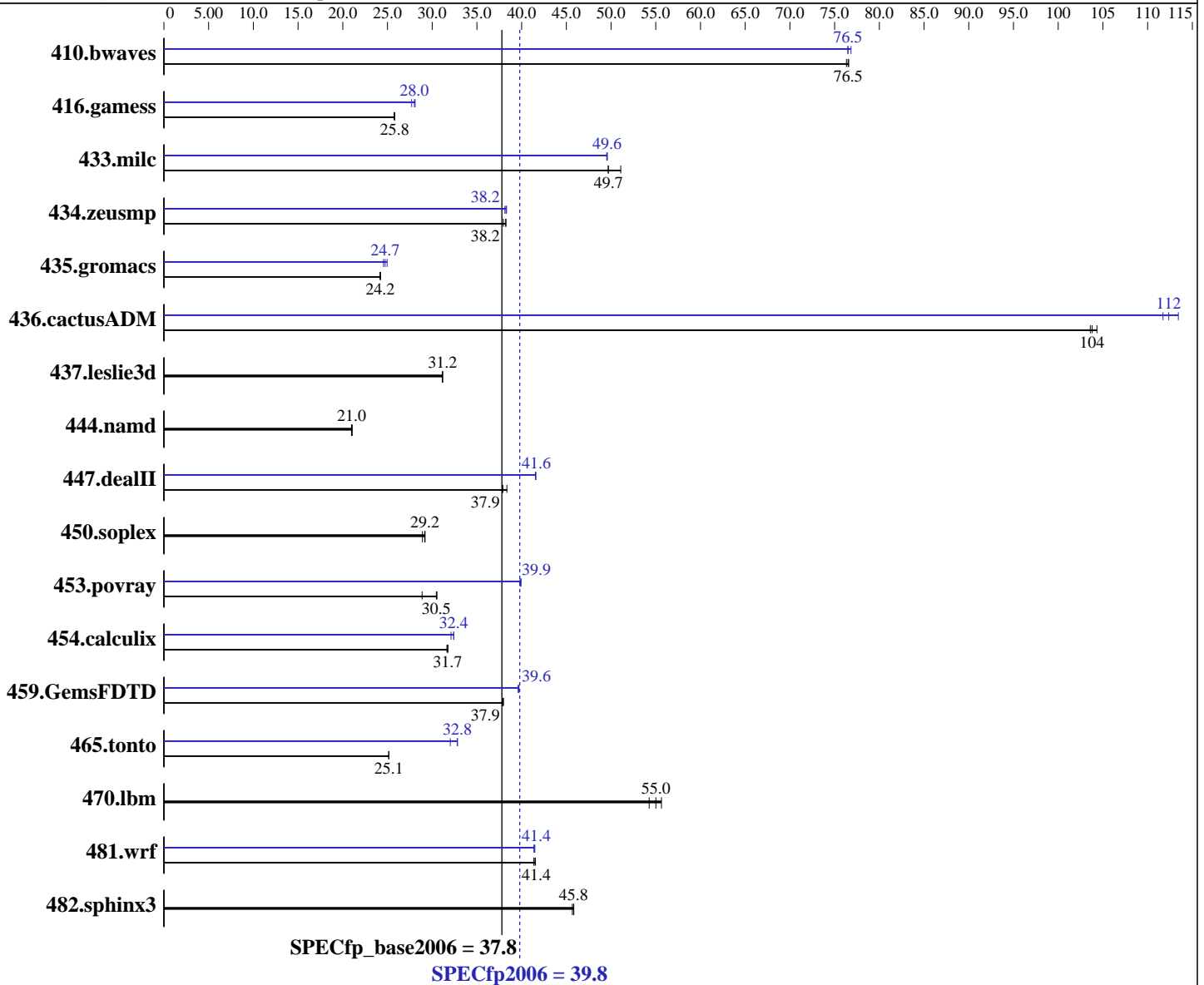
Test date: Nov-2009

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2009

Tested by: ASUSTeK Computer Inc.

Software Availability: Jul-2009



### Hardware

CPU Name: Intel Xeon X3470  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.6 GHz  
 CPU MHz: 2933  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 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 20090511 Package ID: L\_cproc\_p\_11.1.040, L\_cprof\_p\_11.1.040  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon X3470)

SPECfp2006 = **39.8**

SPECfp\_base2006 = **37.8**

CPU2006 license: 9016

Test sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test date: Nov-2009

Hardware Availability: Sep-2009

Software Availability: Jul-2009

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6 x 4 GB PC3-10600R, CL=9)  
Disk Subsystem: HITACHI HDT722525DLA380 250 GB, 7200RPM  
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>178</b>	<b>76.5</b>	178	76.3	177	76.6	<b>178</b>	<b>76.5</b>	177	76.8	178	76.5
416.gamess	759	25.8	<b>759</b>	<b>25.8</b>	760	25.7	697	28.1	<b>699</b>	<b>28.0</b>	707	27.7
433.milc	180	51.1	<b>185</b>	<b>49.7</b>	185	49.7	<b>185</b>	<b>49.6</b>	185	49.5	185	49.6
434.zeusmp	<b>238</b>	<b>38.2</b>	240	38.0	238	38.2	238	38.3	239	38.1	<b>238</b>	<b>38.2</b>
435.gromacs	<b>295</b>	<b>24.2</b>	295	24.2	295	24.2	291	24.6	286	25.0	<b>289</b>	<b>24.7</b>
436.cactusADM	115	104	<b>115</b>	<b>104</b>	115	104	<b>106</b>	<b>112</b>	107	112	105	113
437.leslie3d	<b>302</b>	<b>31.2</b>	302	31.2	302	31.2	<b>302</b>	<b>31.2</b>	302	31.2	302	31.2
444.namd	381	21.1	<b>382</b>	<b>21.0</b>	382	21.0	381	21.1	<b>382</b>	<b>21.0</b>	382	21.0
447.dealII	298	38.4	<b>302</b>	<b>37.9</b>	302	37.9	275	41.6	<b>275</b>	<b>41.6</b>	275	41.5
450.soplex	<b>286</b>	<b>29.2</b>	288	28.9	286	29.2	<b>286</b>	<b>29.2</b>	288	28.9	286	29.2
453.povray	<b>175</b>	<b>30.5</b>	184	28.9	174	30.5	134	39.8	133	39.9	<b>133</b>	<b>39.9</b>
454.calculix	260	31.8	261	31.6	<b>260</b>	<b>31.7</b>	257	32.1	<b>255</b>	<b>32.4</b>	255	32.4
459.GemsFDTD	280	37.9	<b>280</b>	<b>37.9</b>	279	38.0	<b>268</b>	<b>39.6</b>	267	39.7	268	39.6
465.tonto	391	25.2	<b>391</b>	<b>25.1</b>	391	25.1	300	32.8	<b>300</b>	<b>32.8</b>	307	32.0
470.lbm	<b>250</b>	<b>55.0</b>	247	55.6	253	54.3	<b>250</b>	<b>55.0</b>	247	55.6	253	54.3
481.wrf	<b>270</b>	<b>41.4</b>	270	41.4	269	41.5	<b>270</b>	<b>41.4</b>	269	41.5	270	41.4
482.sphinx3	425	45.8	<b>425</b>	<b>45.8</b>	427	45.7	425	45.8	<b>425</b>	<b>45.8</b>	427	45.7

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.

## Operating System Notes

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

## Component Notes

Tested system case compliance with Intel ATX or SSI spec  
390W or higher ATX Power Supply, 350W or higher SSI Server Power Supply  
System was configured with ASPEED AST2050 VGA (on board VGA)



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon X3470)

**SPECfp2006 = 39.8**

**SPECfp\_base2006 = 37.8**

**CPU2006 license:** 9016

**Test sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test date:** Nov-2009

**Hardware Availability:** Sep-2009

**Software Availability:** Jul-2009

## General Notes

The ASUS TS300-E6 (Intel Xeon X3470, 2.93 GHz) and the ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) models are electronically equivalent. The results have been measured on a ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) model.

Submitted\_by: <East\_Zhao@asus.com>  
Submitted: Tue Dec 8 15:40:08 EST 2009  
Submission: cpu2006-20091208-09250.sub

## 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.lelie3d: -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 -opt-prefetch

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

**SPECfp2006 = 39.8**

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon X3470)

**SPECfp\_base2006 = 37.8**

**CPU2006 license:** 9016

**Test date:** Nov-2009

**Test sponsor:** ASUSTeK Computer Inc.

**Hardware Availability:** Sep-2009

**Tested by:** ASUSTeK Computer Inc.

**Software Availability:** Jul-2009

## Base Optimization Flags (Continued)

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

## 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)  
-fno-alias`

`470.lbm: basepeak = yes`

`482.sphinx3: basepeak = yes`

C++ benchmarks:

`444.namd: basepeak = yes`

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## ASUSTeK Computer Inc.

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon  
X3470)

**SPECfp2006 = 39.8**

**SPECfp\_base2006 = 37.8**

**CPU2006 license:** 9016

**Test sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test date:** Nov-2009

**Hardware Availability:** Sep-2009

**Software Availability:** Jul-2009

## Peak Optimization Flags (Continued)

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- -opt-prefetch

450.soplex: basepeak = yes

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: Same as 410.bwaves

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)  
-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 -parallel -auto-ilp32

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

481.wrf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
-parallel -auto-ilp32

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revF.html>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**ASUSTeK Computer Inc.**

ASUS RS300-E6 (P7F-E) server system  
(Intel Xeon  
X3470)

**SPECfp2006 = 39.8**

**SPECfp\_base2006 = 37.8**

**CPU2006 license:** 9016

**Test sponsor:** ASUSTeK Computer Inc.

**Tested by:** ASUSTeK Computer Inc.

**Test date:** Nov-2009

**Hardware Availability:** Sep-2009

**Software Availability:** Jul-2009

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revF.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 04:31:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 8 December 2009.