



# SPEC® CFP2006 Result

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## Fujitsu

### SPECfp®\_rate2006 = 110

PRIMERGY RX300 S6, Intel Xeon X5667, 3.06 GHz

### SPECfp\_rate\_base2006 = 106

CPU2006 license: 19

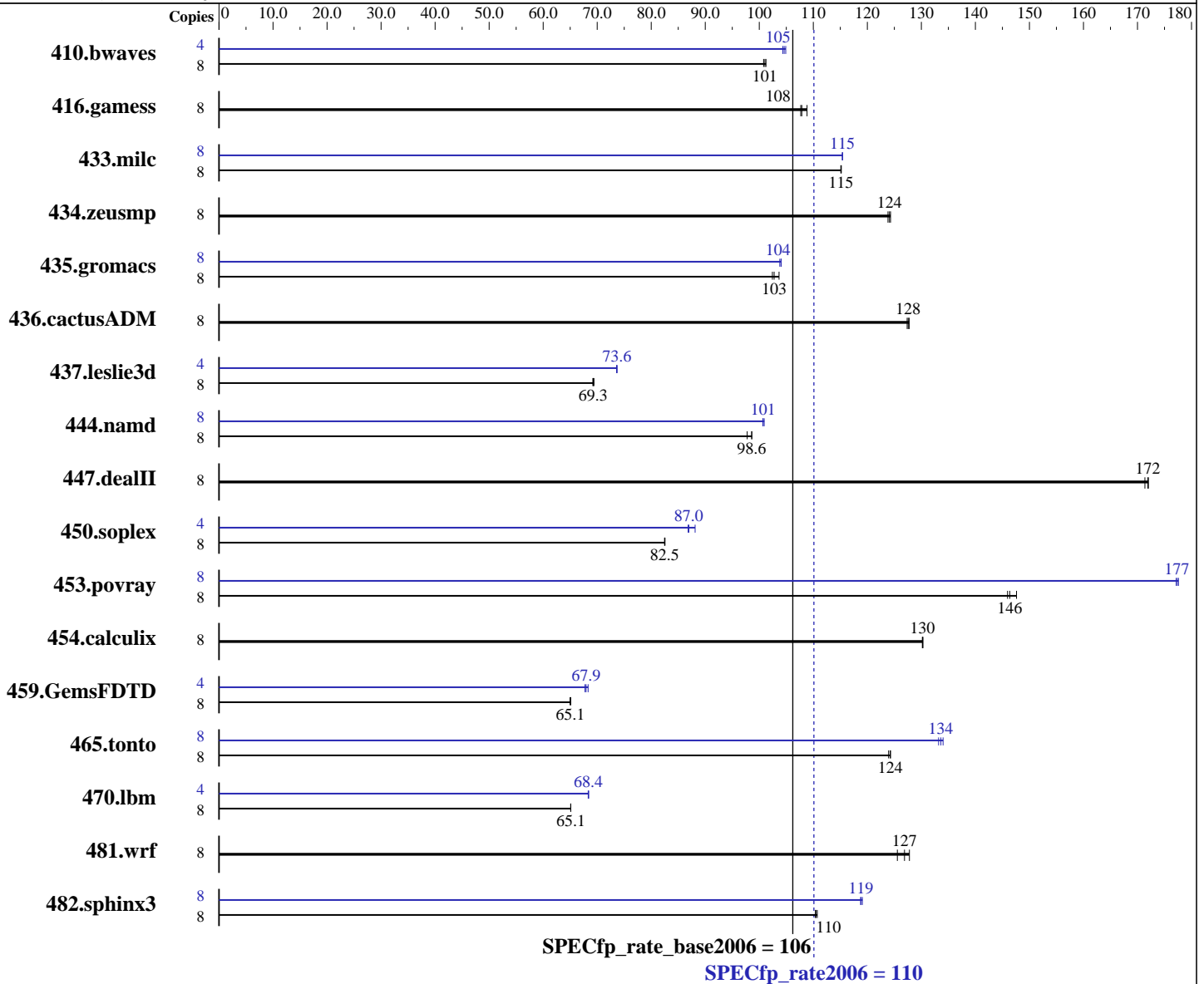
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2010

Hardware Availability: Apr-2010

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon X5667  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz  
 CPU MHz: 3067  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 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

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### 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

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L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC)  
Disk Subsystem: 1 x SATA, 250 GB, 5.4 krpm  
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1074	101	<b><u>1076</u></b>	<b><u>101</u></b>	1079	101	4	521	104	518	105	<b><u>520</u></b>	<b><u>105</u></b>
416.gamess	8	1455	108	<b><u>1452</u></b>	<b><u>108</u></b>	1439	109	8	1455	108	<b><u>1452</u></b>	<b><u>108</u></b>	1439	109
433.milc	8	638	115	638	115	<b><u>638</u></b>	<b><u>115</u></b>	8	637	115	<b><u>636</u></b>	<b><u>115</u></b>	636	115
434.zeusmp	8	586	124	588	124	<b><u>587</u></b>	<b><u>124</u></b>	8	586	124	588	124	<b><u>587</u></b>	<b><u>124</u></b>
435.gromacs	8	<b><u>556</u></b>	<b><u>103</u></b>	558	102	551	104	8	<b><u>549</u></b>	<b><u>104</u></b>	550	104	549	104
436.cactusADM	8	<b><u>749</u></b>	<b><u>128</u></b>	748	128	751	127	8	<b><u>749</u></b>	<b><u>128</u></b>	748	128	751	127
437.leslie3d	8	1084	69.4	<b><u>1086</u></b>	<b><u>69.3</u></b>	1087	69.2	4	<b><u>511</u></b>	<b><u>73.6</u></b>	510	73.7	511	73.6
444.namd	8	651	98.6	<b><u>651</u></b>	<b><u>98.6</u></b>	656	97.8	8	637	101	636	101	<b><u>637</u></b>	<b><u>101</u></b>
447.dealII	8	534	171	532	172	<b><u>532</u></b>	<b><u>172</u></b>	8	534	171	532	172	<b><u>532</u></b>	<b><u>172</u></b>
450.soplex	8	808	82.6	<b><u>809</u></b>	<b><u>82.5</u></b>	809	82.5	4	379	88.1	384	86.8	<b><u>384</u></b>	<b><u>87.0</u></b>
453.povray	8	288	148	<b><u>291</u></b>	<b><u>146</u></b>	292	146	8	240	178	240	177	<b><u>240</u></b>	<b><u>177</u></b>
454.calculix	8	<b><u>507</u></b>	<b><u>130</u></b>	507	130	507	130	8	<b><u>507</u></b>	<b><u>130</u></b>	507	130	507	130
459.GemsFDTD	8	1306	65.0	<b><u>1305</u></b>	<b><u>65.1</u></b>	1304	65.1	4	621	68.3	627	67.7	<b><u>625</u></b>	<b><u>67.9</u></b>
465.tonto	8	<b><u>634</u></b>	<b><u>124</u></b>	635	124	633	124	8	<b><u>589</u></b>	<b><u>134</u></b>	591	133	587	134
470.lbm	8	1689	65.1	<b><u>1688</u></b>	<b><u>65.1</u></b>	1688	65.1	4	804	68.3	<b><u>804</u></b>	<b><u>68.4</u></b>	803	68.4
481.wrf	8	<b><u>704</u></b>	<b><u>127</u></b>	712	126	699	128	8	<b><u>704</u></b>	<b><u>127</u></b>	712	126	699	128
482.sphinx3	8	1408	111	<b><u>1411</u></b>	<b><u>110</u></b>	1412	110	8	<b><u>1312</u></b>	<b><u>119</u></b>	1309	119	1313	119

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



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**Test date:** Mar-2010  
**Hardware Availability:** Apr-2010  
**Software Availability:** Jan-2010

## General Notes

This result was measured on the PRIMERGY TX300 S6. The PRIMERGY TX300 S6 and the PRIMERGY RX300 S6 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

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

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## 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



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

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

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## 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.20100330.02.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.20100330.02.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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