



# SPEC<sup>®</sup> CFP2006 Result

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## Fujitsu

### SPECfp<sup>®</sup>\_rate2006 = 264

PRIMERGY BX924 S2, Intel Xeon X5675, 3.07 GHz

### SPECfp\_rate\_base2006 = 257

CPU2006 license: 19

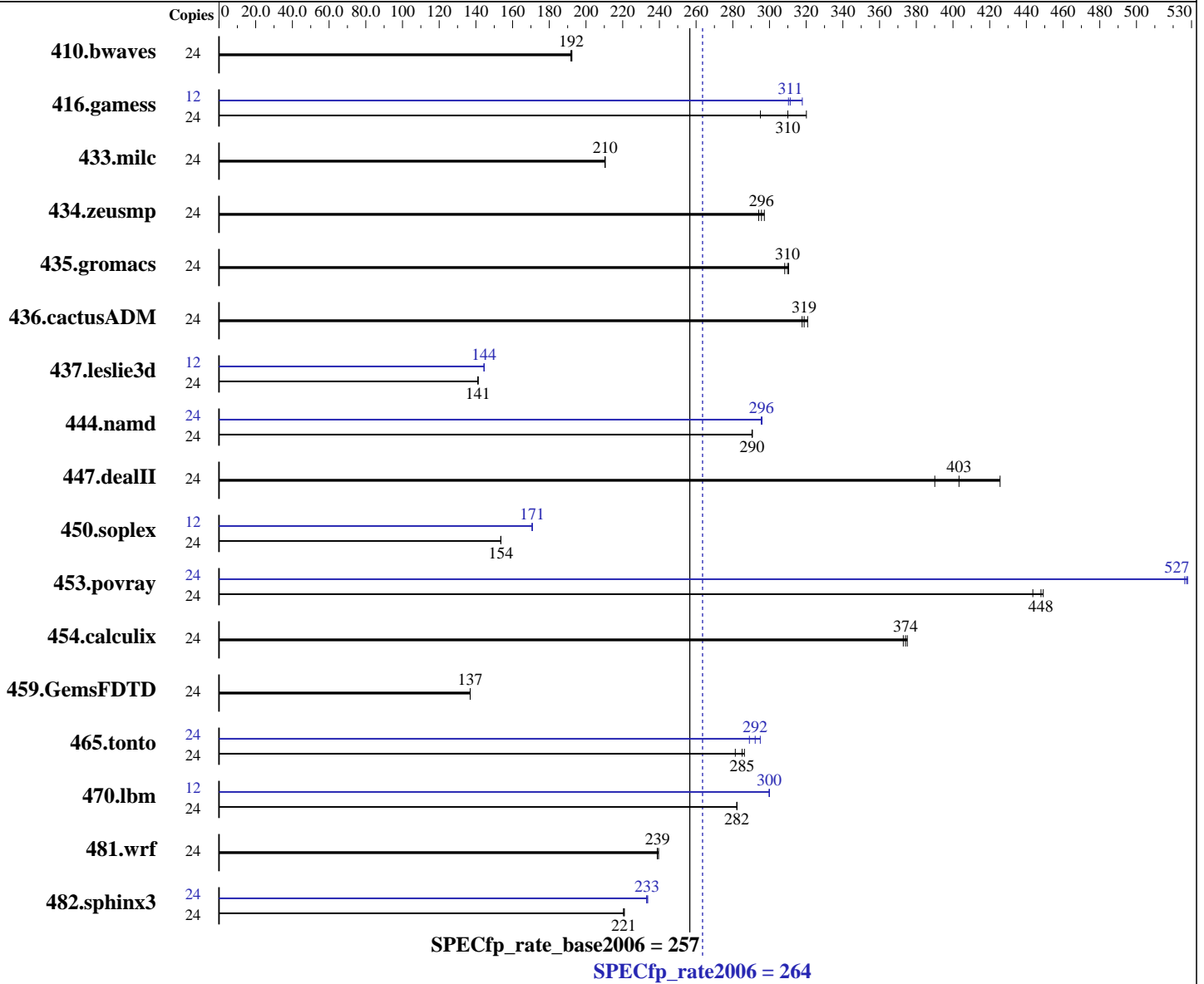
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Nov-2010



### Hardware

CPU Name: Intel Xeon X5675  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.47 GHz  
 CPU MHz: 3067  
 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

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### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64) with SP1, Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64, Version 12.0.0.082 Build 20101006  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit

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L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 96 GB (12 x 8 GB 2Rx4 PC3-10600R-9, ECC)  
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM  
Other Hardware: --

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	1696	192	<b>1698</b>	<b>192</b>	1700	192	24	1696	192	<b>1698</b>	<b>192</b>	1700	192		
416.gamess	24	1593	295	1468	320	<b>1516</b>	<b>310</b>	12	<b>755</b>	<b>311</b>	739	318	757	310		
433.milc	24	<b>1047</b>	<b>210</b>	1048	210	1047	210	24	<b>1047</b>	<b>210</b>	1048	210	1047	210		
434.zeusmp	24	<b>739</b>	<b>296</b>	743	294	735	297	24	<b>739</b>	<b>296</b>	743	294	735	297		
435.gromacs	24	<b>553</b>	<b>310</b>	556	308	552	310	24	<b>553</b>	<b>310</b>	556	308	552	310		
436.cactusADM	24	<b>899</b>	<b>319</b>	903	318	894	321	24	<b>899</b>	<b>319</b>	903	318	894	321		
437.leslie3d	24	1597	141	1600	141	<b>1598</b>	<b>141</b>	12	781	144	<b>781</b>	<b>144</b>	781	144		
444.namd	24	<b>663</b>	<b>290</b>	662	291	663	290	24	<b>651</b>	<b>296</b>	650	296	651	295		
447.dealII	24	<b>681</b>	<b>403</b>	704	390	645	426	24	<b>681</b>	<b>403</b>	704	390	645	426		
450.soplex	24	1303	154	1303	154	<b>1303</b>	<b>154</b>	12	586	171	587	171	<b>586</b>	<b>171</b>		
453.povray	24	284	449	288	444	<b>285</b>	<b>448</b>	24	<b>242</b>	<b>527</b>	242	528	243	526		
454.calculix	24	531	373	<b>529</b>	<b>374</b>	528	375	24	531	373	<b>529</b>	<b>374</b>	528	375		
459.GemsFDTD	24	1860	137	1860	137	<b>1860</b>	<b>137</b>	24	1860	137	1860	137	<b>1860</b>	<b>137</b>		
465.tonto	24	<b>828</b>	<b>285</b>	825	286	839	281	24	801	295	817	289	<b>808</b>	<b>292</b>		
470.lbm	24	1168	282	<b>1168</b>	<b>282</b>	1168	282	12	550	300	<b>550</b>	<b>300</b>	550	300		
481.wrf	24	1119	240	1122	239	<b>1122</b>	<b>239</b>	24	1119	240	1122	239	<b>1122</b>	<b>239</b>		
482.sphinx3	24	2117	221	2122	220	<b>2120</b>	<b>221</b>	24	2002	234	<b>2005</b>	<b>233</b>	2007	233		

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  
Large pages were not enabled for this run

## Platform Notes

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



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## General Notes

For information about Fujitsu please visit: <http://www.fujitsu.com>  
Binaries were compiled on SLES 10 SP1 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 -ansi-alias

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

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## Base Optimization Flags (Continued)

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

## 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.deallI: -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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## Peak Optimization Flags

### C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3  
-ansi-alias -opt-prefetch -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

### C++ benchmarks:

444.namd: -xSSE4.2(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.dealII: basepeak = yes

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(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) -prof-use(pass 2) -unroll4 -ansi-alias

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xSSE4.2(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-

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto  
-inline-calloc -opt-malloc-options=3

### Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

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## Peak Optimization Flags (Continued)

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-ic12.0-linux64-revA.20110222.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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