



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

SPECfp<sup>®</sup>2006 = 17.4

### CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = 16.0

CPU2006 license: 22

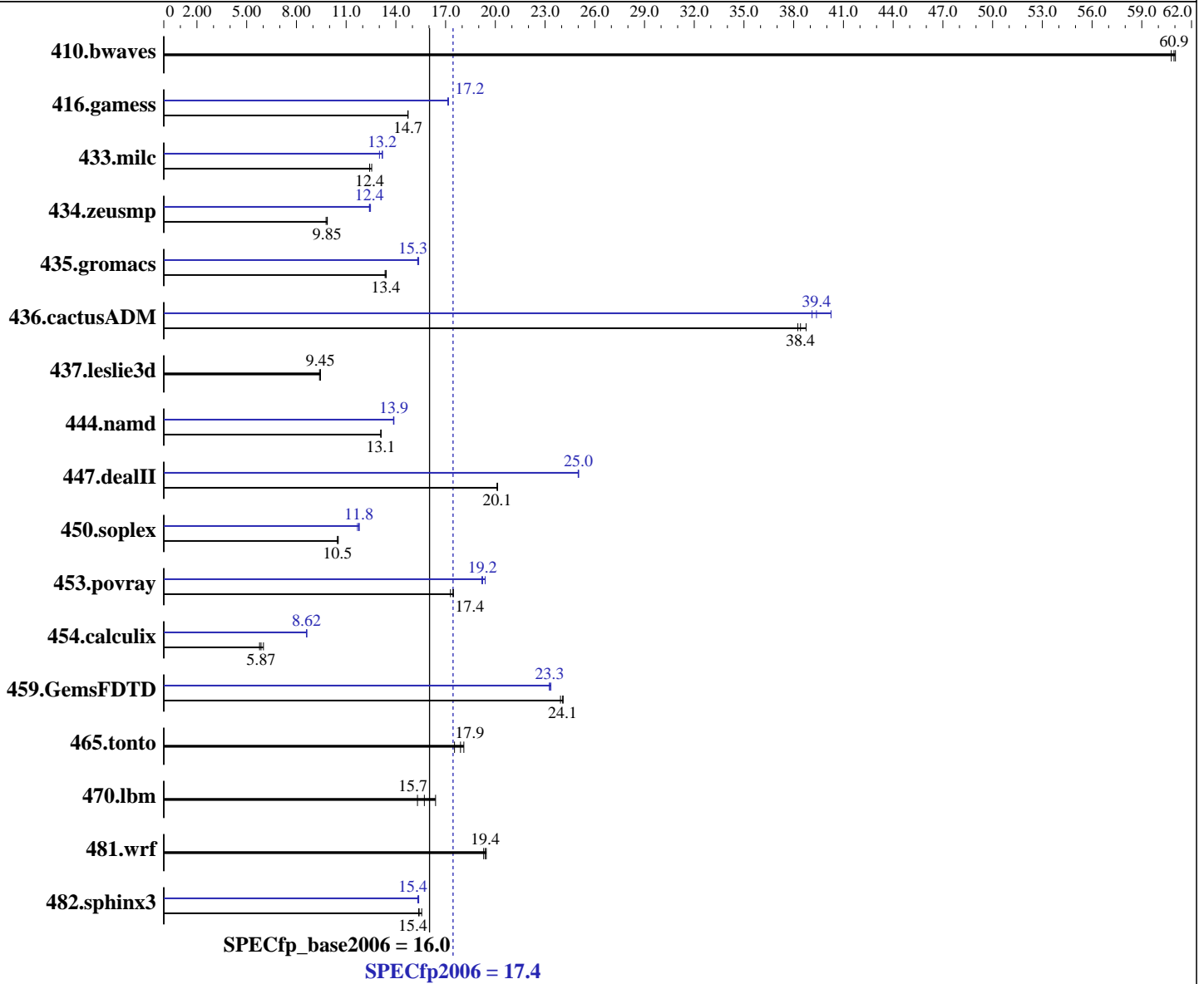
Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007



#### Hardware

CPU Name: AMD Opteron 2222  
 CPU Characteristics: Dual Core, 3.0 GHz, 2 MB L2-cache  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core

Continued on next page

#### Software

Operating System: SLES 10 for AMD64/EM64T  
 Compiler: QLogic PathScale Compiler Suite, - Release 3.0  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Multi-User SuSE Run Level 3  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

SPECfp2006 = **17.4**

## CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = **16.0**

CPU2006 license: 22

Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x2GB DDR2-667 CL5 dual rank ECC DIMMs registered)  
 Disk Subsystem: SATA II, 80 GB  
 Other Hardware: None

Other Software: None

### Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	223	61.0	<b>223</b>	<b>60.9</b>	224	60.8	223	61.0	<b>223</b>	<b>60.9</b>	224	60.8
416.gamess	1330	14.7	<b>1330</b>	<b>14.7</b>	1328	14.7	<b>1142</b>	<b>17.2</b>	1140	17.2	1143	17.1
433.milc	<b>739</b>	<b>12.4</b>	739	12.4	732	12.5	706	13.0	<b>697</b>	<b>13.2</b>	696	13.2
434.zeusmp	922	9.87	<b>924</b>	<b>9.85</b>	930	9.79	730	12.5	<b>733</b>	<b>12.4</b>	734	12.4
435.gromacs	535	13.3	532	13.4	<b>533</b>	<b>13.4</b>	466	15.3	<b>465</b>	<b>15.3</b>	464	15.4
436.cactusADM	312	38.2	308	38.7	<b>311</b>	<b>38.4</b>	297	40.3	<b>304</b>	<b>39.4</b>	306	39.1
437.leslie3d	1001	9.39	995	9.45	<b>995</b>	<b>9.45</b>	1001	9.39	995	9.45	<b>995</b>	<b>9.45</b>
444.namd	612	13.1	613	13.1	<b>612</b>	<b>13.1</b>	<b>578</b>	<b>13.9</b>	579	13.9	578	13.9
447.dealII	<b>569</b>	<b>20.1</b>	568	20.1	569	20.1	457	25.0	<b>457</b>	<b>25.0</b>	458	25.0
450.soplex	<b>795</b>	<b>10.5</b>	792	10.5	796	10.5	<b>709</b>	<b>11.8</b>	714	11.7	707	11.8
453.povray	304	17.5	308	17.3	<b>305</b>	<b>17.4</b>	<b>277</b>	<b>19.2</b>	277	19.2	274	19.4
454.calculix	1428	5.78	1372	6.01	<b>1406</b>	<b>5.87</b>	957	8.62	<b>957</b>	<b>8.62</b>	957	8.62
459.GemsFDTD	440	24.1	<b>441</b>	<b>24.1</b>	443	23.9	454	23.4	456	23.3	<b>456</b>	<b>23.3</b>
465.tonto	544	18.1	<b>550</b>	<b>17.9</b>	561	17.5	544	18.1	<b>550</b>	<b>17.9</b>	561	17.5
470.lbm	838	16.4	<b>874</b>	<b>15.7</b>	898	15.3	838	16.4	<b>874</b>	<b>15.7</b>	898	15.3
481.wrf	<b>576</b>	<b>19.4</b>	579	19.3	574	19.5	<b>576</b>	<b>19.4</b>	579	19.3	574	19.5
482.sphinx3	<b>1265</b>	<b>15.4</b>	1253	15.6	1268	15.4	1267	15.4	<b>1268</b>	<b>15.4</b>	1272	15.3

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

### Operating System Notes

powersave -f is applied to set CPU to maximum frequency prior to run  
stacksize is set to unlimited prior to run

### General Notes

BIOS default settings with  
Node memory interleave disabled, SRAT enabled

For information about Fujitsu Siemens Computers in your country please see:  
<http://www.fujitsu-siemens.com/countries>



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 17.4

CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = 16.0

CPU2006 license: 22

Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

Fortran benchmarks:  
pathf95

Benchmarks using both Fortran and C:  
pathcc pathf95

## 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  
436.cactusADM: -DSPEC\_CPU\_LP64 -fno-second-underscore  
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  
459.GemsFDTD: -DSPEC\_CPU\_LP64  
465.tonto: -DSPEC\_CPU\_LP64  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX -fno-second-underscore  
482.sphinx3: -DSPEC\_CPU\_LP64

## Base Optimization Flags

C benchmarks:  
-Ofast

C++ benchmarks:  
-Ofast

Fortran benchmarks:  
-Ofast -apo -OPT:malloc\_alg=1

Benchmarks using both Fortran and C:  
-Ofast -apo -OPT:malloc\_alg=1



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 17.4

CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = 16.0

CPU2006 license: 22

Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## Base Other Flags

C benchmarks:  
-IPA:max\_jobs=4

C++ benchmarks:  
-IPA:max\_jobs=4

Fortran benchmarks:  
-IPA:max\_jobs=4

Benchmarks using both Fortran and C:  
-IPA:max\_jobs=4

## Peak Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

Fortran benchmarks:  
pathf95

Benchmarks using both Fortran and C:  
pathcc pathf95

## 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  
 436.cactusADM: -DSPEC\_CPU\_LP64 -fno-second-underscore  
 437.leslie3d: -DSPEC\_CPU\_LP64  
 444.namd: -DSPEC\_CPU\_LP64  
 453.povray: -DSPEC\_CPU\_LP64  
 454.calculix: -DSPEC\_CPU\_LP64  
 459.GemsFDTD: -DSPEC\_CPU\_LP64  
 465.tonto: -DSPEC\_CPU\_LP64  
 470.lbm: -DSPEC\_CPU\_LP64  
 481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX -fno-second-underscore  
 482.sphinx3: -DSPEC\_CPU\_LP64



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 17.4

CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = 16.0

CPU2006 license: 22

Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## Peak Optimization Flags

### C benchmarks:

433.milc: -Ofast -CG:cflow=off -LNO:prefetch=1 -OPT:malloc\_alg=1

470.lbm: basepeak = yes

482.sphinx3: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3 -apo  
-OPT:Ofast -WOPT:aggstr=0 -m32

### C++ benchmarks:

444.namd: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-fno-exceptions

447.deallI: -Ofast -apo -static -INLINE:aggressive=on  
-OPT:malloc\_alg=1 -m32 -fno-exceptions

450.soplex: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-apo -OPT:IEEE\_arith=3 -CG:load\_exe=0 -CG:movnti=1  
-LNO:minvariant=off -LNO:prefetch=1 -fno-exceptions

453.povray: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-apo -fno-fast-math

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O2  
-OPT:Ofast -OPT:ro=3 -OPT:unroll\_size=256

434.zeusmp: -Ofast -CG:local\_fwd\_sched=on -LNO:blocking=off  
-LNO:interchange=off -LNO:fu=10 -LNO:full\_unroll\_outer=on

437.leslie3d: basepeak = yes

459.GemsFDTD: -Ofast -apo -LNO:fission=2 -LNO:prefetch=0

465.tonto: basepeak = yes

### Benchmarks using both Fortran and C:

435.gromacs: -O3 -apo -OPT:rsqrt=2 -OPT:ro=3

436.cactusADM: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3 -apo  
-LNO:prefetch=3 -LNO:prefetch\_ahead=5 -LNO:ou\_prod\_max=10  
-LNO:full\_unroll=5 -ipa

454.calculix: -Ofast -LNO:simd=0 -WOPT:mem\_opnds=on

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp2006 = 17.4

CELSIUS V840, Opteron 2222, 64-bit Linux

SPECfp\_base2006 = 16.0

CPU2006 license: 22

Test date: Jul-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Jul-2007

Tested by: Fujitsu Siemens Computers

Software Availability: Mar-2007

## Peak Optimization Flags (Continued)

481.wrf: basepeak = yes

## Peak Other Flags

C benchmarks:

-IPA:max\_jobs=4

C++ benchmarks:

-IPA:max\_jobs=4

Fortran benchmarks:

-IPA:max\_jobs=4

Benchmarks using both Fortran and C:

-IPA:max\_jobs=4

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.28.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.28.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.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 v1.0.  
Report generated on Tue Sep 13 11:24:20 2016 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 21 August 2007.