



# SPEC® CFP2006 Result

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Fujitsu Siemens Computers

CELSIUS R640, Intel Xeon E5345 processor

**SPECfp®\_rate2006 = 54.1**

CPU2006 license: 22

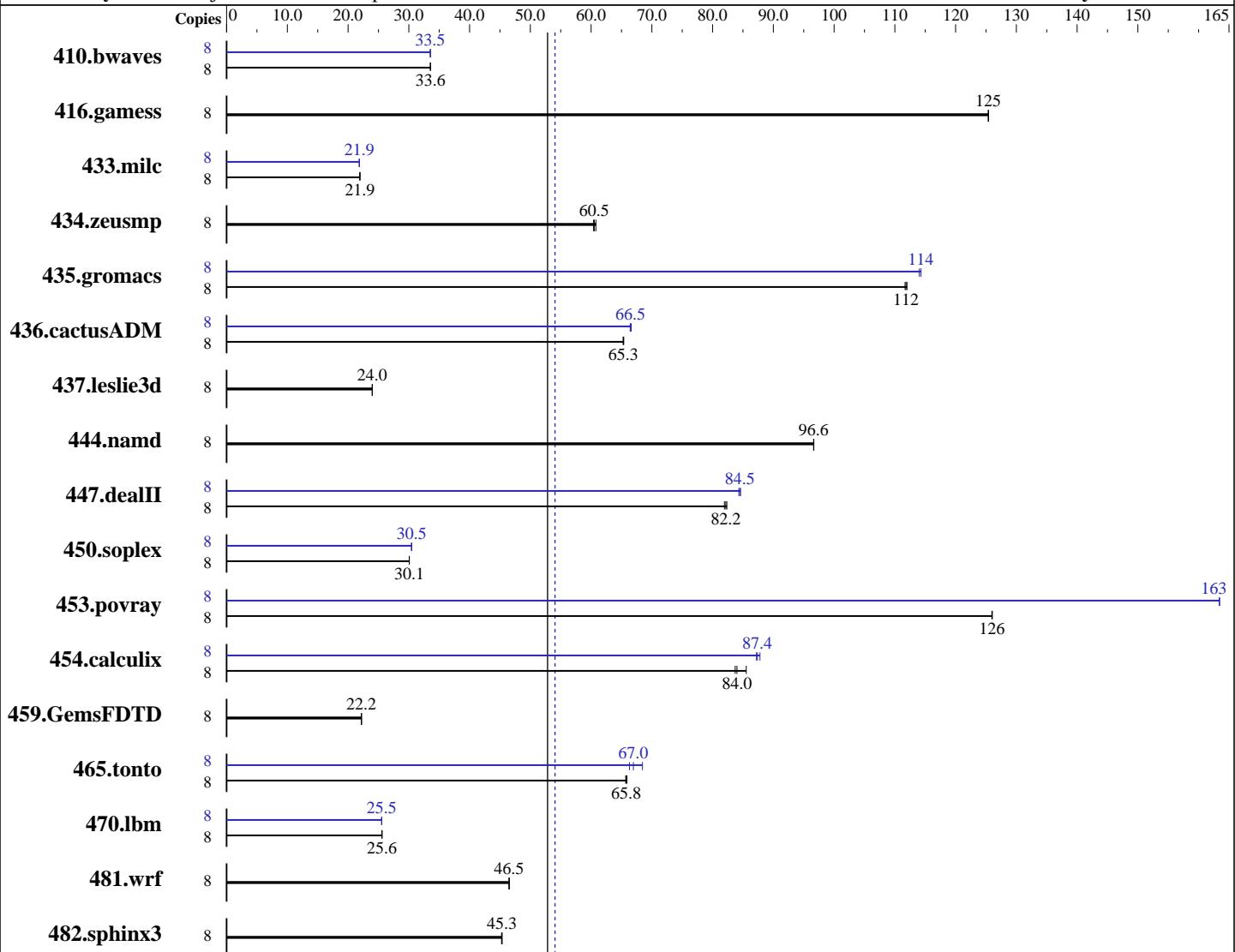
Test date: Mar-2007

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Nov-2006

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2006



**SPECfp\_rate\_base2006 = 52.8**

**SPECfp\_rate2006 = 54.1**

## Hardware

CPU Name: Intel Xeon E5345  
CPU Characteristics: E5345  
CPU MHz: 2333  
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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

## Software

Operating System: Windows XP, 64 bit Edition  
Compiler:  
Auto Parallel:  
File System:  
System State:  
Windows XP, 64 bit Edition  
Intel C++ Compiler for EM64T version 9.1  
- Build 20061104, Package-ID W\_CC\_C\_9.1.033  
Intel Fortran Compiler for EM64T version 9.1  
- Build 20061104, Package-ID W\_FC\_C\_9.1.033  
Microsoft Visual Studio 2005 (libr. & linker)

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L3 Cache:	None	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	64-bit
Memory:	16 GB (8x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)	Other Software:	None
Disk Subsystem:	SATA II 7200 rpm		
Other Hardware:	None		

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3241	33.5	<b>3240</b>	<b>33.6</b>	3239	33.6	8	3243	33.5	<b>3241</b>	<b>33.5</b>	3238	33.6
416.gamess	8	1249	125	<b>1249</b>	<b>125</b>	1249	125	8	1249	125	<b>1249</b>	<b>125</b>	1249	125
433.milc	8	3349	21.9	3346	21.9	<b>3348</b>	<b>21.9</b>	8	3362	21.8	<b>3361</b>	<b>21.9</b>	3360	21.9
434.zeusmp	8	1205	60.4	<b>1203</b>	<b>60.5</b>	1198	60.8	8	1205	60.4	<b>1203</b>	<b>60.5</b>	1198	60.8
435.gromacs	8	510	112	511	112	<b>511</b>	<b>112</b>	8	500	114	<b>500</b>	<b>114</b>	501	114
436.cactusADM	8	<b>1464</b>	<b>65.3</b>	1464	65.3	1462	65.4	8	1439	66.4	<b>1438</b>	<b>66.5</b>	1435	66.6
437.leslie3d	8	<b>3136</b>	<b>24.0</b>	3136	24.0	3136	24.0	8	<b>3136</b>	<b>24.0</b>	3136	24.0	3136	24.0
444.namd	8	<b>664</b>	<b>96.6</b>	664	96.7	664	96.6	8	<b>664</b>	<b>96.6</b>	664	96.7	664	96.6
447.dealII	8	1117	81.9	<b>1114</b>	<b>82.2</b>	1111	82.3	8	1082	84.6	1085	84.3	<b>1083</b>	<b>84.5</b>
450.soplex	8	2218	30.1	<b>2219</b>	<b>30.1</b>	2219	30.1	8	<b>2191</b>	<b>30.5</b>	2191	30.5	2191	30.4
453.povray	8	<b>338</b>	<b>126</b>	338	126	338	126	8	<b>260</b>	<b>163</b>	260	163	260	163
454.calculix	8	788	83.7	<b>786</b>	<b>84.0</b>	772	85.5	8	<b>755</b>	<b>87.4</b>	752	87.8	757	87.2
459.GemsFDTD	8	3823	22.2	3826	22.2	<b>3823</b>	<b>22.2</b>	8	3823	22.2	3826	22.2	<b>3823</b>	<b>22.2</b>
465.tonto	8	1195	65.9	<b>1196</b>	<b>65.8</b>	1198	65.7	8	1187	66.3	<b>1176</b>	<b>67.0</b>	1150	68.5
470.lbm	8	<b>4298</b>	<b>25.6</b>	4298	25.6	4298	25.6	8	<b>4305</b>	<b>25.5</b>	<b>4305</b>	<b>25.5</b>	4306	25.5
481.wrf	8	<b>1921</b>	<b>46.5</b>	1922	46.5	1921	46.5	8	<b>1921</b>	<b>46.5</b>	1922	46.5	1921	46.5
482.sphinx3	8	3439	45.3	3445	45.3	<b>3440</b>	<b>45.3</b>	8	<b>3439</b>	<b>45.3</b>	3445	45.3	<b>3440</b>	<b>45.3</b>

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

## Platform Notes

BIOS default settings have been used, except:

High Bandwidth Option Enabled

(To Optimize throughput of High Bandwidth FSB applications  
on multiprocessor configurations)

## General Notes

'start /b /wait /affinity' command is used to bind CPU(s) to processors.  
The Windows command "start /b /wait /affinity <hex\_affinity\_mask> application"  
starts the specified application without creating a new window (/b)  
and waits for its termination (/wait). Only the processors specified  
in <hex\_affinity\_mask> are allowed to execute the application.  
See the Windows documentation for the description of other parameters  
of the start command.

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## General Notes (Continued)

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

## Base Compiler Invocation

C benchmarks:

`icl -Qvc8 -Qc99`

C++ benchmarks:

`icl -Qvc8`

Fortran benchmarks:

`ifort`

Benchmarks using both Fortran and C:

`icl -Qvc8 -Qc99 ifort`

## Base Portability Flags

410.bwaves: `-DSPEC_CPU_P64`  
416.gamess: `-DSPEC_CPU_P64`  
  433.milc: `-D_Complex= -DSPEC_CPU_P64`  
434.zeusmp: `-DSPEC_CPU_P64`  
435.gromacs: `-D_Complex= -DSPEC_CPU_P64`  
436.cactusADM: `-D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore`  
437.leslie3d: `-DSPEC_CPU_P64`  
  444.namd: `-DSPEC_CPU_P64 /TP`  
447.dealII: `-D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T`  
  `-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG`  
450.soplex: `-DSPEC_CPU_P64`  
453.povray: `-DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL`  
454.calculix: `-D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER`  
  `-Qlowercase`  
459.GemsFDTD: `-DSPEC_CPU_P64`  
465.tonto: `-DSPEC_CPU_P64`  
  470.lbm: `-D_Complex= -DSPEC_CPU_P64`  
  481.wrf: `-DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL`  
482.sphinx3: `-D_Complex= -DSPEC_CPU_P64`

## Base Optimization Flags

C benchmarks:

`-fast -F950000000`

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## Base Optimization Flags (Continued)

C++ benchmarks:

-fast -Qcxx-features -F950000000

Fortran benchmarks:

-fast -F950000000

Benchmarks using both Fortran and C:

-fast -F950000000

## Peak Compiler Invocation

C benchmarks:

icl -Qvc8 -Qc99

C++ benchmarks:

icl -Qvc8

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc8 -Qc99 ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000

470.lbm: Same as 433.milc

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx-features  
-F950000000

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## Peak Optimization Flags (Continued)

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -F950000000

436.cactusADM: Same as 435.gromacs

454.calculix: Same as 435.gromacs

481.wrf: basepeak = yes

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.20.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.20.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.20.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.20.xml)

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

Tested with SPEC CPU2006 v1.0.

Report generated on Tue Jul 22 11:52:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 3 April 2007.