



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

**SPECint®2006 = 14.9**

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

**SPECint\_base2006 = 13.5**

CPU2006 license: 22

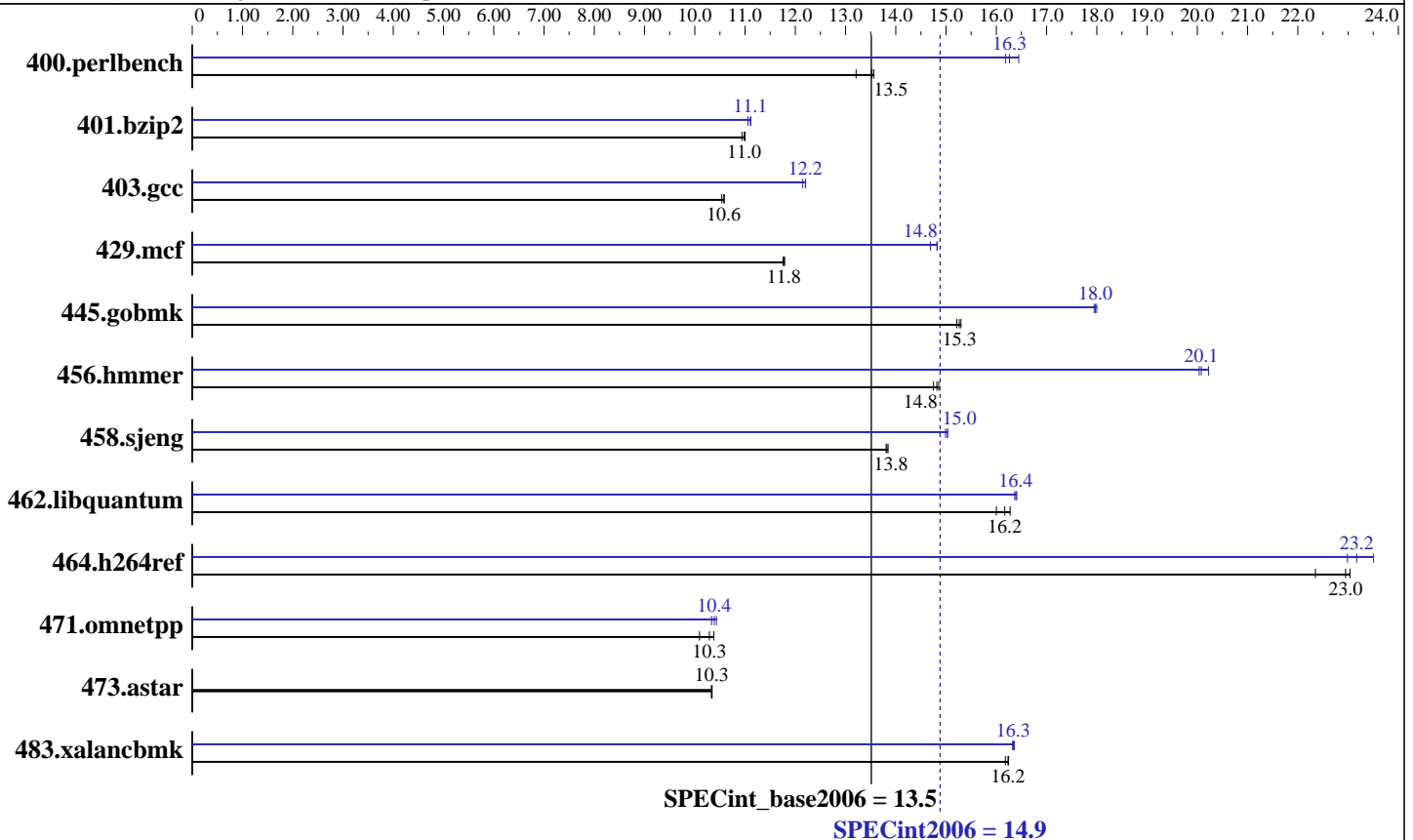
Test date: Jul-2007

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  
 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

### Software

Operating System: SLES 10 for AMD64/EM64T  
 Compiler: QLogic PathScale Compiler Suite, - Release 3.0  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-User SuSE Run Level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap 8.1



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	740	13.2	720	13.6	<u>722</u>	<u>13.5</u>	<u>601</u>	<u>16.3</u>	604	16.2	594	16.4
401.bzip2	882	10.9	877	11.0	<u>879</u>	<u>11.0</u>	<u>869</u>	<u>11.1</u>	868	11.1	873	11.1
403.gcc	760	10.6	<u>761</u>	<u>10.6</u>	764	10.5	660	12.2	<u>660</u>	<u>12.2</u>	663	12.1
429.mcf	776	11.8	774	11.8	<u>775</u>	<u>11.8</u>	615	14.8	<u>615</u>	<u>14.8</u>	621	14.7
445.gobmk	686	15.3	<u>687</u>	<u>15.3</u>	689	15.2	585	17.9	583	18.0	<u>584</u>	<u>18.0</u>
456.hammer	628	14.9	633	14.7	<u>630</u>	<u>14.8</u>	461	20.2	466	20.0	<u>465</u>	<u>20.1</u>
458.sjeng	874	13.8	876	13.8	<u>875</u>	<u>13.8</u>	805	15.0	807	15.0	<u>805</u>	<u>15.0</u>
462.libquantum	1295	16.0	<u>1282</u>	<u>16.2</u>	1273	16.3	1263	16.4	1266	16.4	<u>1264</u>	<u>16.4</u>
464.h264ref	990	22.3	961	23.0	<u>964</u>	<u>23.0</u>	963	23.0	<u>955</u>	<u>23.2</u>	941	23.5
471.omnetpp	<u>607</u>	<u>10.3</u>	602	10.4	619	10.1	599	10.4	605	10.3	<u>602</u>	<u>10.4</u>
473.astar	680	10.3	<u>679</u>	<u>10.3</u>	679	10.3	680	10.3	<u>679</u>	<u>10.3</u>	679	10.3
483.xalancbmk	<u>425</u>	<u>16.2</u>	425	16.2	426	16.2	422	16.4	423	16.3	<u>422</u>	<u>16.3</u>

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

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## Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC



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## Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX
```

## Base Optimization Flags

C benchmarks:

```
-Ofast -OPT:malloc_alg=1
```

C++ benchmarks:

```
-Ofast -m32 -L/opt/SmartHeap_8.1/lib -lsmarheap
```

## Base Other Flags

C benchmarks:

```
-IPA:max_jobs=4
```

C++ benchmarks:

```
-IPA:max_jobs=4
```

## Peak Compiler Invocation

Same as Base Compiler Invocation

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX
```



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## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-LNO:opt=0

401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast

429.mcf: -m32 -O3 -ipa -L/opt/SmartHeap\_8.1/lib -lsmartheap

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on

456.hmmer: -O2 -OPT:alias=disjoint -OPT:malloc\_alg=1 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -CG:gcm=off -m32  
-L/opt/SmartHeap\_8.1/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
-L/opt/SmartHeap\_8.1/lib -lsmartheap

## Peak Other Flags

Same as Base Other Flags

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)



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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 14 17:48:27 2009 by SPEC CPU2006 PS/PDF formatter v6323.