



# SPEC® CFP2006 Result

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**HITACHI**

BladeSymphony BS320 (Intel Xeon E5345)

**SPECfp®2006 = 15.2**

CPU2006 license: 872

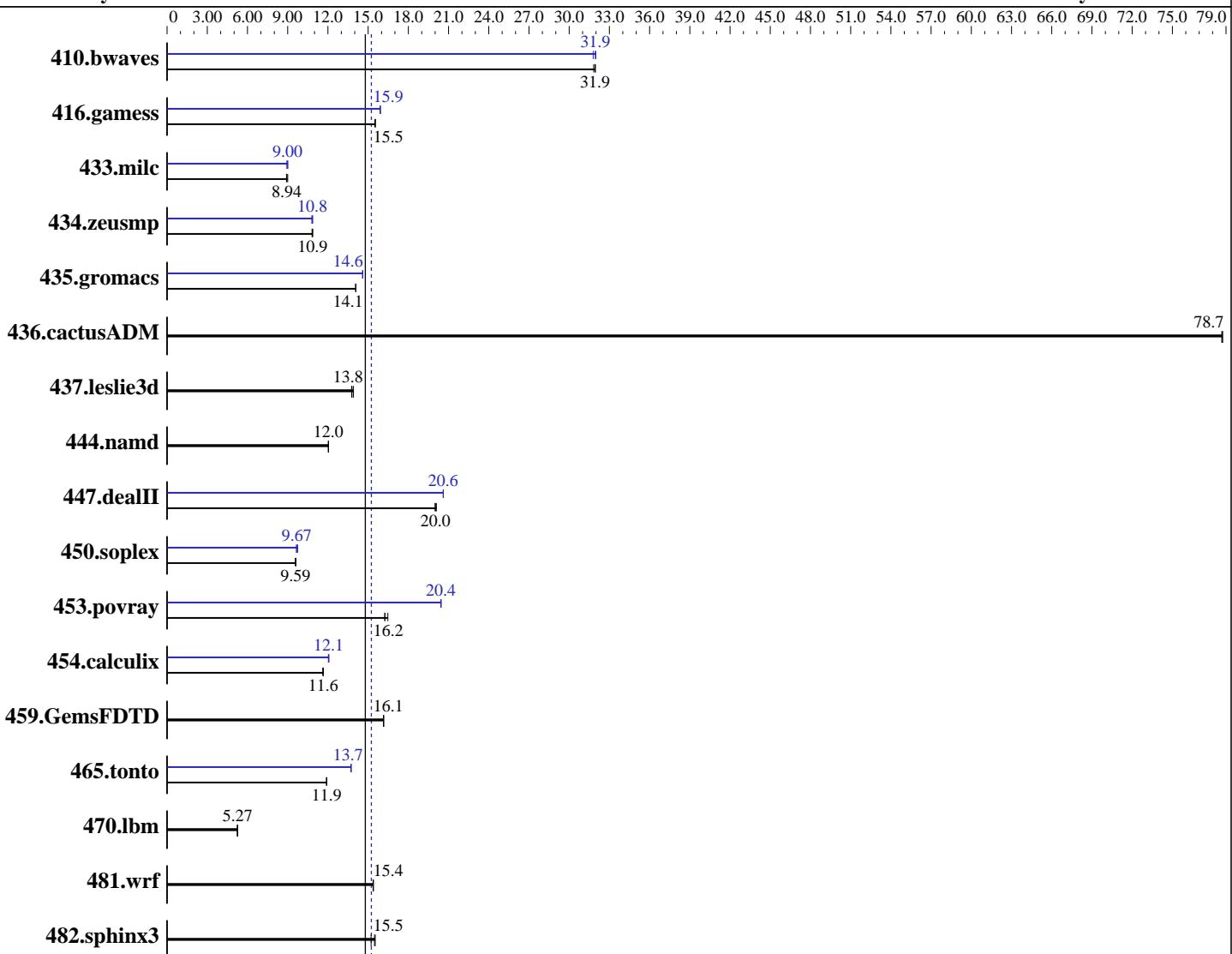
**Test date:** Jul-2007

**Test sponsor:** HITACHI

**Hardware Availability:** Jan-2007

**Tested by:** HITACHI

**Software Availability:** Mar-2007



**SPECfp\_base2006 = 14.8**

**SPECfp2006 = 15.2**

## Hardware

CPU Name: Intel Xeon E5345  
 CPU Characteristics: 1333MHz system bus  
 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: Red Hat Enterprise Linux ES release 4 (Nahant Update 3)  
 Compiler: Kernel 2.6.9-34.ELsmp on an x86\_64  
 Intel C++ Compiler for EM64T version 9.1 build 20070320  
 Intel Fortran Compiler for EM64T version 9.1 build 20070320  
 Auto Parallel: Yes

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L3 Cache: None  
Other Cache: None  
Memory: 8 GB(4 x 2 GB PC2-5300F CAS 5-5-5)  
Disk Subsystem: 2 x 73GB 10000rpm SAS  
Other Hardware: None

File System: ext3  
System State: Multi-user run level 3  
Base Pointers: 64-bit  
Peak Pointers: 64-bit  
Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<b>426</b>	<b>31.9</b>	427	31.8	425	32.0	428	31.8	<b>425</b>	<b>31.9</b>	425	32.0
416.gamess	<b>1261</b>	<b>15.5</b>	1260	15.5	1263	15.5	1230	15.9	<b>1231</b>	<b>15.9</b>	1232	15.9
433.milc	<b>1027</b>	<b>8.94</b>	1020	9.00	1030	8.91	1020	9.00	<b>1020</b>	<b>9.00</b>	1028	8.93
434.zeusmp	<b>838</b>	<b>10.9</b>	838	10.9	841	10.8	843	10.8	838	10.9	<b>839</b>	<b>10.8</b>
435.gromacs	507	14.1	<b>507</b>	<b>14.1</b>	507	14.1	<b>489</b>	<b>14.6</b>	489	14.6	489	14.6
436.cactusADM	<b>152</b>	<b>78.7</b>	152	78.7	152	78.7	<b>152</b>	<b>78.7</b>	152	78.7	152	78.7
437.leslie3d	682	13.8	<b>681</b>	<b>13.8</b>	676	13.9	682	13.8	<b>681</b>	<b>13.8</b>	676	13.9
444.namd	666	12.0	<b>666</b>	<b>12.0</b>	666	12.0	666	12.0	<b>666</b>	<b>12.0</b>	666	12.0
447.dealII	<b>571</b>	<b>20.0</b>	569	20.1	572	20.0	<b>555</b>	<b>20.6</b>	<b>555</b>	<b>20.6</b>	555	20.6
450.soplex	871	9.58	<b>870</b>	<b>9.59</b>	868	9.61	864	9.65	<b>863</b>	<b>9.67</b>	855	9.75
453.povray	327	16.2	323	16.5	<b>327</b>	<b>16.2</b>	<b>260</b>	<b>20.4</b>	260	20.4	260	20.4
454.calculix	710	11.6	707	11.7	<b>708</b>	<b>11.6</b>	<b>684</b>	<b>12.1</b>	684	12.1	685	12.0
459.GemsFDTD	<b>657</b>	<b>16.1</b>	656	16.2	657	16.1	<b>657</b>	<b>16.1</b>	656	16.2	657	16.1
465.tonto	826	11.9	827	11.9	<b>826</b>	<b>11.9</b>	718	13.7	<b>717</b>	<b>13.7</b>	716	13.7
470.lbm	2627	5.23	<b>2608</b>	<b>5.27</b>	2607	5.27	2627	5.23	<b>2608</b>	<b>5.27</b>	2607	5.27
481.wrf	726	15.4	<b>726</b>	<b>15.4</b>	727	15.4	<b>726</b>	<b>15.4</b>	<b>726</b>	<b>15.4</b>	727	15.4
482.sphinx3	1280	15.2	<b>1259</b>	<b>15.5</b>	1255	15.5	1280	15.2	<b>1259</b>	<b>15.5</b>	1255	15.5

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

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## Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

icc ifort

## 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:

-fast -parallel

C++ benchmarks:

-fast -parallel

Fortran benchmarks:

-fast -parallel

Benchmarks using both Fortran and C:

-fast -parallel

## Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

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## Peak Compiler Invocation (Continued)

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icc ifort

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: -fast

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -fast

450.soplex: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -parallel

453.povray: Same as 450.soplex

Fortran benchmarks:

410.bwaves: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -parallel

416.gamess: -fast

434.zeusmp: Same as 410.bwaves

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

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## Peak Optimization Flags (Continued)

435.gromacs: -prof\_gen(pass 1) -prof\_use(pass 2) -fast -parallel

436.cactusADM: basepeak = yes

454.calculix: -prof\_gen(pass 1) -prof\_use(pass 2) -fast

481.wrf: basepeak = yes

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

[http://www.spec.org/cpu2006/flags/ic91\\_fp.html](http://www.spec.org/cpu2006/flags/ic91_fp.html)

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

[http://www.spec.org/cpu2006/flags/ic91\\_fp.xml](http://www.spec.org/cpu2006/flags/ic91_fp.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).

Tested with SPEC CPU2006 v1.0.1.

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