



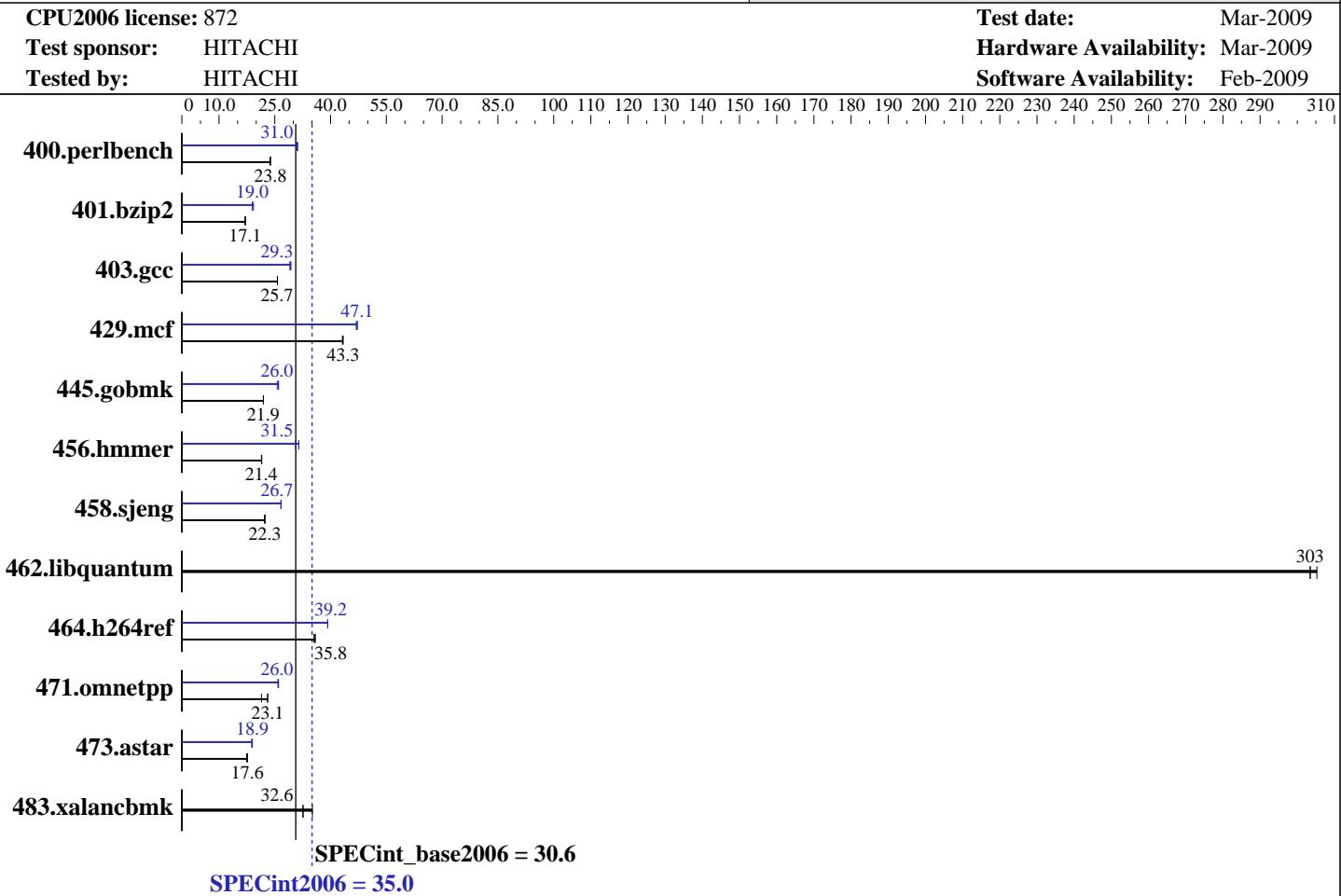
# SPEC® CINT2006 Result

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**HITACHI**

BladeSymphony BS320 (Intel Xeon X5570)

**SPECint®2006 = 35.0**



## Hardware

CPU Name:	Intel Xeon X5570
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2933
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:	256 KB I+D on chip per core
L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB(6 x 4 GB PC3-10600R, 2 rank, CL=9)
Disk Subsystem:	1 x 73 GB 10000 rpm SAS
Other Hardware:	None

## Software

Operating System:	Red Hat Enterprise Linux Server release 5.3, Advanced Platform, Kernel 2.6.18-128.el5 on an x86_64
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20090131 Package ID: l_cproc_p_11.0.081
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-user run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1



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Tested by: HITACHI

Software Availability: Feb-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	411	23.8	<b>411</b>	<b>23.8</b>	410	23.8	<b>315</b>	<b>31.0</b>	314	31.2	316	30.9
401.bzip2	567	17.0	<b>565</b>	<b>17.1</b>	565	17.1	<b>510</b>	<b>18.9</b>	501	19.3	<b>508</b>	<b>19.0</b>
403.gcc	313	25.7	<b>313</b>	<b>25.7</b>	313	25.7	<b>275</b>	<b>29.3</b>	277	29.0	<b>275</b>	<b>29.3</b>
429.mcf	210	43.3	<b>210</b>	<b>43.3</b>	211	43.2	<b>193</b>	<b>47.1</b>	195	46.9	193	47.2
445.gobmk	<b>478</b>	<b>21.9</b>	478	21.9	478	22.0	<b>409</b>	<b>25.6</b>	403	26.0	<b>404</b>	<b>26.0</b>
456.hmmer	436	21.4	<b>435</b>	<b>21.4</b>	434	21.5	<b>305</b>	<b>30.6</b>	296	31.5	<b>297</b>	<b>31.5</b>
458sjeng	<b>542</b>	<b>22.3</b>	542	22.3	544	22.2	<b>454</b>	<b>26.7</b>	<b>454</b>	<b>26.7</b>	453	26.7
462.libquantum	68.3	303	67.9	305	<b>68.3</b>	<b>303</b>	68.3	303	67.9	305	<b>68.3</b>	<b>303</b>
464.h264ref	623	35.5	<b>618</b>	<b>35.8</b>	617	35.9	<b>564</b>	<b>39.2</b>	<b>564</b>	<b>39.2</b>	564	39.2
471.omnetpp	271	23.1	292	21.4	<b>271</b>	<b>23.1</b>	<b>241</b>	<b>26.0</b>	240	26.0	242	25.8
473.astar	<b>399</b>	<b>17.6</b>	402	17.4	398	17.6	<b>370</b>	<b>18.9</b>	374	18.8	370	19.0
483.xalancbmk	<b>211</b>	<b>32.6</b>	196	35.1	212	32.5	<b>211</b>	<b>32.6</b>	196	35.1	212	32.5

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  
 OMP\_NUM\_THREADS set to number of cores  
 KMP\_AFFINITY set to physical,0

## Platform Notes

BIOS Settings:  
 Intel HT Technology = Disabled

## Base Compiler Invocation

C benchmarks:  
 icc

C++ benchmarks:  
 icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
 462.libquantum: -DSPEC\_CPU\_LINUX  
 483.xalancbmk: -DSPEC\_CPU\_LINUX



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## Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch
```

C++ benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/bsc/smartheap/lib -lsmartheap
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc
```

```
401.bzip2: /opt/intel/Compiler/11.0/081/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/081/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/081/ipp/em64t/include
```

```
456.hmmr: /opt/intel/Compiler/11.0/081/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/081/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/081/ipp/em64t/include
```

```
458.sjeng: /opt/intel/Compiler/11.0/081/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/081/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/081/ipp/em64t/include
```

C++ benchmarks:

```
icpc
```

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
```

```
401.bzip2: -DSPEC_CPU_LP64
```

```
456.hmmr: -DSPEC_CPU_LP64
```

```
458.sjeng: -DSPEC_CPU_LP64
```

```
462.libquantum: -DSPEC_CPU_LINUX
```

```
483.xalancbmk: -DSPEC_CPU_LINUX
```



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CPU2006 license: 872

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Test date: Mar-2009

Hardware Availability: Mar-2009

Software Availability: Feb-2009

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                 -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
                 -prof-use(pass 2) -ansi-alias -opt-prefetch

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
            -prof-use(pass 2) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
          -opt-malloc-options=3

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
            -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
            -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
            -prof-use(pass 2) -unroll14 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
              -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
              -prof-use(pass 2) -unroll12 -ansi-alias
```

C++ benchmarks:

```
471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
              -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
              -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
              -L/home/msc/smartheap/lib -lsmartheap

473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
            -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
            -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs
            -L/home/msc/smartheap/lib -lsmartheap

483.xalancbmk: basepeak = yes
```



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**SPECint2006 = 35.0**

**SPECint\_base2006 = 30.6**

**CPU2006 license:** 872

**Test sponsor:** HITACHI

**Tested by:** HITACHI

**Test date:** Mar-2009

**Hardware Availability:** Mar-2009

**Software Availability:** Feb-2009

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.05.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.05.xml>

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