



# SPEC® CINT2006 Result

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## Intel Corporation

### SPECint®\_rate2006 = 90.4

## Supermicro X7DB8+ (Intel Xeon X5270)

### SPECint\_rate\_base2006 = 84.9

CPU2006 license: 13

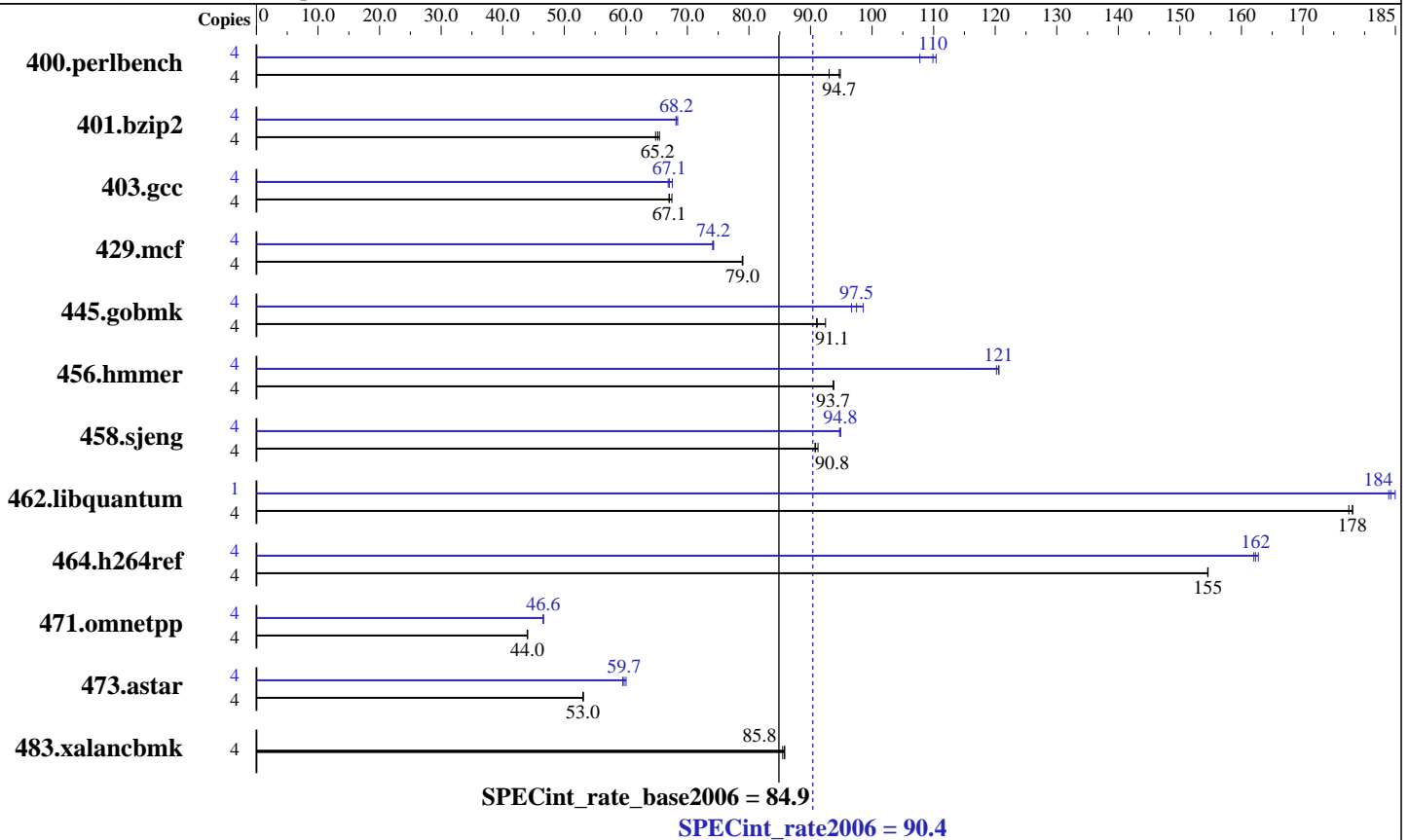
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon X5270  
 CPU Characteristics:  
 CPU MHz: 3500  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8x 2GB Samsung 5300F, CL5-5-5, 2 rank, ECC)  
 Disk Subsystem: 36.4 GB HP SCSI, 15K RPM  
 Other Hardware: None

### Software

Operating System: SuSe Linux SLES10 SP2  
 Compiler: Intel C++ Compiler 11.0 for Linux  
 Build 20080730 Package ID: 1\_cc\_b\_11.0.042  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1  
 Binutils 2.18.50.0.7.20080502



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	420	93.0	<b><u>413</u></b>	<b><u>94.7</u></b>	412	94.8	4	354	110	<b><u>356</u></b>	<b><u>110</u></b>	363	108
401.bzip2	4	590	65.5	<b><u>592</u></b>	<b><u>65.2</u></b>	595	64.8	4	564	68.4	566	68.1	<b><u>566</u></b>	<b><u>68.2</u></b>
403.gcc	4	477	67.5	<b><u>480</u></b>	<b><u>67.1</u></b>	480	67.0	4	481	66.9	<b><u>480</u></b>	<b><u>67.1</u></b>	477	67.6
429.mcf	4	462	79.0	<b><u>462</u></b>	<b><u>79.0</u></b>	462	78.9	4	<b><u>491</u></b>	<b><u>74.2</u></b>	492	74.1	491	74.3
445.gobmk	4	461	91.0	454	92.4	<b><u>461</u></b>	<b><u>91.1</u></b>	4	434	96.6	426	98.6	<b><u>430</u></b>	<b><u>97.5</u></b>
456.hmmer	4	<b><u>398</u></b>	<b><u>93.7</u></b>	398	93.8	398	93.7	4	309	121	<b><u>310</u></b>	<b><u>121</u></b>	310	120
458.sjeng	4	533	90.7	<b><u>533</u></b>	<b><u>90.8</u></b>	531	91.2	4	<b><u>510</u></b>	<b><u>94.8</u></b>	510	94.9	511	94.7
462.libquantum	4	<b><u>466</u></b>	<b><u>178</u></b>	465	178	467	177	1	<b><u>112</u></b>	<b><u>184</u></b>	112	185	113	184
464.h264ref	4	573	155	573	155	<b><u>573</u></b>	<b><u>155</u></b>	4	<b><u>545</u></b>	<b><u>162</u></b>	544	163	546	162
471.omnetpp	4	568	44.0	<b><u>568</u></b>	<b><u>44.0</u></b>	568	44.0	4	537	46.6	536	46.6	<b><u>537</u></b>	<b><u>46.6</u></b>
473.astar	4	529	53.1	529	53.0	<b><u>529</u></b>	<b><u>53.0</u></b>	4	472	59.5	468	60.0	<b><u>470</u></b>	<b><u>59.7</u></b>
483.xalancbmk	4	<b><u>322</u></b>	<b><u>85.8</u></b>	322	85.8	323	85.5	4	<b><u>322</u></b>	<b><u>85.8</u></b>	322	85.8	323	85.5

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

## Submit Notes

The config file option 'submit' was used.

## General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode  
 taskset was used to bind processes to cores except for 462.libquantum peak  
 OMP\_NUM\_THREADS set to number of processors  
 KMP\_AFFINITY set to "physical,0"  
 KMP\_STACKSIZE set to 64M

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



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## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/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/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

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

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

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4

462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static  
-opt-malloc-options=3 -parallel -par-runtime-control  
-opt-prefetch

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

483.xalancbmk: basepeak = yes



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## 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.20090713.06.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.20090713.06.xml>

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

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