



# SPEC® CINT2006 Result

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## Supermicro

(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor E5450,  
3.00 GHz)

**SPECint®\_rate2006 = 134**

**SPECint\_rate\_base2006 = 109**

CPU2006 license: 13

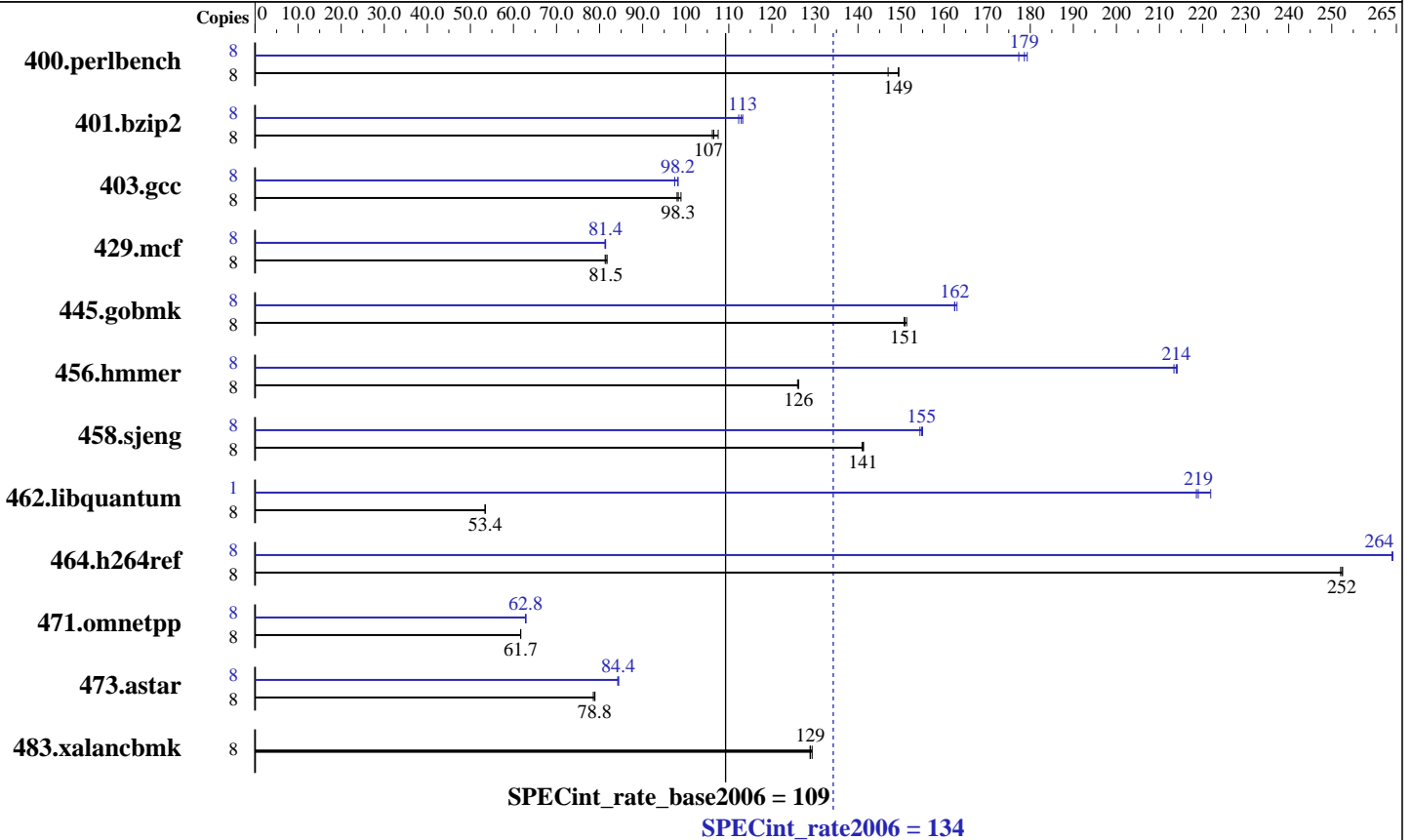
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Nov-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5450  
 CPU Characteristics: Quad Core, 3.00 GHz  
 CPU MHz: 3000  
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 \* 2GB DDR2 5300F, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: 1x73GB Seagate ST37330LC SCSI 10K RPM  
 Other Hardware: None

### Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10 SP1 RC1, Kernel  
 linux-cbgn 2.6.16.43-0.5-smp for x86\_64  
 Compiler: Intel C++ Compiler 10.1 for Linux  
 Build 20070913 Package ID: l\_cc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1  
 Binutils 2.17.50.0.15



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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	8	<u>523</u>	<u>149</u>	532	147	523	150	8	436	179	441	177	<u>438</u>	<u>179</u>
401.bzip2	8	<u>725</u>	<u>107</u>	718	108	727	106	8	682	113	<u>684</u>	<u>113</u>	687	112
403.gcc	8	651	98.9	<u>655</u>	<u>98.3</u>	657	98.0	8	661	97.5	656	98.2	<u>656</u>	<u>98.2</u>
429.mcf	8	893	81.7	897	81.3	<u>896</u>	<u>81.5</u>	8	898	81.2	896	81.4	<u>897</u>	<u>81.4</u>
445.gobmk	8	555	151	557	151	<u>556</u>	<u>151</u>	8	<u>517</u>	<u>162</u>	517	162	515	163
456.hmmer	8	<u>591</u>	<u>126</u>	591	126	593	126	8	350	213	349	214	<u>349</u>	<u>214</u>
458.sjeng	8	685	141	<u>686</u>	<u>141</u>	687	141	8	<u>626</u>	<u>155</u>	627	154	625	155
462.libquantum	8	3102	53.4	<u>3102</u>	<u>53.4</u>	3102	53.4	1	93.4	222	<u>94.6</u>	<u>219</u>	94.8	219
464.h264ref	8	<u>702</u>	<u>252</u>	701	253	702	252	8	670	264	671	264	<u>671</u>	<u>264</u>
471.omnetpp	8	811	61.7	<u>811</u>	<u>61.7</u>	811	61.7	8	796	62.8	<u>796</u>	<u>62.8</u>	795	62.9
473.astar	8	712	78.9	<u>712</u>	<u>78.8</u>	715	78.5	8	665	84.4	667	84.2	<u>666</u>	<u>84.4</u>
483.xalancbmk	8	<u>428</u>	<u>129</u>	427	129	428	129	8	<u>428</u>	<u>129</u>	427	129	428	129

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

## General Notes

Bios settings:

Hardware Prefetcher: Enabled

Adjacent Sector Prefetch: Disabled

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode

The taskset utility was used to bind processes to cores

## 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:

-fast -inline-calloc -opt-malloc-options=3

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/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/cce/10.1.008/bin/icc  
-L/opt/intel/cce/10.1.008/lib  
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc  
-L/opt/intel/cce/10.1.008/lib  
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

Continued on next page



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## Peak Optimization Flags (Continued)

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

## 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-ic10-ia32-intel64-linux-flags.20090714.36.html>



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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.36.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).

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