



# SPEC® CINT2006 Result

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## Supermicro

### SPECint®\_rate2006 = 130

Motherboard X8SIU-F (Intel Xeon X3480, 3.06 GHz)

### SPECint\_rate\_base2006 = 122

CPU2006 license: 001176

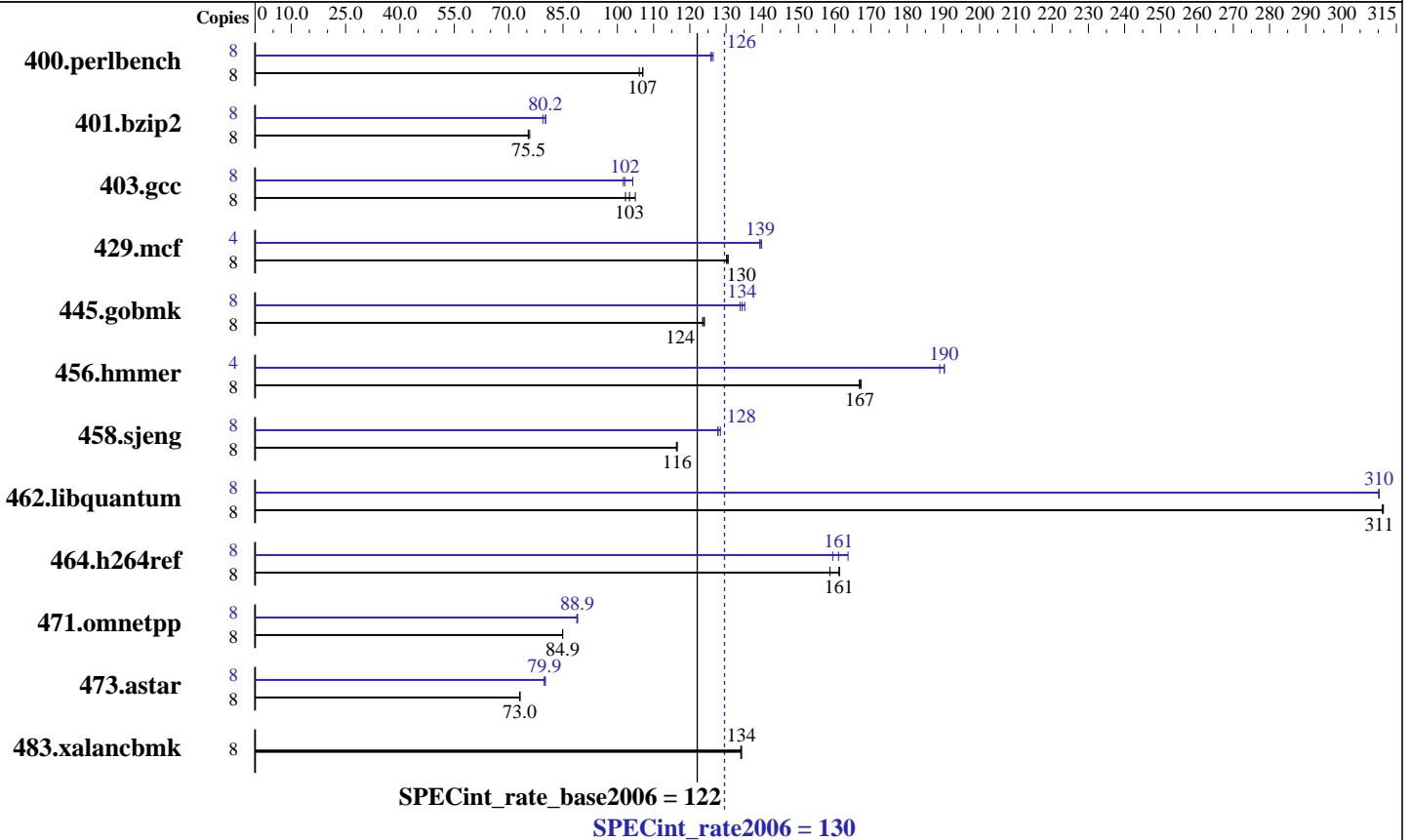
Test date: Sep-2010

Test sponsor: Supermicro

Hardware Availability: May-2010

Tested by: Supermicro

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon X3480  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz  
 CPU MHz: 3067  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 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: 16 GB (4 x 4 GB 2Rx8 DDR3-1333 RDIMM, ECC, CL9)  
 Disk Subsystem: 1 x 500 GB SATA II, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64)  
 Kernel 2.6.27.19-5-default  
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1  
 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1



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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	<b><u>731</u></b>	<b><u>107</u></b>	730	107	737	106	8	618	126	<b><u>621</u></b>	<b><u>126</u></b>	621	126
401.bzip2	8	1018	75.8	<b><u>1023</u></b>	<b><u>75.5</u></b>	1024	75.4	8	963	80.2	<b><u>963</u></b>	<b><u>80.2</u></b>	972	79.4
403.gcc	8	614	105	<b><u>623</u></b>	<b><u>103</u></b>	630	102	8	634	102	618	104	<b><u>631</u></b>	<b><u>102</u></b>
429.mcf	8	<b><u>560</u></b>	<b><u>130</u></b>	561	130	559	131	4	261	140	262	139	<b><u>262</u></b>	<b><u>139</u></b>
445.gobmk	8	680	124	<b><u>678</u></b>	<b><u>124</u></b>	677	124	8	627	134	621	135	<b><u>624</u></b>	<b><u>134</u></b>
456.hammer	8	446	167	<b><u>447</u></b>	<b><u>167</u></b>	448	167	4	<b><u>196</u></b>	<b><u>190</u></b>	197	189	196	190
458.sjeng	8	831	117	<b><u>831</u></b>	<b><u>116</u></b>	832	116	8	<b><u>757</u></b>	<b><u>128</u></b>	758	128	754	128
462.libquantum	8	532	311	<b><u>533</u></b>	<b><u>311</u></b>	533	311	8	534	310	535	310	<b><u>534</u></b>	<b><u>310</u></b>
464.h264ref	8	1116	159	<b><u>1099</u></b>	<b><u>161</u></b>	1097	161	8	1110	159	1082	164	<b><u>1099</u></b>	<b><u>161</u></b>
471.omnetpp	8	589	84.9	<b><u>589</u></b>	<b><u>84.9</u></b>	589	84.9	8	<b><u>562</u></b>	<b><u>88.9</u></b>	562	89.0	563	88.8
473.astar	8	768	73.2	<b><u>769</u></b>	<b><u>73.0</u></b>	769	73.0	8	704	79.8	<b><u>703</u></b>	<b><u>79.9</u></b>	701	80.1
483.xalancbmk	8	<b><u>411</u></b>	<b><u>134</u></b>	411	134	412	134	8	<b><u>411</u></b>	<b><u>134</u></b>	411	134	412	134

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.  
numactl was used to bind copies to the cores

## Operating System Notes

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

## Platform Notes

Fan speed set to Full Speed in BIOS Setup.  
As tested, the system used a Supermicro CSE-815TQ-330UB chassis.  
The chassis is bundled with a PWS-333-1H20 power supply, a SNK-P0046P heatsink, and 4 FAN-0086L4 cooling fans.

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m32

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc -m32

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.icl1.1/libicl1.1-32bit -lsmarheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):  
icpc -m32

473.astar: icpc -m64



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## Peak Portability Flags

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

## 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  
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) -opt-prefetch -ansi-alias -auto-ilp32  
403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static  
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) -unroll4 -auto-ilp32  
462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32  
-opt-prefetch  
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) -unroll2 -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/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

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## Peak Optimization Flags (Continued)

```
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/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64
```

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-ic11.1-linux64-revE.20100915.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100915.xml>

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

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