



# SPEC® CINT2006 Result

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## Intel Corporation

Supermicro X7DB+ (Intel Xeon processor E5345, 2.33 GHz)

**SPECint®\_rate2006 = 92.8**

**SPECint\_rate\_base2006 = 85.7**

CPU2006 license: 13

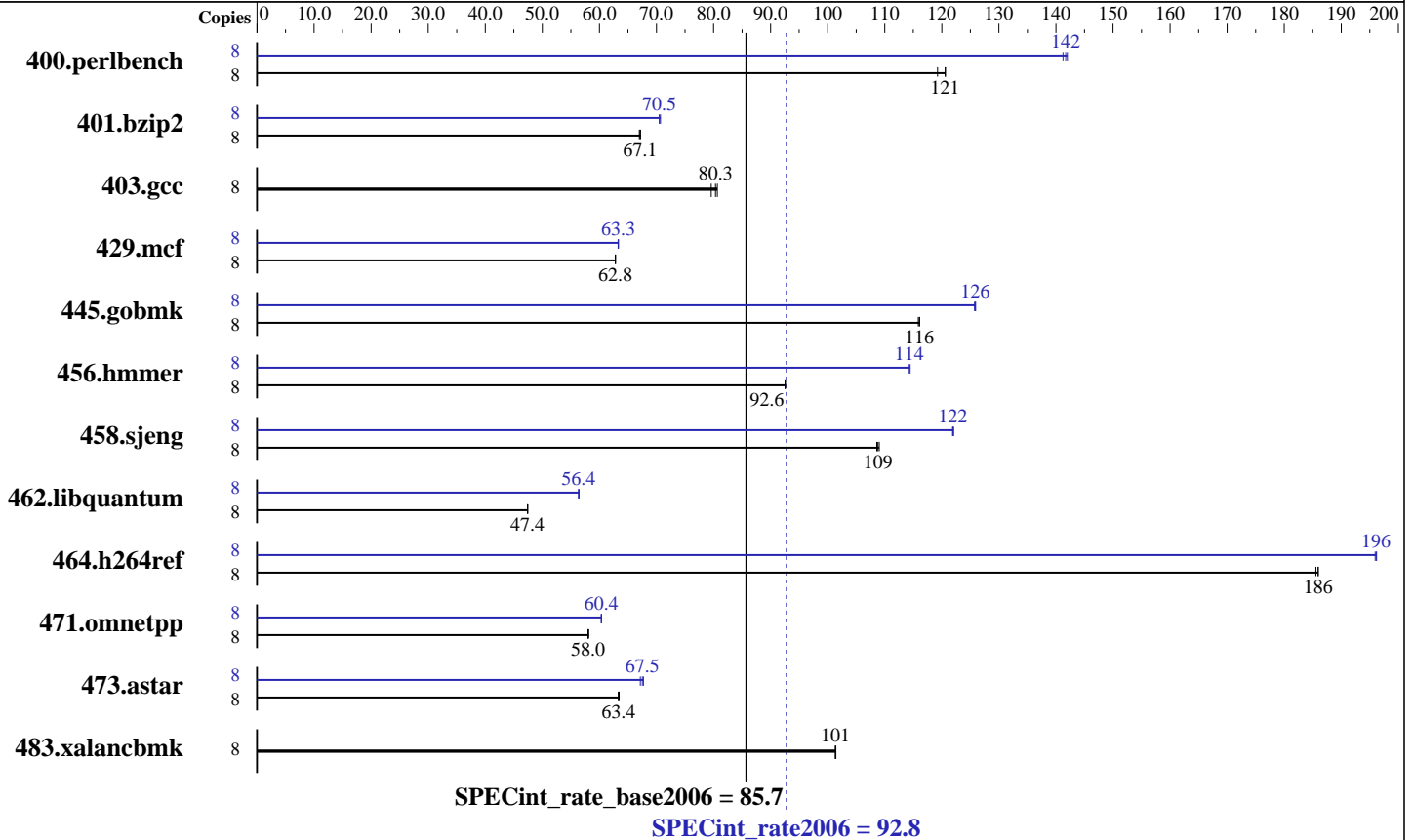
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: May-2007

Hardware Availability: Sep-2007

Software Availability: Jun-2007



### Hardware

CPU Name: Intel Xeon E5345  
 CPU Characteristics: Quad Core, 2.33 GHz  
 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  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 \* 2GB Samsung DDR2 5300F, 2 rank, CL5-5-5, ECC)  
 Disk Subsystem: Seagate, SCSI, 73GB, 10Krpm, 1 disk only  
 Other Hardware: None

### Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86\_64  
 Compiler: Intel C++ Compiler for Linux32 version 10.0 Build 20070426 Package ID: l\_cc\_p\_10.0.023  
 Auto Parallel: No  
 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	655	119	<b>648</b>	<b>121</b>	648	121	8	550	142	<b>552</b>	<b>142</b>	553	141
401.bzip2	8	<b>1150</b>	<b>67.1</b>	1149	67.2	1152	67.0	8	1095	70.5	1092	70.7	<b>1095</b>	<b>70.5</b>
403.gcc	8	<b>802</b>	<b>80.3</b>	809	79.6	798	80.7	8	<b>802</b>	<b>80.3</b>	809	79.6	798	80.7
429.mcf	8	<b>1162</b>	<b>62.8</b>	1162	62.8	1162	62.8	8	<b>1152</b>	<b>63.3</b>	1153	63.3	1152	63.3
445.gobmk	8	723	116	724	116	<b>723</b>	<b>116</b>	8	<b>667</b>	<b>126</b>	667	126	667	126
456.hmmer	8	807	92.5	<b>806</b>	<b>92.6</b>	806	92.6	8	652	114	654	114	<b>653</b>	<b>114</b>
458.sjeng	8	<b>890</b>	<b>109</b>	888	109	891	109	8	794	122	793	122	<b>794</b>	<b>122</b>
462.libquantum	8	<b>3496</b>	<b>47.4</b>	3495	47.4	3496	47.4	8	<b>2941</b>	<b>56.4</b>	2941	56.4	2938	56.4
464.h264ref	8	952	186	<b>952</b>	<b>186</b>	954	186	8	902	196	<b>903</b>	<b>196</b>	904	196
471.omnetpp	8	862	58.0	860	58.1	<b>862</b>	<b>58.0</b>	8	828	60.4	829	60.3	<b>828</b>	<b>60.4</b>
473.astar	8	<b>886</b>	<b>63.4</b>	885	63.5	887	63.3	8	829	67.7	836	67.2	<b>832</b>	<b>67.5</b>
483.xalancbmk	8	545	101	<b>545</b>	<b>101</b>	544	101	8	545	101	<b>545</b>	<b>101</b>	544	101

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

## General Notes

Bios settings:  
Hardware Prefetcher: Disabled  
Adjacent Sector Prefetch: Disabled  
ulimit -s unlimited used to set stack size to unlimited  
taskset command used to assign copies to cores  
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,  
for peak, are compiled in 64-bit mode

## 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

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/spec/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/10.0.023/bin/icc  
-L/opt/intel/cce/10.0.023/lib  
-I/opt/intel/cce/10.0.023/include

456.hmmer: /opt/intel/cce/10.0.023/bin/icc  
-L/opt/intel/cce/10.0.023/lib  
-I/opt/intel/cce/10.0.023/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

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

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

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

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

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0  
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec\_div -ansi-alias -Wl,-z,muldefs  
-L/spec/cpu2006.1.0/lib -lsmartheap

473.astar: Same as 471.omnetpp

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.20090715.00.html>

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.20090715.00.xml>



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

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