



# SPEC<sup>®</sup> CINT2006 Result

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## Intel Corporation

Supermicro SuperServer 6026T-NTR+ (Intel Xeon E5502, 1.86 GHz)

**SPECint<sup>®</sup>\_rate2006 = 71.3**

**SPECint\_rate\_base2006 = 66.2**

CPU2006 license: 13

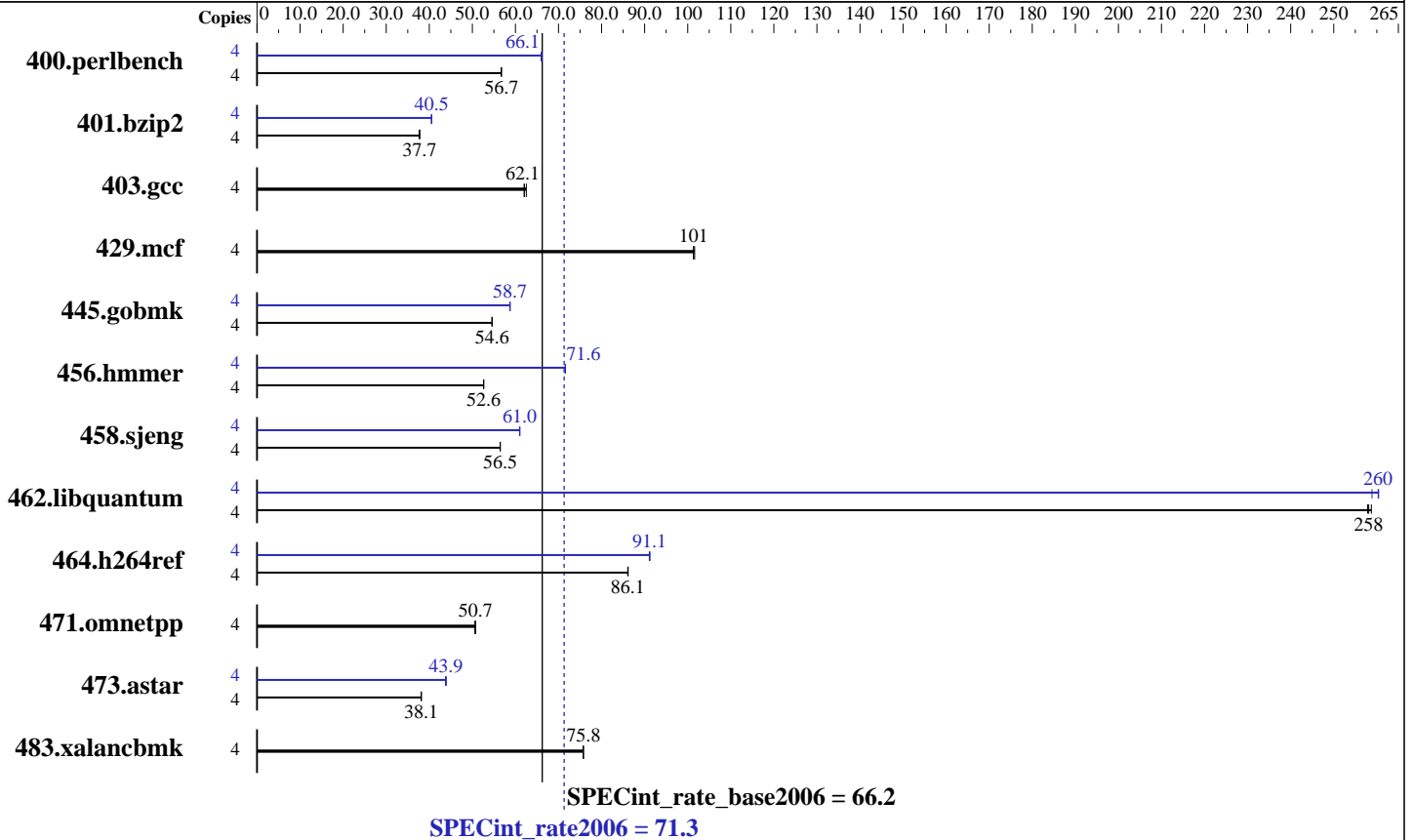
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Mar-2009

Hardware Availability: Mar-2009

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon E5502  
 CPU Characteristics:  
 CPU MHz: 1867  
 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: 256 KB I+D on chip per core  
 L3 Cache: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (12 x 2GB DDR3-1066, CL7)  
 Disk Subsystem: 1 x 150 GB SATA, 10000RPM  
 Other Hardware: None

### Software

Operating System: SuSe Linux SLES10 SP2, Kernel 2.6.16.60-0.34-smp for x86\_64  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20090131 Package ID: l\_cproc\_p\_11.0.080  
 Auto Parallel: No  
 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	690	56.7	<b>689</b>	<b>56.7</b>	689	56.7	4	<b>591</b>	<b>66.1</b>	591	66.1	592	66.0
401.bzip2	4	<b>1023</b>	<b>37.7</b>	1025	37.6	1021	37.8	4	951	40.6	953	40.5	<b>953</b>	<b>40.5</b>
403.gcc	4	<b>519</b>	<b>62.1</b>	519	62.0	515	62.5	4	<b>519</b>	<b>62.1</b>	519	62.0	515	62.5
429.mcf	4	359	102	<b>360</b>	<b>101</b>	360	101	4	359	102	<b>360</b>	<b>101</b>	360	101
445.gobmk	4	769	54.6	<b>769</b>	<b>54.6</b>	768	54.6	4	<b>714</b>	<b>58.7</b>	714	58.7	714	58.8
456.hammer	4	<b>709</b>	<b>52.6</b>	709	52.6	709	52.6	4	522	71.6	521	71.6	<b>521</b>	<b>71.6</b>
458.sjeng	4	857	56.5	<b>857</b>	<b>56.5</b>	857	56.5	4	<b>794</b>	<b>61.0</b>	793	61.0	794	61.0
462.libquantum	4	320	259	321	258	<b>321</b>	<b>258</b>	4	318	260	<b>318</b>	<b>260</b>	320	259
464.h264ref	4	1027	86.2	1028	86.1	<b>1028</b>	<b>86.1</b>	4	<b>971</b>	<b>91.1</b>	970	91.2	972	91.1
471.omnetpp	4	494	50.6	492	50.8	<b>493</b>	<b>50.7</b>	4	494	50.6	492	50.8	<b>493</b>	<b>50.7</b>
473.astar	4	<b>737</b>	<b>38.1</b>	736	38.2	737	38.1	4	639	43.9	642	43.8	<b>640</b>	<b>43.9</b>
483.xalanbmk	4	<b>364</b>	<b>75.8</b>	364	75.8	364	75.7	4	<b>364</b>	<b>75.8</b>	364	75.8	364	75.7

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

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3 -opt-prefetch

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## Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.2 -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/11.0/080/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc

458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):

icpc

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

## 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\_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 -opt-prefetch

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## Peak Optimization Flags (Continued)

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: basepeak = yes

429.mcf: basepeak = yes

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

456.hmmr: -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  
-opt-malloc-options=3 -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: basepeak = yes

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 -auto-ilp32  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -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-ic11.0-int-linux64-revA.20090710.02.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-ic11.0-int-linux64-revA.20090710.02.xml>

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

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