



SPEC® CINT2006 Result

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Intel Corporation

SPECint®2006 = 34.5

Supermicro X8DAI (Intel Xeon W3570, 3.2 GHz)

SPECint_base2006 = 32.5

CPU2006 license: 13

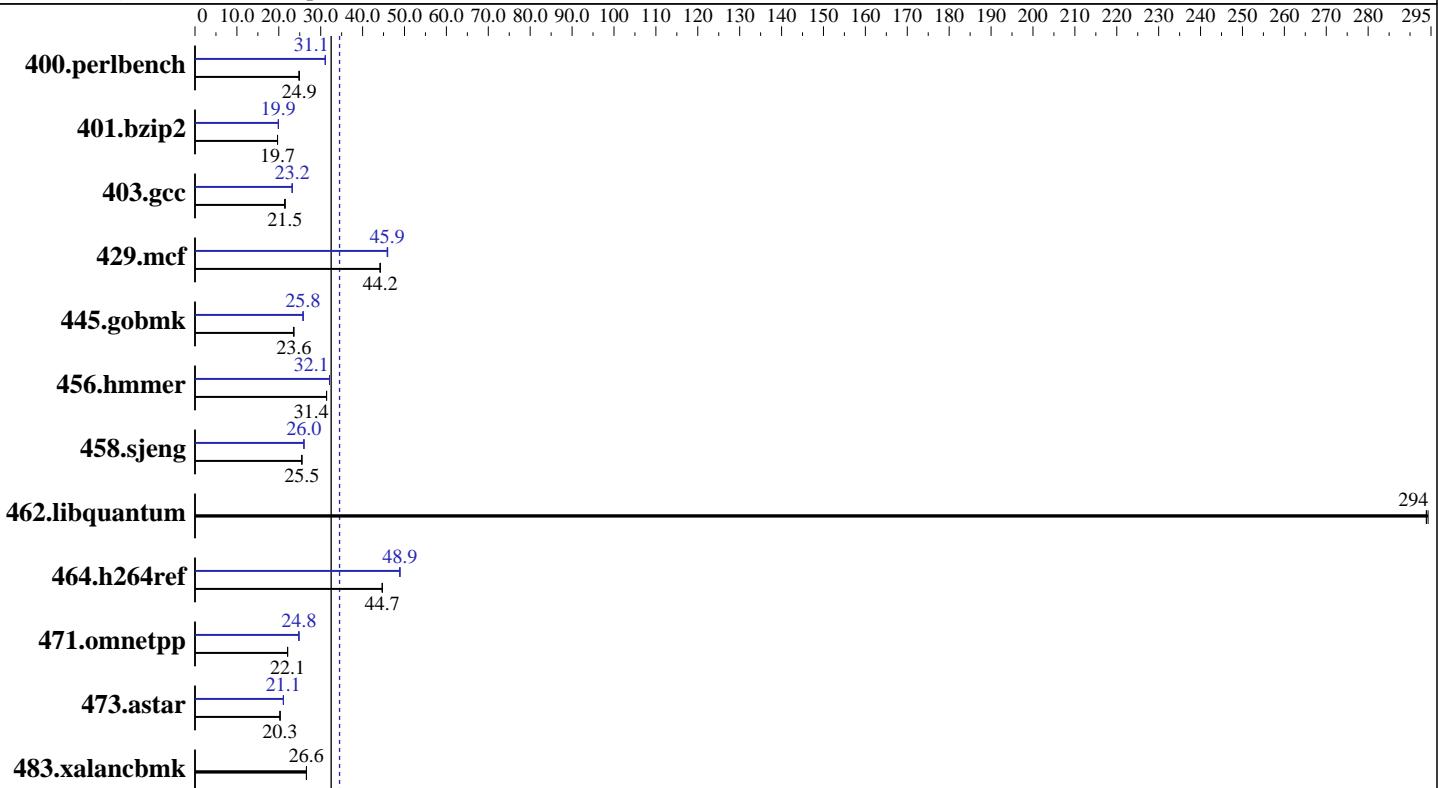
Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Mar-2009

Hardware Availability: Mar-2009

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon W3570
CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
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: 8 MB I+D on chip per chip
Other Cache: None
Memory: 12 GB (3 x 4GB DDR3-1333 CL9, IMHH4GP12A1F1C-13H T2)
Disk Subsystem: Western Digital Raptor WD740, 10k rpm, 74GB SATA
Other Hardware: None

Software

Operating System: Windows® XP® Professional x64 Edition SP2 Build 3790
Compiler: Intel C++ Compiler Professional 11.0 for Intel 64 Build 20090131 Package ID: w_cproc_p_11.0.072
Microsoft Visual Studio 2008 Professional SP1 (for libraries)
Auto Parallel: Yes
File System: NTFS
System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: SmartHeap Library Version 8.1 from <http://www.microquill.com/>



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	393	24.9	393	24.8	393	24.9	314	31.1	314	31.1	314	31.1
401.bzip2	491	19.7	491	19.7	491	19.7	485	19.9	485	19.9	485	19.9
403.gcc	375	21.5	375	21.5	376	21.4	347	23.2	347	23.2	347	23.2
429.mcf	206	44.2	206	44.2	206	44.2	198	46.0	199	45.9	199	45.9
445.gobmk	445	23.6	445	23.6	446	23.5	407	25.8	407	25.8	407	25.8
456.hmmer	297	31.4	297	31.4	297	31.4	291	32.1	291	32.1	291	32.1
458.sjeng	475	25.5	475	25.5	475	25.5	466	26.0	466	26.0	466	26.0
462.libquantum	70.5	294	70.4	294	70.5	294	70.5	294	70.4	294	70.5	294
464.h264ref	496	44.7	496	44.7	495	44.7	452	48.9	452	48.9	452	48.9
471.omnetpp	282	22.1	282	22.1	282	22.1	252	24.8	252	24.8	252	24.8
473.astar	346	20.3	346	20.3	346	20.3	333	21.1	333	21.1	333	21.1
483.xalancbmk	260	26.6	260	26.6	260	26.6	260	26.6	260	26.6	260	26.6

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

General Notes

OMP_NUM_THREADS set to number of processors cores

KMP_AFFINITY set to granularity=fine,scatter

System can be built with an extended ATX case like SuperChassis 743TQ-865B-SQ and an 885W power supply.

Base Compiler Invocation

C benchmarks:

icl -Qvc9 -Qstd=c99

C++ benchmarks:

icl -Qvc9

Base Portability Flags

400.perlbench: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64_X64
-DSPEC_CPU_NO_NEED_VA_COPY

401.bzip2: -DSPEC_CPU_P64

403.gcc: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64

429.mcf: -DSPEC_CPU_P64

445.gobmk: -DSPEC_CPU_P64

456.hmmer: -DSPEC_CPU_P64

458.sjeng: -DSPEC_CPU_P64

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Base Portability Flags (Continued)

```
462.libquantum: -DSPEC_CPU_P64  
464.h264ref: -DSPEC_CPU_P64 -DWIN32 -DSPEC_CPU_NO_INTTYPES  
471.omnetpp: -DSPEC_CPU_P64 -DSPEC_CPU_WIN64  
473.astar: -DSPEC_CPU_P64  
483.xalancbmk: -DSPEC_CPU_P64 -Qoption_cpp,--no_wchar_t_keyword
```

Base Optimization Flags

C benchmarks:

```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qparallel  
-Qpar-runtime-control -Qvec-guard-write -Qauto-ilp32 /F512000000
```

C++ benchmarks:

```
-QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qcxx-features  
-Qauto-ilp32 /F512000000 shlw64Mt.lib -link /FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks:

```
icl -Qvc9 -Qstd=c99
```

C++ benchmarks:

```
icl -Qvc9
```

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)  
-Qipo -O3 -Qprec-div- -Qansi-alias -Qopt-prefetch  
/F512000000
```

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Peak Optimization Flags (Continued)

401.bzip2: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- -Qopt-prefetch -Qansi-alias
 /F512000000

403.gcc: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- /F512000000

429.mcf: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qopt-prefetch
 /F512000000

445.gobmk: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O2 -Qprec-div- -Qansi-alias /F512000000

456.hmmr: -QxSSE4.2 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias
 /F512000000

458.sjeng: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- -Qunroll4 /F512000000

462.libquantum: basepeak = yes

464.h264ref: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- -Qunroll2 -Qansi-alias /F512000000

C++ benchmarks:

471.omnetpp: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- -Qansi-alias
 -Qopt-ra-region-strategy=block /F512000000 shlw64Mt.lib
 -link /FORCE:MULTIPLE

473.astar: -QxSSE4.2(pass 2) -Qprof_gen(pass 1) -Qprof_use(pass 2)
 -Qipo -O3 -Qprec-div- -Qansi-alias
 -Qopt-ra-region-strategy=routine /F512000000 shlw64Mt.lib
 -link /FORCE:MULTIPLE

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.html>

<http://www.spec.org/cpu2006/flags/Intel-Winx64-Platform.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-winx64-revA.xml>

<http://www.spec.org/cpu2006/flags/Intel-Winx64-Platform.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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