



# SPEC® CINT2006 Result

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## ASUSTeK Computer Inc.

**SPECint®2006 = 31.4**

ASUS D5EB-DG server motherboard (Intel Xeon X5492)

**SPECint\_base2006 = 27.6**

CPU2006 license: 009016

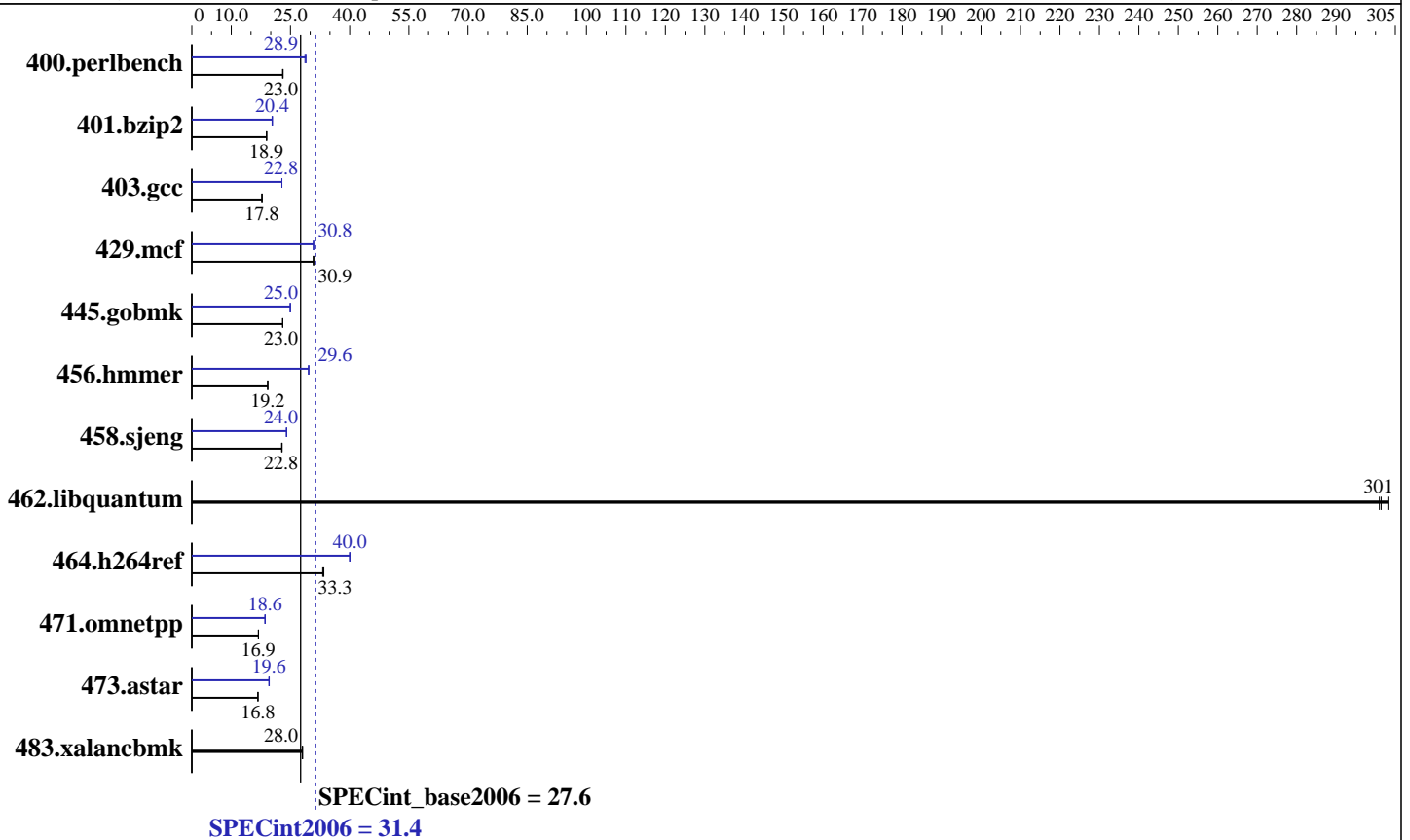
Test date: Oct-2008

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Feb-2008

Tested by: ASUSTeK Computer Inc.

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon X5492  
 CPU Characteristics: 1600 MHz Bus Speed  
 CPU MHz: 3400  
 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: 32 GB (8 X 4GB PC2-6400F, CL5, FBDIMM)  
 Disk Subsystem: Seagate ST3500830AS 500GB SATAII, 7200RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l\_cproc\_b\_11.0.042  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1 Binutils 2.18.50.0.7.20080502



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b><u>424</u></b>	<b><u>23.0</u></b>	424	23.0	422	23.1	<b><u>339</u></b>	<b><u>28.9</u></b>	338	28.9	341	28.7
401.bzip2	510	18.9	509	19.0	<b><u>509</u></b>	<b><u>18.9</u></b>	472	20.4	474	20.3	<b><u>473</u></b>	<b><u>20.4</u></b>
403.gcc	<b><u>453</u></b>	<b><u>17.8</u></b>	454	17.7	451	17.8	<b><u>353</u></b>	<b><u>22.8</u></b>	353	22.8	353	22.8
429.mcf	296	30.8	295	30.9	<b><u>295</u></b>	<b><u>30.9</u></b>	296	30.8	295	30.9	<b><u>296</u></b>	<b><u>30.8</u></b>
445.gobmk	455	23.0	456	23.0	<b><u>455</u></b>	<b><u>23.0</u></b>	420	25.0	<b><u>420</u></b>	<b><u>25.0</u></b>	421	24.9
456.hammer	485	19.2	<b><u>485</u></b>	<b><u>19.2</u></b>	485	19.2	315	29.6	<b><u>315</u></b>	<b><u>29.6</u></b>	315	29.6
458.sjeng	531	22.8	529	22.9	<b><u>531</u></b>	<b><u>22.8</u></b>	<b><u>504</u></b>	<b><u>24.0</u></b>	505	24.0	503	24.0
462.libquantum	68.8	301	<b><u>68.7</u></b>	<b><u>301</u></b>	68.4	303	68.8	301	<b><u>68.7</u></b>	<b><u>301</u></b>	68.4	303
464.h264ref	662	33.4	667	33.2	<b><u>664</u></b>	<b><u>33.3</u></b>	552	40.1	<b><u>553</u></b>	<b><u>40.0</u></b>	553	40.0
471.omnetpp	370	16.9	<b><u>370</u></b>	<b><u>16.9</u></b>	370	16.9	336	18.6	337	18.5	<b><u>336</u></b>	<b><u>18.6</u></b>
473.astar	<b><u>419</u></b>	<b><u>16.8</u></b>	419	16.7	418	16.8	358	19.6	360	19.5	<b><u>358</u></b>	<b><u>19.6</u></b>
483.xalancbmk	246	28.1	<b><u>246</u></b>	<b><u>28.0</u></b>	247	28.0	246	28.1	<b><u>246</u></b>	<b><u>28.0</u></b>	247	28.0

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
OMP\_NUM\_THREADS set to number of processors  
KMP\_AFFINITY set to "physical,0"

## Platform Notes

Tested system case can be used with Intel EEB 3.61 spec  
PC Power and Cooling 650W power supply  
System was configured with XGI Z9s VGA (on board VGA)

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

## Base Portability Flags

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

Continued on next page



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## Base Portability Flags (Continued)

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

C++ benchmarks:

-xSSE4.1 -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/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

C++ benchmarks:

icpc

## Peak Portability Flags

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



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## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -auto-ilp32 -opt-prefetch  
-ansi-alias

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmarheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmarheap

483.xalancbmk: basepeak = yes

## Peak Other Flags

Same as Base Other Flags

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.20090710.04.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.20090710.04.xml>

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

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