



# SPEC® CINT2006 Result

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ASUSTeK Computer Inc.

**SPECint®2006 = 31.4**

ASUS DSEB-DG server motherboard (Intel Xeon X5492)

**SPECint\_base2006 = 27.6**

CPU2006 license: 009016

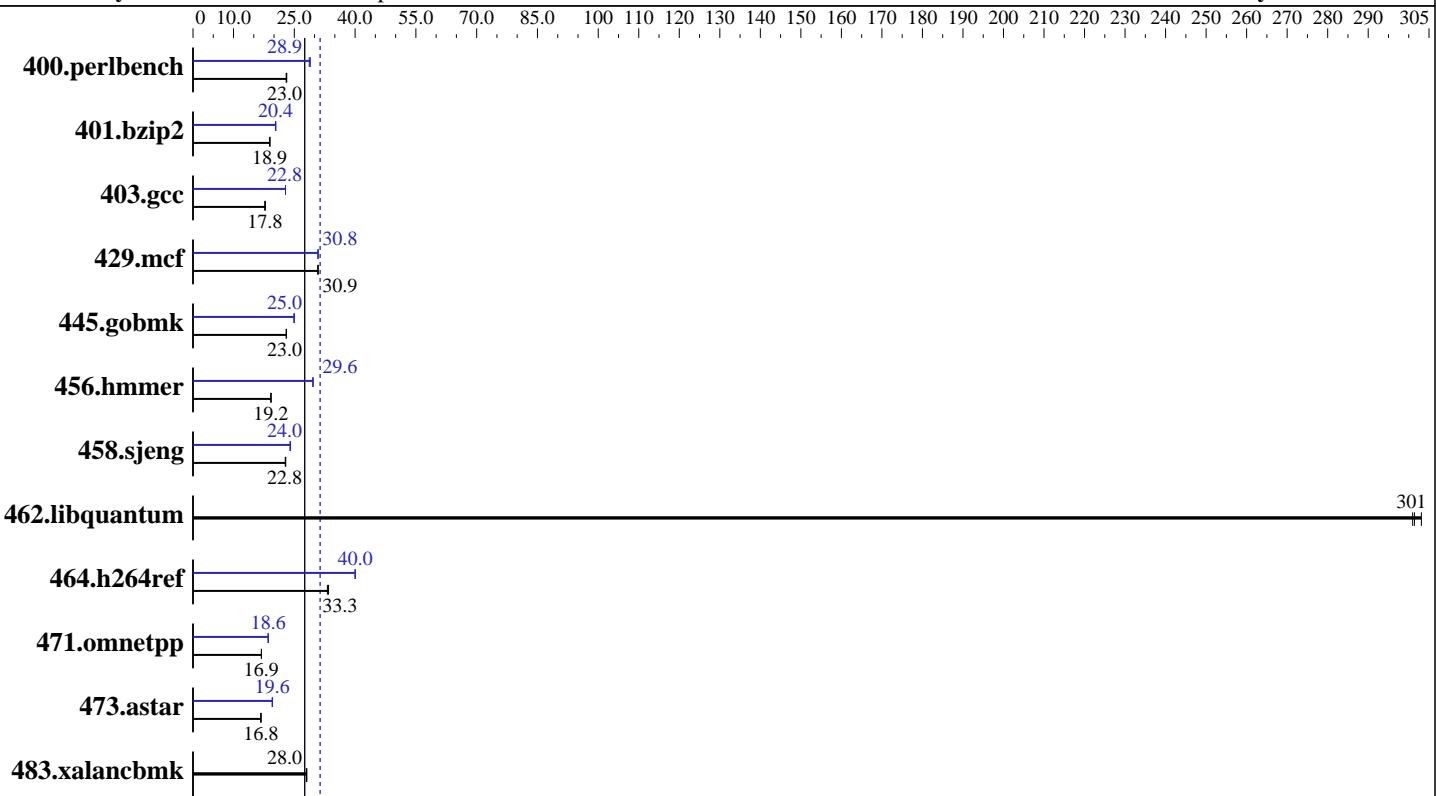
Test sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test date: Oct-2008

Hardware Availability: Feb-2008

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

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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.hmmr: /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.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmr: -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-calloc
          -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.hmmr: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll12
               -ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
               -no-prec-div -static -unroll14

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
               -no-prec-div -static -unroll12 -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 -lsmartheap

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 -lsmartheap

483.xalancbmk: basepeak = yes
```

## Peak Other Flags

C benchmarks:

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



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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>

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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