



# SPEC® CINT2006 Result

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## Supermicro Motherboard X8DTG-DF

**SPECint®2006 = 35.7**  
**SPECint\_base2006 = 31.8**

CPU2006 license: 001176

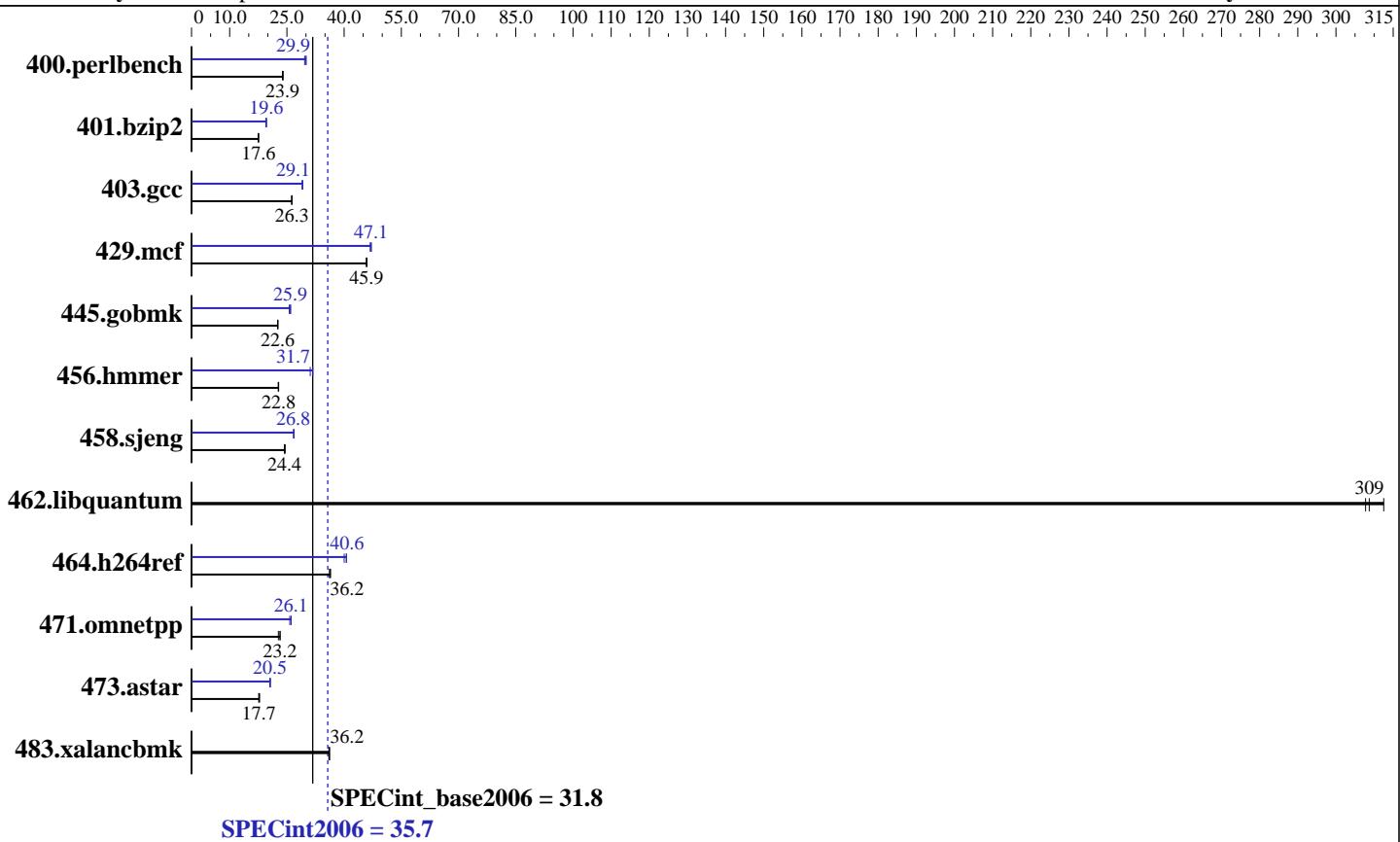
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Dec-2009

Hardware Availability: Oct-2009

Software Availability: Feb-2009



### Hardware

CPU Name:	Intel Xeon X5570
CPU Characteristics:	Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz:	2933
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 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:	24 GB (6 x 4GB DDR3-1333 RDIMM, ECC, CL9)
Disk Subsystem:	1 x 250 GB SATA II, 7200 RPM
Other Hardware:	None

### Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2
	Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux
	Build 20090131 Package ID: l_cproc_p_11.0.080
Auto Parallel:	Yes
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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	410	23.8	<b>409</b>	<b>23.9</b>	407	24.0	<b>327</b>	<b>29.9</b>	325	30.1	330	29.7
401.bzip2	551	17.5	549	17.6	<b>550</b>	<b>17.6</b>	<b>491</b>	<b>19.7</b>	495	19.5	<b>493</b>	<b>19.6</b>
403.gcc	<b>306</b>	<b>26.3</b>	306	26.3	306	26.3	278	29.0	276	29.2	<b>277</b>	<b>29.1</b>
429.mcf	<b>199</b>	<b>45.9</b>	198	46.0	199	45.8	<b>194</b>	<b>47.1</b>	<b>194</b>	<b>47.1</b>	195	46.8
445.gobmk	464	22.6	<b>464</b>	<b>22.6</b>	463	22.6	<b>404</b>	<b>26.0</b>	410	25.6	<b>404</b>	<b>25.9</b>
456.hmmer	408	22.8	<b>409</b>	<b>22.8</b>	411	22.7	294	31.8	300	31.1	<b>294</b>	<b>31.7</b>
458.sjeng	<b>496</b>	<b>24.4</b>	497	24.3	493	24.5	452	26.8	<b>451</b>	26.8	<b>451</b>	<b>26.8</b>
462.libquantum	<b>67.1</b>	<b>309</b>	67.3	308	66.3	313	<b>67.1</b>	<b>309</b>	67.3	308	66.3	313
464.h264ref	607	36.5	<b>611</b>	<b>36.2</b>	611	36.2	<b>545</b>	<b>40.6</b>	545	40.6	<b>553</b>	40.0
471.omnetpp	275	22.8	269	23.2	<b>270</b>	<b>23.2</b>	239	26.1	243	25.8	<b>239</b>	<b>26.1</b>
473.astar	393	17.8	<b>397</b>	<b>17.7</b>	398	17.6	<b>342</b>	<b>20.5</b>	339	20.7	342	20.5
483.xalancbmk	191	36.2	192	36.0	<b>191</b>	<b>36.2</b>	191	36.2	192	36.0	<b>191</b>	<b>36.2</b>

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

## Platform Notes

Default BIOS Settings

## General Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

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

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## Base Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch
```

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

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## Peak Portability Flags (Continued)

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

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) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
          -opt-malloc-options=3

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll12
             -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) -unroll14 -auto-ilp32

462.libquantum: basepeak = yes

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) -unroll12 -ansi-alias
```

C++ benchmarks:

```
471.omnetpp: -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=block -Wl,-z,muldefs
              -L/spec/cpu2006.1.1/lib -lsmartheap

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
```

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## Peak Optimization Flags (Continued)

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.20091028.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.20091028.xml>

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

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