



# SPEC® CINT2006 Result

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## Supermicro Motherboard X7DWN+

SPECint®\_rate2006 = 139

SPECint\_rate\_base2006 = 116

CPU2006 license: 001176

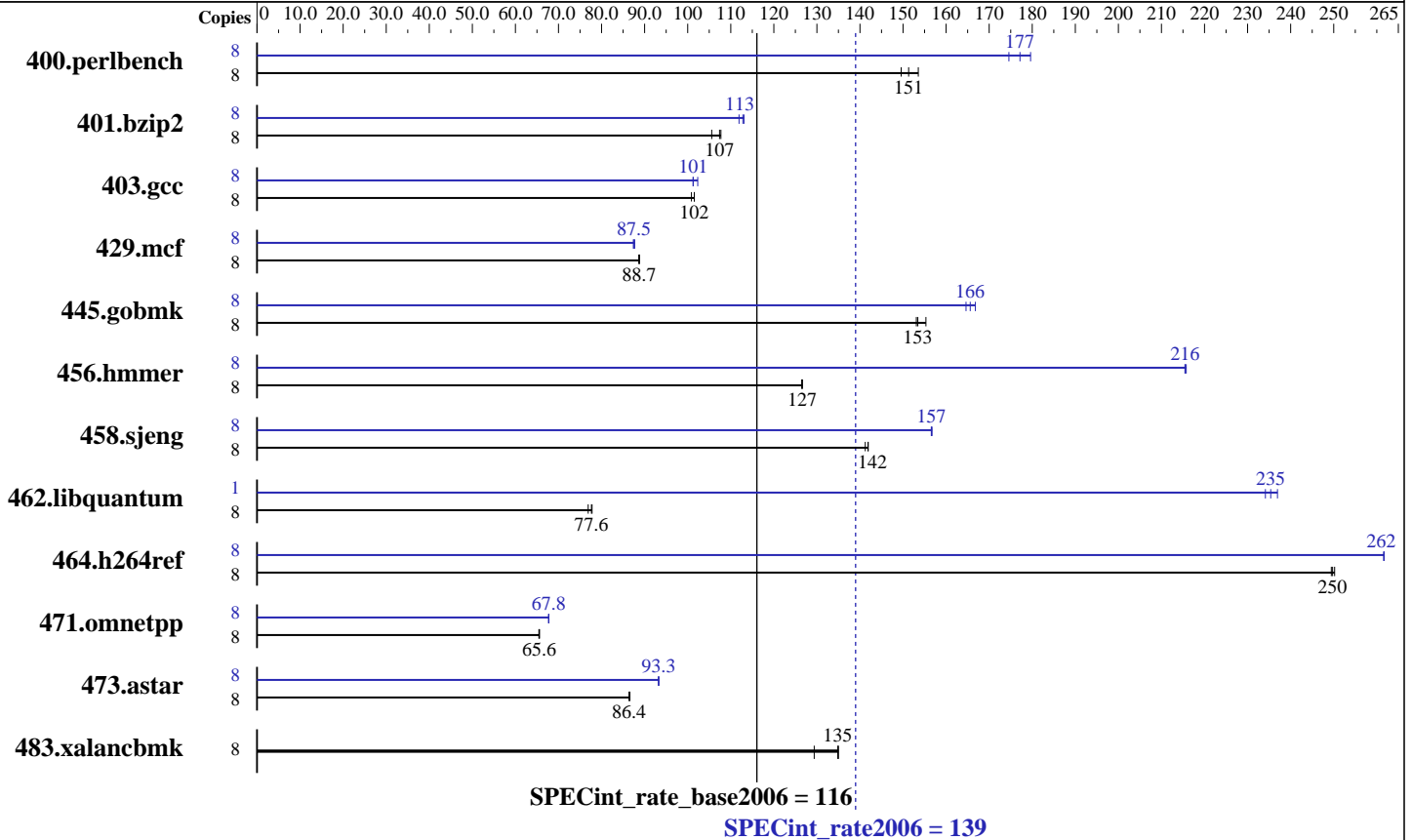
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Oct-2007

Hardware Availability: Nov-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5472  
 CPU Characteristics: Quad Core, 3.00GHz  
 CPU MHz: 3000  
 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: 16 GB (16 X 1GB ECC PC2-6400, CL5, FBDIMM)  
 Disk Subsystem: Westren Digital WD5000YS 500GB SATA2, 7200RPM  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64) SP1, kernel 2.6.16.46-0.12-default  
 Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Default  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1 Binutils 2.17.50.0.15



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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	8	523	150	<u>517</u>	<u>151</u>	509	154	8	448	175	<u>441</u>	<u>177</u>	435	180
401.bzip2	8	731	106	717	108	<u>719</u>	<u>107</u>	8	<u>684</u>	<u>113</u>	690	112	683	113
403.gcc	8	<u>634</u>	<u>102</u>	638	101	634	102	8	<u>636</u>	<u>101</u>	629	102	636	101
429.mcf	8	821	88.8	<u>822</u>	<u>88.7</u>	823	88.6	8	835	87.4	<u>834</u>	<u>87.5</u>	832	87.7
445.gobmk	8	540	155	548	153	<u>547</u>	<u>153</u>	8	503	167	<u>507</u>	<u>166</u>	510	165
456.hammer	8	<u>590</u>	<u>127</u>	589	127	590	126	8	346	215	<u>346</u>	<u>216</u>	346	216
458.sjeng	8	682	142	<u>682</u>	<u>142</u>	685	141	8	618	157	618	157	<u>618</u>	<u>157</u>
462.libquantum	8	2131	77.8	2156	76.9	<u>2135</u>	<u>77.6</u>	1	88.5	234	<u>88.0</u>	<u>235</u>	87.4	237
464.h264ref	8	<u>709</u>	<u>250</u>	710	249	708	250	8	677	262	<u>677</u>	<u>262</u>	677	262
471.omnetpp	8	<u>763</u>	<u>65.6</u>	764	65.5	763	65.6	8	<u>738</u>	<u>67.8</u>	738	67.8	739	67.7
473.astar	8	<u>650</u>	<u>86.4</u>	649	86.6	650	86.4	8	603	93.2	<u>602</u>	<u>93.3</u>	602	93.3
483.xalancbmk	8	<u>409</u>	<u>135</u>	409	135	427	129	8	<u>409</u>	<u>135</u>	409	135	427	129

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

## General Notes

Tested systems can be used with CSE-825TQ-R700LPV case,  
To ensure system stability, a 550W (minimum) ATX power supply  
[4-pin (+12V), 8-pin (+12V) and 24-pin are required]  
Product description located as of  
<http://www.supermicro.com/products/motherboard/Xeon1333/5400/X7DWN+.cfm>  
The system bus runs at 1600 MHz  
taskset was used to bind processes to cores except for 462.libquantum at peak

## Base Compiler Invocation

C benchmarks:  
icc  
C++ benchmarks:  
icpc

## Base Portability Flags

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



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## Base Optimization Flags

C benchmarks:  
-fast -inline-calloc -opt-malloc-options=3  
C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc  
401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
C++ benchmarks:  
icpc

## Peak Portability Flags

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

## Peak Optimization Flags

C benchmarks:

Continued on next page



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## Peak Optimization Flags (Continued)

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmr: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

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-ic10-ia32-intel64-linux-flags.20090714.34.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-ic10-ia32-intel64-linux-flags.20090714.34.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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