SPEC® CINT2006 Result

Supermicro Motherboard X7DWA-N

SPECint®_rate2006 =   139

SPECint_rate_base2006 = 115

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Oct-2007
Hardware Availability: Nov-2007
Software Availability: Nov-2007

Benchmark	Copies	Result
400.perlbench	8	177
400.perlbench	8	151
401.bzip2	8	114
401.bzip2	8	107
403.gcc	8	102
403.gcc	8	102
429.mcf	8	87.3
429.mcf	8	86.7
445.gobmk	8	168
445.gobmk	8	156
456.hmmer	8	216
456.hmmer	8	126
458.sjeng	8	158
458.sjeng	8	144
462.libquantum	1	235
462.libquantum	8	69.1
464.h264ref	8	262
464.h264ref	8	249
471.omnetpp	8	67.7
471.omnetpp	8	65.7
473.astar	8	93.1
473.astar	8	86.3
483.xalancbmk	8	136

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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:	8 GB (8 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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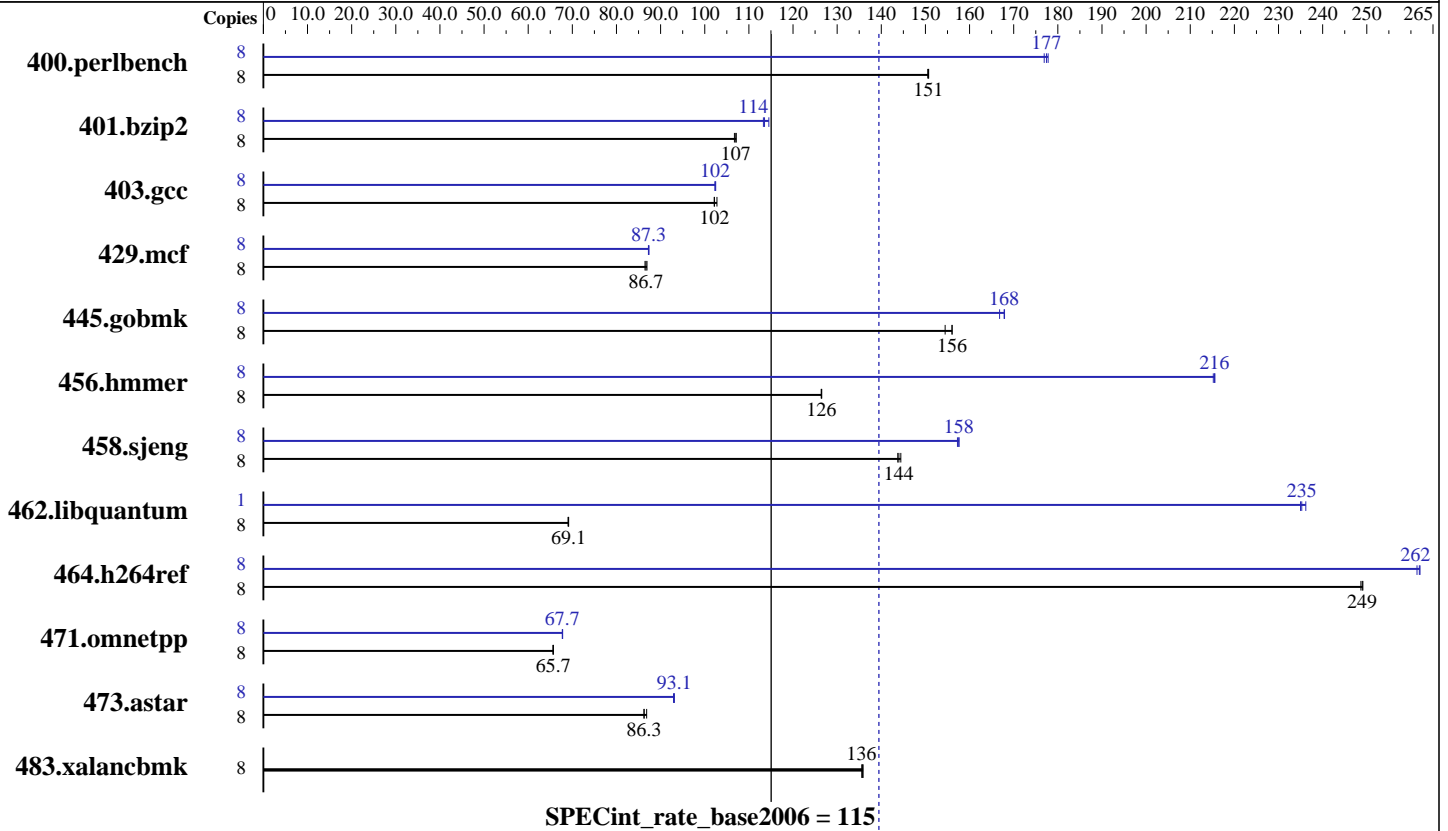**CPU2006 license:** 001176
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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	519	151	519	151	**519**	**151**	8	440	178	**441**	**177**	442	177
401.bzip2	8	723	107	**721**	**107**	721	107	8	681	113	674	115	**680**	**114**
403.gcc	8	**630**	**102**	627	103	630	102	8	**629**	**102**	629	102	628	102
429.mcf	8	844	86.5	**842**	**86.7**	839	86.9	8	835	87.4	**836**	**87.3**	836	87.2
445.gobmk	8	543	154	**538**	**156**	538	156	8	503	167	**500**	**168**	500	168
456.hmmer	8	591	126	590	126	**590**	**126**	8	347	215	**346**	**216**	346	216
458.sjeng	8	670	144	673	144	**672**	**144**	8	616	157	**614**	**158**	614	158
462.libquantum	8	2397	69.2	2401	69.0	**2397**	**69.1**	1	**88.1**	**235**	87.7	236	88.2	235
464.h264ref	8	711	249	**711**	**249**	712	249	8	**676**	**262**	677	261	676	262
471.omnetpp	8	762	65.6	**761**	**65.7**	761	65.7	8	738	67.7	737	67.8	**738**	**67.7**
473.astar	8	651	86.2	647	86.8	**651**	**86.3**	8	604	92.9	**603**	**93.1**	603	93.1
483.xalancbmk	8	**407**	**136**	406	136	407	136	8	**407**	**136**	406	136	407	136

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-743TQ-865 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/X7DWA-N.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:

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CPU2006 license: 001176	**Test date:**	Oct-2007
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Tested by:	Supermicro	**Software Availability:**	Nov-2007

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.hmmer: `-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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