SPEC® CINT2006 Result
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Supermicro
(Test Sponsor: Intel Corporation)

Supermicro X7DB8+ (Intel Xeon processor E5310, 1.60 GHz)

$SPECint^{®}\_rate2006 =$ 73.6

$SPECint\_rate\_base2006 =$ 62.3

CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Test date: Aug-2007

Hardware Availability: Jul-2007

Software Availability: Nov-2007

Benchmark	Copies	Peak	Base
400.perlbench	8 / 8	99.3	84.9
401.bzip2	8 / 8	53.8	51.2
403.gcc	8 / 8	60.7	60.9
429.mcf	8 / 8	48.1	48.3
445.gobmk	8 / 8	90.1	82.7
456.hmmer	8 / 8	112	67.1
458.sjeng	8 / 8	85.1	77.3
462.libquantum	1 / 8	98.9	38.1
464.h264ref	8 / 8	136	129
471.omnetpp	8 / 8	39.1	38.5
473.astar	8 / 8	47.8	44.5
483.xalancbmk	8		75.1

SPECint_rate_base2006 = 62.3

SPECint_rate2006 = 73.6

Hardware

CPU Name:	Intel Xeon E5310
CPU Characteristics:	Quad Core, 1.60 GHz
CPU MHz:	1600
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:	8 MB I+D on chip per chip, 4 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (16*1GB Micron DDR2 4200F CL4-4-4, ECC)
Disk Subsystem:	Seagate, SCSI, 73GB, 10Krpm, 1 disk only
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10 SP1, Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64
Compiler:	Intel C++ Compiler for Linux32 and Linux64 Version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
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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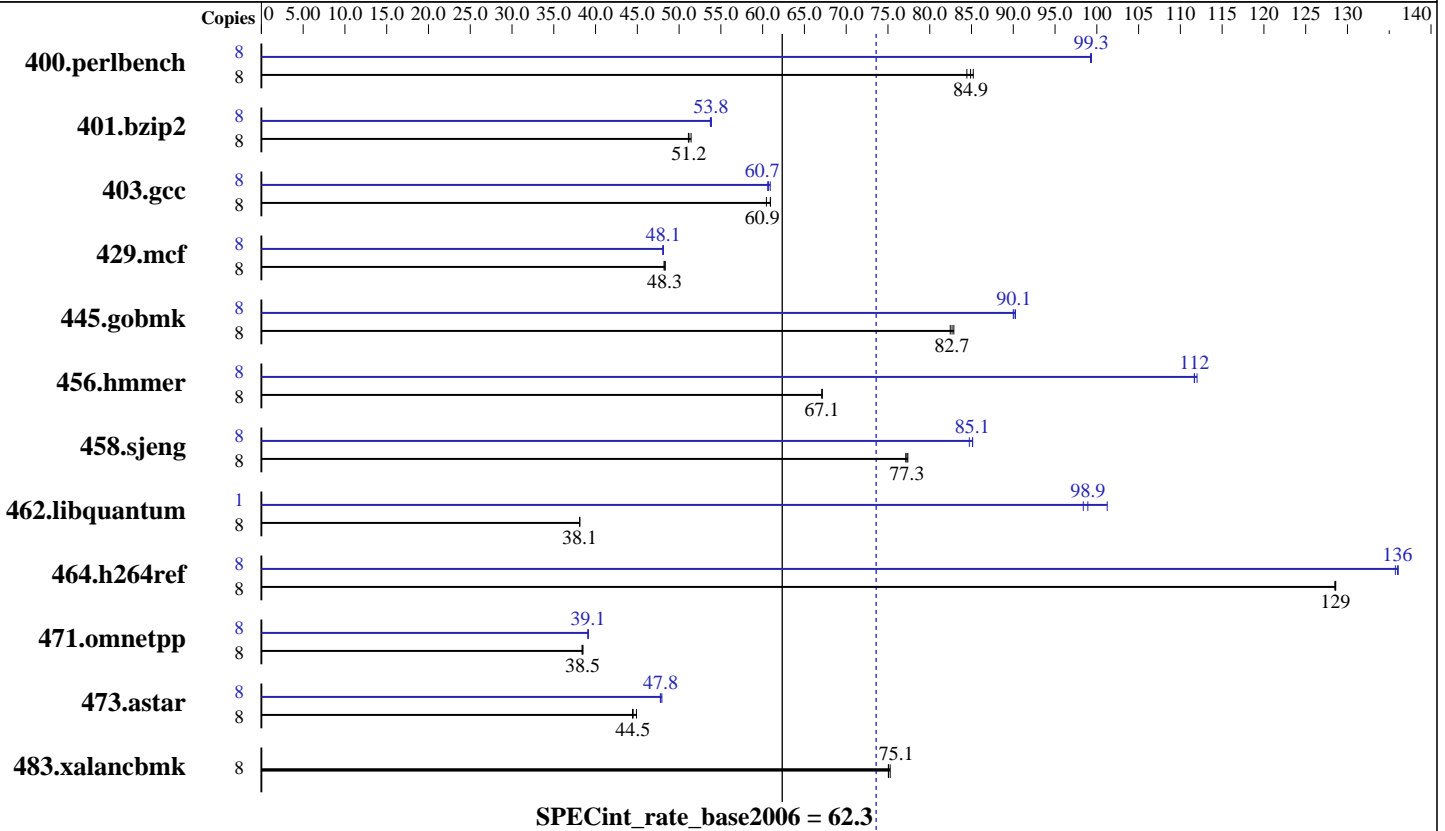
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Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	926	84.4	**921**	**84.9**	917	85.2	8	787	99.4	788	99.2	**787**	**99.3**
401.bzip2	8	1501	51.4	**1508**	**51.2**	1510	51.1	8	1433	53.9	**1435**	**53.8**	1436	53.7
403.gcc	8	**1057**	**60.9**	1057	60.9	1065	60.5	8	1063	60.6	1057	60.9	**1061**	**60.7**
429.mcf	8	**1511**	**48.3**	1509	48.3	1514	48.2	8	1519	48.0	1516	48.1	**1517**	**48.1**
445.gobmk	8	**1015**	**82.7**	1018	82.5	1012	82.9	8	932	90.0	930	90.3	**932**	**90.1**
456.hmmer	8	1112	67.1	1112	67.1	**1112**	**67.1**	8	666	112	668	112	**668**	**112**
458.sjeng	8	1255	77.1	1251	77.4	**1253**	**77.3**	8	1142	84.7	1137	85.1	**1137**	**85.1**
462.libquantum	8	4350	38.1	4351	38.1	**4351**	**38.1**	1	211	98.4	**209**	**98.9**	205	101
464.h264ref	8	**1377**	**129**	1377	129	1378	128	8	1301	136	**1302**	**136**	1304	136
471.omnetpp	8	1299	38.5	**1300**	**38.5**	1303	38.4	8	1279	39.1	**1279**	**39.1**	1277	39.1
473.astar	8	1251	44.9	**1262**	**44.5**	1264	44.4	8	**1175**	**47.8**	1171	47.9	1176	47.8
483.xalancbmk	8	733	75.3	736	75.0	**735**	**75.1**	8	733	75.3	736	75.0	**735**	**75.1**

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

General Notes

```
Bios settings:
Hardware Prefetcher:      Enabled
Adjacent Sector Prefetch: Disabled
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
```

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.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.20090714.46.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.20090714.46.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
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