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

Supermicro X7DB8+ (Intel Xeon processor E5420, 2.50 GHz)

$SPECint®\_rate2006 =$ 120

$SPECint\_rate\_base2006 =$ 98.3
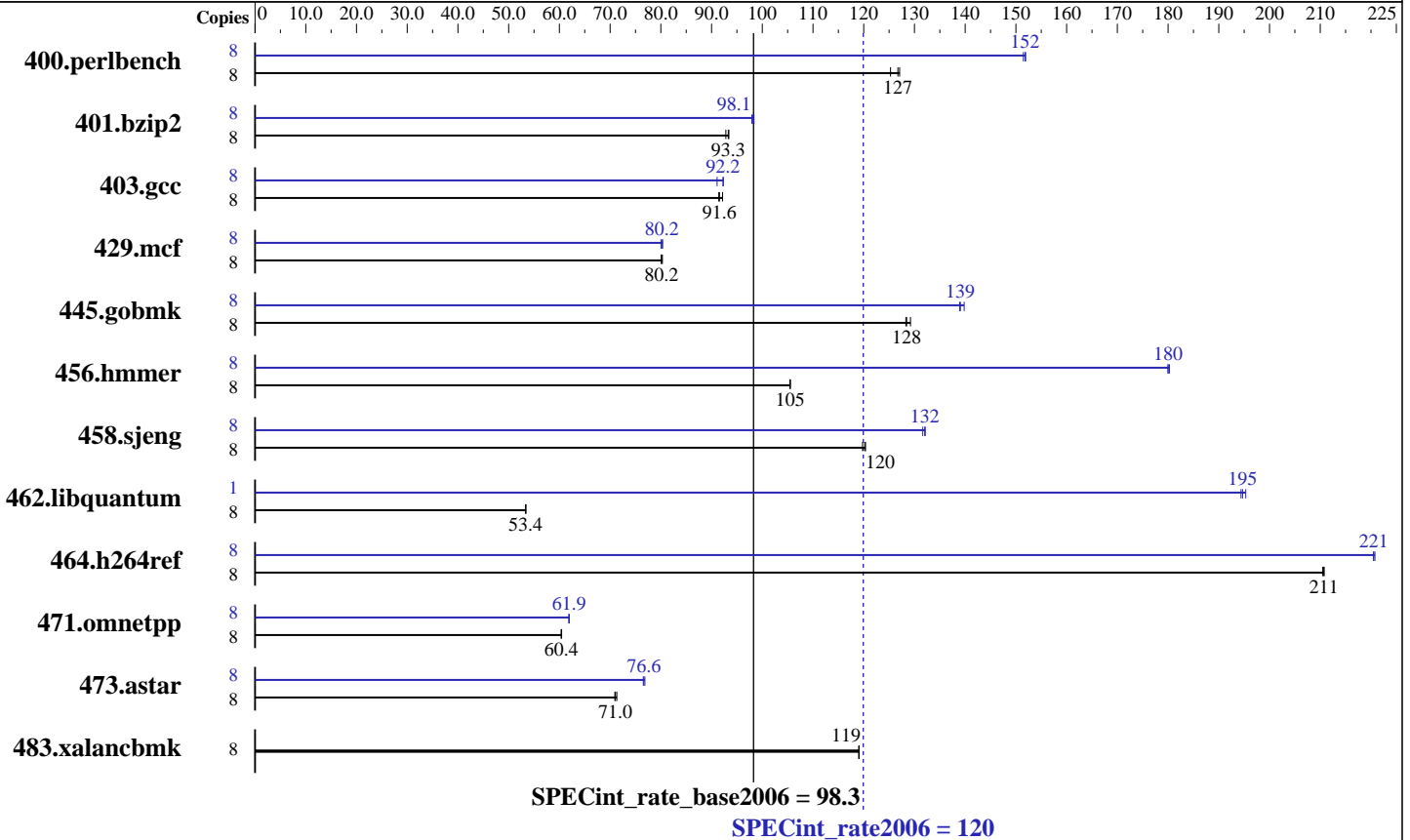
CPU2006 license: 13

Test sponsor: Intel Corporation

Tested by: Intel Corporation

Benchmark	Copies	Result
400.perlbench	8	152
	8	127
401.bzip2	8	98.1
	8	93.3
403.gcc	8	92.2
	8	91.6
429.mcf	8	80.2
	8	80.2
445.gobmk	8	139
	8	128
456.hmmer	8	180
	8	105
458.sjeng	8	132
	8	120
462.libquantum	1	195
	8	53.4
464.h264ref	8	221
	8	211
471.omnetpp	8	61.9
	8	60.4
473.astar	8	76.6
	8	71.0
483.xalancbmk	8	119

SPECint_rate_base2006 = 98.3

SPECint_rate2006 = 120

Hardware

CPU Name: Intel Xeon E5420
CPU Characteristics: Quad Core, 2.50 GHz
CPU MHz: 2500
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 (8 * 2GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x73GB Seagate ST37330LC SCSI 10K RPM
Other Hardware: None

Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10 SP1 RC1, Kernel linux-cbgm 2.6.16.43-0.5-smp for x86_64
Compiler: Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_cc_p_10.1.008
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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Software Availability: Nov-2007

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	615	127	**617**	**127**	624	125	8	516	151	514	152	**515**	**152**
401.bzip2	8	826	93.4	**828**	**93.3**	832	92.8	8	**787**	**98.1**	788	98.0	785	98.4
403.gcc	8	704	91.4	**703**	**91.6**	699	92.2	8	**698**	**92.2**	697	92.3	707	91.1
429.mcf	8	**910**	**80.2**	908	80.3	911	80.1	8	908	80.4	912	80.0	**910**	**80.2**
445.gobmk	8	649	129	**653**	**128**	654	128	8	600	140	604	139	**603**	**139**
456.hmmer	8	**708**	**105**	708	105	707	106	8	**415**	**180**	415	180	414	180
458.sjeng	8	804	120	808	120	**805**	**120**	8	**733**	**132**	735	132	733	132
462.libquantum	8	3106	53.4	3106	53.4	**3106**	**53.4**	1	**106**	**195**	106	195	107	194
464.h264ref	8	**840**	**211**	840	211	841	210	8	802	221	803	220	**803**	**221**
471.omnetpp	8	828	60.4	**828**	**60.4**	827	60.4	8	807	61.9	**807**	**61.9**	808	61.9
473.astar	8	**791**	**71.0**	792	70.9	787	71.3	8	731	76.9	734	76.5	**733**	**76.6**
483.xalancbmk	8	**464**	**119**	464	119	464	119	8	**464**	**119**	464	119	464	119

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
The taskset utility was used to bind processes to cores
```

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/spec/users/rahul/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: /opt/intel/cce/10.1.008/bin/icc
            -L/opt/intel/cce/10.1.008/lib
            -I/opt/intel/cce/10.1.008/include
```

```
  456.hmmer: /opt/intel/cce/10.1.008/bin/icc
            -L/opt/intel/cce/10.1.008/lib
            -I/opt/intel/cce/10.1.008/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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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/spec/users/rahul/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/spec/users/rahul/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.20090714.36.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.20090714.36.xml

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