SPEC® CINT2006 Result
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Supermicro

Motherboard X8DTN+-F (Intel Xeon X5667, 3.06 GHz)

$SPECint®2006 =$ 40.7

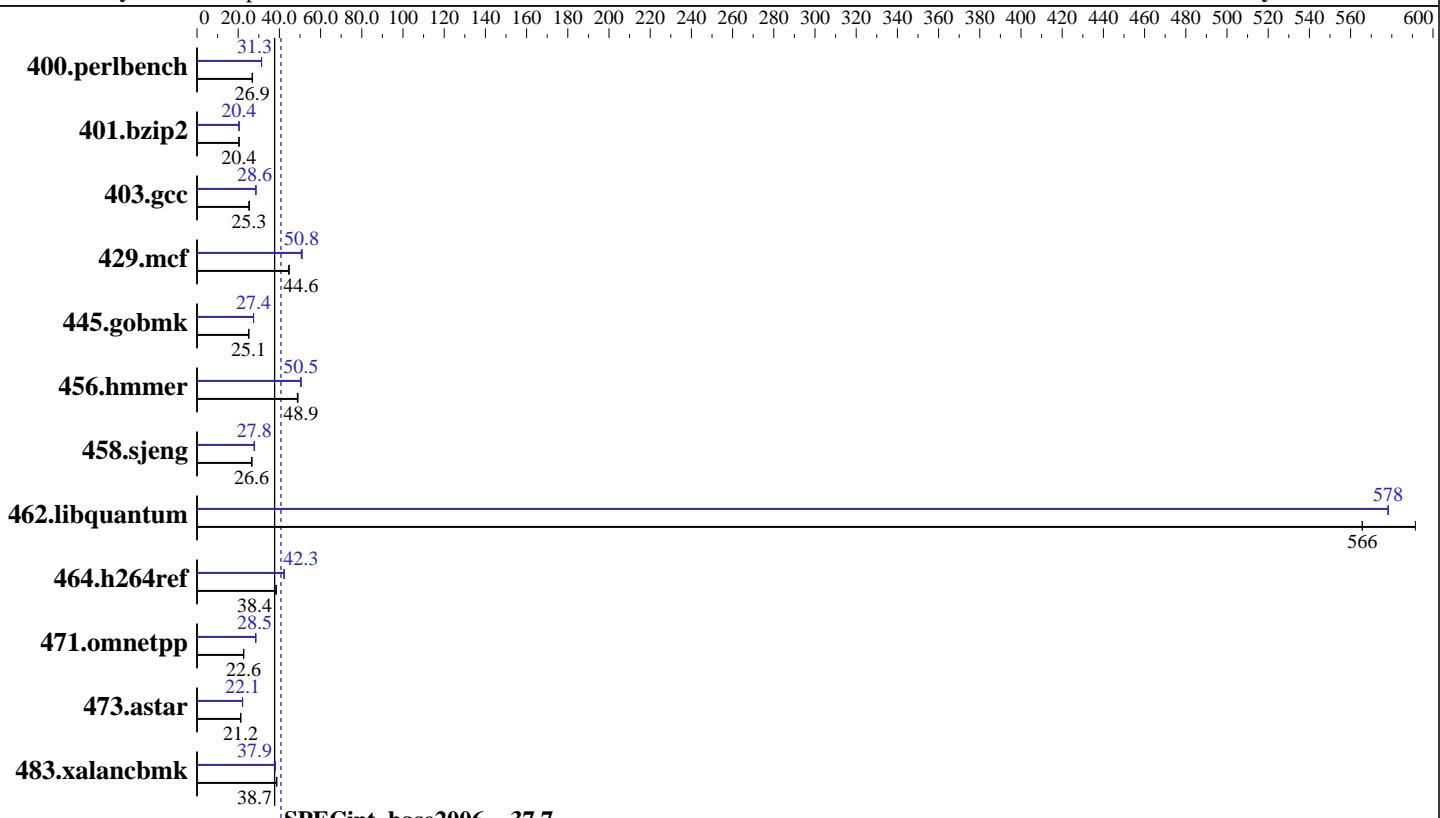$SPECint\_base2006 =$ 37.7

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

Test date: Jun-2010
Hardware Availability: Mar-2010
Software Availability: Jan-2010

Benchmark	base	peak
400.perlbench	26.9	31.3
401.bzip2	20.4	20.4
403.gcc	25.3	28.6
429.mcf	44.6	50.8
445.gobmk	25.1	27.4
456.hmmer	48.9	50.5
458.sjeng	26.6	27.8
462.libquantum	566	578
464.h264ref	38.4	42.3
471.omnetpp	22.6	28.5
473.astar	21.2	22.1
483.xalancbmk	38.7	37.9

SPECint_base2006 = 37.7
SPECint2006 = 40.7

Hardware

CPU Name: Intel Xeon X5667
CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
CPU MHz: 3067
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: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 DDR3-1333 RDIMM, ECC, CL9)
Disk Subsystem: 1 x 500 GB SATA II, 7200 RPM
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64)
Kernel 2.6.27.19-5-default
Compiler: Intel C++ Professional Compiler for IA32 and
Intel 64, Version 11.1
Build 20091130 Package ID: l_cproc_p_11.1.064
Auto Parallel: Yes
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V8.1

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	365	26.8	**363**	**26.9**	362	27.0	312	31.3	**312**	**31.3**	312	31.3
401.bzip2	474	20.4	**473**	**20.4**	473	20.4	473	20.4	**472**	**20.4**	472	20.4
403.gcc	318	25.3	318	25.3	**318**	**25.3**	282	28.6	281	28.6	**282**	**28.6**
429.mcf	204	44.7	**204**	**44.6**	204	44.6	**179**	**50.8**	179	51.1	180	50.6
445.gobmk	418	25.1	**418**	**25.1**	417	25.2	**382**	**27.4**	382	27.5	382	27.4
456.hmmer	192	48.7	**191**	**48.9**	190	49.0	185	50.4	185	50.5	**185**	**50.5**
458.sjeng	**455**	**26.6**	456	26.6	454	26.6	435	27.8	**435**	**27.8**	435	27.8
462.libquantum	36.6	566	**36.6**	**566**	35.0	591	35.8	578	35.8	578	**35.8**	**578**
464.h264ref	576	38.4	576	38.4	**576**	**38.4**	523	42.3	**523**	**42.3**	523	42.3
471.omnetpp	275	22.7	277	22.6	**276**	**22.6**	219	28.6	220	28.4	**219**	**28.5**
473.astar	332	21.2	**330**	**21.2**	330	21.2	318	22.1	317	22.1	**317**	**22.1**
483.xalancbmk	178	38.7	**178**	**38.7**	179	38.6	182	37.9	**182**	**37.9**	181	38.1

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 stack size to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
```

Platform Notes

```
Fan speed set to Full Speed in BIOS Setup.
As tested, the system used a Supermicro CSE-745TQ-920B chassis.
The chassis is bundled with a PWS-920P-1R power supply, 2 SNK-P0038P heatsinks,
as well as 2 FAN-0082L4 and 3 FAN-0074L4 cooling fans.
```

General Notes

```
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
```

Base Compiler Invocation

C benchmarks:
```
icc -m64
```

C++ benchmarks:
```
icpc -m64
```

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Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
   401.bzip2: -DSPEC_CPU_LP64
     403.gcc: -DSPEC_CPU_LP64
     429.mcf: -DSPEC_CPU_LP64
   445.gobmk: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
  464.h264ref: -DSPEC_CPU_LP64
  471.omnetpp: -DSPEC_CPU_LP64
    473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64
```

Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc   -m64
```

```
400.perlbench: icc -m32
```

```
429.mcf: icc -m32
```

```
445.gobmk: icc -m32
```

```
464.h264ref: icc -m32
```

C++ benchmarks (except as noted below):
```
icpc -m32
```

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Peak Compiler Invocation (Continued)

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -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 -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 -auto-ilp32`

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.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2`
`-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) -unroll4`

462.libquantum: `-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel`
`-opt-prefetch -par-schedule-static=32768 -ansi-alias`

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) -unroll2 -ansi-alias`

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Peak Optimization Flags (Continued)

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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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 -Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64`

483.xalancbmk: `-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch`
`-Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap`

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-ic11.1-linux64-revE.20100915.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100915.xml

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