SPEC® CINT2006 Result
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Fujitsu

CELSIUS M470, Intel Xeon W3670

$SPECint^®\_rate2006 =$ 165

SPECint_rate_base2006 = 159

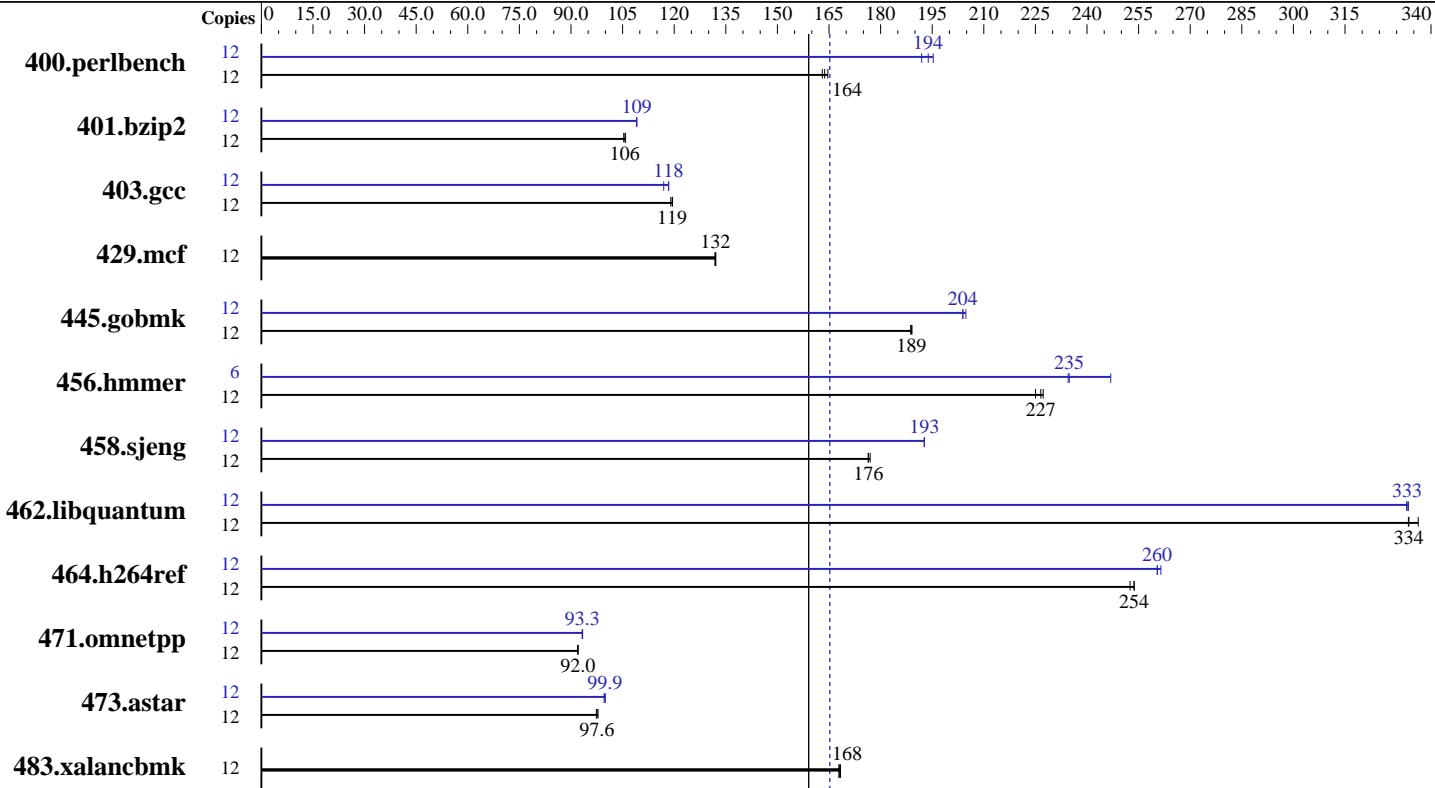|		
CPU2006 license: 19	**Test date:**	Sep-2010
Test sponsor: Fujitsu	**Hardware Availability:**	Aug-2010
Tested by: Fujitsu	**Software Availability:**	Dec-2009

SPECint_rate_base2006 = 159

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Hardware

CPU Name:	Intel Xeon W3670
CPU Characteristics:	Intel Turbo Boost Technology up to 3.46 GHz
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
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:	12 GB (6x2 GB PC3-10600E, 2 rank, CL9, ECC, running at 1066 MHz)
Disk Subsystem:	1 x SATA II, 400 GB, 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:	No
File System:	ext3
System State:	Multi-User Run Level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1

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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	12	712	165	719	163	**716**	**164**	12	600	195	**605**	**194**	611	192
401.bzip2	12	1094	106	**1096**	**106**	1099	105	12	1061	109	1062	109	**1061**	**109**
403.gcc	12	808	120	**809**	**119**	812	119	12	826	117	816	118	**816**	**118**
429.mcf	12	**829**	**132**	829	132	830	132	12	**829**	**132**	829	132	830	132
445.gobmk	12	666	189	667	189	**666**	**189**	12	617	204	**617**	**204**	615	205
456.hmmer	12	498	225	493	227	**494**	**227**	6	227	247	**238**	**235**	239	235
458.sjeng	12	823	176	820	177	**823**	**176**	12	**753**	**193**	753	193	754	193
462.libquantum	12	746	333	**745**	**334**	739	336	12	**747**	**333**	747	333	746	333
464.h264ref	12	1052	253	**1047**	**254**	1047	254	12	1016	261	1020	260	**1020**	**260**
471.omnetpp	12	815	92.0	815	92.0	**815**	**92.0**	12	803	93.4	804	93.3	**804**	**93.3**
473.astar	12	861	97.9	865	97.4	**864**	**97.6**	12	846	99.6	843	100	**844**	**99.9**
483.xalancbmk	12	492	168	**493**	**168**	493	168	12	492	168	**493**	**168**	493	168

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 stacksize to unlimited prior to run

Platform Notes

```
BIOS configuration:
Data Reuse Optimization = Disabled
```

General Notes

```
For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
```

Base Compiler Invocation

C benchmarks:
```
icc -m32
```

C++ benchmarks:
```
icpc -m32
```

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Test date: Sep-2010
Hardware Availability: Aug-2010
Software Availability: Dec-2009

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -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/libic11.1-32bit -lsmartheap
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

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

```
401.bzip2: icc -m64
```

```
456.hmmer: icc -m64
```

```
458.sjeng: icc -m64
```

```
462.libquantum: icc -m64
```

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

```
473.astar: icpc -m64
```

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
```

Continued on next page

Fujitsu	SPECint_rate2006 =	165
CELSIUS M470, Intel Xeon W3670	SPECint_rate_base2006 =	159

Peak Portability Flags (Continued)

```
      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

     401.bzip2: -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) -opt-prefetch -ansi-alias -auto-ilp32

       403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

       429.mcf: basepeak = yes

     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 -auto-ilp32

  462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
                 -opt-prefetch

    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
```

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
```

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Peak Optimization Flags (Continued)

473.astar (continued):
```
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64
```

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-ic11.1-linux64-revE.20100929.02.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.20100929.02.xml

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

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