SPEC® CINT2006 Result
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Fujitsu

CELSIUS W410, Intel Core i3-2100

SPECint®_rate2006 = 78.8

SPECint_rate_base2006 = 76.0

CPU2006 license: 19	**Test date:** May-2011
Test sponsor: Fujitsu	**Hardware Availability:** Mar-2011
Tested by: Fujitsu	**Software Availability:** Jan-2011

Copies — Graph axis 0 15.0 30.0 45.0 60.0 75.0 90.0 105 120 135 150 165 180 195 210 225 240 255 270 285 300 315 330 345 360 375 395

- 400.perlbench: 4 — 71.6; 4 — 60.3
- 401.bzip2: 4 — 44.1; 4 — 41.1
- 403.gcc: 4 — 66.5; 4 — 66.9
- 429.mcf: 2 — 86.4; 4 — 80.6
- 445.gobmk: 4 — 63.0; 4 — 60.6
- 456.hmmer: 2 — 90.5; 4 — 93.1
- 458.sjeng: 4 — 60.8; 4 — 58.8
- 462.libquantum: 4 — 394
- 464.h264ref: 4 — 106; 4 — 105
- 471.omnetpp: 4 — 53.7; 4 — 50.2
- 473.astar: 4 — 47.9
- 483.xalancbmk: 4 — 84.3

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Hardware

CPU Name:	Intel Core i3-2100
CPU Characteristics:	
CPU MHz:	3100
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 2Rx8 PC3-10600U-9)
Disk Subsystem:	1 x SATA II, 400 GB, 7200 rpm
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64) SP1, kernel 2.6.32.12-0.6-default
Compiler:	Intel C++ Compiler XE for applications running on Intel 64 Version 12.0.2.137 Build 20110112
Auto Parallel:	No
File System:	ext3
System State:	Run Level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

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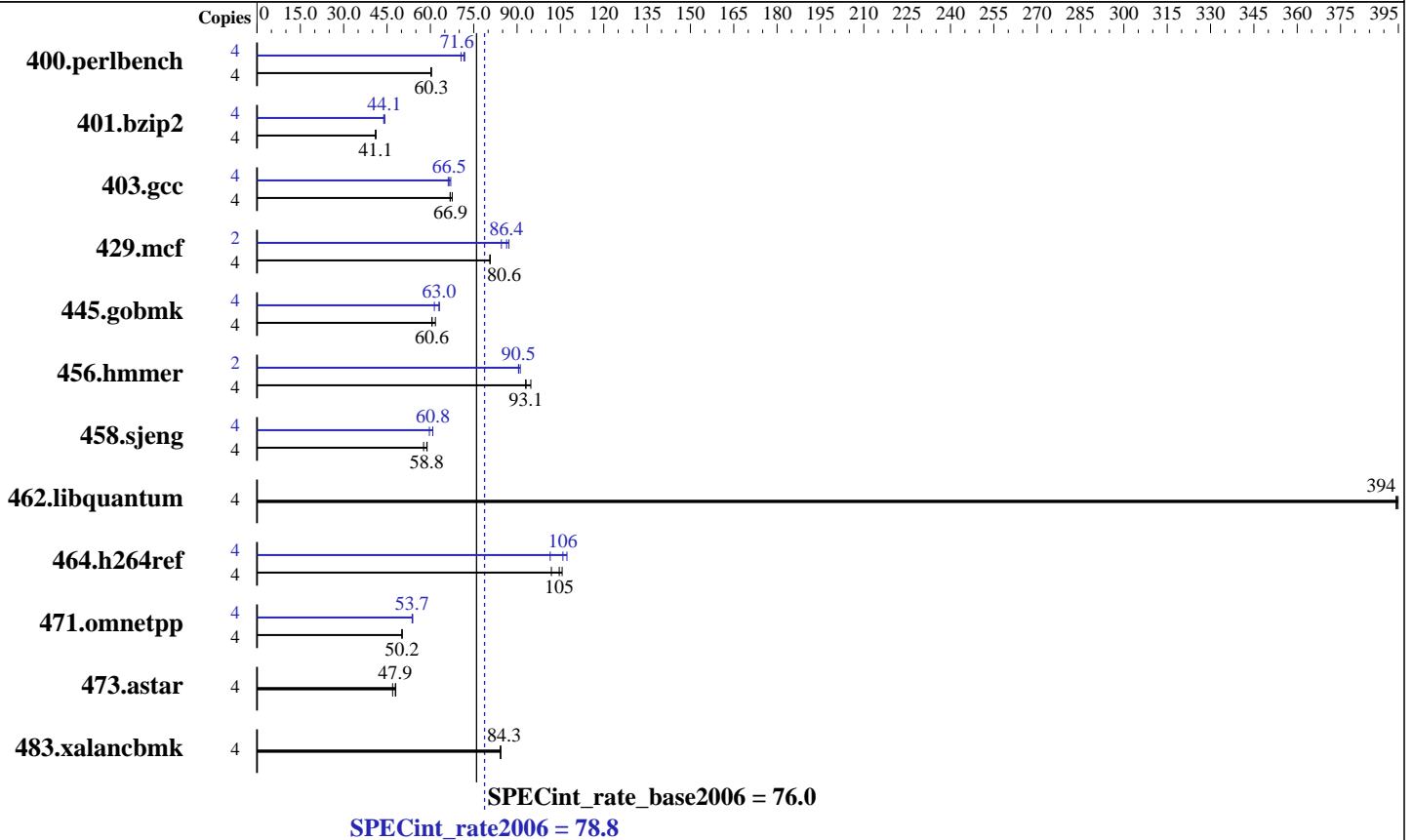
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Results Table

Benchmark	Copies	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	**648**	**60.3**	650	60.2	648	60.4	4	544	71.9	**546**	**71.6**	554	70.6
401.bzip2	4	938	41.1	**940**	**41.1**	942	41.0	4	873	44.2	**876**	**44.1**	880	43.8
403.gcc	4	476	67.6	482	66.8	**481**	**66.9**	4	**484**	**66.5**	480	67.0	487	66.2
429.mcf	4	**452**	**80.6**	453	80.6	452	80.7	2	216	84.6	**211**	**86.4**	209	87.2
445.gobmk	4	**693**	**60.6**	693	60.6	680	61.7	4	684	61.4	665	63.1	**666**	**63.0**
456.hmmer	4	401	93.0	394	94.8	**401**	**93.1**	2	**206**	**90.5**	206	90.5	205	91.1
458.sjeng	4	822	58.9	**824**	**58.8**	839	57.7	4	796	60.8	**796**	**60.8**	811	59.7
462.libquantum	4	**210**	**394**	210	394	210	395	4	**210**	**394**	210	394	210	395
464.h264ref	4	869	102	**846**	**105**	838	106	4	**836**	**106**	825	107	872	101
471.omnetpp	4	498	50.2	498	50.2	**498**	**50.2**	4	464	53.9	466	53.7	**465**	**53.7**
473.astar	4	585	48.0	598	46.9	**587**	**47.9**	4	585	48.0	598	46.9	**587**	**47.9**
483.xalancbmk	4	327	84.3	**327**	**84.3**	328	84.2	4	327	84.3	**327**	**84.3**	328	84.2

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

Submit Notes

```
The config file option 'submit' was used.
 numactl was used to bind copies to the cores
```

Operating System Notes

```
 'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
 Huge pages were not configured for this run
```

Base Compiler Invocation

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

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

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:

```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

C++ benchmarks:

```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/opt/smartheap/ia32 -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
```

Base Other Flags

C benchmarks:

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

Peak Compiler Invocation

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

```
400.perlbench: icc -m64
```

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

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

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

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

Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
   401.bzip2: -DSPEC_CPU_LP64
   456.hmmer: -DSPEC_CPU_LP64
   458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX
```

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Peak Optimization Flags

C benchmarks:

  400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                 -no-prec-div(pass 2) -prof-use(pass 2)
                 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

  401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
             -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
             -auto-ilp32 -ansi-alias
             -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

  403.gcc: -xAVX -ipo -O3 -no-prec-div
           -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

  429.mcf: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -ansi-alias
           -auto-ilp32

  445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
             -ansi-alias -auto-ilp32

  456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
             -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

  458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
             -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
             -auto-ilp32
             -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

  462.libquantum: basepeak = yes

  464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
               -ansi-alias

C++ benchmarks:

  471.omnetpp: -xAVX(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/opt/smartheap/ia32 -lsmartheap

  473.astar: basepeak = yes

  483.xalancbmk: basepeak = yes

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Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html`
`http://www.spec.org/cpu2006/flags/Fujitsu_CELSIUS_Platform.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml`
`http://www.spec.org/cpu2006/flags/Fujitsu_CELSIUS_Platform.xml`

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

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