# SPEC® CINT2006 Result

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## Fujitsu

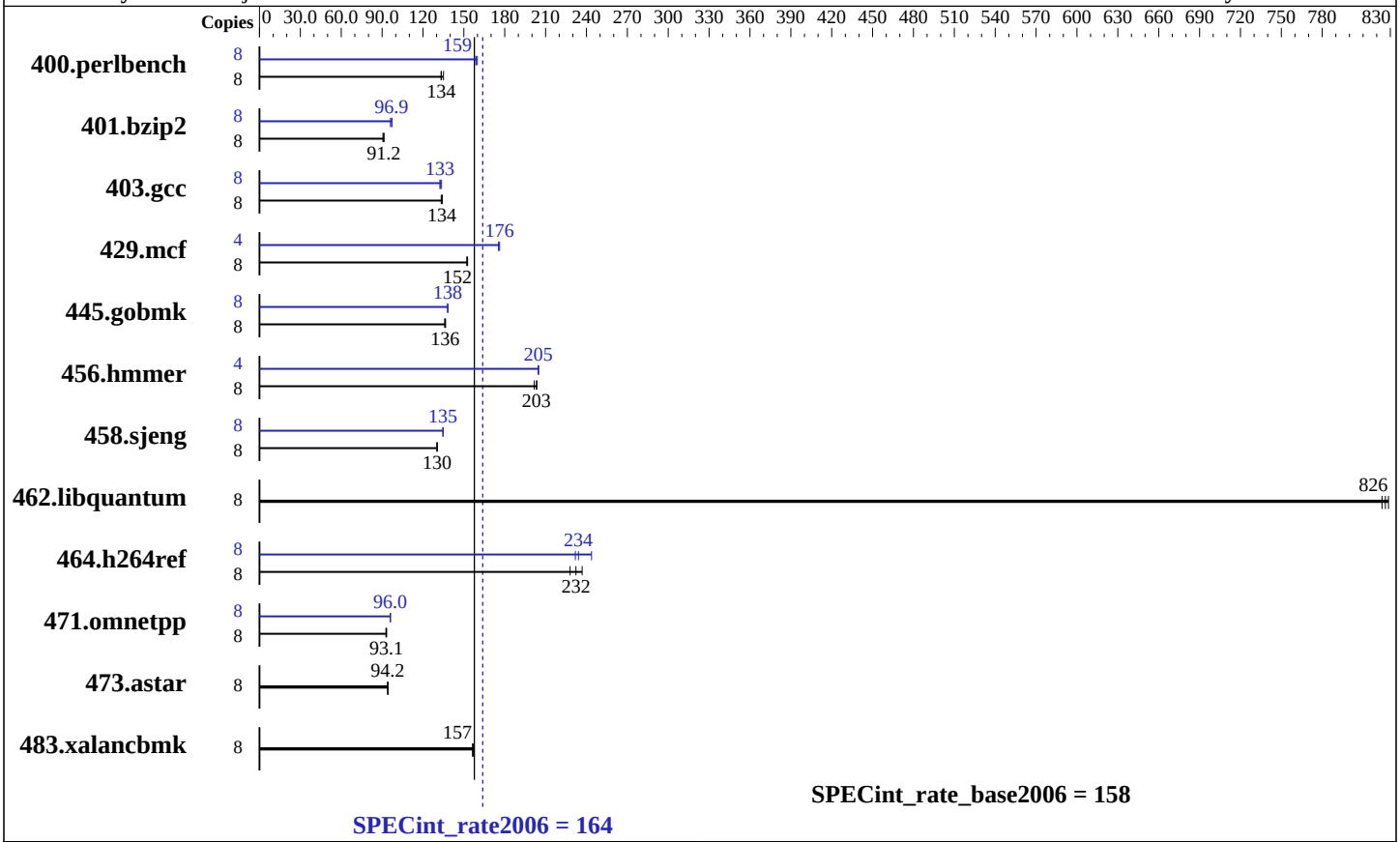
## CELSIUS W410, Intel Core i7-2600

**SPECint®_rate2006 = 164**

**SPECint_rate_base2006 = 158**

**CPU2006 license:** 19
**Test sponsor:** Fujitsu
**Tested by:** Fujitsu

**Test date:** Jun-2011
**Hardware Availability:** Mar-2011
**Software Availability:** Jan-2011




## Hardware

| | |
|---|---|
| CPU Name: | Intel Core i7-2600 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.8 GHz |
| CPU MHz: | 3400 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 1 chip, 4 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: | 8 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<br>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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## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 8 | 579 | 135 | 587 | 133 | **585** | **134** | 8 | **492** | **159** | 492 | 159 | 489 | 160 |
| 401.bzip2 | 8 | **847** | **91.2** | 845 | 91.4 | 852 | 90.6 | 8 | 794 | 97.3 | **796** | **96.9** | 803 | 96.1 |
| 403.gcc | 8 | **481** | **134** | 483 | 133 | 480 | 134 | 8 | 482 | 134 | **486** | **133** | 486 | 132 |
| 429.mcf | 8 | 479 | 152 | **479** | **152** | 478 | 153 | 4 | 207 | 176 | **208** | **176** | 208 | 175 |
| 445.gobmk | 8 | 618 | 136 | **615** | **136** | 615 | 137 | 8 | **607** | **138** | 607 | 138 | 607 | 138 |
| 456.hmmer | 8 | 370 | 202 | 367 | 204 | **367** | **203** | 4 | **182** | **205** | 182 | 205 | 183 | 204 |
| 458.sjeng | 8 | 743 | 130 | 742 | 130 | **743** | **130** | 8 | 718 | 135 | 719 | 135 | **719** | **135** |
| 462.libquantum | 8 | 200 | 829 | 201 | 824 | **201** | **826** | 8 | 200 | 829 | 201 | 824 | **201** | **826** |
| 464.h264ref | 8 | **762** | **232** | 748 | 237 | 777 | 228 | 8 | **756** | **234** | 726 | 244 | 764 | 232 |
| 471.omnetpp | 8 | 536 | 93.3 | **537** | **93.1** | 539 | 92.8 | 8 | 521 | 95.9 | 520 | 96.2 | **521** | **96.0** |
| 473.astar | 8 | 596 | 94.2 | **596** | **94.2** | 597 | 94.1 | 8 | 596 | 94.2 | **596** | **94.2** | 597 | 94.1 |
| 483.xalancbmk | 8 | 352 | 157 | 353 | 156 | **353** | **157** | 8 | 352 | 157 | 353 | 156 | **353** | **157** |

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`

## 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`

## 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

## 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`


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For other inquiries, please contact webmaster@spec.org.

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