# SPEC® CINT2006 Result

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## Fujitsu

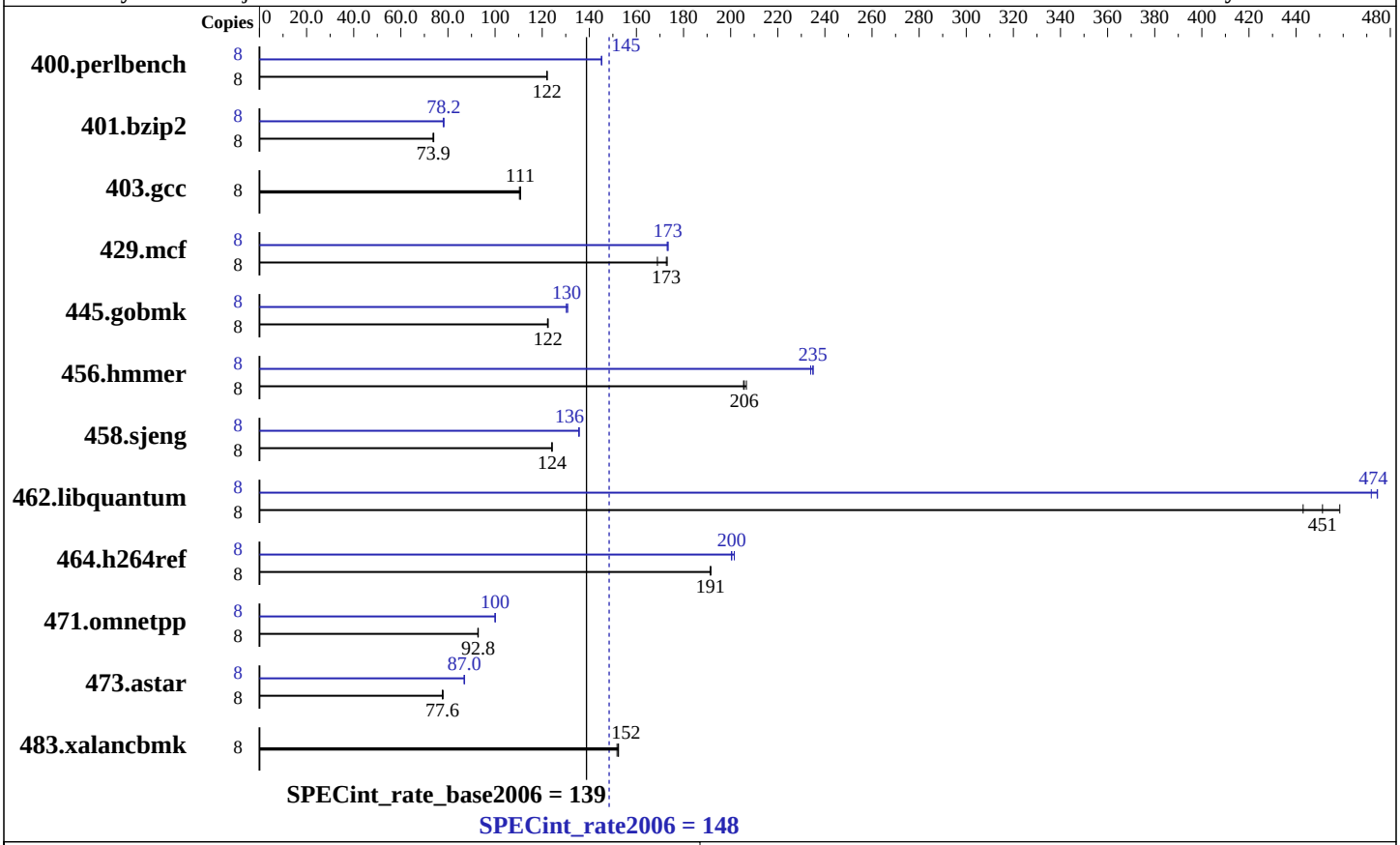
PRIMERGY RX200 S6, Intel Xeon E5506, 2.13 GHz

SPECint®_rate2006 = 148

SPECint_rate_base2006 = 139

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

**Test date:** Apr-2010
**Hardware Availability:** May-2010
**Software Availability:** Jan-2010




## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5506 |
| CPU Characteristics: | |
| CPU MHz: | 2133 |
| 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: | 256 KB I+D on chip per core |
| L3 Cache: | 4 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 48 GB (12x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes) |
| Disk Subsystem: | 1 x SATA, 160 GB, 5400 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 | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 8 | **640** | **122** | 640 | 122 | 641 | 122 | 8 | 539 | 145 | **538** | **145** | 538 | 145 |
| 401.bzip2 | 8 | 1044 | 74.0 | 1048 | 73.7 | **1045** | **73.9** | 8 | 986 | 78.3 | 990 | 78.0 | **987** | **78.2** |
| 403.gcc | 8 | **581** | **111** | 581 | 111 | 584 | 110 | 8 | **581** | **111** | 581 | 111 | 584 | 110 |
| 429.mcf | 8 | 432 | 169 | 422 | 173 | **422** | **173** | 8 | 422 | 173 | 421 | 173 | **421** | **173** |
| 445.gobmk | 8 | 686 | 122 | **685** | **122** | 685 | 123 | 8 | **644** | **130** | 641 | 131 | 644 | 130 |
| 456.hmmer | 8 | **363** | **206** | 361 | 207 | 363 | 205 | 8 | 318 | 235 | 319 | 234 | **318** | **235** |
| 458.sjeng | 8 | **779** | **124** | 780 | 124 | 779 | 124 | 8 | **713** | **136** | 714 | 135 | 713 | 136 |
| 462.libquantum | 8 | **367** | **451** | 374 | 443 | 361 | 459 | 8 | 351 | 472 | **349** | **474** | 349 | 475 |
| 464.h264ref | 8 | 925 | 191 | 924 | 192 | **925** | **191** | 8 | 884 | 200 | 878 | 202 | **883** | **200** |
| 471.omnetpp | 8 | 539 | 92.7 | **539** | **92.8** | 538 | 92.9 | 8 | 500 | 100 | 500 | 100 | **500** | **100** |
| 473.astar | 8 | **723** | **77.6** | 723 | 77.6 | 721 | 77.9 | 8 | **646** | **87.0** | 645 | 87.1 | 647 | 86.9 |
| 483.xalancbmk | 8 | 364 | 152 | **362** | **152** | 362 | 152 | 8 | 364 | 152 | **362** | **152** | 362 | 152 |

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.
```

## Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

## Platform Notes

```
The system automatically configures the memory to run at 800 MHz.
BIOS configuration:
Data Reuse Optimization = Disable
```

## 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
```

## 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`

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## 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: basepeak = yes

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 -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.20100330.01.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.20100330.01.xml`


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

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