# SPEC® CINT2006 Result

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## Fujitsu

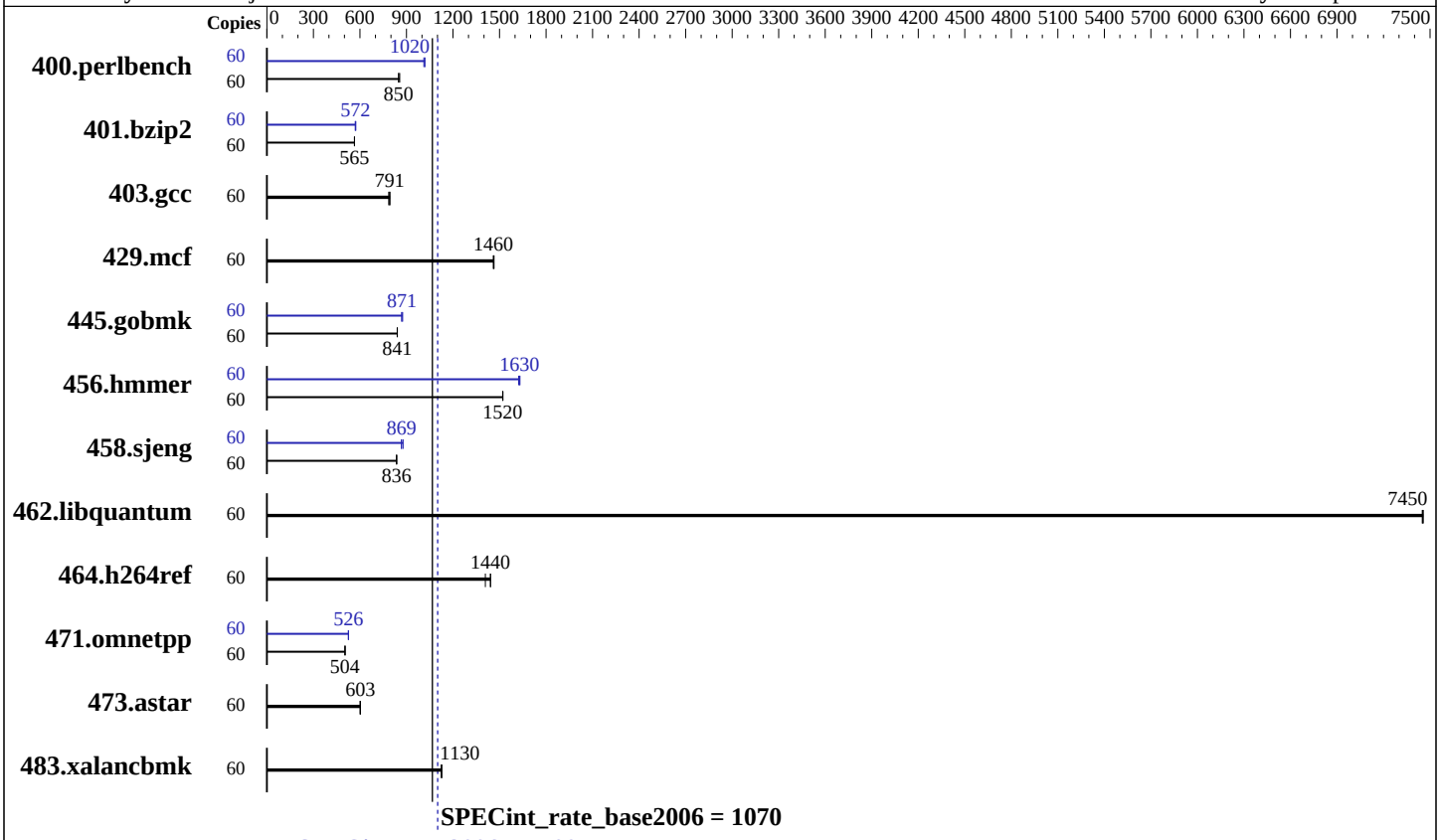
PRIMERGY RX4770 M1, Intel Xeon E7-4880 v2, 2.50 GHz

SPECint®_rate2006 = 1100

SPECint_rate_base2006 = 1070

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

**Test date:** May-2014
**Hardware Availability:** Jun-2014
**Software Availability:** Sep-2013




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E7-4880 v2 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.10 GHz |
| CPU MHz: | 2500 |
| FPU: | Integrated |
| CPU(s) enabled: | 30 cores, 2 chips, 15 cores/chip, 2 threads/core |
| CPU(s) orderable: | 2,4 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: | 37.5 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 512 GB (32 x 16 GB 2Rx4 PC3L-12800R-11, ECC, running at 1333 MHz and CL9) |
| Disk Subsystem: | 1 x SATA, 500 GB, 7200 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 6.5 (Santiago) 2.6.32-431.el6.x86_64 |
| Compiler: | C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux |
| Auto Parallel: | No |
| File System: | ext4 |
| System State: | Run level 5 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V10.0 |

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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 | 60 | 690 | 849 | 684 | 856 | **690** | **850** | 60 | 579 | 1010 | **576** | **1020** | 575 | 1020 |
| 401.bzip2 | 60 | 1026 | 565 | 1025 | 565 | **1025** | **565** | 60 | 1011 | 573 | **1012** | **572** | 1017 | 570 |
| 403.gcc | 60 | 615 | 785 | 608 | 794 | **611** | **791** | 60 | 615 | 785 | 608 | 794 | **611** | **791** |
| 429.mcf | 60 | 375 | 1460 | **374** | **1460** | 374 | 1460 | 60 | 375 | 1460 | **374** | **1460** | 374 | 1460 |
| 445.gobmk | 60 | **749** | **841** | 748 | 841 | 749 | 840 | 60 | **723** | **871** | 724 | 869 | 719 | 875 |
| 456.hmmer | 60 | **368** | **1520** | 368 | 1520 | 368 | 1520 | 60 | **344** | **1630** | 343 | 1630 | 345 | 1620 |
| 458.sjeng | 60 | 867 | 837 | 869 | 836 | **868** | **836** | 60 | 837 | 867 | 826 | 878 | **836** | **869** |
| 462.libquantum | 60 | 167 | 7450 | 167 | 7460 | **167** | **7450** | 60 | 167 | 7450 | 167 | 7460 | **167** | **7450** |
| 464.h264ref | 60 | **921** | **1440** | 921 | 1440 | 943 | 1410 | 60 | **921** | **1440** | 921 | 1440 | 943 | 1410 |
| 471.omnetpp | 60 | 745 | 504 | **744** | **504** | 744 | 504 | 60 | 714 | 525 | **713** | **526** | 712 | 526 |
| 473.astar | 60 | **699** | **603** | 701 | 601 | 698 | 603 | 60 | **699** | **603** | 701 | 601 | 698 | 603 |
| 483.xalancbmk | 60 | 368 | 1130 | **368** | **1130** | 367 | 1130 | 60 | 368 | 1130 | **368** | **1130** | 367 | 1130 |

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

## Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

## Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

## Platform Notes

```
BIOS configuration:
Energy Performance = Performance
```

## General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/SPECcpu2006-MONITOR/libs/32:/SPECcpu2006-MONITOR/libs/64:/SPECcpu2006-MONITOR/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>       /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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## General Notes (Continued)

For information about Fujitsu please visit: http://www.fujitsu.com

## 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 -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/sh -lsmartheap

## 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

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## Peak Compiler Invocation (Continued)

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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -auto-ilp32

401.bzip2: -xSSE4.2(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

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

Continued on next page

## Peak Optimization Flags (Continued)

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/sh -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-ic14.0-official-linux64-revB.html`
`http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.xml`
`http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml`


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

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