# SPEC® CFP2006 Result

**Fujitsu**

PRIMERGY RX200 S6, Intel Xeon X5675, 3.07 GHz

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>61.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006</td>
<td>57.3</td>
</tr>
</tbody>
</table>

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

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon X5675</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.47 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>3067</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) Enabled</td>
<td>12 cores, 2 chips, 6 cores/chip</td>
</tr>
<tr>
<td>CPU(s) Orderable</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB L1 + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB L1+D on chip per core</td>
</tr>
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</table>

### Software

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>SUSE Linux Enterprise Server 11 (x86_64) with SP1,</td>
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<tr>
<td></td>
<td>Kernel 2.6.32.12-0.7-default</td>
</tr>
<tr>
<td>Compiler</td>
<td>Intel C++ and Fortran Intel 64 Compiler XE for</td>
</tr>
<tr>
<td></td>
<td>applications running on Intel 64</td>
</tr>
<tr>
<td></td>
<td>Version 12.0 Update 3</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>File System</td>
<td>ext3</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>64-bit</td>
</tr>
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</table>

**SPECFp®2006 = 61.5**  
**SPECFP_base2006 = 57.3**

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Fujitsu
PRIMERGY RX200 S6, Intel Xeon X5675, 3.07 GHz

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

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM
Other Hardware: --

Peak Pointers: 32/64-bit
Other Software: None

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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>306</td>
<td>63.7</td>
</tr>
</tbody>
</table>

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
'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab
echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Intel HT Technology = Disable
Fujitsu

PRIMERGY RX200 S6, Intel Xeon X5675, 3.07 GHz

SPECfp2006 = 61.5
SPECfp_base2006 = 57.3

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

Test date: Mar-2011
Hardware Availability: Feb-2011
Software Availability: Apr-2011

General Notes

OMP_NUM_THREADS set to number of cores
For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

Base Compiler Invocation

C benchmarks:
  icc -m64

C++ benchmarks:
  icpc -m64

Fortran benchmarks:
  ifort -m64

Benchmarks using both Fortran and C:
  icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
  333.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
  437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
  447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
  454.calcualix: -DSPEC_CPU_LP64 -nofor_main
459.GemFDFTD: -DSPEC_CPU_LP64
  465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
  481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
  -ansi-alias

C++ benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Continued on next page
Fujitsu

PRIMERGY RX200 S6, Intel Xeon X5675, 3.07 GHz

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CPU2006 license: 19
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### Base Optimization Flags (Continued)

Fortran benchmarks:
- `-xSSE4.2` `-ipo` `-O3` `-no-prec-div` `-static` `-parallel` `-opt-prefetch`

Benchmarks using both Fortran and C:
- `-xSSE4.2` `-ipo` `-O3` `-no-prec-div` `-static` `-parallel` `-opt-prefetch`
- `-ansi-alias`

---

### Peak Compiler Invocation

**C benchmarks:**
- `icc` `-m64`

**C++ benchmarks:**
- `icpc` `-m64`

**Fortran benchmarks:**
- `ifort` `-m64`

Benchmarks using both Fortran and C:
- `icc` `-m64` `ifort` `-m64`

---

### Peak Portability Flags

Same as Base Portability Flags

---

### Peak Optimization Flags

**C benchmarks:**
- `433.milc`: `-xSSE4.2(pass 2)` `-prof-gen(pass 1)` `-ipo(pass 2)` `-O3(pass 2)`
  `-no-prec-div(pass 2)` `-prof-use(pass 2)` `-static` `-auto-ilp32`
  `-ansi-alias`
- `470.lbm`: `basepeak = yes`
- `482.sphinx3`: `-xSSE4.2` `-ipo` `-O3` `-no-prec-div` `-unroll2` `-ansi-alias`
  `-parallel`

**C++ benchmarks:**
- `444.namd`: `-xSSE4.2(pass 2)` `-prof-gen(pass 1)` `-ipo(pass 2)` `-O3(pass 2)`
  `-no-prec-div(pass 2)` `-prof-use(pass 2)` `-fno-alias`
  `-auto-ilp32`

Continued on next page
SPEC CFP2006 Result

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PRIMERGY RX200 S6, Intel Xeon X5675, 3.07 GHz

SPECfp2006 = 61.5
SPECfp_base2006 = 57.3

CPU2006 license: 19
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Peak Optimization Flags (Continued)

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110316.xml
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**SPECfp2006**

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

**SPECfp_base2006**

Test date: Mar-2011
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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Originally published on 12 April 2011.