Supermicro

SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

**SPECfp\textsuperscript{®} rate\textsubscript{2006} = 221**

**SPECfp\textsubscript{rate} base\textsubscript{2006} = 215**

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**Hardware**

- **CPU Name:** Intel Xeon E5-1650
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz
- **CPU MHz:** 3200
- **FPU:** Integrated
- **CPU(s) enabled:** 6 cores, 1 chip, 6 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

**Software**

- **Operating System:** Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
- **Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext4
- **System State:** Run level 3 (multi-user)
Supermicro
SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 300 GB SATA II, 10000 RPM
Other Hardware: None

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 300 GB SATA II, 10000 RPM
Other Hardware: None

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

Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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"
Transparent Huge Pages enabled with:
echo never > /sys/kernel/mm/redhat_transparent_hugepage/enabled
**SPEC CFP2006 Result**

**Supermicro**

SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

| SPECfp_rate2006 | 221 |
| SPECfp_rate_base2006 | 215 |

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

**General Notes**

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

**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
433.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.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -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:
```
-xAVX  -ipo -o3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3
```

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Supermicro
SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

SPECfp_rate2006 = 221
SPECfp_rate_base2006 = 215

CPU2006 license: 001176
Test date: May-2012
Test sponsor: Supermicro
Hardware Availability: Mar-2012
Tested by: Supermicro
Software Availability: Dec-2011

Base Optimization Flags (Continued)

C++ benchmarks:
- xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
  -ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:
- xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:
- xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
  -ansi-alias -opt-mem-layout-trans=3

Peak Compiler Invocation

C benchmarks (except as noted below):
icc  -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):
icpc  -m64

450.soplex: icpc -m32

Fortran benchmarks:
ifort  -m64

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

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.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
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
Supermicro
SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

SATP 001176
Test sponsor: Supermicro
Hardware Availability: Mar-2012
Test date: May-2012
Tested by: Supermicro
Software Availability: Dec-2011

Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
          -no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
          -opt-mem-layout-trans=3

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

C++ benchmarks:

444.namd: -xAVX(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

447.dealII: basepeak = yes

450.soplex: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
          -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -xAVX(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

435.gromacs: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
            -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
           -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
            -no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
            -static -auto-ilp32 -opt-mem-layout-trans=3

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Supermicro
SuperServer 5037A-i (X9SRA, Intel Xeon E5-1650)

SPECfp_rate2006 = 221
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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32
-optim-mem-layout-trans=3

481.wrf: Same as 454.calculix

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.xml

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

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