SPEC® CFP2006 Result
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Supermicro

SuperServer 1017C-TF (X9SCL-F, Intel E3-1260L)

$SPECfp^®2006 =$ 55.7

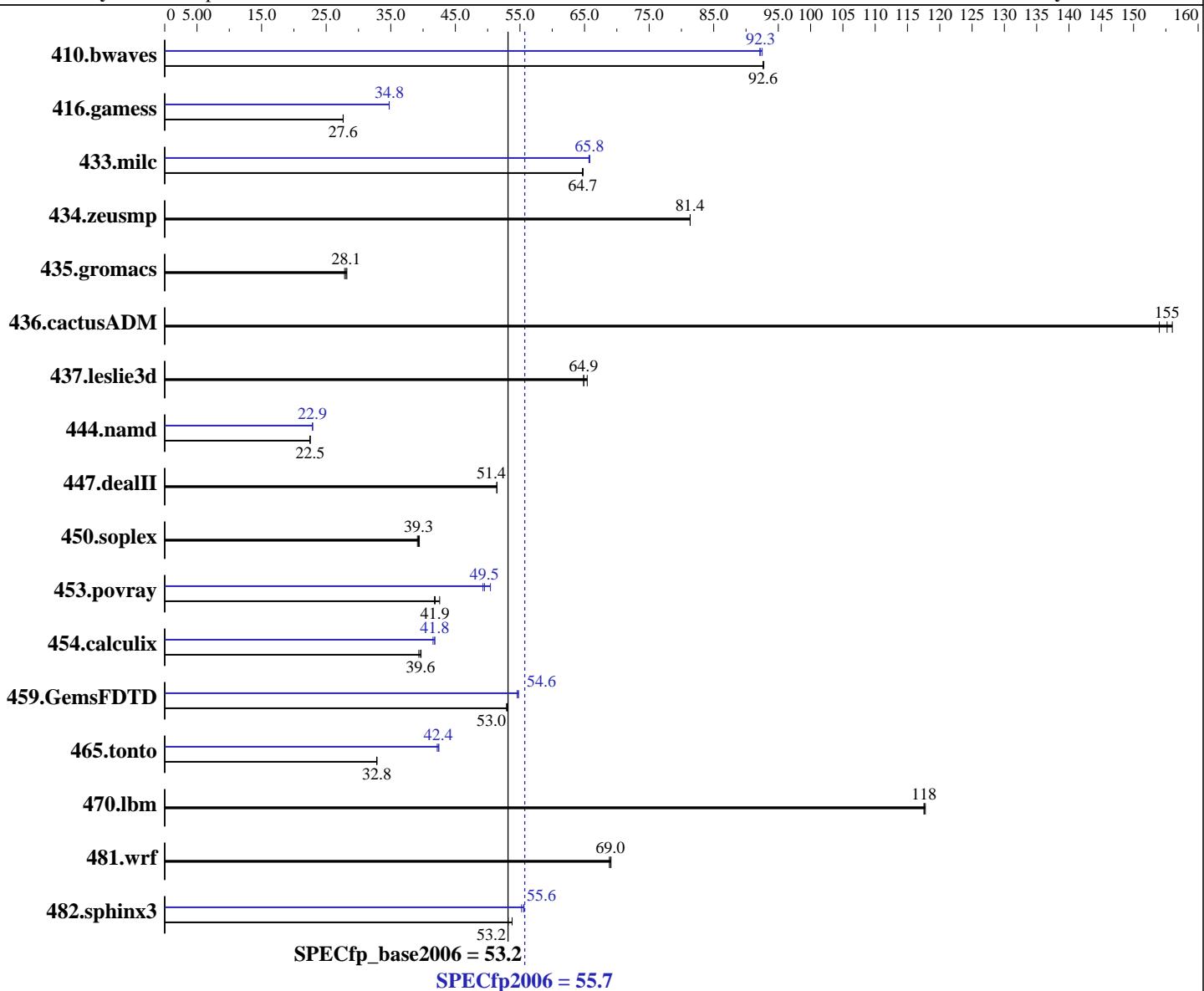$SPECfp\_base2006 =$ 53.2

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

Test date: May-2012
Hardware Availability: Apr-2011
Software Availability: Oct-2011

Benchmark	Value
410.bwaves	92.3 / 92.6
416.gamess	34.8 / 27.6
433.milc	65.8 / 64.7
434.zeusmp	81.4
435.gromacs	28.1
436.cactusADM	155
437.leslie3d	64.9
444.namd	22.9 / 22.5
447.dealII	51.4
450.soplex	39.3
453.povray	49.5 / 41.9
454.calculix	41.8 / 39.6
459.GemsFDTD	54.6 / 53.0
465.tonto	42.4 / 32.8
470.lbm	118
481.wrf	69.0
482.sphinx3	55.6 / 53.2

SPECfp_base2006 = 53.2
SPECfp2006 = 55.7

Hardware

CPU Name: Intel Xeon E3-1260L
CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
CPU MHz: 2400
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

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server Release 6.1, Kernel 2.6.32-131.0.15.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: Yes
File System: ext4
System State: Run level 3 (multi-user)

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L3 Cache:	8 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, ECC)	Other Software:	None
Disk Subsystem:	1 x 500 GB SATA II, 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
410.bwaves	**147**	**92.6**	147	92.8	147	92.6	148	92.1	**147**	**92.3**	147	92.5
416.gamess	708	27.6	**709**	**27.6**	709	27.6	**563**	**34.8**	563	34.8	563	34.8
433.milc	142	64.7	142	64.8	**142**	**64.7**	140	65.7	139	65.8	**140**	**65.8**
434.zeusmp	112	81.4	112	81.4	**112**	**81.4**	112	81.4	112	81.4	**112**	**81.4**
435.gromacs	256	27.9	253	28.2	**254**	**28.1**	256	27.9	253	28.2	**254**	**28.1**
436.cactusADM	**77.0**	**155**	76.6	156	77.6	154	**77.0**	**155**	76.6	156	77.6	154
437.leslie3d	144	65.4	145	64.9	**145**	**64.9**	144	65.4	145	64.9	**145**	**64.9**
444.namd	**356**	**22.5**	356	22.5	356	22.5	**350**	**22.9**	350	22.9	351	22.9
447.dealII	222	51.5	**222**	**51.4**	223	51.4	222	51.5	**222**	**51.4**	223	51.4
450.soplex	212	39.4	**212**	**39.3**	213	39.1	212	39.4	**212**	**39.3**	213	39.1
453.povray	**127**	**41.9**	125	42.6	127	41.8	108	49.3	**107**	**49.5**	105	50.4
454.calculix	208	39.7	210	39.3	**208**	**39.6**	199	41.5	197	41.8	**197**	**41.8**
459.GemsFDTD	**200**	**53.0**	201	52.9	200	53.1	194	54.6	**194**	**54.6**	194	54.8
465.tonto	**300**	**32.8**	299	32.9	300	32.8	232	42.5	**232**	**42.4**	233	42.2
470.lbm	117	118	**117**	**118**	117	118	117	118	**117**	**118**	117	118
481.wrf	162	68.8	162	69.1	**162**	**69.0**	162	68.8	162	69.1	**162**	**69.0**
482.sphinx3	367	53.1	362	53.8	**367**	**53.2**	353	55.3	**351**	**55.6**	350	55.6

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "4"

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

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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 -parallel -opt-prefetch
    -ansi-alias
```

C++ benchmarks:
```
    -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

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

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

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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: `-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`
`-ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias`
`-parallel`

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: `basepeak = yes`

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 -ipo -O3 -no-prec-div -opt-prefetch -parallel`
`-static`

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Peak Optimization Flags (Continued)

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`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `-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 -opt-prefetch -parallel`

465.tonto: `-xAVX(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`

Benchmarks using both Fortran and C:

435.gromacs: `basepeak = yes`

436.cactusADM: `basepeak = yes`

454.calculix: `-xAVX -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
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.html
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.html

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You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.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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