



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 5018D-MTRF (X10SLM-F, Intel Xeon E3-1280 v3, 3.60 GHz)

SPECfp<sup>®</sup>2006 = 75.7

SPECfp\_base2006 = 73.8

CPU2006 license: 001176

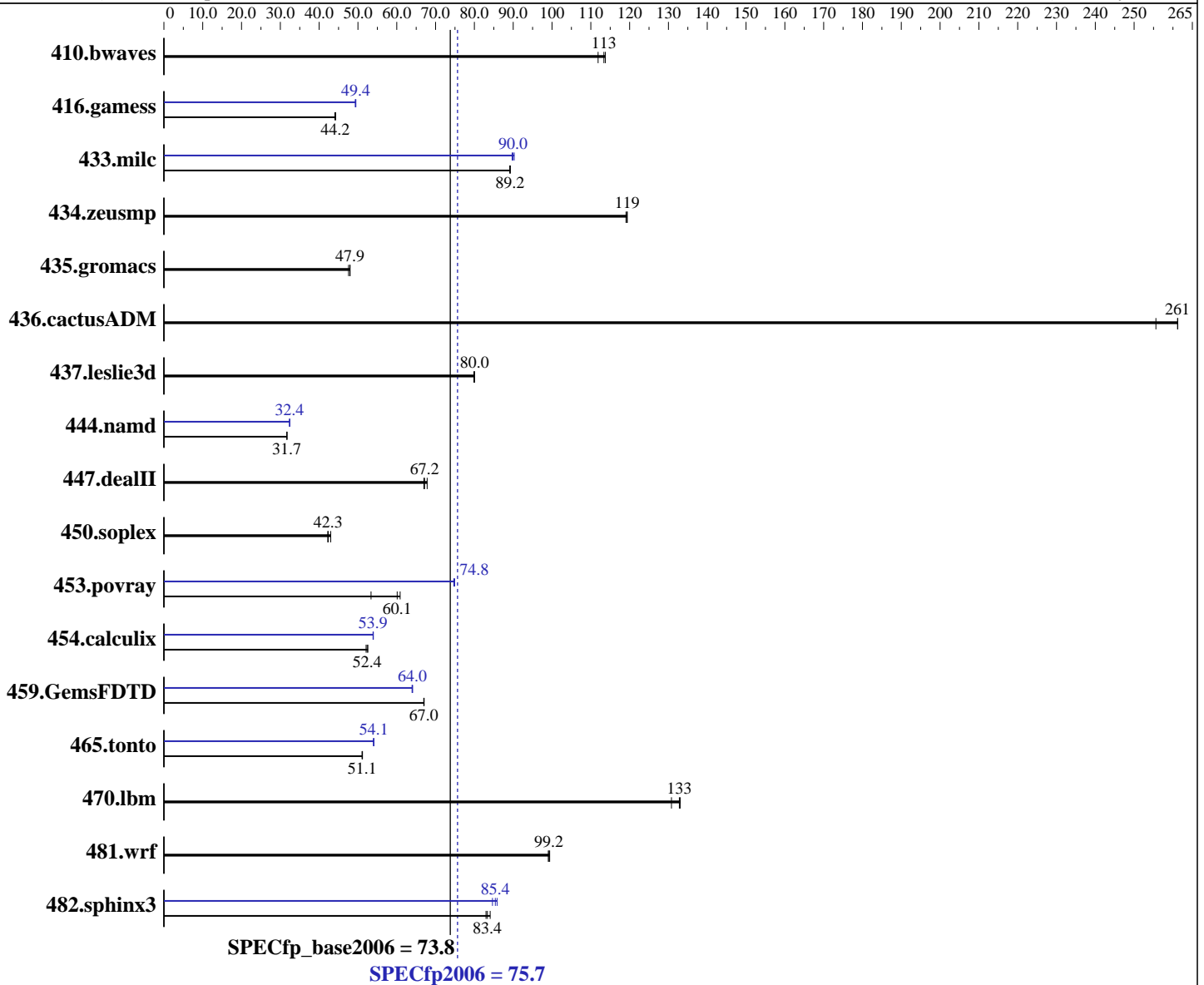
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2013

Hardware Availability: Jun-2013

Software Availability: May-2013



### Hardware

CPU Name: Intel Xeon E3-1280 v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz  
 CPU MHz: 3600  
 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 6.4, Kernel 2.6.32-358.el6.x86\_64  
 Compiler: C/C++: Version 13.1.1.163 of Intel C++ Studio XE for Linux;  
 Fortran: Version 13.1.1.163 of Intel Fortran Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 5018D-MTRF (X10SLM-F, Intel Xeon E3-1280 v3, 3.60 GHz)

SPECfp2006 = 75.7

SPECfp\_base2006 = 73.8

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2013

Hardware Availability: Jun-2013

Software Availability: May-2013

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 32 GB (4 x 8 GB 2Rx4 PC3-12800E-11, ECC)  
Disk Subsystem: 1 x 2000 GB SATA II, 7200 RPM  
Other Hardware: None

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

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	119	114	121	112	<u>120</u>	<u>113</u>	119	114	121	112	<u>120</u>	<u>113</u>
416.gamess	445	44.0	443	44.2	<u>443</u>	<u>44.2</u>	<u>396</u>	<u>49.4</u>	397	49.3	396	49.5
433.milc	103	89.1	<u>103</u>	<u>89.2</u>	103	89.3	102	90.3	<u>102</u>	<u>90.0</u>	102	89.7
434.zeusmp	76.2	119	<u>76.2</u>	<u>119</u>	76.4	119	76.2	119	<u>76.2</u>	<u>119</u>	76.4	119
435.gromacs	149	48.0	<u>149</u>	<u>47.9</u>	150	47.6	149	48.0	<u>149</u>	<u>47.9</u>	150	47.6
436.cactusADM	45.7	261	46.8	256	<u>45.8</u>	<u>261</u>	45.7	261	46.8	256	<u>45.8</u>	<u>261</u>
437.leslie3d	117	80.0	118	79.9	<u>117</u>	<u>80.0</u>	117	80.0	118	79.9	<u>117</u>	<u>80.0</u>
444.namd	253	31.7	253	31.7	<u>253</u>	<u>31.7</u>	<u>248</u>	<u>32.4</u>	248	32.4	248	32.4
447.dealII	171	67.0	<u>170</u>	<u>67.2</u>	169	67.8	171	67.0	<u>170</u>	<u>67.2</u>	169	67.8
450.soplex	198	42.2	<u>197</u>	<u>42.3</u>	194	43.0	198	42.2	<u>197</u>	<u>42.3</u>	194	43.0
453.povray	87.4	60.9	99.7	53.4	<u>88.5</u>	<u>60.1</u>	71.2	74.7	<u>71.1</u>	<u>74.8</u>	71.0	74.9
454.calculix	158	52.1	<u>158</u>	<u>52.4</u>	157	52.6	<u>153</u>	<u>53.9</u>	153	53.9	153	54.0
459.GemsFDTD	158	67.1	<u>158</u>	<u>67.0</u>	158	67.0	166	64.1	166	63.9	<u>166</u>	<u>64.0</u>
465.tonto	193	51.1	192	51.2	<u>193</u>	<u>51.1</u>	<u>182</u>	<u>54.1</u>	182	54.1	182	54.0
470.lbm	103	133	<u>103</u>	<u>133</u>	105	131	103	133	<u>103</u>	<u>133</u>	105	131
481.wrf	<u>113</u>	<u>99.2</u>	112	99.4	113	99.0	<u>113</u>	<u>99.2</u>	112	99.4	113	99.0
482.sphinx3	<u>234</u>	<u>83.4</u>	232	84.1	235	83.0	<u>227</u>	<u>85.9</u>	<u>228</u>	<u>85.4</u>	230	84.7

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"

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/cpu2006/sh"  
OMP\_NUM\_THREADS = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled  
runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 5018D-MTRF (X10SLM-F, Intel Xeon E3-1280 v3, 3.60 GHz)

SPECfp2006 = 75.7

SPECfp\_base2006 = 73.8

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

Test date: Jun-2013  
Hardware Availability: Jun-2013  
Software Availability: May-2013

## 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:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

C++ benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 5018D-MTRF (X10SLM-F, Intel Xeon E3-1280 v3, 3.60 GHz)

SPECfp2006 = 75.7

SPECfp\_base2006 = 73.8

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2013

Hardware Availability: Jun-2013

Software Availability: May-2013

## 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: -xCORE-AVX2(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: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
-parallel

C++ benchmarks:

444.namd: -xCORE-AVX2(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.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(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:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 5018D-MTRF (X10SLM-F, Intel Xeon E3-1280 v3, 3.60 GHz)

SPECfp2006 = 75.7

SPECfp\_base2006 = 73.8

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jun-2013

Hardware Availability: Jun-2013

Software Availability: May-2013

## Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -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/Supermicro-Platform-Settings-V1.2-revB.20130719.html>

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130702.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Thu Jul 24 16:41:09 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 19 July 2013.