



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp[®]2006 = 107

SPECfp_base2006 = 102

CPU2006 license: 001176

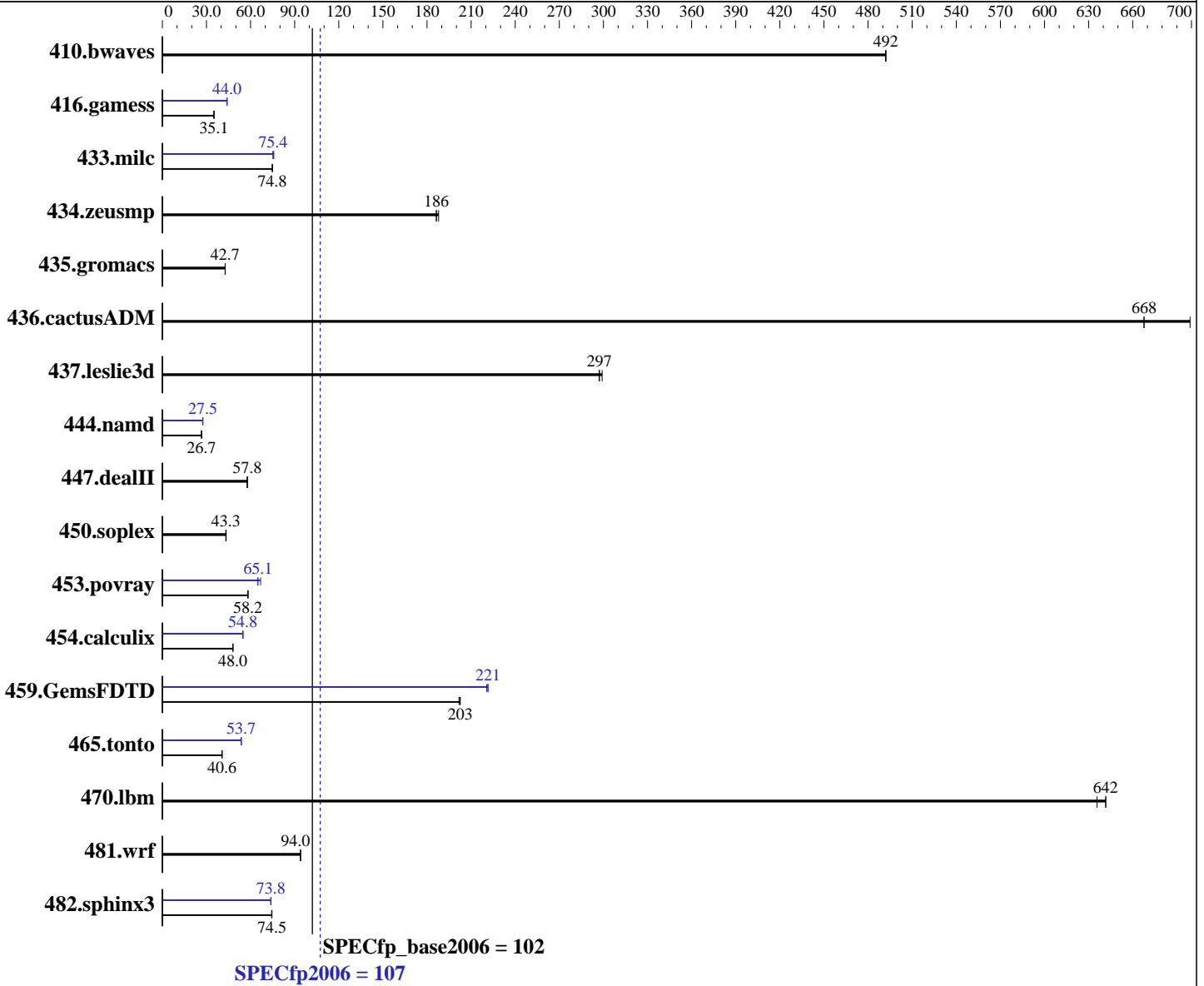
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Sep-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2640 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip
 CPU(s) orderable: 1,2 chips
 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 6.5, Kernel 2.6.32-431.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.0.080 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 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp2006 = **107**

SPECfp_base2006 = **102**

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Sep-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem: 1 x 2000 GB SATA III, 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	<u>27.6</u>	<u>492</u>	27.6	492	27.6	492	<u>27.6</u>	<u>492</u>	27.6	492	27.6	492
416.gamess	<u>558</u>	<u>35.1</u>	557	35.1	559	35.1	<u>445</u>	<u>44.0</u>	446	43.9	444	44.1
433.milc	<u>123</u>	<u>74.8</u>	122	75.0	123	74.7	122	75.2	121	75.8	<u>122</u>	<u>75.4</u>
434.zeusmp	48.4	188	<u>48.8</u>	<u>186</u>	48.8	186	48.4	188	<u>48.8</u>	<u>186</u>	48.8	186
435.gromacs	<u>167</u>	<u>42.7</u>	167	42.7	167	42.7	<u>167</u>	<u>42.7</u>	167	42.7	167	42.7
436.cactusADM	17.9	668	17.1	699	<u>17.9</u>	<u>668</u>	17.9	668	17.1	699	<u>17.9</u>	<u>668</u>
437.leslie3d	<u>31.6</u>	<u>297</u>	31.6	297	31.4	299	<u>31.6</u>	<u>297</u>	31.6	297	31.4	299
444.namd	301	26.7	302	26.6	<u>301</u>	<u>26.7</u>	291	27.5	291	27.5	<u>291</u>	<u>27.5</u>
447.dealII	198	57.8	<u>198</u>	<u>57.8</u>	198	57.8	198	57.8	<u>198</u>	<u>57.8</u>	198	57.8
450.soplex	<u>193</u>	<u>43.3</u>	193	43.2	192	43.4	<u>193</u>	<u>43.3</u>	193	43.2	192	43.4
453.povray	91.4	58.2	<u>91.4</u>	<u>58.2</u>	91.2	58.3	<u>81.7</u>	<u>65.1</u>	79.6	66.8	82.1	64.8
454.calculix	<u>172</u>	<u>48.0</u>	172	48.1	172	47.9	150	54.8	151	54.8	<u>151</u>	<u>54.8</u>
459.GemsFDTD	52.6	202	52.4	203	<u>52.4</u>	<u>203</u>	<u>47.9</u>	<u>221</u>	47.9	221	48.1	221
465.tonto	243	40.6	<u>242</u>	<u>40.6</u>	242	40.6	184	53.6	<u>183</u>	<u>53.7</u>	183	53.7
470.lbm	<u>21.4</u>	<u>642</u>	21.6	636	21.4	642	<u>21.4</u>	<u>642</u>	21.6	636	21.4	642
481.wrf	119	94.0	<u>119</u>	<u>94.0</u>	119	93.8	119	94.0	<u>119</u>	<u>94.0</u>	119	93.8
482.sphinx3	<u>262</u>	<u>74.5</u>	261	74.5	262	74.3	264	73.8	264	73.9	<u>264</u>	<u>73.8</u>

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"

Platform Notes

BIOS Settings:
Hyper-Threading (All) = Disabled
Early Snoop = Disabled
Enforce POR = Disabled
COD Enabled = Disabled



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp2006 = 107

SPECfp_base2006 = 102

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

Test date: Sep-2014
Hardware Availability: Sep-2014
Software Availability: Nov-2013

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,compact,0,1"

LD_LIBRARY_PATH = "/home/Trial/SPEC2006_v11/libs/32:/home/Trial/SPEC2006_v11/libs/64:/home/Trial/SPEC2006_v11/sh"

OMP_NUM_THREADS = "16"

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

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp2006 = 107

SPECfp_base2006 = 102

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

Test date: Sep-2014
Hardware Availability: Sep-2014
Software Availability: Nov-2013

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp2006 = 107

SPECfp_base2006 = 102

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

Test date: Sep-2014
Hardware Availability: Sep-2014
Software Availability: Nov-2013

Peak Optimization Flags (Continued)

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:

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-

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/Intel-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revD.html>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 6028R-TR
(X10DRI , Intel Xeon E5-2640 v3)

SPECfp2006 = 107

SPECfp_base2006 = 102

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Sep-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revD.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.

Tested with SPEC CPU2006 v1.2.
Report generated on Wed Nov 12 10:17:32 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 7 November 2014.