



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer F628R3-R72BPT+
(X10DRFR-T , Intel Xeon E5-2643 v3)

SPECfp[®]2006 = **110**

SPECfp_base2006 = **106**

CPU2006 license: 001176

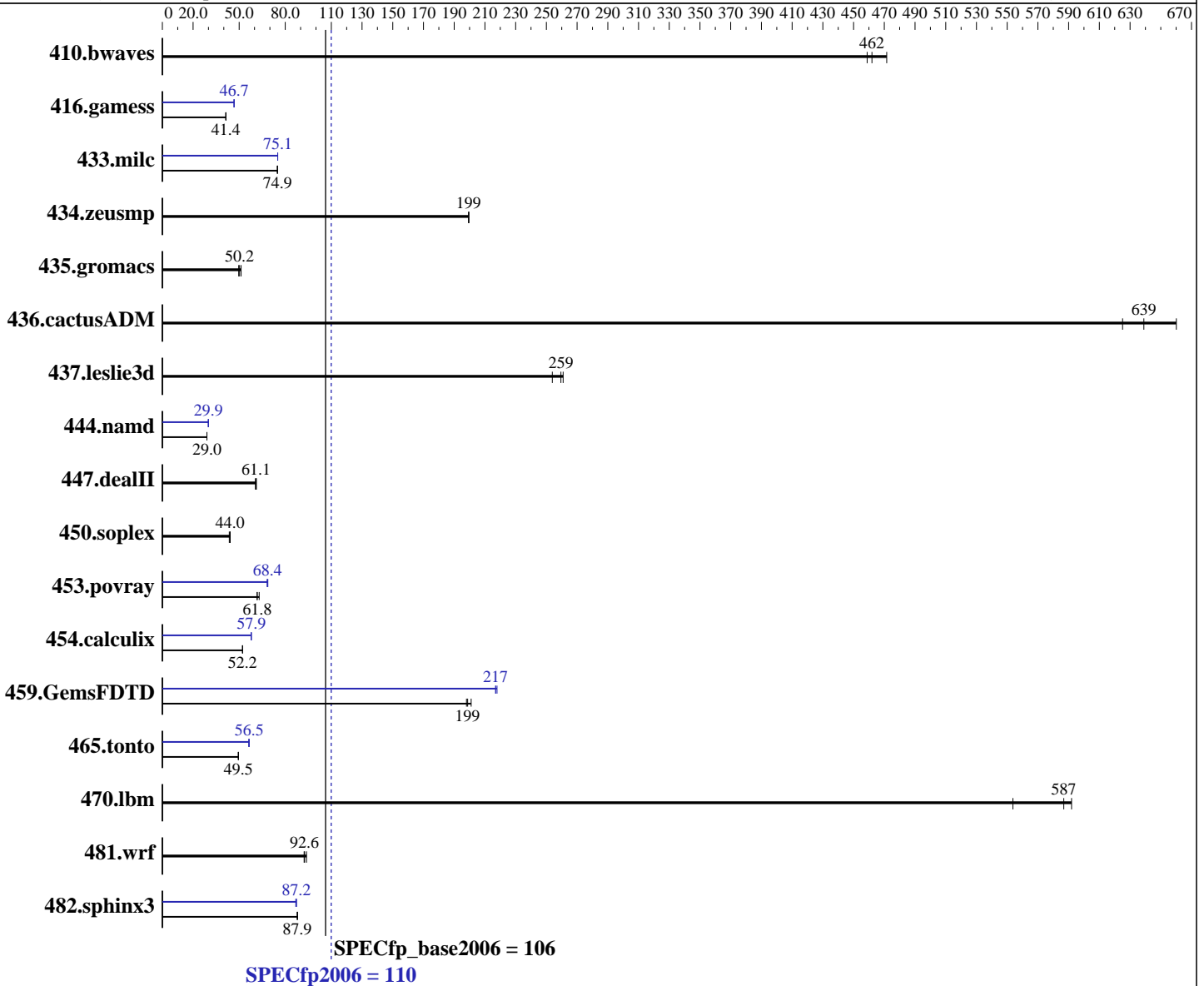
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2014

Hardware Availability: Nov-2014

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2643 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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 2.6.32-431.23.3.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 F628R3-R72BPT+
(X10DRFR-T , Intel Xeon E5-2643 v3)

SPECfp2006 = **110**

SPECfp_base2006 = **106**

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2014

Hardware Availability: Nov-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 1000 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	29.6	459	28.8	472	<u>29.4</u>	<u>462</u>	29.6	459	28.8	472	<u>29.4</u>	<u>462</u>
416.gamess	472	41.4	475	41.2	<u>473</u>	<u>41.4</u>	420	46.6	419	46.7	<u>419</u>	<u>46.7</u>
433.milc	123	74.8	122	75.0	<u>123</u>	<u>74.9</u>	122	75.1	<u>122</u>	<u>75.1</u>	122	75.1
434.zeusmp	45.6	199	45.6	199	<u>45.6</u>	<u>199</u>	45.6	199	45.6	199	<u>45.6</u>	<u>199</u>
435.gromacs	144	49.7	<u>142</u>	<u>50.2</u>	139	51.3	144	49.7	<u>142</u>	<u>50.2</u>	139	51.3
436.cactusADM	19.1	625	<u>18.7</u>	<u>639</u>	18.1	660	19.1	625	<u>18.7</u>	<u>639</u>	18.1	660
437.leslie3d	<u>36.2</u>	<u>259</u>	36.0	261	37.0	254	<u>36.2</u>	<u>259</u>	36.0	261	37.0	254
444.namd	<u>276</u>	<u>29.0</u>	276	29.0	277	29.0	268	29.9	<u>268</u>	<u>29.9</u>	268	30.0
447.dealII	<u>187</u>	<u>61.1</u>	189	60.6	187	61.2	<u>187</u>	<u>61.1</u>	189	60.6	187	61.2
450.soplex	<u>189</u>	<u>44.0</u>	189	44.2	191	43.6	<u>189</u>	<u>44.0</u>	189	44.2	191	43.6
453.povray	<u>86.2</u>	<u>61.8</u>	86.2	61.7	84.4	63.0	<u>77.7</u>	<u>68.4</u>	77.5	68.7	78.0	68.2
454.calculix	158	52.3	<u>158</u>	<u>52.2</u>	158	52.1	142	57.9	143	57.7	<u>142</u>	<u>57.9</u>
459.GemsFDTD	53.6	198	<u>53.4</u>	<u>199</u>	52.8	201	48.7	218	<u>48.9</u>	<u>217</u>	48.9	217
465.tonto	199	49.5	199	49.5	<u>199</u>	<u>49.5</u>	<u>174</u>	<u>56.5</u>	175	56.2	174	56.5
470.lbm	<u>23.4</u>	<u>587</u>	24.8	554	23.2	592	<u>23.4</u>	<u>587</u>	24.8	554	23.2	592
481.wrf	119	93.8	<u>121</u>	<u>92.6</u>	121	92.3	119	93.8	<u>121</u>	<u>92.6</u>	121	92.3
482.sphinx3	<u>222</u>	<u>87.9</u>	221	88.0	222	87.8	223	87.3	<u>223</u>	<u>87.2</u>	224	86.8

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:
Enforce POR - Disable
Memory Frequency - 2133
Early Snoop - Disable
COD Enable - Disable
Hyper-Threading (ALL) - Disable



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer F628R3-R72BPT+
(X10DRFR-T, Intel Xeon E5-2643 v3)

SPECfp2006 = 110

SPECfp_base2006 = 106

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

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

General Notes

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

```
KMP_AFFINITY = "granularity=fine,compact,1,0"  
LD_LIBRARY_PATH = "/root/cpu2006/libs/32:/root/cpu2006/libs/64:/root/cpu2006/sh"  
OMP_NUM_THREADS = "12"
```

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
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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.deallI: -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 F628R3-R72BPT+
(X10DRFR-T , Intel Xeon E5-2643 v3)

SPECfp2006 = 110

SPECfp_base2006 = 106

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

Test date: Nov-2014
Hardware Availability: Nov-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 F628R3-R72BPT+
(X10DRFR-T , Intel Xeon E5-2643 v3)

SPECfp2006 = 110

SPECfp_base2006 = 106

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2014

Hardware Availability: Nov-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-revF.html>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer F628R3-R72BPT+
(X10DRFR-T , Intel Xeon E5-2643 v3)

SPECfp2006 = 110

SPECfp_base2006 = 106

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2014

Hardware Availability: Nov-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-revF.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 Tue Dec 30 16:10:27 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 30 December 2014.