



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

Supermicro SuperServer 1027R-WRF4+  
(X9DRW-3LN4F+, Intel Xeon E5-2620 v2)

SPECint®2006 = 42.8

SPECint\_base2006 = 40.5

CPU2006 license: 001176

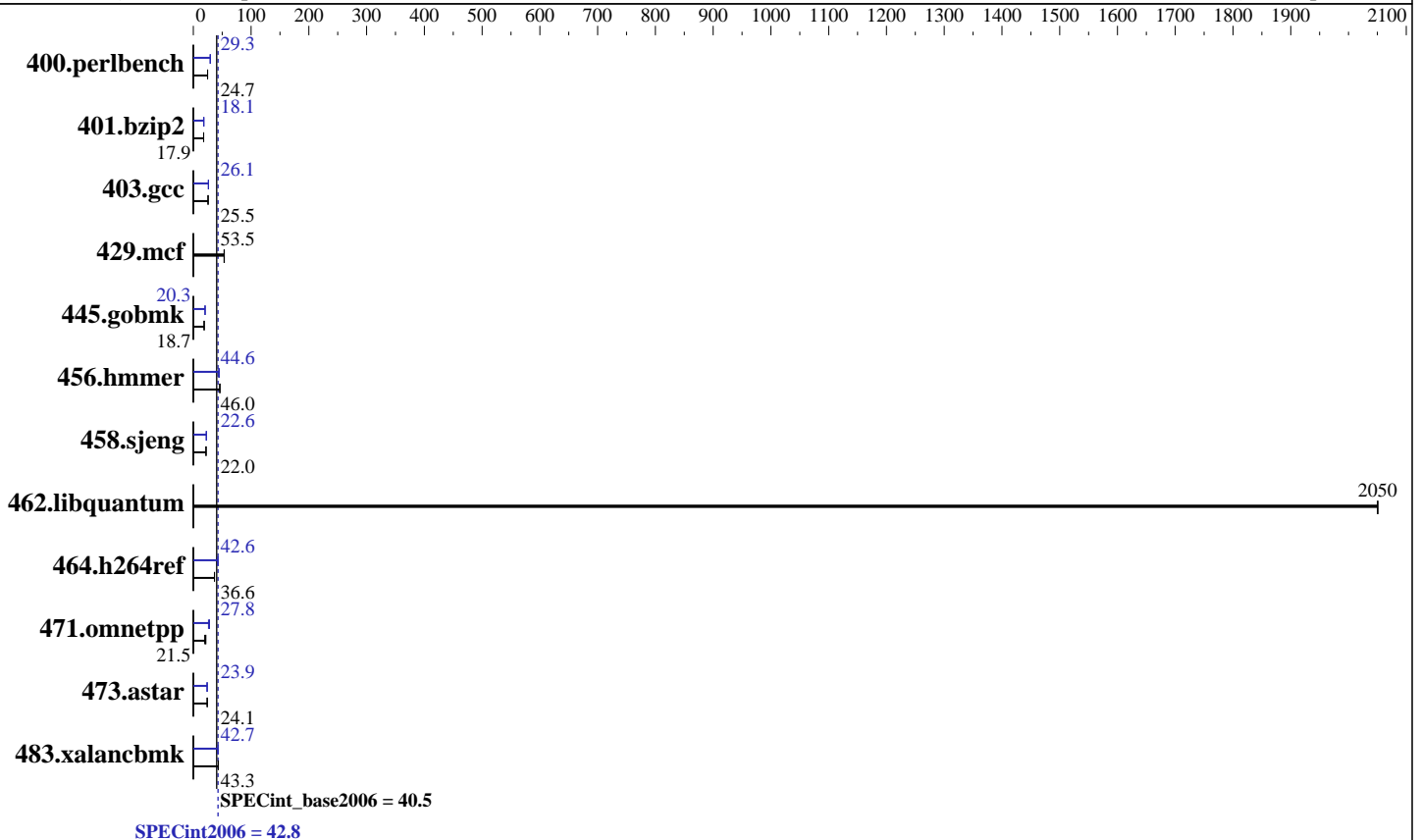
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2014

Hardware Availability: Oct-2013

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2620 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.60 GHz  
 CPU MHz: 2100  
 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  
 L3 Cache: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)  
 Disk Subsystem: 1 x 500 GB SATA II, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4, Kernel 2.6.32-358.23.2.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)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V10.0



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

Supermicro SuperServer 1027R-WRF4+  
(X9DRW-3LN4F+, Intel Xeon E5-2620 v2)

SPECint2006 = 42.8

SPECint\_base2006 = 40.5

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

Test date: Mar-2014  
Hardware Availability: Oct-2013  
Software Availability: Sep-2013

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	395	24.7	<b>396</b>	<b>24.7</b>	396	24.7	333	29.3	333	29.4	<b>333</b>	<b>29.3</b>
401.bzip2	539	17.9	<b>540</b>	<b>17.9</b>	540	17.9	533	18.1	<b>532</b>	<b>18.1</b>	532	18.1
403.gcc	<b>315</b>	<b>25.5</b>	315	25.5	315	25.6	308	26.1	308	26.2	<b>308</b>	<b>26.1</b>
429.mcf	170	53.7	171	53.2	<b>170</b>	<b>53.5</b>	170	53.7	171	53.2	<b>170</b>	<b>53.5</b>
445.gobmk	<b>560</b>	<b>18.7</b>	560	18.7	560	18.7	<b>516</b>	<b>20.3</b>	517	20.3	515	20.4
456.hammer	203	46.0	<b>203</b>	<b>46.0</b>	203	45.9	<b>209</b>	<b>44.6</b>	209	44.6	212	44.1
458.sjeng	551	22.0	550	22.0	<b>550</b>	<b>22.0</b>	536	22.6	<b>536</b>	<b>22.6</b>	537	22.5
462.libquantum	<b>10.1</b>	<b>2050</b>	10.1	2050	10.1	2050	<b>10.1</b>	<b>2050</b>	10.1	2050	10.1	2050
464.h264ref	<b>605</b>	<b>36.6</b>	605	36.6	604	36.6	519	42.7	<b>519</b>	<b>42.6</b>	522	42.4
471.omnetpp	290	21.5	<b>291</b>	<b>21.5</b>	318	19.7	238	26.2	<b>225</b>	<b>27.8</b>	224	28.0
473.astar	291	24.1	292	24.0	<b>291</b>	<b>24.1</b>	<b>294</b>	<b>23.9</b>	293	23.9	294	23.9
483.xalancbmk	159	43.3	159	43.4	<b>159</b>	<b>43.3</b>	<b>162</b>	<b>42.7</b>	162	42.7	162	42.7

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

## Submit Notes

The config file option 'submit' was used.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

BIOS Configuration:  
Disable Hyper-threading

## General Notes

Environment variables set by runspec before the start of the run:  
KMP\_AFFINITY = "granularity=fine,compact,0,1"  
LD\_LIBRARY\_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64:/usr/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>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

Supermicro SuperServer 1027R-WRF4+  
(X9DRW-3LN4F+, Intel Xeon E5-2620 v2)

SPECint2006 = 42.8

SPECint\_base2006 = 40.5

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

Test date: Mar-2014  
Hardware Availability: Oct-2013  
Software Availability: Sep-2013

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64  
403.gcc: -DSPEC\_CPU\_LP64  
429.mcf: -DSPEC\_CPU\_LP64  
445.gobmk: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
464.h264ref: -DSPEC\_CPU\_LP64  
471.omnetpp: -DSPEC\_CPU\_LP64  
473.astar: -DSPEC\_CPU\_LP64  
483.xalancbmk: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs  
-L/sh -lsmartheap64

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

Supermicro SuperServer 1027R-WRF4+  
(X9DRW-3LN4F+, Intel Xeon E5-2620 v2)

SPECint2006 = 42.8

SPECint\_base2006 = 40.5

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2014

Hardware Availability: Oct-2013

Software Availability: Sep-2013

## Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

473.astar: `-DSPEC_CPU_LP64`

483.xalancbmk: `-DSPEC_CPU_LINUX`

## Peak Optimization Flags

C benchmarks:

400.perlbench: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch  
-ansi-alias`

401.bzip2: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch  
-ansi-alias`

403.gcc: `-xAVX -ipo -O3 -no-prec-div -inline-calloc  
-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias`

456.hmmer: `-xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-ansi-alias`

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Supermicro

Supermicro SuperServer 1027R-WRF4+  
(X9DRW-3LN4F+, Intel Xeon E5-2620 v2)

SPECint2006 = 42.8

SPECint\_base2006 = 40.5

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2014

Hardware Availability: Oct-2013

Software Availability: Sep-2013

## Peak Optimization Flags (Continued)

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2)  
-opt-ra-region-strategy=block -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/sh -lsmartheap

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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>

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 SPECint 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 23:31:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 15 May 2014.