



# SPEC® CINT2006 Result

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## Supermicro

SuperStorage Server 5048R-E1CR36L  
(X10SRH-CF/CLN4F , Intel Xeon E5-2697 v3)

**SPECint®\_rate2006 = 628**

**SPECint\_rate\_base2006 = 608**

CPU2006 license: 001176

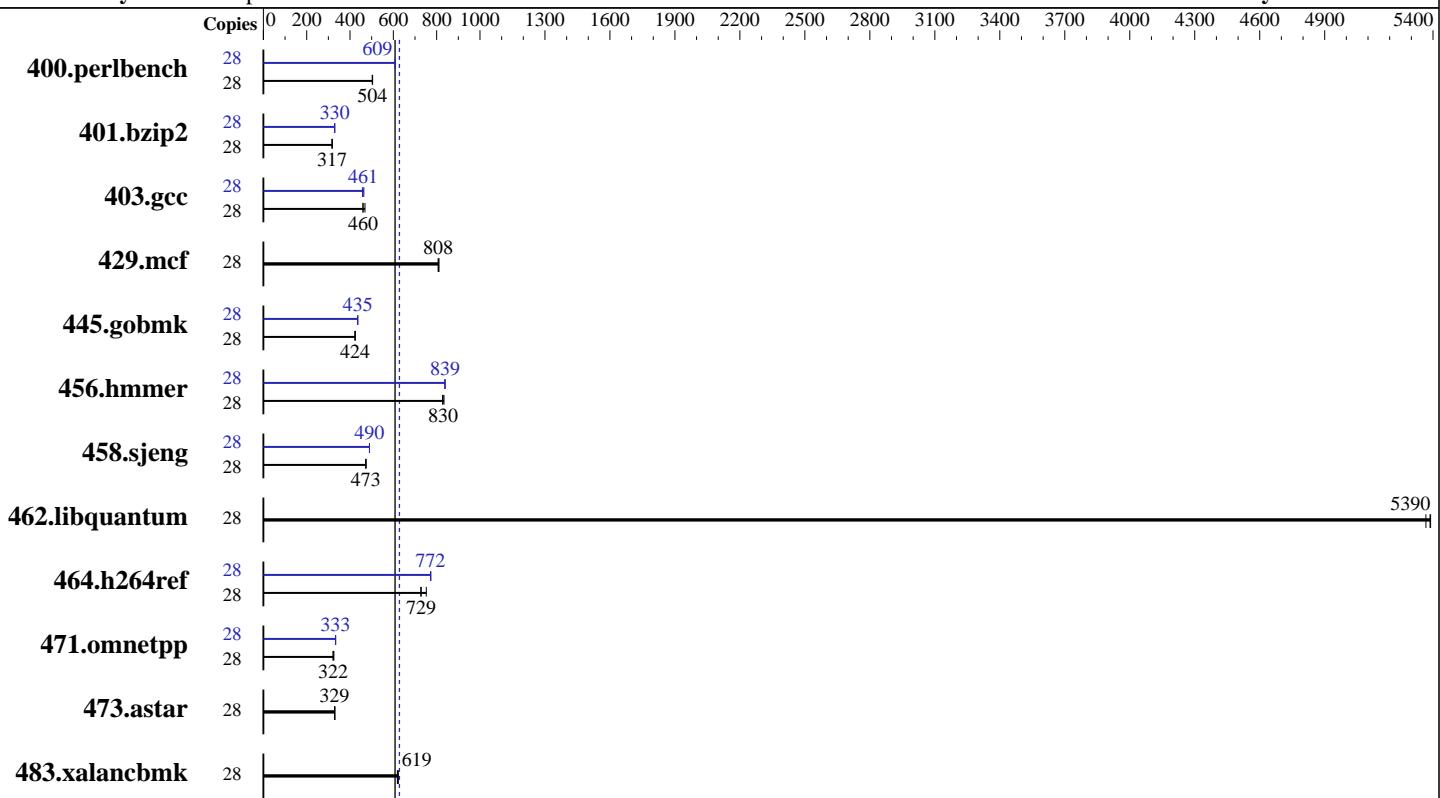
Test sponsor: Supermicro

Tested by: Supermicro

**Test date:** May-2014

**Hardware Availability:** Sep-2014

**Software Availability:** Nov-2013



<b>Hardware</b>		<b>Software</b>	
CPU Name:	Intel Xeon E5-2697 v3	Operating System:	Red Hat Enterprise Linux Server release 6.5, Kernel 2.6.32-431.el6.x86_64
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz	Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
CPU MHz:	2600	Auto Parallel:	No
FPU:	Integrated	File System:	ext4
CPU(s) enabled:	14 cores, 1 chip, 14 cores/chip, 2 threads/core	System State:	Run level 3 (multi-user)
CPU(s) orderable:	1 chip	Base Pointers:	32-bit
Primary Cache:	32 KB I + 32 KB D on chip per core	Peak Pointers:	32/64-bit
Secondary Cache:	256 KB I+D on chip per core	Other Software:	Microquill SmartHeap V10.0
L3 Cache:	35 MB I+D on chip per chip		
Other Cache:	None		
Memory:	128 GB (8 x 16 GB 2Rx4 PC4-2133P-R)		
Disk Subsystem:	1 x 1000 GB SATA II, 7200 RPM		
Other Hardware:	None		



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	28	<b>543</b>	<b>504</b>	542	504	544	503	28	449	609	<b>449</b>	<b>609</b>	449	609
401.bzip2	28	849	318	<b>852</b>	<b>317</b>	852	317	28	823	328	<b>820</b>	<b>330</b>	820	330
403.gcc	28	<b>490</b>	<b>460</b>	481	469	490	460	28	493	458	486	464	<b>489</b>	<b>461</b>
429.mcf	28	315	811	<b>316</b>	<b>808</b>	316	807	28	315	811	<b>316</b>	<b>808</b>	316	807
445.gobmk	28	693	424	694	423	<b>693</b>	<b>424</b>	28	674	436	<b>674</b>	<b>435</b>	675	435
456.hammer	28	313	834	<b>315</b>	<b>830</b>	316	827	28	311	839	312	838	<b>311</b>	<b>839</b>
458.sjeng	28	716	473	<b>716</b>	<b>473</b>	715	474	28	692	490	692	490	<b>692</b>	<b>490</b>
462.libquantum	28	<b>108</b>	<b>5390</b>	108	5370	108	5390	28	<b>108</b>	<b>5390</b>	108	5370	108	5390
464.h264ref	28	853	727	824	752	<b>850</b>	<b>729</b>	28	803	772	801	773	<b>802</b>	<b>772</b>
471.omnetpp	28	538	326	<b>543</b>	<b>322</b>	544	322	28	<b>525</b>	<b>333</b>	524	334	526	333
473.astar	28	<b>598</b>	<b>329</b>	598	329	595	330	28	<b>598</b>	<b>329</b>	598	329	<b>595</b>	330
483.xalancbmk	28	<b>312</b>	<b>619</b>	310	623	312	619	28	<b>312</b>	<b>619</b>	310	623	312	619

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

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

## Platform Notes

BIOS Settings:  
COD Enable = Enabled  
Early Snoop = Disabled  
Enforce POR = Disabled  
Memory Frequency = 2133

## 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"

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

Filesystem page cache cleared with:

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## General Notes (Continued)

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

## Base Compiler Invocation

C benchmarks:

```
icc -m32
```

C++ benchmarks:

```
icpc -m32
```

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m32
```

400.perlbench: icc -m64

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## Peak Compiler Invocation (Continued)

401.bzip2: icc -m64

456.hmmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:  
icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmmer: -DSPEC\_CPU\_LP64

458.sjeng: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -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

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

456.hmmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll4 -auto-ilp32

462.libquantum: basepeak = yes

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## Peak Optimization Flags (Continued)

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll12 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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-revE.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-revE.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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