



# SPEC<sup>®</sup> CINT2006 Result

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## Supermicro

SPECint<sup>®</sup>\_rate2006 = 90.4

SuperServer 1017C-TF (X9SCL-F, Intel E3-1220LV2)

SPECint\_rate\_base2006 = 86.1

CPU2006 license: 001176

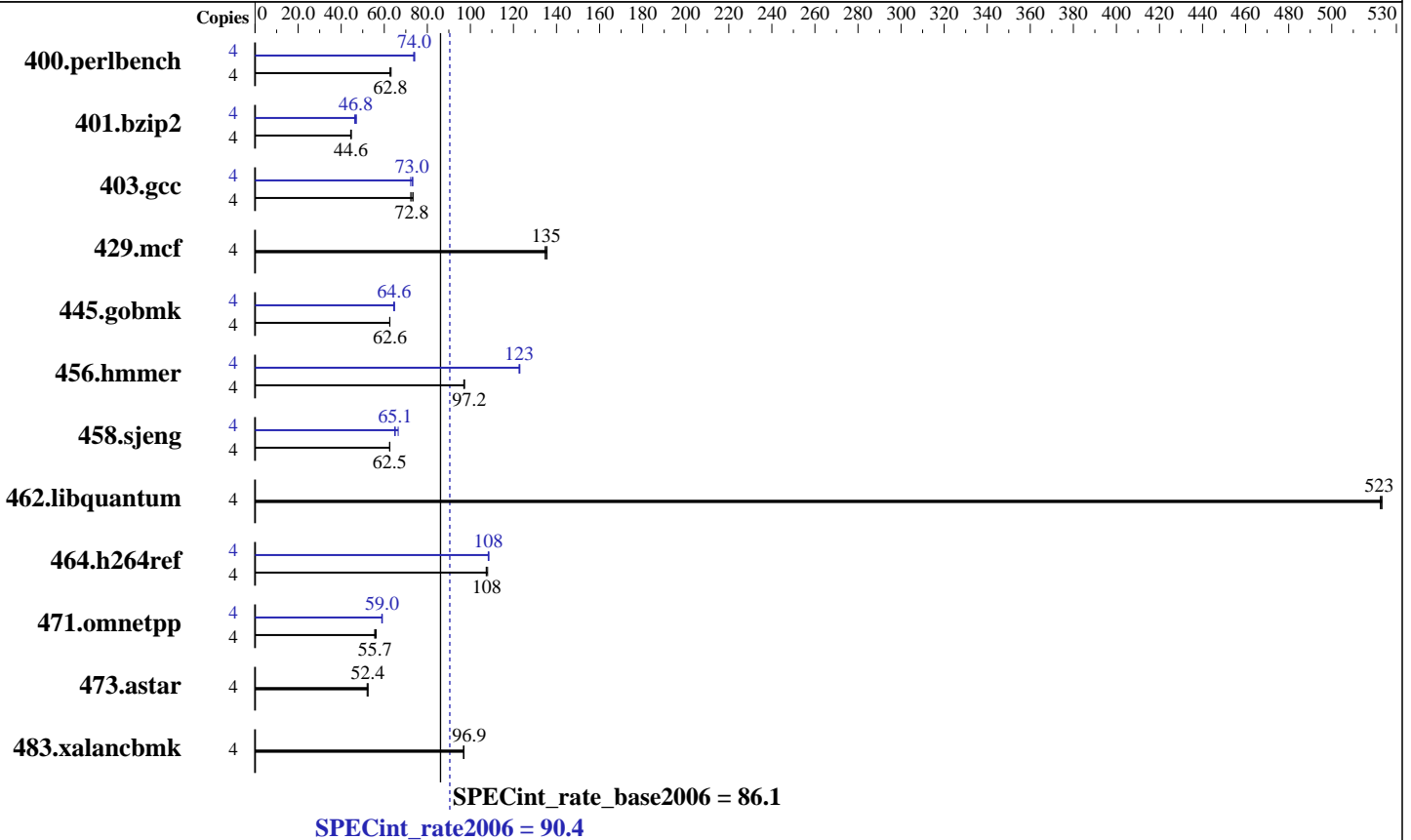
Test date: May-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E3-1220L v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 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  
 L3 Cache: 3 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)  
 Disk Subsystem: 1 x 500 GB SATA II, 7200 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago), Kernel 2.6.32-220.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V9.01



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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	4	619	63.2	623	62.7	<b><u>622</u></b>	<b><u>62.8</u></b>	4	<b><u>528</u></b>	<b><u>74.0</u></b>	531	73.7	527	74.1
401.bzip2	4	863	44.7	869	44.4	<b><u>866</u></b>	<b><u>44.6</u></b>	4	835	46.2	820	47.1	<b><u>825</u></b>	<b><u>46.8</u></b>
403.gcc	4	445	72.3	<b><u>442</u></b>	<b><u>72.8</u></b>	439	73.4	4	439	73.3	<b><u>441</u></b>	<b><u>73.0</u></b>	446	72.3
429.mcf	4	269	136	271	135	<b><u>270</u></b>	<b><u>135</u></b>	4	269	136	271	135	<b><u>270</u></b>	<b><u>135</u></b>
445.gobmk	4	670	62.6	<b><u>670</u></b>	<b><u>62.6</u></b>	671	62.5	4	<b><u>649</u></b>	<b><u>64.6</u></b>	652	64.4	648	64.7
456.hammer	4	384	97.2	<b><u>384</u></b>	<b><u>97.2</u></b>	385	96.9	4	304	123	303	123	<b><u>304</u></b>	<b><u>123</u></b>
458.sjeng	4	<b><u>774</u></b>	<b><u>62.5</u></b>	774	62.5	773	62.6	4	<b><u>743</u></b>	<b><u>65.1</u></b>	728	66.5	746	64.9
462.libquantum	4	159	523	158	523	<b><u>158</u></b>	<b><u>523</u></b>	4	159	523	158	523	<b><u>158</u></b>	<b><u>523</u></b>
464.h264ref	4	819	108	<b><u>823</u></b>	<b><u>108</u></b>	825	107	4	<b><u>816</u></b>	<b><u>108</u></b>	817	108	815	109
471.omnetpp	4	450	55.6	<b><u>449</u></b>	<b><u>55.7</u></b>	444	56.3	4	425	58.8	423	59.1	<b><u>424</u></b>	<b><u>59.0</u></b>
473.astar	4	<b><u>536</u></b>	<b><u>52.4</u></b>	536	52.4	540	52.0	4	<b><u>536</u></b>	<b><u>52.4</u></b>	536	52.4	540	52.0
483.xalancbmk	4	285	96.9	<b><u>285</u></b>	<b><u>96.9</u></b>	285	96.9	4	285	96.9	<b><u>285</u></b>	<b><u>96.9</u></b>	285	96.9

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

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset 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"  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:  
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/smartheap -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

401.bzip2: icc -m64

456.hmmer: 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.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
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) -auto-ilp32

401.bzp2: -xAVX(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: -xAVX -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

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

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

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  
-auto-ilp32

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) -ansi-alias  
-opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes



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## 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-ic12.1-official-linux64.20120425.html>  
<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml>  
<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.xml>

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

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