



# SPEC® CINT2006 Result

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## Supermicro

SuperServer F627G2-FT+  
(X9DRFF-iG+, Intel Xeon E5-2667 v2)

**SPECint®2006 = 67.4**

**SPECint\_base2006 = 63.0**

**CPU2006 license:** 001176

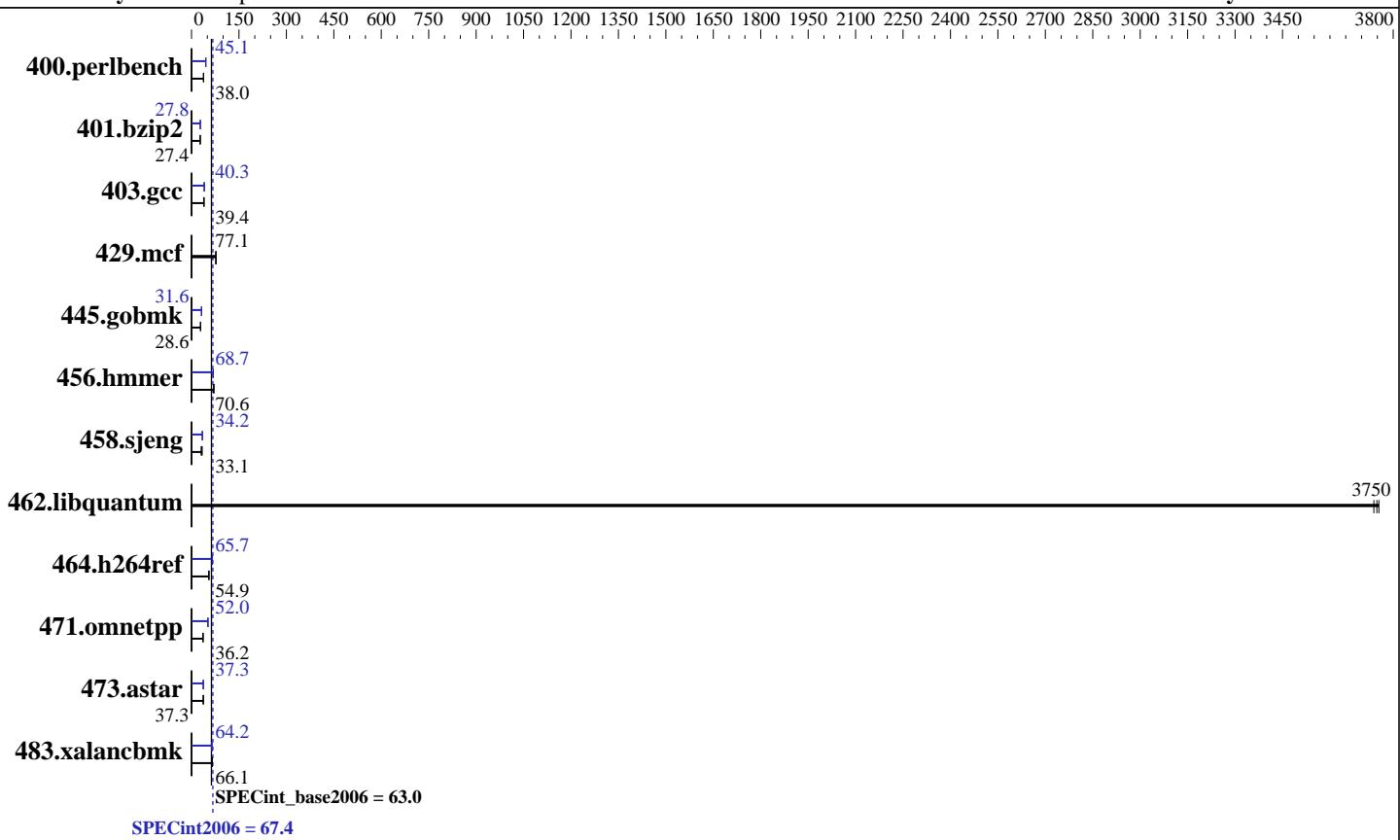
**Test sponsor:** Supermicro

**Tested by:** Supermicro

**Test date:** Oct-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Oct-2013



### Hardware

CPU Name: Intel Xeon E5-2667 v2  
CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz  
CPU MHz: 3300  
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  
L3 Cache: 25 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 512 GB SATA III, SSD  
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  
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



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>257</b>	<b>38.0</b>	257	38.0	258	37.9	<b>216</b>	<b>45.2</b>	<b>217</b>	<b>45.1</b>	<b>216</b>	<b>45.1</b>
401.bzip2	351	27.5	352	27.4	<b>352</b>	<b>27.4</b>	<b>347</b>	<b>27.8</b>	<b>347</b>	<b>27.8</b>	<b>347</b>	<b>27.8</b>
403.gcc	206	39.2	<b>205</b>	<b>39.4</b>	204	39.4	200	40.3	<b>200</b>	<b>40.3</b>	200	40.3
429.mcf	<b>118</b>	<b>77.1</b>	118	77.2	119	76.8	<b>118</b>	<b>77.1</b>	118	77.2	119	76.8
445.gobmk	367	28.6	<b>367</b>	<b>28.6</b>	367	28.6	<b>332</b>	<b>31.6</b>	332	31.6	332	31.6
456.hammer	132	70.7	134	69.8	<b>132</b>	<b>70.6</b>	<b>136</b>	<b>68.7</b>	136	68.6	136	68.7
458.sjeng	<b>365</b>	<b>33.1</b>	400	30.3	363	33.3	<b>354</b>	<b>34.2</b>	354	34.2	354	34.2
462.libquantum	5.52	3750	5.54	3740	<b>5.53</b>	<b>3750</b>	<b>5.52</b>	3750	<b>5.54</b>	3740	<b>5.53</b>	<b>3750</b>
464.h264ref	<b>403</b>	<b>54.9</b>	404	54.8	403	55.0	<b>337</b>	<b>65.7</b>	338	65.5	337	65.7
471.omnetpp	173	36.2	<b>173</b>	<b>36.2</b>	170	36.7	<b>121</b>	<b>51.5</b>	120	52.2	<b>120</b>	<b>52.0</b>
473.astar	190	36.9	188	37.3	<b>188</b>	<b>37.3</b>	<b>188</b>	<b>37.3</b>	188	37.3	189	37.1
483.xalancbmk	105	66.0	<b>104</b>	<b>66.1</b>	104	66.1	<b>107</b>	<b>64.2</b>	108	64.1	107	64.4

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:  
Hyper-threading = Disabled

## General Notes

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

KMP\_AFFINITY = "granularity=scatter"

LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/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  
runspec command invoked through numactl i.e.:  
numactl --interleave=all runspec <etc>



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## 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.hammer: -DSPEC_CPU_LP64
458sjeng: -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

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## 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.hammer: -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.hammer: -xAVX -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
-ansi-alias

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## 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) -unroll14

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) -unroll12  
-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-revB.20130719.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-revB.20130719.xml>

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

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