



# SPEC® CINT2006 Result

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## Supermicro

SuperServer F627R2-F72+  
(X9DRFF-7+, Intel Xeon E5-2695 v2)

**SPECint\_rate2006 = 917**

**SPECint\_rate\_base2006 = 885**

CPU2006 license: 001176

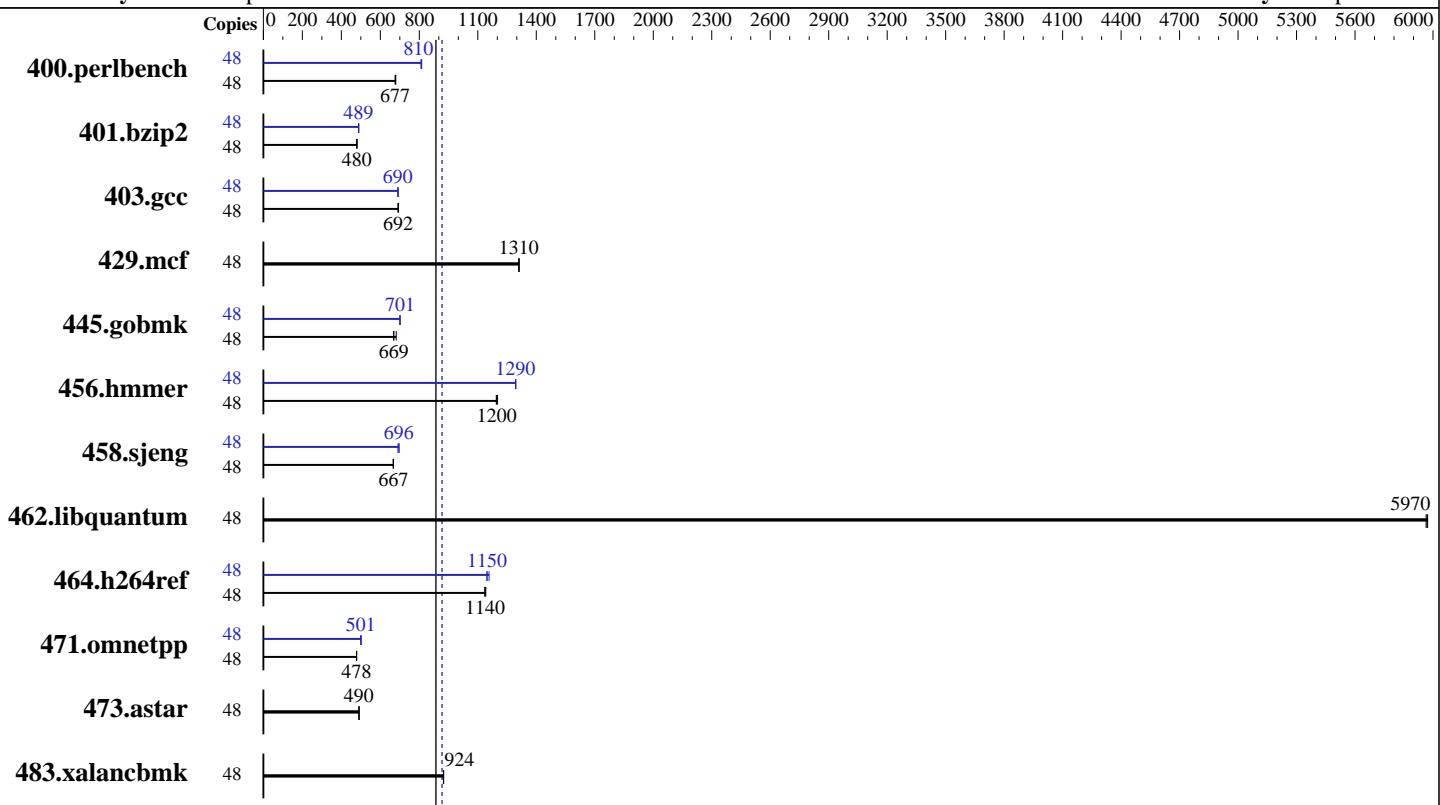
Test sponsor: Supermicro

Tested by: Supermicro

**Test date:** Oct-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013



**SPECint\_rate\_base2006 = 885**

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### Hardware

CPU Name: Intel Xeon E5-2695 v2  
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz  
CPU MHz: 2400  
FPU: Integrated  
CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core  
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: 30 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 2.6.32-358.18.1.el6.x86\_64  
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux  
Auto Parallel: No  
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	48	690	679	<b>693</b>	<b>677</b>	693	676	48	<b>579</b>	<b>810</b>	577	812	580	809
401.bzip2	48	967	479	<b>965</b>	<b>480</b>	964	480	48	948	489	947	489	<b>948</b>	<b>489</b>
403.gcc	48	559	691	<b>559</b>	<b>692</b>	558	693	48	559	691	<b>560</b>	<b>690</b>	560	690
429.mcf	48	334	1310	<b>334</b>	<b>1310</b>	334	1310	48	334	1310	<b>334</b>	<b>1310</b>	334	1310
445.gobmk	48	<b>753</b>	<b>669</b>	753	668	739	681	48	718	701	719	701	<b>718</b>	<b>701</b>
456.hammer	48	373	1200	375	1190	<b>374</b>	<b>1200</b>	48	<b>346</b>	<b>1290</b>	346	1300	346	1290
458.sjeng	48	<b>871</b>	<b>667</b>	872	666	871	667	48	835	696	841	690	<b>835</b>	<b>696</b>
462.libquantum	48	167	5970	<b>167</b>	<b>5970</b>	167	5960	48	167	5970	<b>167</b>	<b>5970</b>	167	5960
464.h264ref	48	935	1140	931	1140	<b>934</b>	<b>1140</b>	48	<b>925</b>	<b>1150</b>	926	1150	918	1160
471.omnetpp	48	<b>627</b>	<b>478</b>	627	479	628	478	48	598	502	600	500	<b>599</b>	<b>501</b>
473.astar	48	687	490	<b>687</b>	<b>490</b>	686	491	48	687	490	<b>687</b>	<b>490</b>	686	491
483.xalancbmk	48	359	924	358	925	<b>358</b>	<b>924</b>	48	359	924	358	925	<b>358</b>	<b>924</b>

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

```
Sysinfo program /home/cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date::: 2012-07-17 #$
running on localhost.localdomain Wed Oct 9 13:52:09 2013
```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2695 v2 @ 2.40GHz
 2 "physical id"s (chips)
 48 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
  cpu cores : 12
  siblings  : 24
```

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## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
cache size : 30720 KB

From /proc/meminfo
MemTotal:      132188060 kB
HugePages_Total:      0
Hugepagesize:     2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
Linux localhost.localdomain 2.6.32-358.18.1.el6.x86_64 #1 SMP Fri Aug 2
17:04:38 EDT 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 8 12:35

SPEC is set to: /home/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_home
                  ext4   416G  209G  187G  53%  /home

Additional information from dmidecode:
BIOS American Megatrends Inc. 3.0a 09/17/2013
Memory:
 1x 16 MB
 16x 8 GB
 16x Hynix Semiconductor HMT31GR7CFR4C-RD 8 GB 1866 MHz 1 rank
 1x Micron/Numonyx 25Q Series 16 MB 33 MHz

(End of data from sysinfo program)
```

## General Notes

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

LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/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:

echo 1> /proc/sys/vm/drop\_caches

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>



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## 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:

  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

  -xSSE4.2 -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

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

  icpc -m32



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## 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  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(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: -xSSE4.2(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: -xSSE4.2 -ipo -O3 -no-prec-div  
  
429.mcf: basepeak = yes  
  
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3  
  
456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32  
  
458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll14 -auto-ilp32  
  
462.libquantum: basepeak = yes  
  
464.h264ref: -xSSE4.2(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: -xSSE4.2(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

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## Peak Optimization Flags (Continued)

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-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).

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Jul 24 19:09:58 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 5 November 2013.