



# SPEC® CINT2006 Result

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## Fujitsu

SPECint®2006 = 59.2

PRIMERGY RX350 S8, Intel Xeon E5-2637 v2, 3.50 GHz

SPECint\_base2006 = 56.1

CPU2006 license: 19

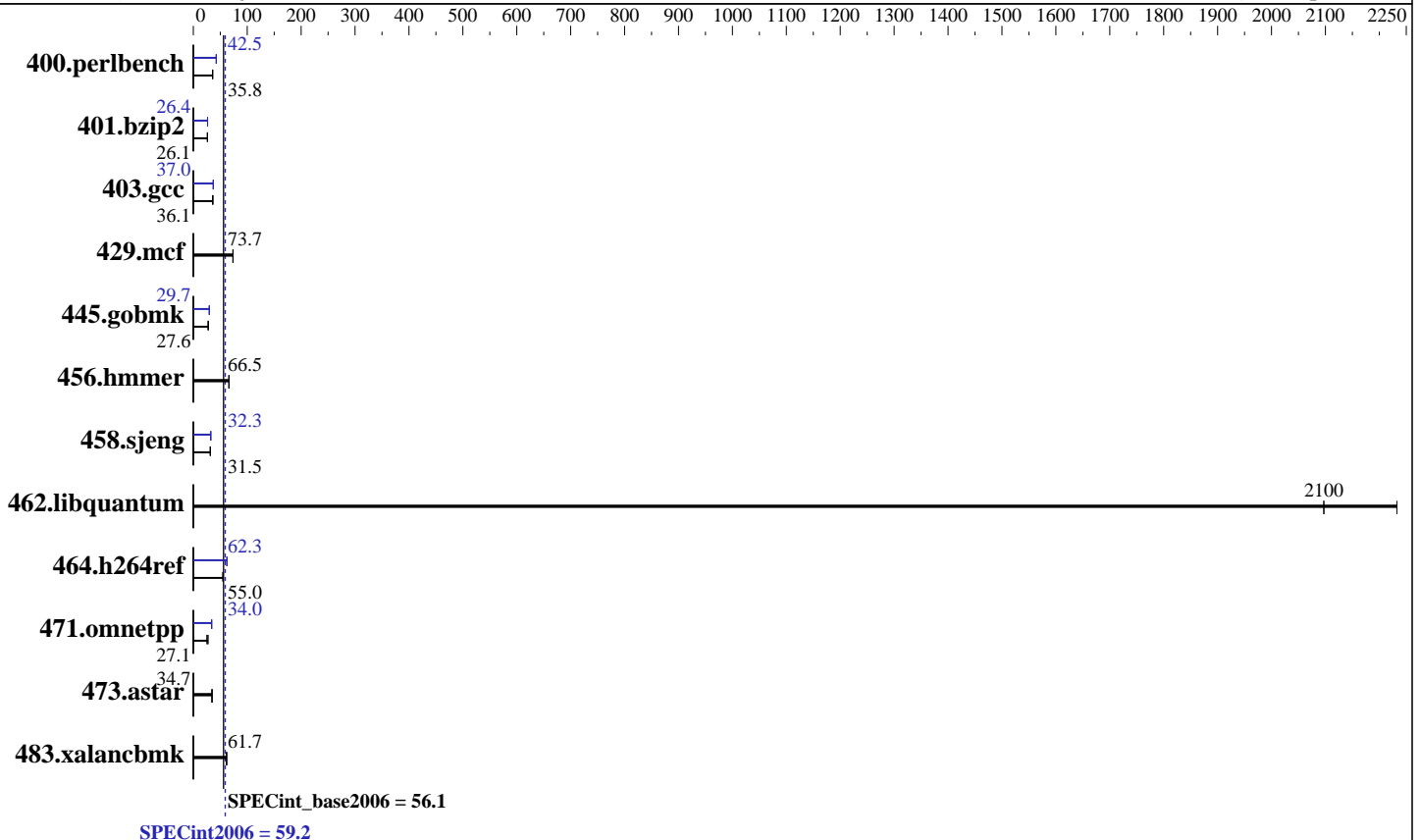
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Sep-2013

Hardware Availability: Oct-2013

Software Availability: Sep-2013



### Hardware

CPU Name: Intel Xeon E5-2637 v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz  
 CPU MHz: 3500  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)  
 Disk Subsystem: 1 x SATA, 450 GB, 15000 RPM  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
 2.6.32-358.11.1.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	272	35.9	<b><u>273</u></b>	<b><u>35.8</u></b>	273	35.7	230	42.5	230	42.5	<b><u>230</u></b>	<b><u>42.5</u></b>
401.bzip2	<b><u>369</u></b>	<b><u>26.1</u></b>	369	26.1	369	26.2	<b><u>365</u></b>	<b><u>26.4</u></b>	367	26.3	364	26.5
403.gcc	223	36.1	223	36.1	<b><u>223</u></b>	<b><u>36.1</u></b>	217	37.0	<b><u>217</u></b>	<b><u>37.0</u></b>	218	36.9
429.mcf	124	73.3	124	73.8	<b><u>124</u></b>	<b><u>73.7</u></b>	124	73.3	124	73.8	<b><u>124</u></b>	<b><u>73.7</u></b>
445.gobmk	380	27.6	<b><u>380</u></b>	<b><u>27.6</u></b>	380	27.6	354	29.6	353	29.7	<b><u>354</u></b>	<b><u>29.7</u></b>
456.hammer	140	66.5	<b><u>140</u></b>	<b><u>66.5</u></b>	142	65.6	140	66.5	<b><u>140</u></b>	<b><u>66.5</u></b>	142	65.6
458.sjeng	<b><u>384</u></b>	<b><u>31.5</u></b>	384	31.5	384	31.5	375	32.3	<b><u>374</u></b>	<b><u>32.3</u></b>	374	32.4
462.libquantum	<b><u>9.88</u></b>	<b><u>2100</u></b>	9.88	2100	9.28	2230	<b><u>9.88</u></b>	<b><u>2100</u></b>	9.88	2100	9.28	2230
464.h264ref	402	55.0	403	55.0	<b><u>402</u></b>	<b><u>55.0</u></b>	356	62.2	354	62.5	<b><u>355</u></b>	<b><u>62.3</u></b>
471.omnetpp	<b><u>231</u></b>	<b><u>27.1</u></b>	230	27.1	250	25.0	<b><u>184</u></b>	<b><u>34.0</u></b>	184	34.0	183	34.1
473.astar	<b><u>203</u></b>	<b><u>34.7</u></b>	201	34.9	204	34.4	<b><u>203</u></b>	<b><u>34.7</u></b>	201	34.9	204	34.4
483.xalancbmk	<b><u>112</u></b>	<b><u>61.7</u></b>	112	61.9	112	61.5	<b><u>112</u></b>	<b><u>61.7</u></b>	112	61.9	112	61.5

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:  
Energy Performance = Performance  
Utilization Profile = Unbalanced

## General Notes

Environment variables set by runspec before the start of the run:  
KMP\_AFFINITY = "granularity=fine,compact,1,0"  
LD\_LIBRARY\_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/SPECcpu2006/sh"  
OMP\_NUM\_THREADS = "8"

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>  
This result was measured on the PRIMERGY RX350 S8. The PRIMERGY RX350 S8

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## General Notes (Continued)

and the PRIMERGY TX300 S8 are electronically equivalent.  
For information about Fujitsu please visit: <http://www.fujitsu.com>

## 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.hmmmer: -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.xalanbmk: -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



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**Test date:** Sep-2013

**Test sponsor:** Fujitsu

**Hardware Availability:** Oct-2013

**Tested by:** Fujitsu

**Software Availability:** Sep-2013

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

471.omnetpp: icpc -m32

## 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.hmmcr: -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\_LP64 -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

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## Peak Optimization Flags (Continued)

456.hmmcr: basepeak = yes

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: 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/Fujitsu-Platform.20130924.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/Fujitsu-Platform.20130924.xml>

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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 17:18:54 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 9 October 2013.

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