



# SPEC® CINT2006 Result

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## Fujitsu

PRIMERGY RX100 S8, Intel Xeon E3-1230L v3, 1.80 GHz

**SPECint\_rate2006 = 168**

**SPECint\_rate\_base2006 = 162**

CPU2006 license: 19

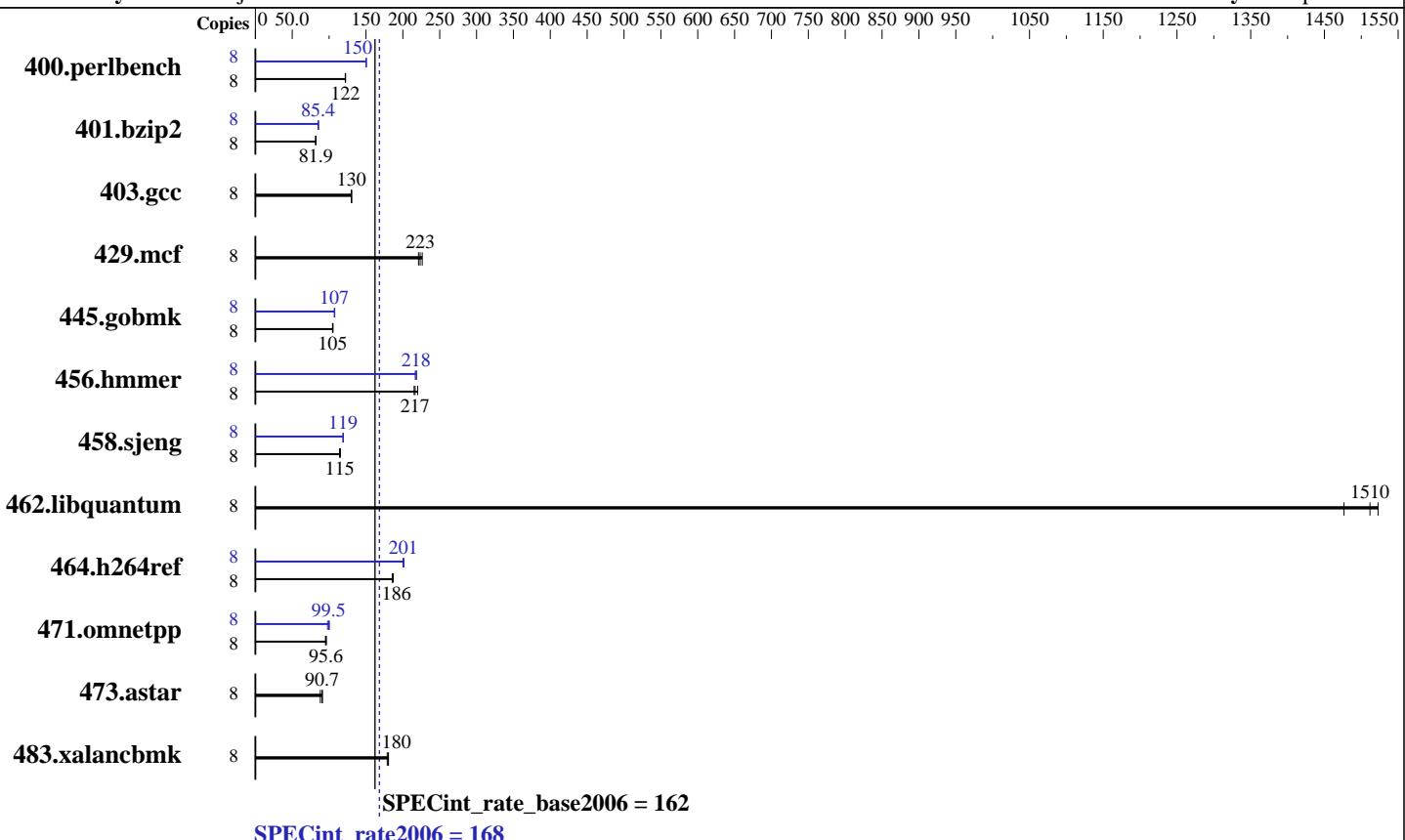
Test sponsor: Fujitsu

Tested by: Fujitsu

**Test date:** Sep-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013



**SPECint\_rate\_base2006 = 162**

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## Hardware

CPU Name: Intel Xeon E3-1230L v3  
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
CPU MHz: 1800  
FPU: Integrated  
CPU(s) enabled: 4 cores, 1 chip, 4 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: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 32 GB (4 x 8 GB 2Rx8 PC3L-12800E-11, ECC)  
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM  
Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)  
Compiler: 2.6.32-358.11.1.el6.x86\_64  
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-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	8	641	122	639	122	<b>640</b>	<b>122</b>	8	<b>520</b>	<b>150</b>	521	150	520	150
401.bzip2	8	944	81.8	941	82.0	<b>943</b>	<b>81.9</b>	8	909	85.0	<b>904</b>	<b>85.4</b>	900	85.7
403.gcc	8	493	131	<b>494</b>	<b>130</b>	494	130	8	493	131	<b>494</b>	<b>130</b>	494	130
429.mcf	8	330	221	322	226	<b>326</b>	<b>223</b>	8	330	221	322	226	<b>326</b>	<b>223</b>
445.gobmk	8	796	105	802	105	<b>801</b>	<b>105</b>	8	783	107	779	108	<b>783</b>	<b>107</b>
456.hmmer	8	347	215	339	220	<b>344</b>	<b>217</b>	8	<b>342</b>	<b>218</b>	341	219	344	217
458.sjeng	8	<b>845</b>	<b>115</b>	840	115	848	114	8	814	119	<b>813</b>	<b>119</b>	811	119
462.libquantum	8	109	1520	112	1480	<b>110</b>	<b>1510</b>	8	109	1520	112	1480	<b>110</b>	<b>1510</b>
464.h264ref	8	954	186	<b>953</b>	<b>186</b>	946	187	8	878	202	<b>882</b>	<b>201</b>	884	200
471.omnetpp	8	519	96.3	<b>523</b>	<b>95.6</b>	526	95.1	8	<b>502</b>	<b>99.5</b>	499	100	<b>511</b>	97.9
473.astar	8	<b>619</b>	<b>90.7</b>	638	88.1	618	90.8	8	<b>619</b>	<b>90.7</b>	638	88.1	618	90.8
483.xalancbmk	8	<b>307</b>	<b>180</b>	306	181	309	179	8	<b>307</b>	<b>180</b>	306	181	309	179

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"

## General Notes

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

LD\_LIBRARY\_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/SPECcpu2006/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:

-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

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

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## Peak Compiler Invocation (Continued)

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: basepeak = yes  
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 -unroll12 -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)  
-unroll14 -auto-ilp32  
462.libquantum: basepeak = yes  
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:

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## Peak Optimization Flags (Continued)

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

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