



# SPEC® CINT2006 Result

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## Fujitsu

PRIMERGY CX250 S2, Intel Xeon E5-2650L v2, 1.70 GHz

**SPECint\_rate2006 = 565**

**SPECint\_rate\_base2006 = 543**

CPU2006 license: 19

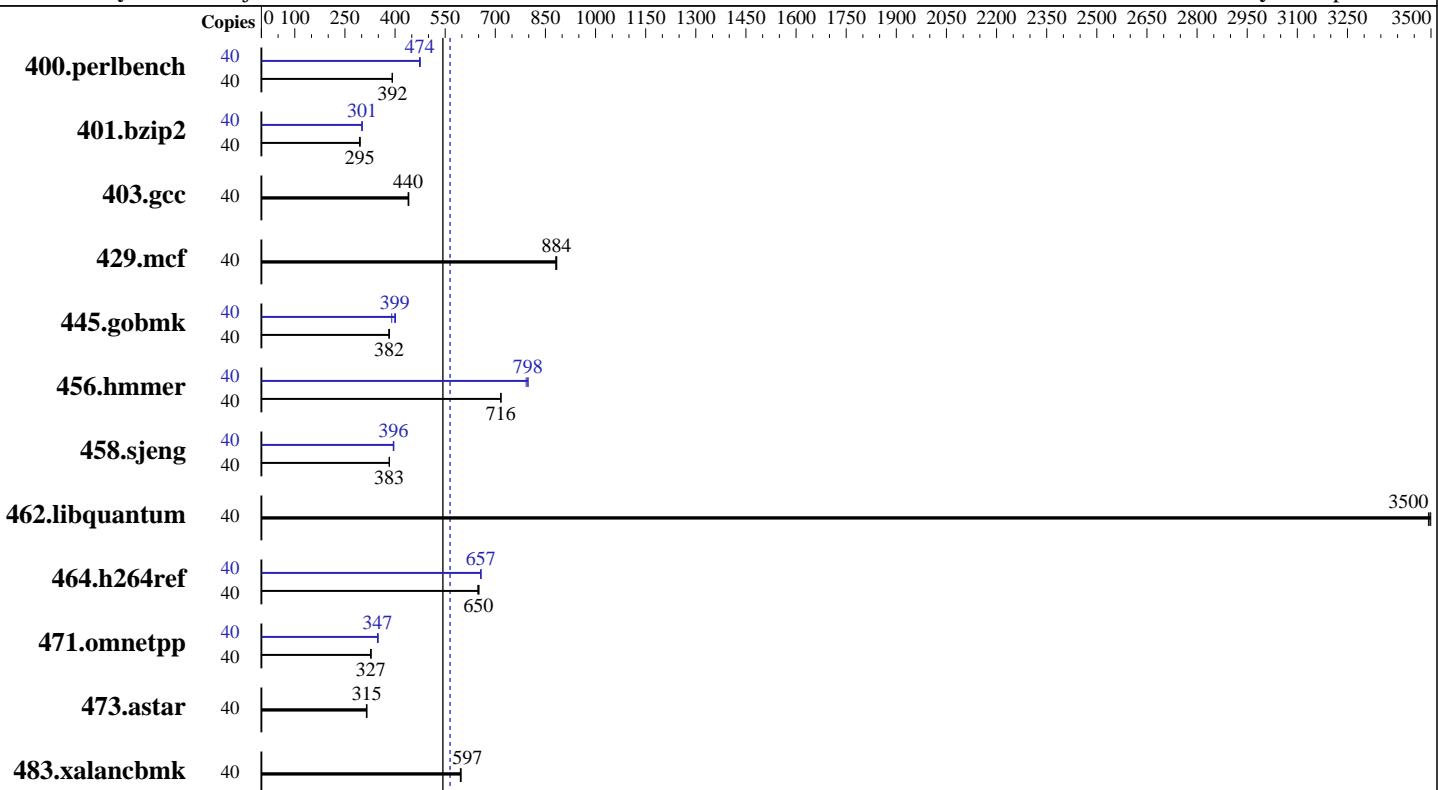
Test sponsor: Fujitsu

Tested by: Fujitsu

**Test date:** Nov-2013

**Hardware Availability:** Sep-2013

**Software Availability:** Sep-2013



**SPECint\_rate\_base2006 = 543**

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### Hardware

CPU Name: Intel Xeon E5-2650L v2  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.10 GHz  
 CPU MHz: 1700  
 FPU: Integrated  
 CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (16 x 8 GB 2Rx8 PC3-14900R-13, ECC, running at 1600 MHz and CL11)  
 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 5 (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	40	<b>997</b>	<b>392</b>	999	391	996	392	40	822	475	826	473	<b>824</b>	<b>474</b>
401.bzip2	40	1314	294	<b>1309</b>	<b>295</b>	1306	296	40	1283	301	1279	302	<b>1282</b>	<b>301</b>
403.gcc	40	730	441	<b>732</b>	<b>440</b>	733	439	40	730	441	<b>732</b>	<b>440</b>	733	439
429.mcf	40	413	884	<b>413</b>	<b>884</b>	414	881	40	413	884	<b>413</b>	<b>884</b>	414	881
445.gobmk	40	1100	381	<b>1097</b>	<b>382</b>	1095	383	40	1076	390	<b>1051</b>	<b>399</b>	1045	401
456.hammer	40	520	717	<b>521</b>	<b>716</b>	521	716	40	468	798	<b>468</b>	<b>798</b>	471	792
458.sjeng	40	1263	383	1265	383	<b>1265</b>	<b>383</b>	40	1222	396	<b>1223</b>	<b>396</b>	1226	395
462.libquantum	40	237	3500	237	3490	<b>237</b>	<b>3500</b>	40	237	3500	237	3490	<b>237</b>	<b>3500</b>
464.h264ref	40	1367	648	1359	651	<b>1362</b>	<b>650</b>	40	1347	657	1349	656	<b>1348</b>	<b>657</b>
471.omnetpp	40	761	328	764	327	<b>763</b>	<b>327</b>	40	720	347	<b>719</b>	<b>347</b>	715	350
473.astar	40	894	314	890	316	<b>890</b>	<b>315</b>	40	894	314	890	316	<b>890</b>	<b>315</b>
483.xalancbmk	40	462	598	<b>463</b>	<b>597</b>	464	595	40	462	598	<b>463</b>	<b>597</b>	464	595

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

BIOS configuration:

Energy Performance = Performance

## 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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## General Notes (Continued)

For information about Fujitsu please visit: <http://www.fujitsu.com>

## 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

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## Peak Compiler Invocation (Continued)

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

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: basepeak = yes

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

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## Peak Optimization Flags (Continued)

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
```

```
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.20131009.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.20131009.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).

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