



# SPEC® CINT2006 Result

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Fujitsu

PRIMERGY CX250 S1, Intel Xeon E5-2650, 2.0 GHz

**SPECint®\_rate2006 = 540**

**SPECint\_rate\_base2006 = 517**

CPU2006 license: 19

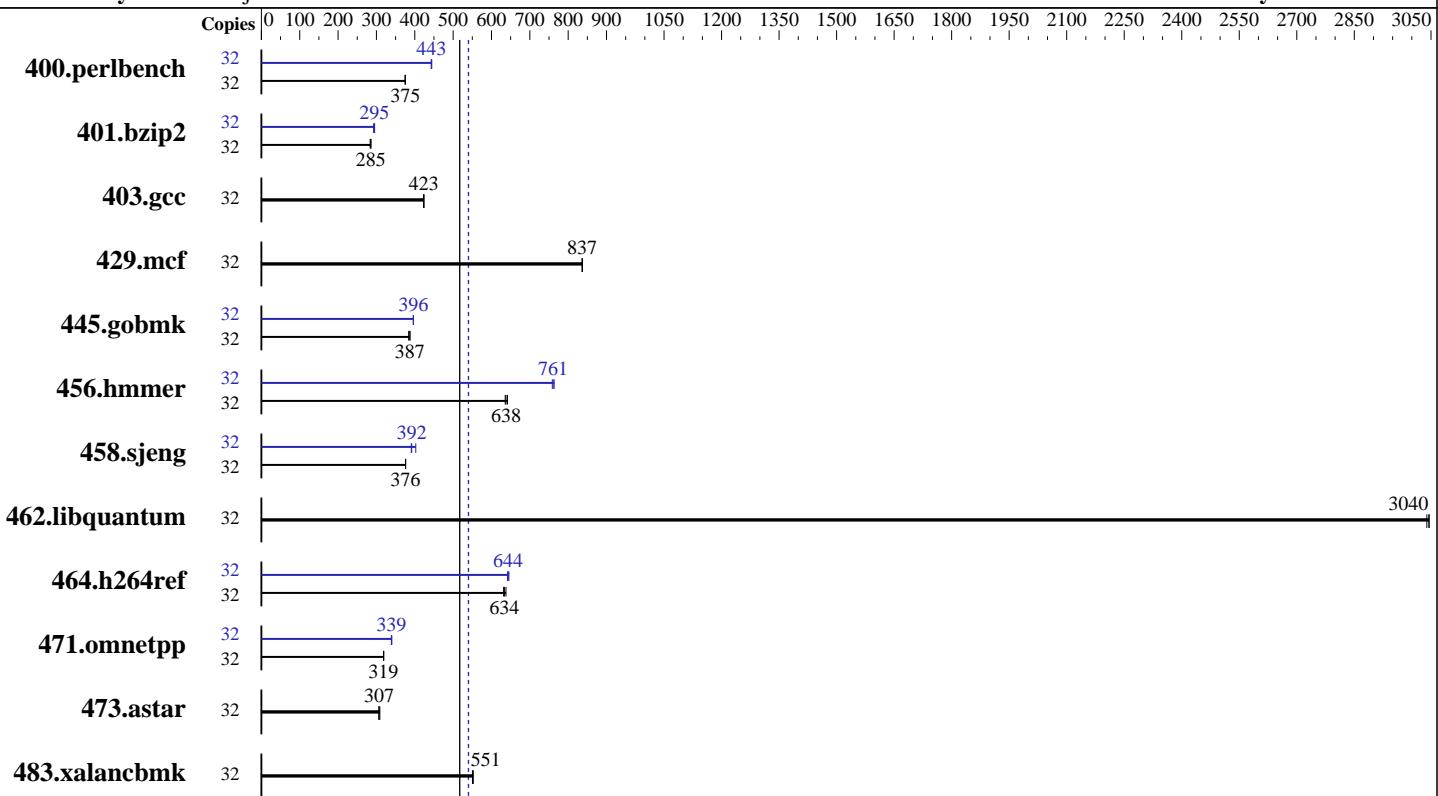
Test date: Feb-2012

Test sponsor: Fujitsu

Hardware Availability: Jun-2012

Tested by: Fujitsu

Software Availability: Dec-2011



**SPECint\_rate\_base2006 = 517**

**SPECint\_rate2006 = 540**

## Hardware

CPU Name: Intel Xeon E5-2650  
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
CPU MHz: 2000  
FPU: Integrated  
CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core  
CPU(s) orderable: 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: 20 MB I+D on chip per chip  
Other Cache: None  
Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)  
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM  
Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago) 2.6.32-220.el6.x86\_64  
Compiler: C/C++: Version 12.1.0.225 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 V9.01



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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	32	832	376	<b>833</b>	<b>375</b>	834	375	32	<b>705</b>	<b>443</b>	704	444	705	443
401.bzip2	32	1088	284	<b>1082</b>	<b>285</b>	1081	286	32	<b>1048</b>	<b>295</b>	1056	293	1046	295
403.gcc	32	<b>608</b>	<b>423</b>	608	424	609	423	32	<b>608</b>	<b>423</b>	608	424	609	423
429.mcf	32	349	837	349	837	<b>349</b>	<b>837</b>	32	349	837	349	837	<b>349</b>	<b>837</b>
445.gobmk	32	874	384	867	387	<b>867</b>	<b>387</b>	32	847	397	<b>847</b>	<b>396</b>	847	396
456.hammer	32	470	636	<b>468</b>	<b>638</b>	465	642	32	<b>392</b>	<b>761</b>	394	759	391	763
458.sjeng	32	1030	376	1029	376	<b>1030</b>	<b>376</b>	32	991	391	<b>988</b>	<b>392</b>	962	403
462.libquantum	32	218	3040	218	3040	<b>218</b>	<b>3040</b>	32	218	3040	218	3040	<b>218</b>	<b>3040</b>
464.h264ref	32	1121	632	1110	638	<b>1117</b>	<b>634</b>	32	1097	645	1103	642	<b>1100</b>	<b>644</b>
471.omnetpp	32	627	319	628	318	<b>627</b>	<b>319</b>	32	588	340	<b>589</b>	<b>339</b>	590	339
473.astar	32	733	306	<b>732</b>	<b>307</b>	727	309	32	733	306	<b>732</b>	<b>307</b>	727	309
483.xalancbmk	32	<b>401</b>	<b>551</b>	400	553	401	550	32	<b>401</b>	<b>551</b>	400	553	401	550

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"  
 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>

## General Notes

Environment variables set by runspec before the start of the run:  
 LD\_LIBRARY\_PATH = "/SPECcpu2006/lib32:/SPECcpu2006/lib64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

This result was measured on the PRIMERGY CX250 S1. The PRIMERGY CX250 S1 and the PRIMERGY CX270 S1 are electronically equivalent.

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



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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/smartheap -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: 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

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/smartheap -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-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.01.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.01.xml>

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

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