



# SPEC® CINT2006 Result

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## Fujitsu

PRIMERGY RX500 S7, Intel Xeon E5-4617, 2.90 GHz

**SPECint®\_rate2006 = 435**

**SPECint\_rate\_base2006 = 419**

CPU2006 license: 19

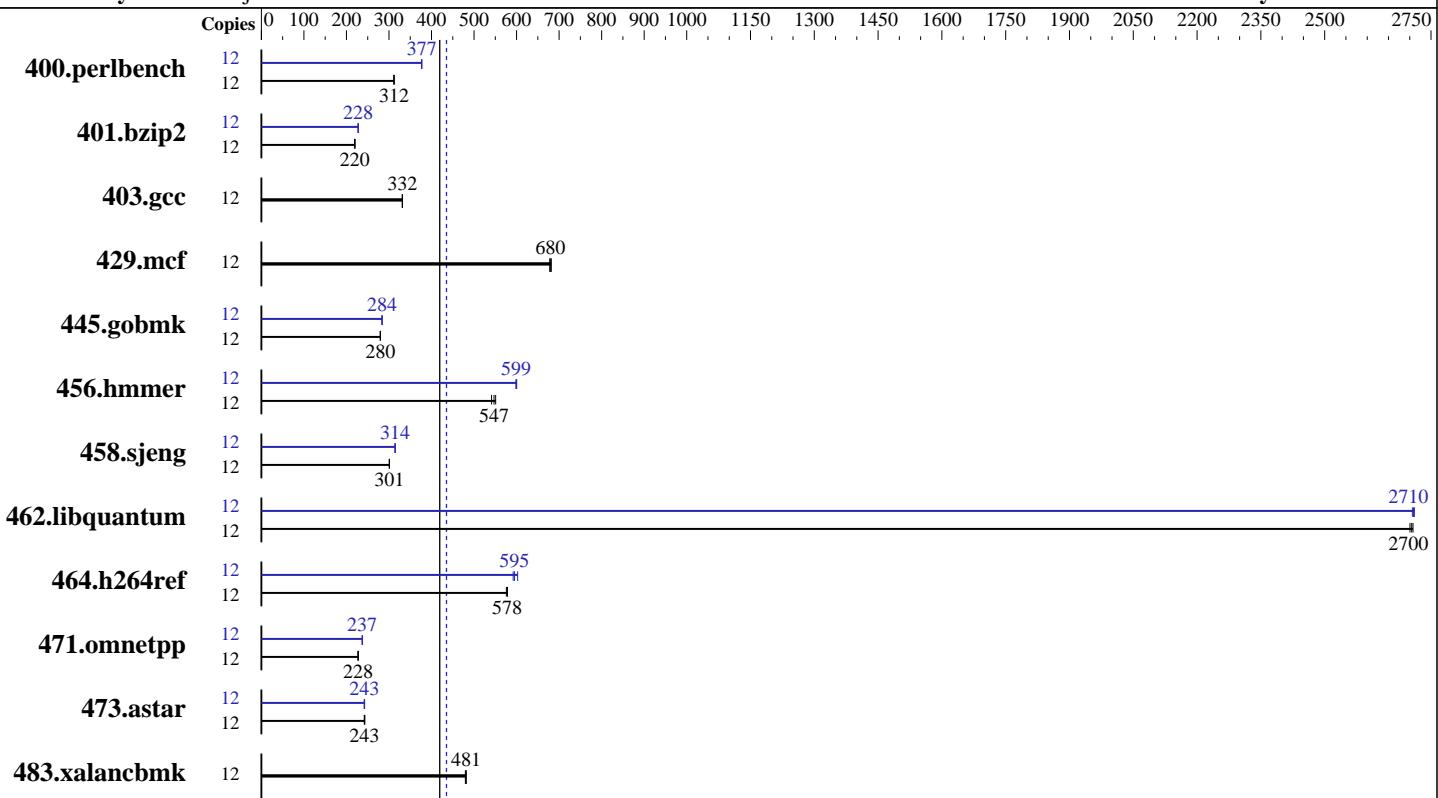
**Test date:** Jul-2012

Test sponsor: Fujitsu

**Hardware Availability:** Jul-2012

Tested by: Fujitsu

**Software Availability:** Feb-2012



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### Hardware

CPU Name:	Intel Xeon E5-4617
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	2900
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip
CPU(s) orderable:	2,4 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:	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 12.1.0.293 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	12	<b>376</b>	<b>312</b>	376	311	375	312	12	311	376	<b>311</b>	<b>377</b>	311	377
401.bzip2	12	528	219	<b>527</b>	<b>220</b>	527	220	12	<b>508</b>	<b>228</b>	509	227	508	228
403.gcc	12	292	331	<b>291</b>	<b>332</b>	291	332	12	292	331	<b>291</b>	<b>332</b>	291	332
429.mcf	12	161	678	<b>161</b>	<b>680</b>	161	682	12	161	678	<b>161</b>	<b>680</b>	161	682
445.gobmk	12	450	280	450	280	<b>450</b>	<b>280</b>	12	444	284	<b>444</b>	<b>284</b>	443	284
456.hammer	12	203	551	<b>205</b>	<b>547</b>	207	541	12	187	599	186	600	<b>187</b>	<b>599</b>
458.sjeng	12	483	301	482	301	<b>483</b>	<b>301</b>	12	462	314	462	314	<b>462</b>	<b>314</b>
462.libquantum	12	<b>91.9</b>	<b>2700</b>	91.8	2710	92.1	2700	12	91.7	2710	91.9	2710	<b>91.8</b>	<b>2710</b>
464.h264ref	12	461	576	<b>459</b>	<b>578</b>	459	579	12	441	602	<b>446</b>	<b>595</b>	449	592
471.omnetpp	12	330	227	329	228	<b>329</b>	<b>228</b>	12	<b>316</b>	<b>237</b>	316	237	316	237
473.astar	12	346	243	<b>347</b>	<b>243</b>	348	242	12	<b>347</b>	<b>243</b>	349	242	347	243
483.xalancbmk	12	173	480	<b>172</b>	<b>481</b>	172	481	12	173	480	<b>172</b>	<b>481</b>	172	481

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 2x E5-2650 CPU + 96 GB  
 memory using RHEL6.2  
 For information about Fujitsu please visit: <http://www.fujitsu.com>

## Base Compiler Invocation

C benchmarks:  
 icc -m32

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## Base Compiler Invocation (Continued)

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/opt/SmartHeap/lib -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: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3  
  
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/opt/SmartHeap/lib -lsmartheap  
  
473.astar: -xAVX -ipo -O3 -no-prec-div -opt-prefetch  
-opt-mem-layout-trans=3 -Wl,-z,muldefs  
-L/opt/SmartHeap/lib -lsmartheap

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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.20120320.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.20120320.xml>

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

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