



# SPEC® CINT2006 Result

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## Fujitsu

SPECint®\_rate2006 = 1620

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

SPECint\_rate\_base2006 = 1520

CPU2006 license: 19

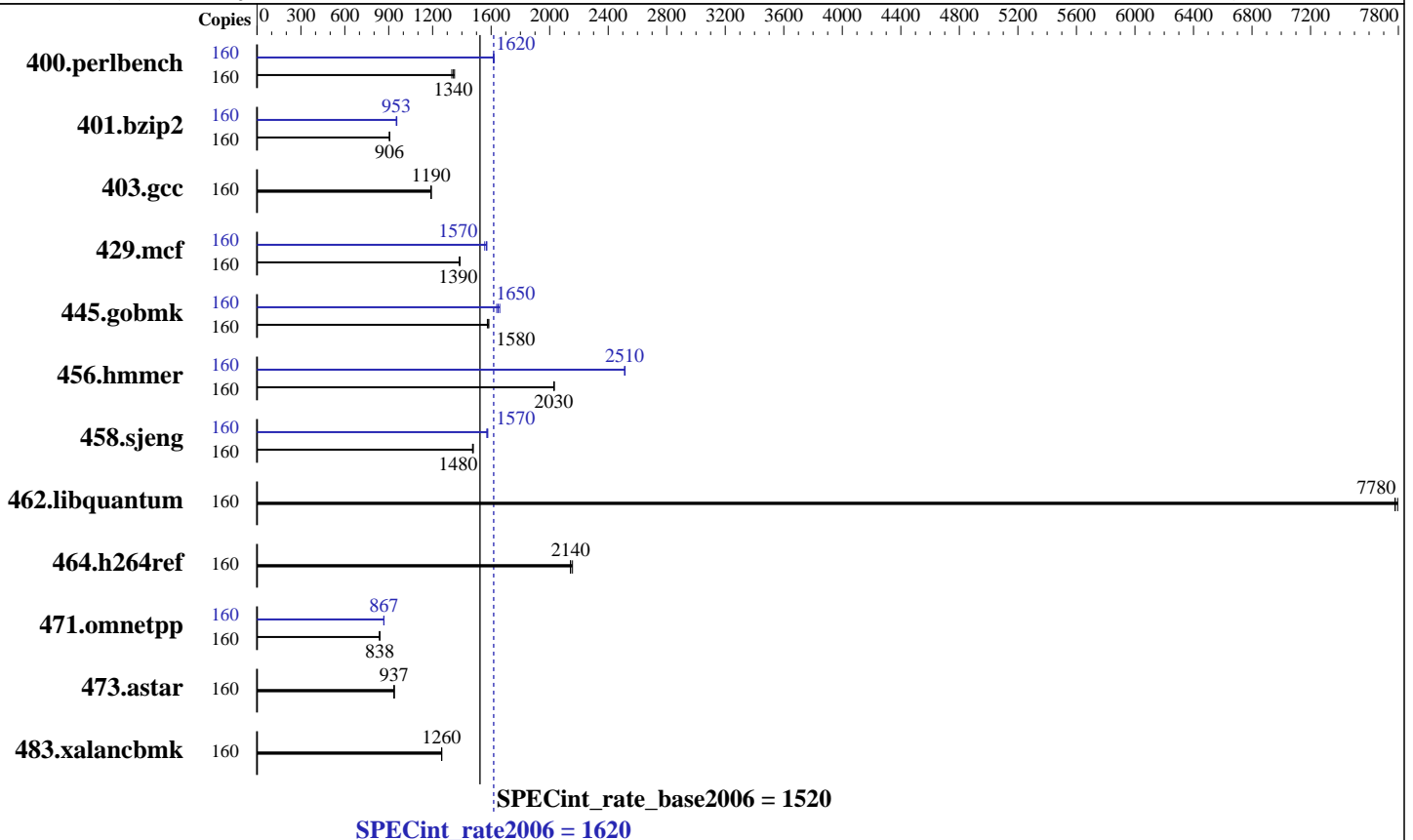
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2011

Hardware Availability: Jun-2011

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon E7-8850  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 80 cores, 8 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 4,6,8 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: 24 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 1 TB (128 x 8 GB 4Rx8 PC3-10600R-9, ECC, running at 1066 MHz)  
 Disk Subsystem: 2 x 147 GB (SAS, 15000RPM, RAID0)  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 SP1(x86\_64), Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ Compiler XE for applications running on IA-32 Version 12.0.1.116 Build 20101116  
 Auto Parallel: No  
 File System: ext2  
 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	160	1158	1350	1174	1330	<u>1165</u>	<u>1340</u>	160	965	1620	<u>966</u>	<u>1620</u>	968	1620
401.bzip2	160	<u>1704</u>	<u>906</u>	1703	907	1707	904	160	1621	953	<u>1620</u>	<u>953</u>	1616	956
403.gcc	160	<u>1083</u>	<u>1190</u>	1083	1190	1082	1190	160	<u>1083</u>	<u>1190</u>	1083	1190	1082	1190
429.mcf	160	<u>1053</u>	<u>1390</u>	1052	1390	1056	1380	160	929	1570	938	1560	<u>930</u>	<u>1570</u>
445.gobmk	160	1059	1580	<u>1063</u>	<u>1580</u>	1066	1570	160	1025	1640	<u>1018</u>	<u>1650</u>	1012	1660
456.hammer	160	735	2030	<u>736</u>	<u>2030</u>	736	2030	160	<u>594</u>	<u>2510</u>	594	2510	593	2520
458.sjeng	160	<u>1311</u>	<u>1480</u>	1311	1480	1315	1470	160	1227	1580	1233	1570	<u>1230</u>	<u>1570</u>
462.libquantum	160	426	7780	425	7800	<u>426</u>	<u>7780</u>	160	426	7780	425	7800	<u>426</u>	<u>7780</u>
464.h264ref	160	1642	2160	<u>1652</u>	<u>2140</u>	1653	2140	160	1642	2160	<u>1652</u>	<u>2140</u>	1653	2140
471.omnetpp	160	1191	840	1195	837	<u>1193</u>	<u>838</u>	160	<u>1153</u>	<u>867</u>	1153	867	1154	867
473.astar	160	1200	936	1197	938	<u>1199</u>	<u>937</u>	160	1200	936	1197	938	<u>1199</u>	<u>937</u>
483.xalancbmk	160	874	1260	876	1260	<u>875</u>	<u>1260</u>	160	874	1260	876	1260	<u>875</u>	<u>1260</u>

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.  
numactl was used to bind copies to the cores

## Operating System Notes

Large pages were not enabled for this run  
The following command was used prior to run  
ulimit -s unlimited  
echo 1 > /proc/sys/vm/zone\_reclaim\_mode

## General Notes

Binaries were compiled on RHEL5.5  
For information about Fujitsu please visit: <http://www.fujitsu.com>

## Base Compiler Invocation

C benchmarks:  
icc -m32  
C++ benchmarks:  
icpc -m32



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## 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  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/smartheap -lsmartheap  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

## 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

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

456.hmmcr: -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)  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

403.gcc: basepeak = yes

429.mcf: -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 -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -auto-ilp32

456.hmmcr: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

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)  
-unroll4 -auto-ilp32  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

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.xalanbmk: 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-ic12.0-linux64-revB.html>

[http://www.spec.org/cpu2006/flags/RX900S2\\_Platform.html](http://www.spec.org/cpu2006/flags/RX900S2_Platform.html)

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

[http://www.spec.org/cpu2006/flags/RX900S2\\_Platform.xml](http://www.spec.org/cpu2006/flags/RX900S2_Platform.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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