



# SPEC® CINT2006 Result

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## Fujitsu Siemens Computers

PRIMERGY TX600 S3, Intel Xeon processor 7140M, 3.40 GHz

SPECint®\_rate2006 = 80.6

SPECint\_rate\_base2006 = 75.5

CPU2006 license: 22

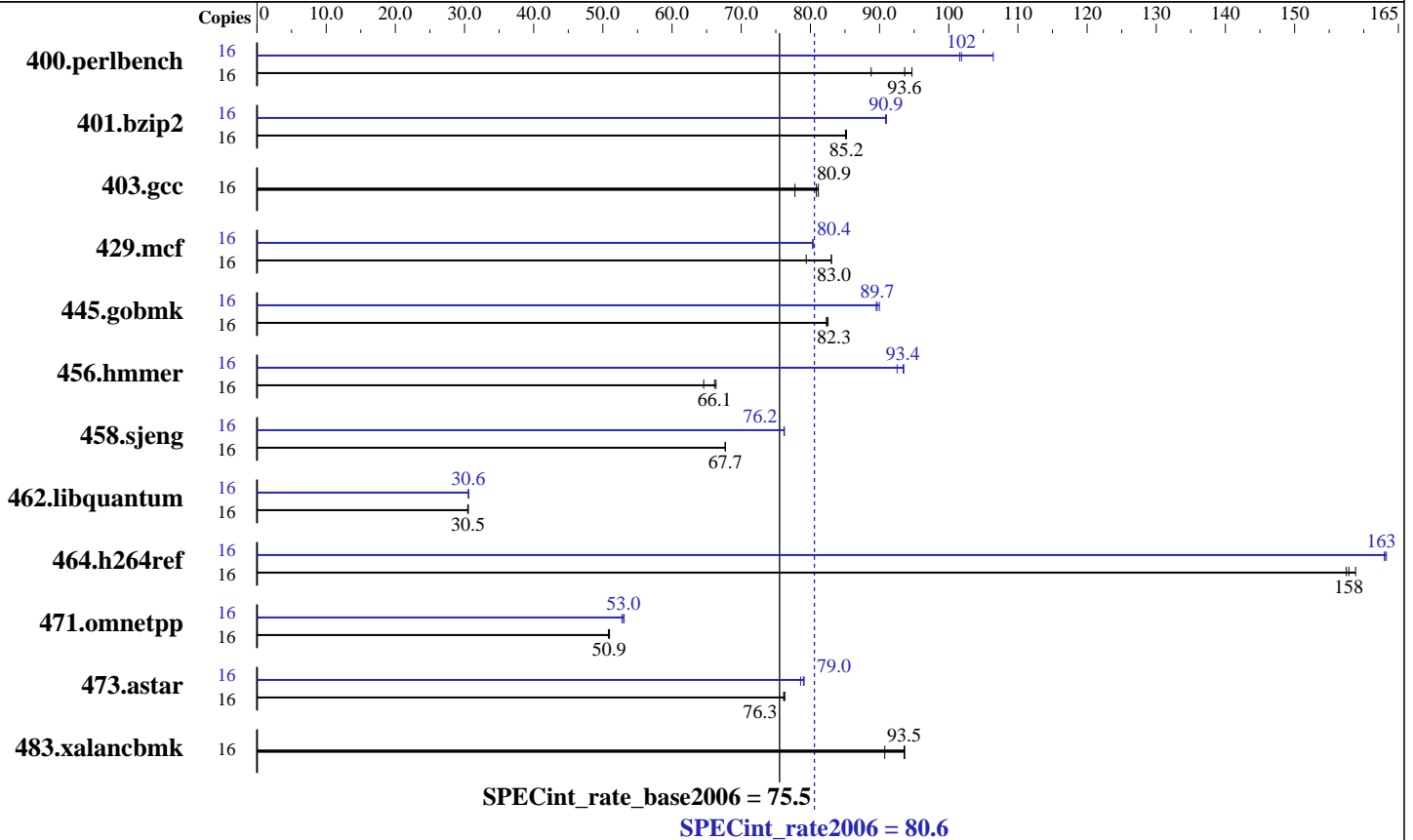
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Mar-2007

Hardware Availability: Dec-2006

Software Availability: Feb-2007



### Hardware

CPU Name: Intel Xeon 7140M  
 CPU Characteristics: 800 MHz system bus  
 CPU MHz: 3400  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2,4 chips  
 Primary Cache: 12 K micro-ops I + 16 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: 16 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 32 GB (16x2 GB DDR2 PC2-3200R, 1 rank, CAS 3-3-3, with ECC)  
 Disk Subsystem: Fujitsu MAS3735NC (SCSI 73GB 15 krpm)  
 Other Hardware: None

### Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86\_64  
 Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l\_cc\_p\_9.1.047  
 Auto Parallel: No  
 File System: ReiserFS  
 System State: Multiuser, Runlevel 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Smart Heap Library, Version 8.1



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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	16	1651	94.7	1761	88.8	<b>1669</b>	<b>93.6</b>	16	1539	102	<b>1535</b>	<b>102</b>	1469	106
401.bzip2	16	1815	85.1	<b>1813</b>	<b>85.2</b>	1812	85.2	16	1697	91.0	1699	90.9	<b>1698</b>	<b>90.9</b>
403.gcc	16	1587	81.2	<b>1593</b>	<b>80.9</b>	1656	77.8	16	1587	81.2	<b>1593</b>	<b>80.9</b>	1656	77.8
429.mcf	16	<b>1758</b>	<b>83.0</b>	1757	83.0	1838	79.4	16	1816	80.3	1815	80.4	<b>1816</b>	<b>80.4</b>
445.gobmk	16	2039	82.3	2033	82.6	<b>2039</b>	<b>82.3</b>	16	1865	90.0	<b>1872</b>	<b>89.7</b>	1875	89.5
456.hmmmer	16	<b>2257</b>	<b>66.1</b>	2249	66.4	2312	64.6	16	1596	93.5	<b>1598</b>	<b>93.4</b>	1613	92.5
458.sjeng	16	2858	67.7	<b>2858</b>	<b>67.7</b>	2861	67.7	16	2541	76.2	2540	76.2	<b>2540</b>	<b>76.2</b>
462.libquantum	16	10881	30.5	<b>10864</b>	<b>30.5</b>	10856	30.5	16	10849	30.6	<b>10843</b>	<b>30.6</b>	10839	30.6
464.h264ref	16	2249	157	<b>2243</b>	<b>158</b>	2229	159	16	2173	163	2168	163	<b>2172</b>	<b>163</b>
471.omnetpp	16	1969	50.8	1962	51.0	<b>1965</b>	<b>50.9</b>	16	1884	53.1	<b>1887</b>	<b>53.0</b>	1895	52.8
473.astar	16	1475	76.1	<b>1473</b>	<b>76.3</b>	1472	76.3	16	1420	79.1	<b>1422</b>	<b>79.0</b>	1429	78.6
483.xalancbmk	16	<b>1180</b>	<b>93.5</b>	1217	90.7	1179	93.6	16	<b>1180</b>	<b>93.5</b>	1217	90.7	1179	93.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
'/usr/bin/taskset' used to bind processes to CPUs

## General Notes

The system bus runs at 800 MHz

All binaries were built with 32-bit Intel compiler except:  
401.bzip2, 456.hmmmer and 462.libquantum in peak were built with  
64-bit Intel compiler by changing the path for include and library files.

BIOS configuration:  
Hardware Prefetch = Enable

This result was measured on the PRIMERGY RX600 S3. The PRIMERGY RX600 S3 and  
the PRIMERGY TX600 S3 are electronically equivalent.  
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<http://www.fujitsu-siemens.com/countries>

## Base Compiler Invocation

C benchmarks:  
icc

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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_X64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-fast

C++ benchmarks:  
-xP -O3 -ipo -no-prec-div -L/opt/SmartHeap\_8\_1/lib -lsmarheap

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc

401.bzip2: /opt/intel/cce/9.1.047/bin/icc  
-I/opt/intel/cce/9.1.047/include  
-L/opt/intel/cce/9.1.047/lib

456.hmmer: /opt/intel/cce/9.1.047/bin/icc  
-I/opt/intel/cce/9.1.047/include  
-L/opt/intel/cce/9.1.047/lib

462.libquantum: /opt/intel/cce/9.1.047/bin/icc  
-I/opt/intel/cce/9.1.047/include  
-L/opt/intel/cce/9.1.047/lib

C++ benchmarks:  
icpc

## Peak Portability Flags

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

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## Peak Portability Flags (Continued)

456.hmmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof\_gen(pass 1) -prof\_use(pass 2) -fast

401.bzip2: -fast

403.gcc: basepeak = yes

429.mcf: -prof\_gen(pass 1) -prof\_use(pass 2) -fast  
-L/opt/SmartHeap\_8\_1/lib -lsmartheap

445.gobmk: Same as 429.mcf

456.hmmmer: Same as 400.perlbench

458.sjeng: Same as 429.mcf

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 429.mcf

C++ benchmarks:

471.omnetpp: -prof\_gen(pass 1) -prof\_use(pass 2) -xP -O3 -ipo  
-no-prec-div -L/opt/SmartHeap\_8\_1/lib -lsmartheap

473.astar: -prof\_gen(pass 1) -prof\_use(pass 2) -fast  
-L/opt/SmartHeap\_8\_1/lib -lsmartheap

483.xalancbmk: basepeak = yes

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.09.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html)

You can also download the XML flags source by saving the following link:

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.09.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml)



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

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 14 18:34:00 2009 by SPEC CPU2006 PS/PDF formatter v6323.