



# SPEC® CINT2006 Result

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Itaotec

SPECint®\_rate2006 = 104

Servidor Itaotec MX221 (Intel Xeon E5405)

SPECint\_rate\_base2006 = 85.7

CPU2006 license: 9001

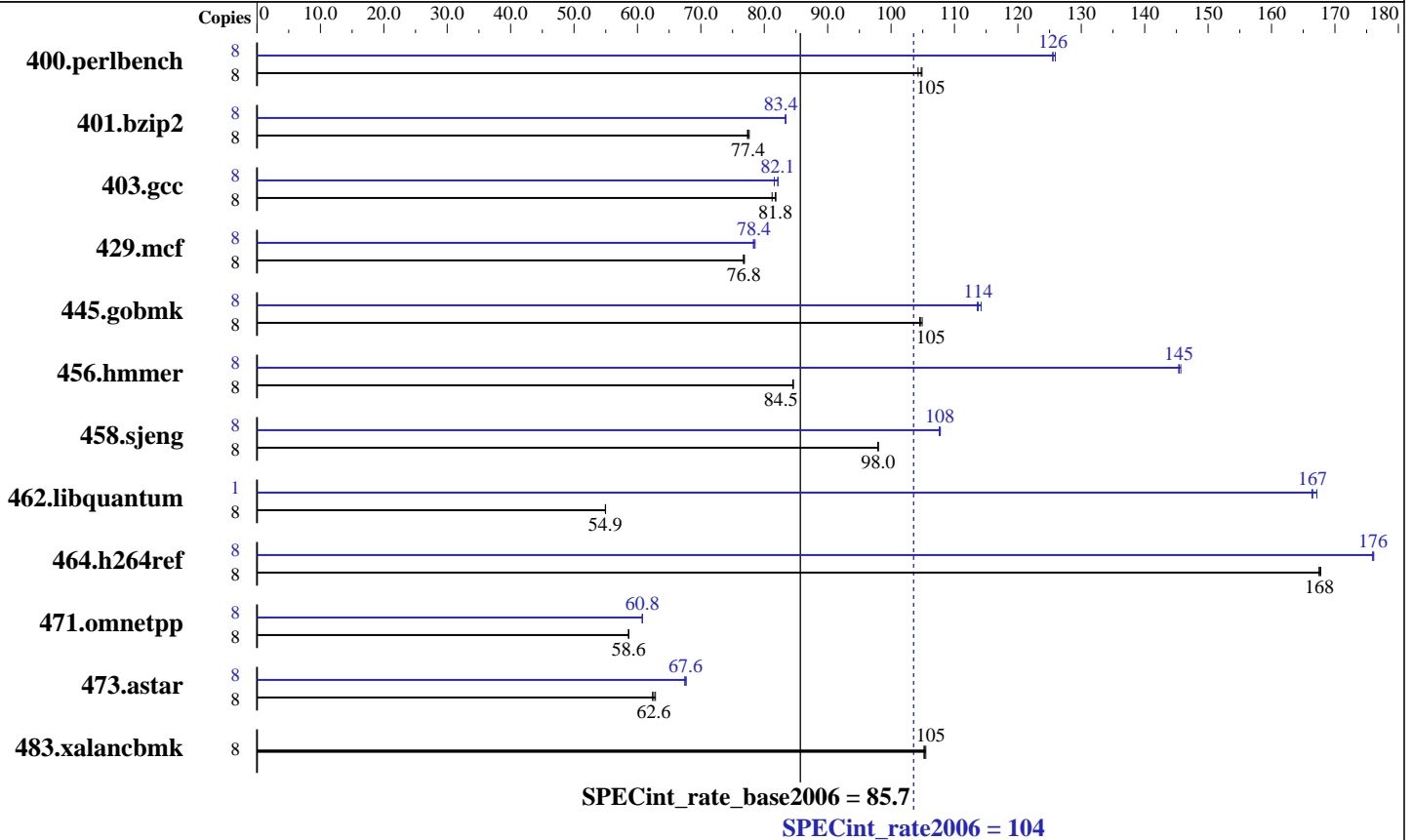
Test date: May-2008

Test sponsor: Itaotec

Hardware Availability: Dec-2007

Tested by: Itaotec

Software Availability: Jan-2008



## Hardware

CPU Name: Intel Xeon E5405  
 CPU Characteristics:  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 \* 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)  
 Disk Subsystem: 1 x SCSI, 73GB, 15000 RPM  
 Other Hardware: None

## Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ Compiler for Linux version 10.1 Build 20080112 Package ID: l\_cc\_p\_10.1.012  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run Level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Binutils 2.17.10.50  
 MicroQuill SmartHeap V8.1



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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	8	<b>746</b>	<b>105</b>	750	104	745	105	8	621	126	<b>623</b>	<b>126</b>	623	125
401.bzip2	8	998	77.4	994	77.6	<b>997</b>	<b>77.4</b>	8	<b>926</b>	<b>83.4</b>	926	83.4	926	83.4
403.gcc	8	793	81.2	<b>788</b>	<b>81.8</b>	787	81.8	8	784	82.2	789	81.6	<b>784</b>	<b>82.1</b>
429.mcf	8	<b>950</b>	<b>76.8</b>	951	76.7	949	76.9	8	932	78.3	929	78.5	<b>931</b>	<b>78.4</b>
445.gobmk	8	800	105	803	105	<b>802</b>	<b>105</b>	8	735	114	<b>738</b>	<b>114</b>	739	114
456.hammer	8	883	84.5	882	84.6	<b>883</b>	<b>84.5</b>	8	<b>513</b>	<b>145</b>	513	145	512	146
458.sjeng	8	988	98.0	989	97.9	<b>988</b>	<b>98.0</b>	8	900	108	898	108	<b>899</b>	<b>108</b>
462.libquantum	8	3017	54.9	3015	55.0	<b>3017</b>	<b>54.9</b>	1	124	167	<b>124</b>	<b>167</b>	125	166
464.h264ref	8	<b>1056</b>	<b>168</b>	1057	167	1055	168	8	1005	176	<b>1006</b>	<b>176</b>	1006	176
471.omnetpp	8	853	58.6	<b>853</b>	<b>58.6</b>	853	58.6	8	823	60.8	<b>823</b>	<b>60.8</b>	823	60.8
473.astar	8	894	62.8	<b>898</b>	<b>62.6</b>	900	62.4	8	<b>831</b>	<b>67.6</b>	830	67.7	833	67.5
483.xalancbmk	8	525	105	<b>524</b>	<b>105</b>	523	105	8	525	105	<b>524</b>	<b>105</b>	523	105

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

## Compiler Invocation Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_STACK\_SIZE set to 64M  
KMP\_AFFINITY set to physical,0

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.  
'/usr/bin/taskset' used to bind benchmark copies to processors, except for 462.libquantum at peak.

## Platform Notes

BIOS configuration:  
Hardware Prefetch Enabled

## General Notes

This result was measured on the Servidor Itautec MX201.  
The Servidor Itautec MX221 and the Servidor Itautec MX201 are electronically equivalent.

## Base Compiler Invocation

C benchmarks:  
icc

Continued on next page



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## Base Compiler Invocation (Continued)

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-fast -inline-calloc -opt-malloc-options=3

C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/opt/sh/SmartHeap\_8.1/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc

401.bzip2: /opt/intel/cce/10.1.012/bin/icc  
-L/opt/intel/cce/10.1.012/lib  
-I/opt/intel/cce/10.1.012/include

456.hmmer: /opt/intel/cce/10.1.012/bin/icc  
-L/opt/intel/cce/10.1.012/lib  
-I/opt/intel/cce/10.1.012/include

C++ benchmarks:  
icpc



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64  
456.hmmer: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch  
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
403.gcc: -fast -inline-calloc -opt-malloc-options=3  
429.mcf: -fast -prefetch  
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo  
-no-prec-div -ansi-alias  
456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive  
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4  
462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control  
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/opt/sh/SmartHeap\_8.1/lib -lsmarheap  
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/opt/sh/SmartHeap\_8.1/lib -lsmarheap  
483.xalancbmk: basepeak = yes



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## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

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

<http://www.spec.org/cpu2006/flags/Itautec-ic10.1-INT-intel64-linux-flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/Itautec-ic10.1-INT-intel64-linux-flags.20090714.xml>

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

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