



# SPEC® CINT2006 Result

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**Itautec**

**SPECint®\_rate2006 = 110**

**Servidor Itautec LX201 (Intel Xeon X5460)**

**SPECint\_rate\_base2006 = 101**

**CPU2006 license:** 9001

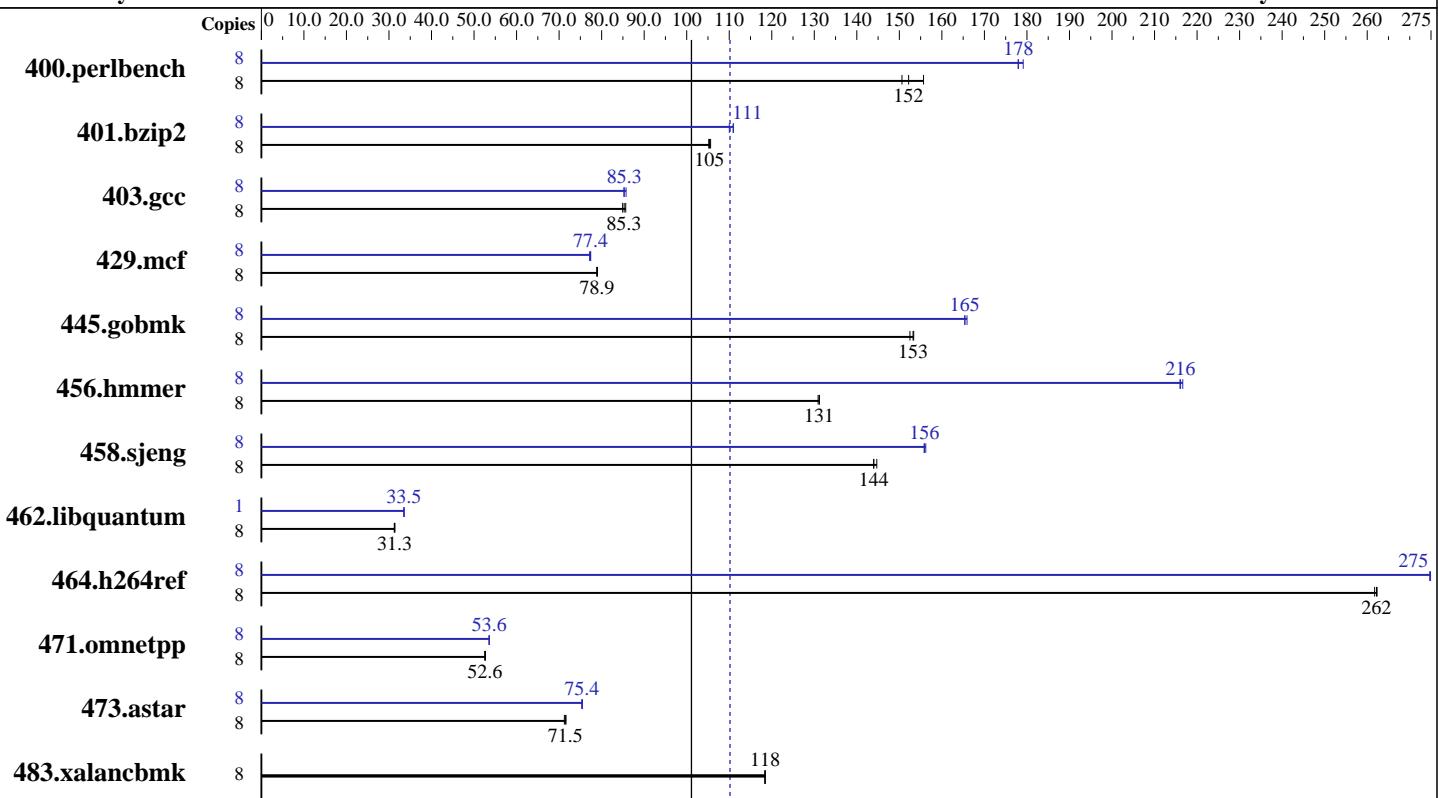
**Test date:** Mar-2008

**Test sponsor:** Itautec

**Hardware Availability:** Dec-2007

**Tested by:** Itautec

**Software Availability:** Jan-2008



**SPECint\_rate\_base2006 = 101**

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## Hardware

|                      |   |
|----------------------|---|
| CPU Name:            | Intel Xeon X5460                                  |
| CPU Characteristics: |   |
| CPU MHz:             | 3160  |
| 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:              | 8 GB (8 * 1 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)    |
| Disk Subsystem:      | 1 x SATA-2, 160GB, 7200 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<br>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      | 502        | 156        | <b>514</b> | <b>152</b>  | 519         | 151         | 8      | 439        | 178        | 436        | 179         | <b>439</b> | <b>178</b>  |
| 401.bzip2      | 8      | 734        | 105        | 731        | 106         | <b>733</b>  | <b>105</b>  | 8      | 696        | 111        | <b>696</b> | <b>111</b>  | 702        | 110         |
| 403.gcc        | 8      | 752        | 85.7       | <b>755</b> | <b>85.3</b> | 758         | 84.9        | 8      | 751        | 85.7       | 756        | 85.2        | <b>755</b> | <b>85.3</b> |
| 429.mcf        | 8      | 923        | 79.0       | <b>925</b> | <b>78.9</b> | 925         | 78.9        | 8      | 946        | 77.2       | <b>943</b> | <b>77.4</b> | 943        | 77.4        |
| 445.gobmk      | 8      | 547        | 153        | 550        | 152         | <b>548</b>  | <b>153</b>  | 8      | 506        | 166        | 507        | 165         | <b>507</b> | <b>165</b>  |
| 456.hammer     | 8      | 570        | 131        | <b>569</b> | <b>131</b>  | 569         | 131         | 8      | 345        | 217        | 346        | 216         | <b>345</b> | <b>216</b>  |
| 458.sjeng      | 8      | 673        | 144        | <b>672</b> | <b>144</b>  | 669         | 145         | 8      | <b>621</b> | <b>156</b> | 620        | 156         | 621        | 156         |
| 462.libquantum | 8      | 5284       | 31.4       | 5305       | 31.2        | <b>5287</b> | <b>31.3</b> | 1      | 618        | 33.5       | 618        | 33.5        | <b>618</b> | <b>33.5</b> |
| 464.h264ref    | 8      | 676        | 262        | 675        | 262         | <b>675</b>  | <b>262</b>  | 8      | <b>644</b> | <b>275</b> | 644        | 275         | 644        | 275         |
| 471.omnetpp    | 8      | 949        | 52.7       | <b>951</b> | <b>52.6</b> | 952         | 52.5        | 8      | 934        | 53.5       | <b>933</b> | <b>53.6</b> | 933        | 53.6        |
| 473.astar      | 8      | 788        | 71.2       | 784        | 71.6        | <b>786</b>  | <b>71.5</b> | 8      | 744        | 75.5       | 745        | 75.4        | <b>745</b> | <b>75.4</b> |
| 483.xalancbmk  | 8      | <b>466</b> | <b>118</b> | 466        | 118         | 466         | 118         | 8      | <b>466</b> | <b>118</b> | 466        | 118         | 466        | 118         |

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.

## Platform Notes

BIOS configuration:  
Hardware Prefetch Enabled

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



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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:

-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.hmmr: /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

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmr: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

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## Peak Portability Flags (Continued)

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.hmmmer: -fast -unroll12 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll14 -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 -unroll12  
-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 -lsmartheap

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 -lsmartheap

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

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## Peak Other Flags (Continued)

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.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.xml>

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

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