# SPEC® CINT2006 Result

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## Itautec

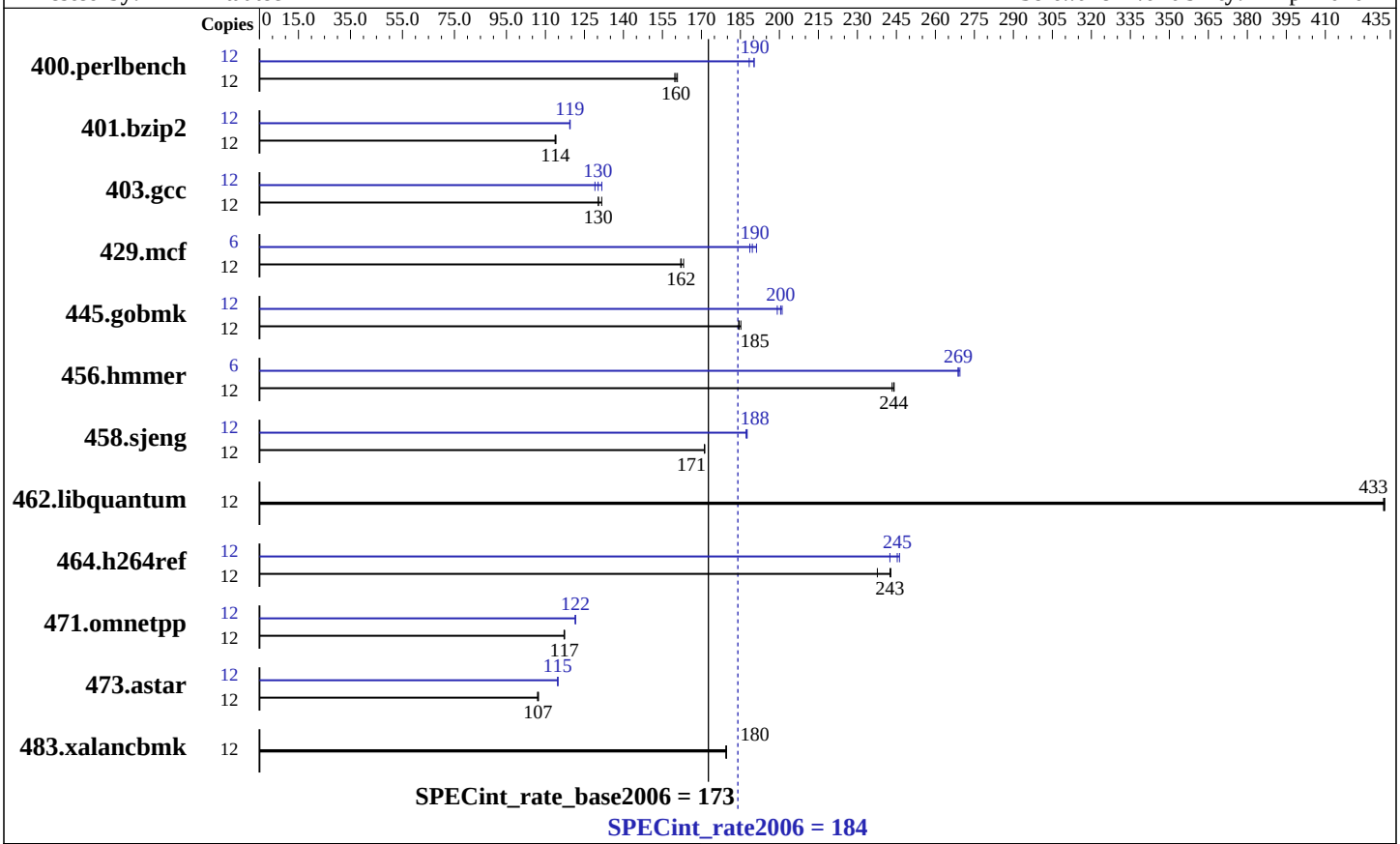
## Servidor Itautec MX203 (Intel Xeon X5670)

**SPECint®_rate2006 = 184**

**SPECint_rate_base2006 = 173**

**CPU2006 license:** 9001
**Test sponsor:** Itautec
**Tested by:** Itautec

**Test date:** May-2010
**Hardware Availability:** Apr-2010
**Software Availability:** Apr-2010




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon X5670 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 3.33 GHz |
| CPU MHz: | 2933 |
| FPU: | Integrated |
| CPU(s) enabled: | 6 cores, 1 chip, 6 cores/chip, 2 threads/core |
| CPU(s) orderable: | 1, 2 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: | 12 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 24 GB (6 x 4GB, DDR3-1333, Dual Rank, CL 9, ECC) |
| Disk Subsystem: | 1 x 160 GB SATA-2, 7200 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-smp |
| Compiler: | Intel C++ Professional Compiler 11.1 for Linux Build 20100414 Package ID: l_cproc_p_11.1.072 |
| Auto Parallel: | No |
| File System: | ReiserFS |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V8.1<br>Binutils 2.18.50.0.7.20080502 |

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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 | 729 | 161 | **732** | **160** | 734 | 160 | 12 | 616 | 190 | **616** | **190** | 622 | 188 |
| 401.bzip2 | 12 | 1018 | 114 | 1015 | 114 | **1018** | **114** | 12 | 969 | 120 | **970** | **119** | 970 | 119 |
| 403.gcc | 12 | 734 | 132 | 741 | 130 | **741** | **130** | 12 | **742** | **130** | 734 | 132 | 749 | 129 |
| 429.mcf | 12 | 675 | 162 | 671 | 163 | **675** | **162** | 6 | 290 | 189 | 286 | 191 | **289** | **190** |
| 445.gobmk | 12 | 680 | 185 | **682** | **185** | 683 | 184 | 12 | 626 | 201 | 632 | 199 | **628** | **200** |
| 456.hmmer | 12 | 460 | 243 | 459 | 244 | **459** | **244** | 6 | 208 | 269 | 208 | 269 | **208** | **269** |
| 458.sjeng | 12 | 848 | 171 | 848 | 171 | **848** | **171** | 12 | **774** | **188** | 774 | 188 | 776 | 187 |
| 462.libquantum | 12 | 574 | 433 | 575 | 432 | **575** | **433** | 12 | 574 | 433 | 575 | 432 | **575** | **433** |
| 464.h264ref | 12 | 1093 | 243 | 1117 | 238 | **1095** | **243** | 12 | 1095 | 243 | **1082** | **245** | 1079 | 246 |
| 471.omnetpp | 12 | **640** | **117** | 640 | 117 | 639 | 117 | 12 | 617 | 122 | 618 | 121 | **617** | **122** |
| 473.astar | 12 | 785 | 107 | 788 | 107 | **786** | **107** | 12 | 734 | 115 | 734 | 115 | **734** | **115** |
| 483.xalancbmk | 12 | 462 | 179 | **461** | **180** | 461 | 180 | 12 | 462 | 179 | **461** | **180** | 461 | 180 |

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

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.
```

## General Notes

```
This result was measured on the Servidor Itautec MX223.
The Servidor Itautec MX203 and the Servidor Itautec MX223 are electronically equivalent.
```

# Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

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 -static -opt-prefetch

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -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 -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks (except as noted below):
icpc -m32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64

Continued on next page

## Peak Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
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) -static(pass 2) -prof-use(pass 2) -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll2 -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/sh/SmartHeap_8.1/lib -lsmartheap

473.astar: -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=routine -Wl,-z,muldefs -L/opt/sh/SmartHeap_8.1/lib -lsmartheap64

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## Peak Optimization Flags (Continued)

483.xalancbmk: `basepeak = yes`

## 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-Intel-ic11.1-linux64-revE.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Itautec-Intel-ic11.1-linux64-revE.xml`


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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 09:23:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 May 2010.