# SPEC® CINT2006 Result

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## Itautec

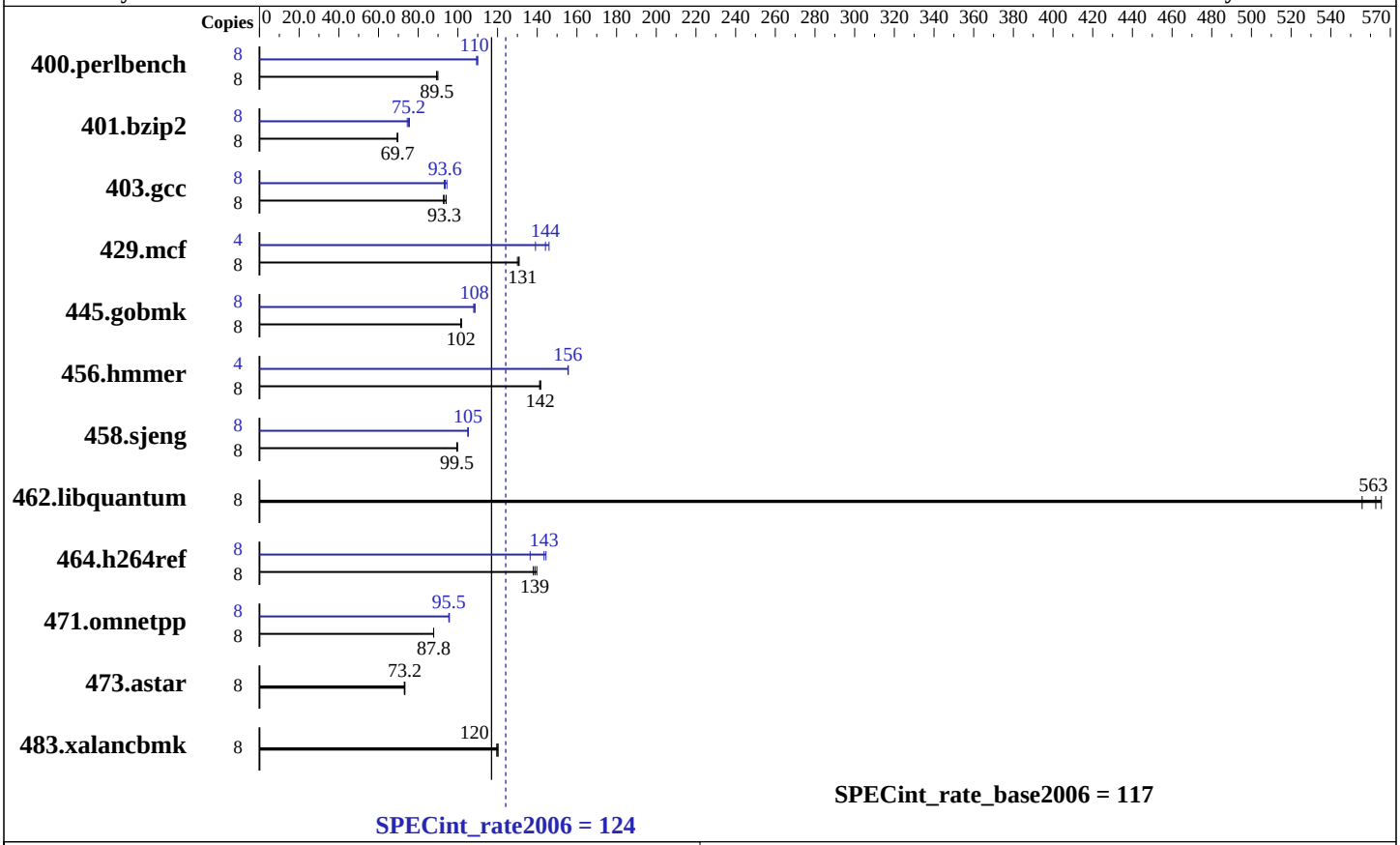
## Servidor Itautec MP224 (Intel Xeon E5630)

SPECint®_rate2006 = 124

SPECint_rate_base2006 = 117

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

**Test date:** Aug-2011
**Hardware Availability:** Feb-2011
**Software Availability:** Jan-2011




## Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5630 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.80 GHz |
| CPU MHz: | 2533 |
| FPU: | Integrated |
| CPU(s) enabled: | 4 cores, 1 chip, 4 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 4 GB 2Rx4 PC3-8500R-7, ECC) |
| Disk Subsystem: | 1 x 500 GB SATA-2, 7200 RPM |
| 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 12.0.2 Build 20110112 |
| Auto Parallel: | No |
| File System: | ext3 |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | 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 | 869 | 89.9 | **874** | **89.5** | 876 | 89.2 | 8 | 714 | 109 | 711 | 110 | **712** | **110** |
| 401.bzip2 | 8 | 1108 | 69.7 | **1108** | **69.7** | 1113 | 69.4 | 8 | 1036 | 74.5 | 1021 | 75.6 | **1027** | **75.2** |
| 403.gcc | 8 | 695 | 92.7 | **691** | **93.3** | 684 | 94.1 | 8 | 682 | 94.5 | 691 | 93.1 | **688** | **93.6** |
| 429.mcf | 8 | 561 | 130 | **558** | **131** | 558 | 131 | 4 | 262 | 139 | 250 | 146 | **253** | **144** |
| 445.gobmk | 8 | 827 | 102 | 824 | 102 | **827** | **102** | 8 | **774** | **108** | 772 | 109 | 777 | 108 |
| 456.hmmer | 8 | 527 | 142 | 529 | 141 | **527** | **142** | 4 | 240 | 155 | 240 | 156 | **240** | **156** |
| 458.sjeng | 8 | **972** | **99.5** | 970 | 99.8 | 973 | 99.5 | 8 | **920** | **105** | 920 | 105 | 922 | 105 |
| 462.libquantum | 8 | **295** | **563** | 298 | 556 | 293 | 565 | 8 | **295** | **563** | 298 | 556 | 293 | 565 |
| 464.h264ref | 8 | 1267 | 140 | 1283 | 138 | **1275** | **139** | 8 | 1226 | 144 | 1298 | 136 | **1234** | **143** |
| 471.omnetpp | 8 | 569 | 87.8 | **569** | **87.8** | 570 | 87.8 | 8 | 524 | 95.5 | **523** | **95.5** | 522 | 95.7 |
| 473.astar | 8 | 766 | 73.3 | 769 | 73.0 | **767** | **73.2** | 8 | 766 | 73.3 | 769 | 73.0 | **767** | **73.2** |
| 483.xalancbmk | 8 | **460** | **120** | 459 | 120 | 462 | 120 | 8 | **460** | **120** | 459 | 120 | 462 | 120 |

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.
Large pages were not enabled for this run
```

## Platform Notes

```
Data Reuse disabled in BIOS.
```

# 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 -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/home/rcaneca/sh/SmartHeap_8.1/lib -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

Continued on next page

## Peak Portability Flags (Continued)

456.hmmer: -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: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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.hmmer: -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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(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/home/rcaneca/sh/SmartHeap_8.1/lib -lsmartheap

Continued on next page

## Peak Optimization Flags (Continued)

473.astar: `basepeak = yes`

483.xalancbmk: `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/Itautec-Intel-Linux64-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/Itautec-Intel-Linux64-Platform.xml`


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