# SPEC® CINT2006 Result

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## Itautec

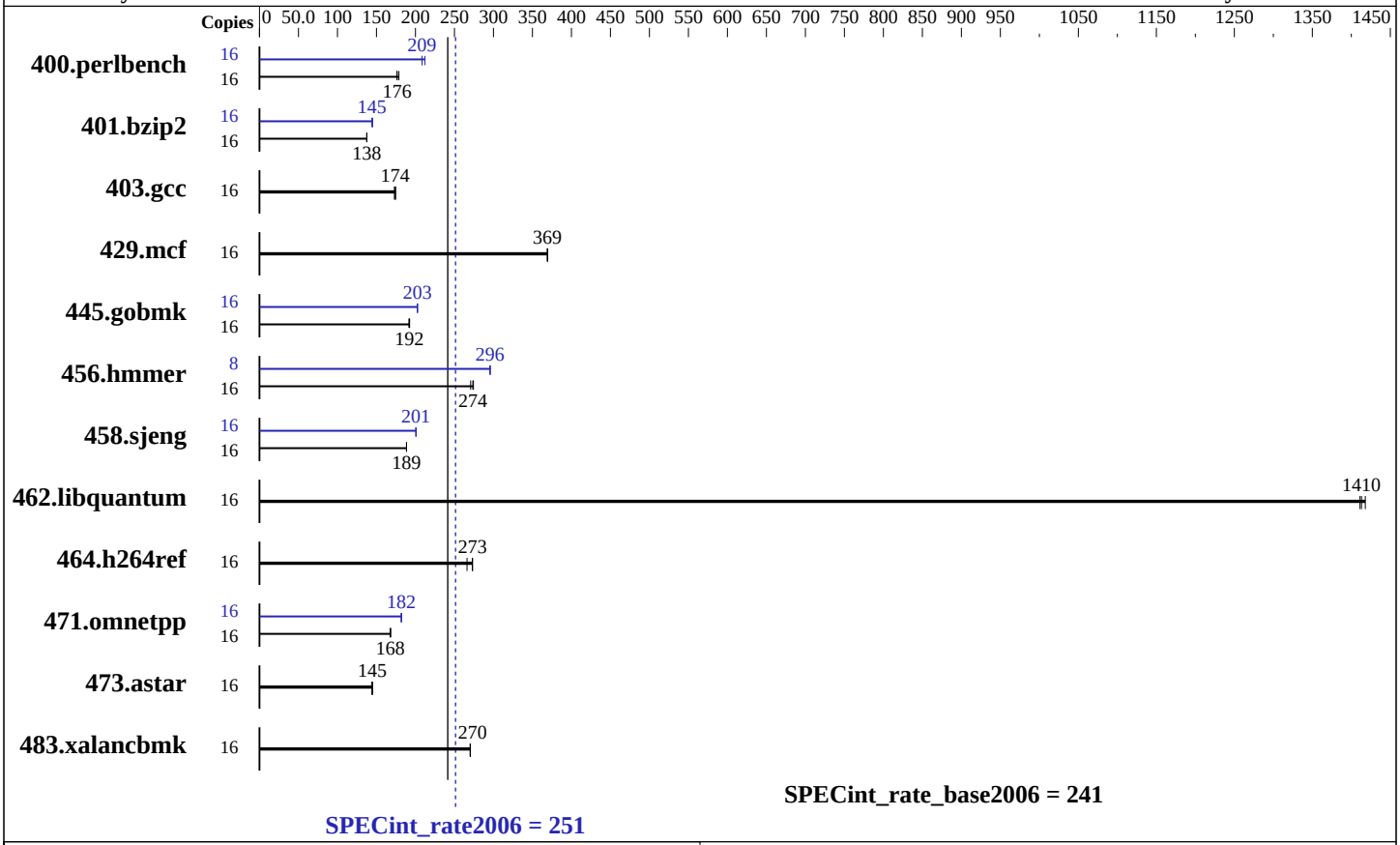
## Servidor Itautec MX214 (Intel Xeon E5620)

**SPECint®_rate2006 = 251**

**SPECint_rate_base2006 = 241**

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

**Test date:** Mar-2012
**Hardware Availability:** Jul-2011
**Software Availability:** Dec-2011




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5620 |
| CPU Characteristics: | Intel Turbo Boost Technology up to 2.67 GHz |
| CPU MHz: | 2400 |
| FPU: | Integrated |
| CPU(s) enabled: | 8 cores, 2 chips, 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: | 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC) |
| Disk Subsystem: | 2 x 146 GB, SAS, 15000 RPM, RAID 0 |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server Release 6.2, 2.6.32-220.el6.x86_64 |
| Compiler: | C/C++: Version 12.1.0 of Intel Compiler XE Build 20111011 |
| Auto Parallel: | No |
| File System: | ext4 |
| 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 | 16 | **886** | **176** | 887 | 176 | 875 | 179 | 16 | 737 | 212 | 750 | 208 | **750** | **209** |
| 401.bzip2 | 16 | 1121 | 138 | 1123 | 138 | **1122** | **138** | 16 | 1070 | 144 | **1068** | **145** | 1064 | 145 |
| 403.gcc | 16 | **740** | **174** | 738 | 175 | 745 | 173 | 16 | **740** | **174** | 738 | 175 | 745 | 173 |
| 429.mcf | 16 | **395** | **369** | 395 | 370 | 395 | 369 | 16 | **395** | **369** | 395 | 370 | 395 | 369 |
| 445.gobmk | 16 | 876 | 192 | **873** | **192** | 872 | 193 | 16 | 828 | 203 | 829 | 202 | **829** | **203** |
| 456.hmmer | 16 | 551 | 271 | **546** | **274** | 544 | 274 | 8 | 253 | 296 | 252 | 296 | **252** | **296** |
| 458.sjeng | 16 | 1027 | 189 | 1027 | 188 | **1027** | **189** | 16 | **965** | **201** | 965 | 201 | 964 | 201 |
| 462.libquantum | 16 | **235** | **1410** | 235 | 1410 | 234 | 1420 | 16 | **235** | **1410** | 235 | 1410 | 234 | 1420 |
| 464.h264ref | 16 | 1330 | 266 | **1298** | **273** | 1296 | 273 | 16 | 1330 | 266 | **1298** | **273** | 1296 | 273 |
| 471.omnetpp | 16 | **595** | **168** | 595 | 168 | 596 | 168 | 16 | 550 | 182 | 549 | 182 | **550** | **182** |
| 473.astar | 16 | 779 | 144 | **777** | **145** | 775 | 145 | 16 | 779 | 144 | **777** | **145** | 775 | 145 |
| 483.xalancbmk | 16 | 408 | 270 | 409 | 270 | **409** | **270** | 16 | 408 | 270 | 409 | 270 | **409** | **270** |

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.
DCU Prefetcher 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 -opt-mem-layout-trans=3

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/home/rcaneca/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

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
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64

Continued on next page

## Peak Portability Flags (Continued)

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: basepeak = yes

429.mcf: basepeak = yes

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: basepeak = yes

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

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/Itautec-Servidor_Itautec-Intel-Linux-Platform.html`
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Itautec-Servidor_Itautec-Intel-Linux-Platform.xml`
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml`


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

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