



# SPEC® CINT2006 Result

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**Itautec**

**SPECint®\_rate2006 = 233**

Servidor Itautec MX224 (Intel Xeon E5620)

**SPECint\_rate\_base2006 = 221**

CPU2006 license: 9001

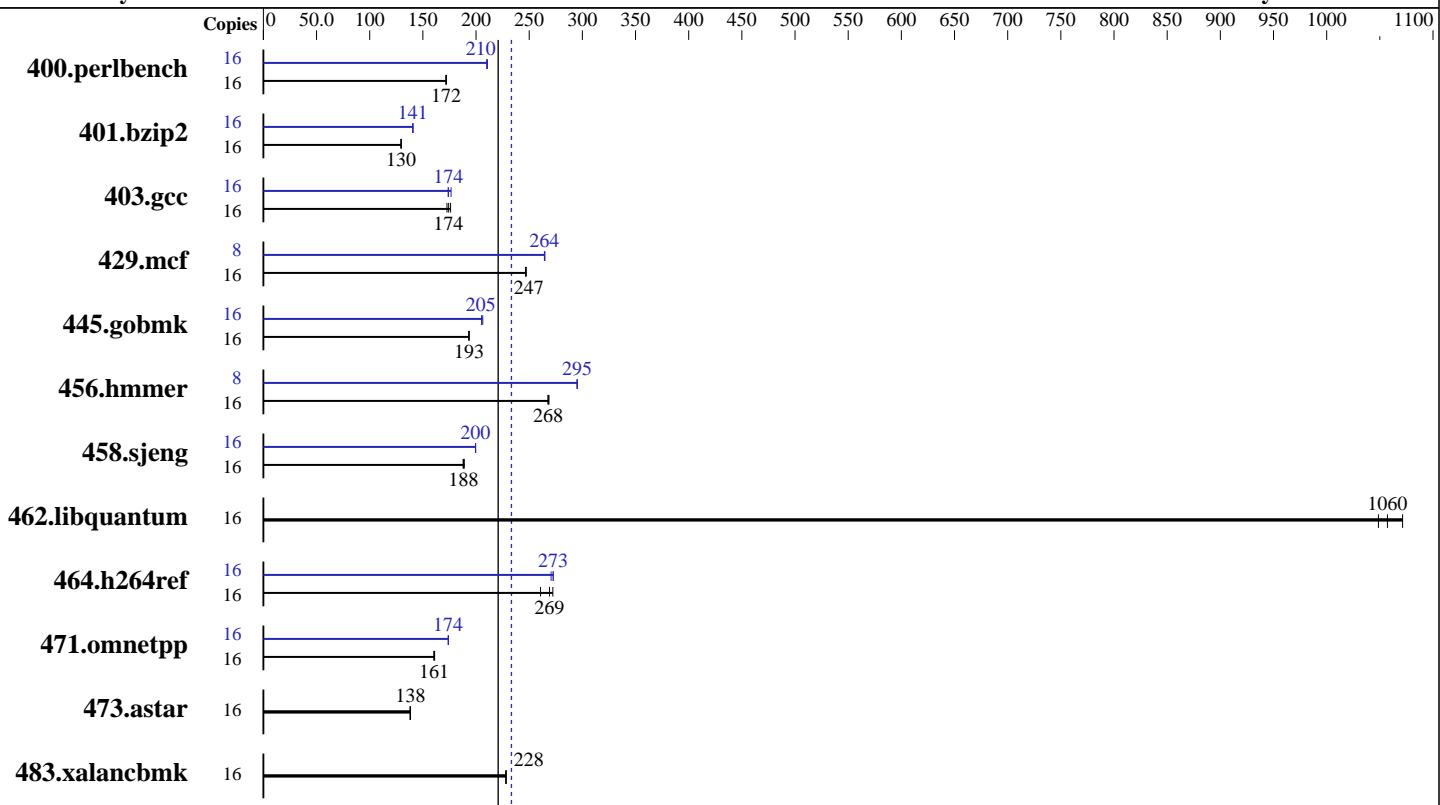
**Test date:** Jul-2011

**Test sponsor:** Itautec

**Hardware Availability:** Feb-2011

**Tested by:** Itautec

**Software Availability:** Jan-2011



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## 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: 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	16	910	172	<b>910</b>	<b>172</b>	908	172	16	<b>744</b>	<b>210</b>	742	211	744	210
401.bzip2	16	1190	130	1194	129	<b>1192</b>	<b>130</b>	16	1097	141	<b>1098</b>	<b>141</b>	1099	140
403.gcc	16	<b>739</b>	<b>174</b>	732	176	746	173	16	741	174	<b>740</b>	<b>174</b>	730	177
429.mcf	16	592	247	590	247	<b>592</b>	<b>247</b>	8	<b>276</b>	<b>264</b>	276	264	276	265
445.gobmk	16	867	194	<b>868</b>	<b>193</b>	869	193	16	813	206	<b>817</b>	<b>205</b>	818	205
456.hammer	16	<b>557</b>	<b>268</b>	558	268	556	269	8	<b>253</b>	<b>295</b>	253	295	253	295
458.sjeng	16	<b>1029</b>	<b>188</b>	1024	189	1030	188	16	970	200	<b>970</b>	<b>200</b>	971	199
462.libquantum	16	316	1050	<b>314</b>	<b>1060</b>	309	1070	16	316	1050	<b>314</b>	<b>1060</b>	309	1070
464.h264ref	16	1301	272	1358	261	<b>1316</b>	<b>269</b>	16	1309	271	1299	273	<b>1299</b>	<b>273</b>
471.omnetpp	16	621	161	623	160	<b>623</b>	<b>161</b>	16	575	174	<b>575</b>	<b>174</b>	575	174
473.astar	16	814	138	<b>812</b>	<b>138</b>	812	138	16	814	138	<b>812</b>	<b>138</b>	812	138
483.xalancbmk	16	484	228	484	228	<b>484</b>	<b>228</b>	16	484	228	484	228	<b>484</b>	<b>228</b>

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.

## General Notes

This result was measured on the Servidor Itautech MX224.  
The Servidor Itautech MX203+, Servidor Itautech MX223+ and the Servidor Itautech MX224  
are electronically equivalent.

## Base Compiler Invocation

C benchmarks:  
icc -m32

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## Base Compiler Invocation (Continued)

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.hmmr: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32



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## 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
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 -unroll12 -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)
  -unroll14 -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)
  -unroll12 -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
```

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## Peak Optimization Flags (Continued)

471.omnetpp (continued):

-L/home/rccaneca/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/Intel-ic12.0-linux64-revB.html>  
<http://www.spec.org/cpu2006/flags/Itautech-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/Itautech-Intel-Linux64-Platform.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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