



# SPEC® CINT2006 Result

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Itaotec

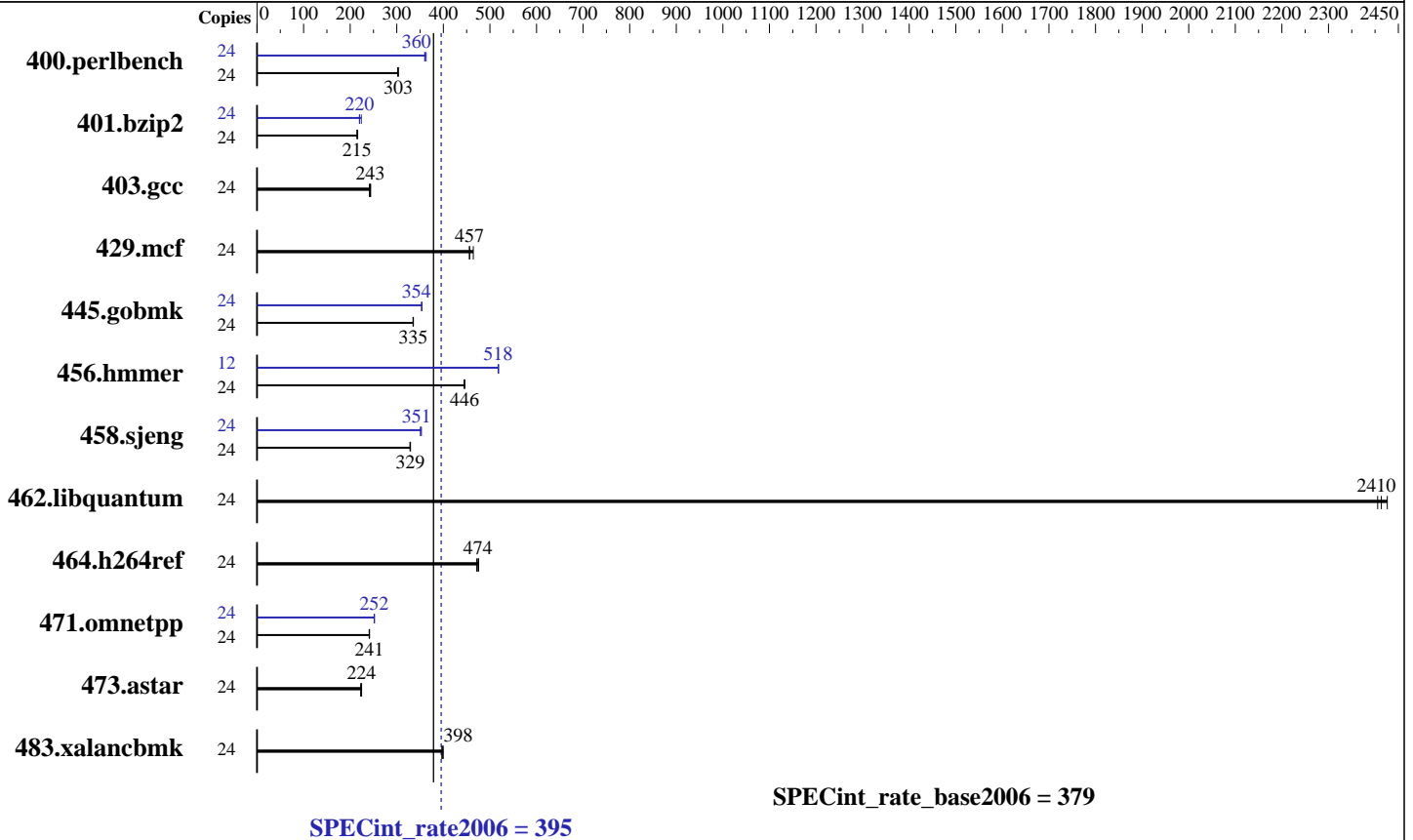
SPECint®\_rate2006 = 395

Servidor Itaotec MX223+ (Intel Xeon X5660)

SPECint\_rate\_base2006 = 379

CPU2006 license: 9001  
Test sponsor: Itaotec  
Tested by: Itaotec

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



## Hardware

CPU Name: Intel Xeon X5660  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 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: 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	24	<b>773</b>	<b>303</b>	773	303	776	302	24	646	363	<b>651</b>	<b>360</b>	651	360
401.bzip2	24	1072	216	<b>1078</b>	<b>215</b>	1079	215	24	1034	224	<b>1052</b>	<b>220</b>	1054	220
403.gcc	24	801	241	792	244	<b>794</b>	<b>243</b>	24	801	241	792	244	<b>794</b>	<b>243</b>
429.mcf	24	480	456	471	464	<b>479</b>	<b>457</b>	24	480	456	471	464	<b>479</b>	<b>457</b>
445.gobmk	24	750	336	752	335	<b>751</b>	<b>335</b>	24	<b>712</b>	<b>354</b>	713	353	712	354
456.hammer	24	502	446	504	445	<b>502</b>	<b>446</b>	12	<b>216</b>	<b>518</b>	216	518	216	519
458.sjeng	24	881	330	884	328	<b>883</b>	<b>329</b>	24	<b>827</b>	<b>351</b>	823	353	827	351
462.libquantum	24	<b>206</b>	<b>2410</b>	205	2430	207	2410	24	<b>206</b>	<b>2410</b>	205	2430	207	2410
464.h264ref	24	1116	476	1127	471	<b>1120</b>	<b>474</b>	24	1116	476	1127	471	<b>1120</b>	<b>474</b>
471.omnetpp	24	<b>622</b>	<b>241</b>	621	242	623	241	24	595	252	596	251	<b>596</b>	<b>252</b>
473.astar	24	<b>752</b>	<b>224</b>	757	223	750	225	24	<b>752</b>	<b>224</b>	757	223	750	225
483.xalancbmk	24	417	397	414	400	<b>416</b>	<b>398</b>	24	417	397	414	400	<b>416</b>	<b>398</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.  
DCU Prefetcher disabled in BIOS.

## General Notes

This result was measured on the Servidor Itaotec MX224.  
The Servidor Itaotec MX203+, Servidor Itaotec MX223+ and the Servidor Itaotec 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 -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



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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: 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

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## Peak Optimization Flags (Continued)

483.xalanbmk: 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/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.html](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-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/Itaotec-Servidor\\_Itaotec-Intel-Linux-Platform.xml](http://www.spec.org/cpu2006/flags/Itaotec-Servidor_Itaotec-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](mailto:webmaster@spec.org).

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