



# SPEC® CINT2006 Result

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Dell Inc.

**SPECint®\_rate2006 = 224**

PowerEdge M710 (Intel Xeon E5620, 2.40 GHz)

**SPECint\_rate\_base2006 = 211**

CPU2006 license: 55

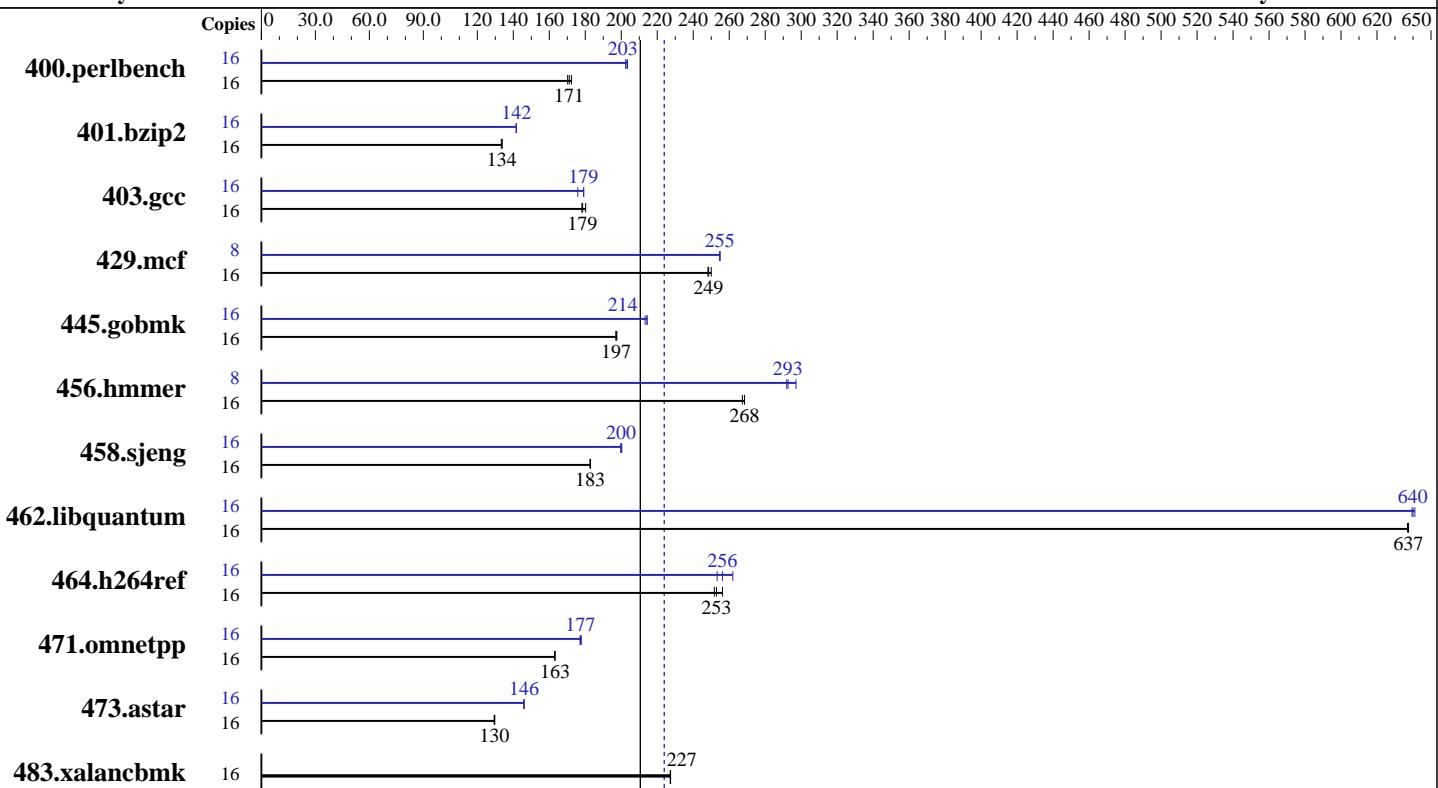
**Test date:** Mar-2010

**Test sponsor:** Dell Inc.

**Hardware Availability:** Mar-2010

**Tested by:** Dell Inc.

**Software Availability:** Dec-2009



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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:	48 GB (12 x 4 GB DDR3-1333 DR RDIMM downclocked to 1066 MHz)
Disk Subsystem:	1 x 146 GB 15000 RPM SAS
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 for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064
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 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	16	918	170	<b>914</b>	<b>171</b>	907	172	16	768	203	<b>772</b>	<b>203</b>	772	203
401.bzip2	16	1158	133	<b>1155</b>	<b>134</b>	1154	134	16	<b>1089</b>	<b>142</b>	1089	142	1091	142
403.gcc	16	<b>721</b>	<b>179</b>	723	178	715	180	16	<b>719</b>	<b>179</b>	733	176	719	179
429.mcf	16	584	250	588	248	<b>587</b>	<b>249</b>	8	286	255	286	255	<b>286</b>	<b>255</b>
445.gobmk	16	850	198	852	197	<b>851</b>	<b>197</b>	16	<b>783</b>	<b>214</b>	783	214	787	213
456.hammer	16	558	267	556	269	<b>556</b>	<b>268</b>	8	256	292	<b>255</b>	<b>293</b>	251	297
458.sjeng	16	<b>1059</b>	<b>183</b>	1059	183	1060	183	16	967	200	<b>968</b>	<b>200</b>	969	200
462.libquantum	16	<b>520</b>	<b>637</b>	520	638	521	637	16	<b>518</b>	<b>640</b>	517	641	518	639
464.h264ref	16	<b>1400</b>	<b>253</b>	1407	252	1382	256	16	<b>1382</b>	<b>256</b>	1398	253	1351	262
471.omnetpp	16	<b>613</b>	<b>163</b>	613	163	614	163	16	<b>565</b>	177	<b>564</b>	<b>177</b>	562	178
473.astar	16	868	129	<b>867</b>	<b>130</b>	866	130	16	770	146	769	146	<b>769</b>	<b>146</b>
483.xalancbmk	16	<b>486</b>	<b>227</b>	485	227	486	227	16	<b>486</b>	<b>227</b>	485	227	486	227

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

## Platform Notes

BIOS Settings:  
Power Management = Maximum Performance (Default = Active Power Controller)  
Data Reuse = Disabled (Default = Enabled)

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## 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/home/cmpllr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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.hmmr: icc -m64

458.sjeng: icc -m64

462.libquantum: 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

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## Peak Portability Flags (Continued)

```
456.hmmr: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -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.hmmr: -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: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32
                -opt-prefetch

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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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
```

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## Peak Optimization Flags (Continued)

473.astar (continued):

-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

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/Intel-ic11.1-linux64-revE.20100330.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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