



# SPEC® CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 19.4

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint\_base2006 = 17.5

CPU2006 license: 55

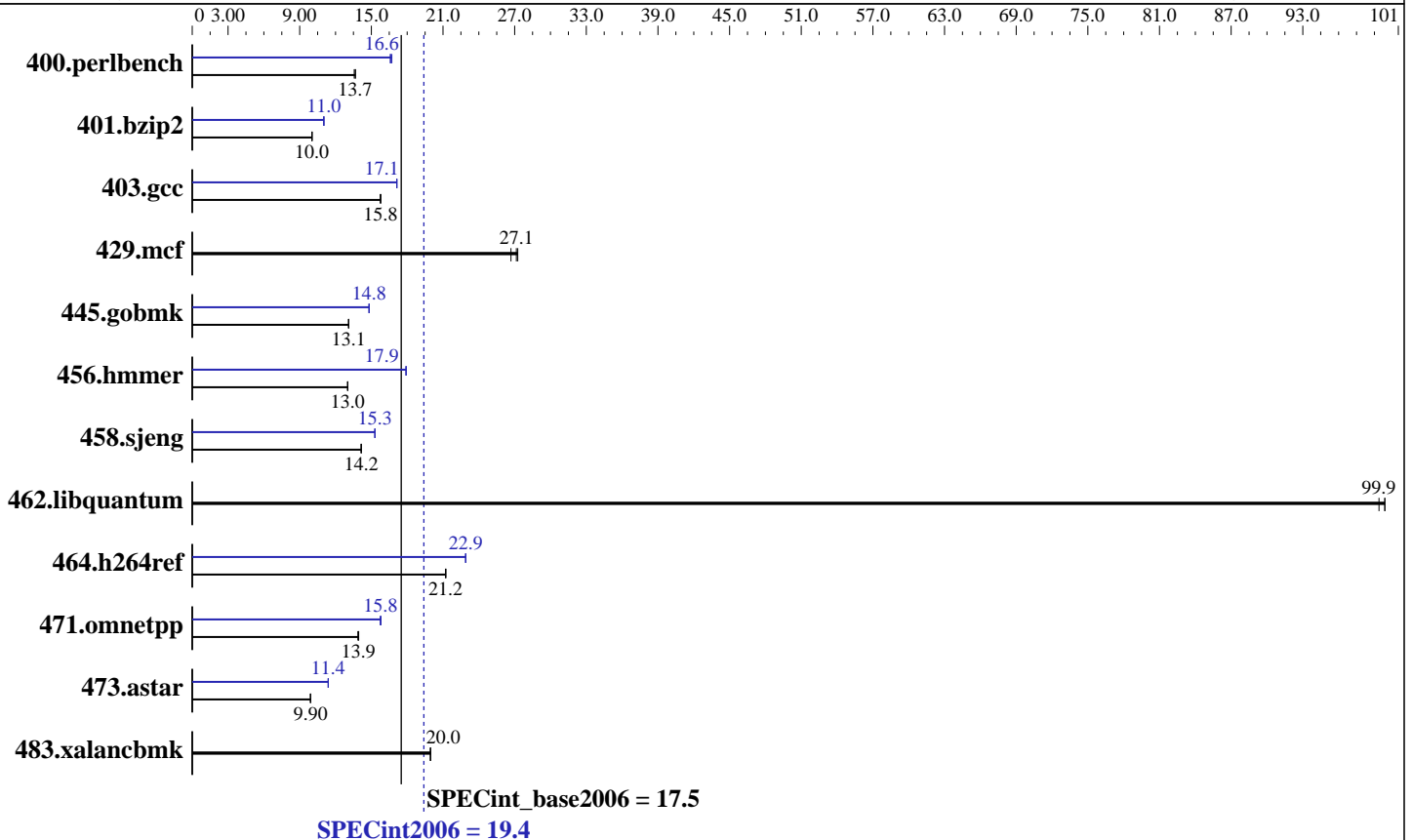
Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009



## Hardware

CPU Name: Intel Xeon E5502  
 CPU Characteristics:  
 CPU MHz: 1867  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 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: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB DDR3-1333 DR RDIMM downclocked to 800 MHz)  
 Disk Subsystem: 1 x 73 GB 10000 RPM SAS  
 Other Hardware: None

## Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ Compiler Professional 11.0 for Linux Build 20090131 Package ID: l\_cproc\_p\_11.0.080  
 Auto Parallel: Yes  
 File System: ReiserFS  
 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



# SPEC CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 19.4

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint\_base2006 = 17.5

CPU2006 license: 55

Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	720	13.6	715	13.7	<u>715</u>	<u>13.7</u>	584	16.7	589	16.6	<u>588</u>	<u>16.6</u>
401.bzip2	961	10.0	<u>962</u>	<u>10.0</u>	963	10.0	875	11.0	<u>875</u>	<u>11.0</u>	876	11.0
403.gcc	510	15.8	511	15.7	<u>510</u>	<u>15.8</u>	<u>470</u>	<u>17.1</u>	470	17.1	470	17.1
429.mcf	342	26.7	<u>336</u>	<u>27.1</u>	335	27.3	342	26.7	<u>336</u>	<u>27.1</u>	335	27.3
445.gobmk	<u>801</u>	<u>13.1</u>	801	13.1	802	13.1	<u>708</u>	<u>14.8</u>	708	14.8	708	14.8
456.hammer	716	13.0	<u>717</u>	<u>13.0</u>	717	13.0	<u>521</u>	<u>17.9</u>	521	17.9	521	17.9
458.sjeng	855	14.2	855	14.1	<u>855</u>	<u>14.2</u>	<u>791</u>	<u>15.3</u>	791	15.3	791	15.3
462.libquantum	208	99.4	<u>207</u>	<u>99.9</u>	207	99.9	208	99.4	<u>207</u>	<u>99.9</u>	207	99.9
464.h264ref	<u>1042</u>	<u>21.2</u>	1042	21.2	1043	21.2	<u>966</u>	<u>22.9</u>	967	22.9	966	22.9
471.omnetpp	451	13.9	448	13.9	<u>449</u>	<u>13.9</u>	<u>396</u>	<u>15.8</u>	395	15.8	397	15.8
473.astar	<u>709</u>	<u>9.90</u>	708	9.92	709	9.90	616	11.4	617	11.4	<u>616</u>	<u>11.4</u>
483.xalanbmk	346	20.0	346	19.9	<u>346</u>	<u>20.0</u>	346	20.0	346	19.9	<u>346</u>	<u>20.0</u>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## General Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalanbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 19.4

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint\_base2006 = 17.5

CPU2006 license: 55

Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009

## Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/Compiler/11.0/080/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc

458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc

C++ benchmarks (except as noted below):

icpc

473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmer: -DSPEC\_CPU\_LP64

458.sjeng: -DSPEC\_CPU\_LP64

462.libquantum: -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 -opt-prefetch

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 19.4

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint\_base2006 = 17.5

CPU2006 license: 55

Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009

## Peak Optimization Flags (Continued)

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) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2  
-ipo -no-prec-div -ansi-alias

456.hmmer: -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: basepeak = yes

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/spec/cpu2006.1.1/lib -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 -auto-ilp32  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

483.xalancbmk: basepeak = yes

## Peak Other Flags

Same as Base Other Flags



# SPEC CINT2006 Result

Copyright 2006-2009 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 19.4

PowerEdge M710 (Intel Xeon E5502, 1.86 GHz)

SPECint\_base2006 = 17.5

CPU2006 license: 55

Test date: Jun-2009

Test sponsor: Dell Inc.

Hardware Availability: Mar-2009

Tested by: Dell Inc.

Software Availability: Feb-2009

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.  
Report generated on Fri Jul 10 11:37:58 2009 by SPEC CPU2006 PS/PDF formatter v6323.