



SPEC® CINT2006 Result

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E4 Computer Engineering S.p.A.
E-Rack Twin E7116

SPECint®2006 = 30.0
SPECint_base2006 = 27.0

CPU2006 license: 3106

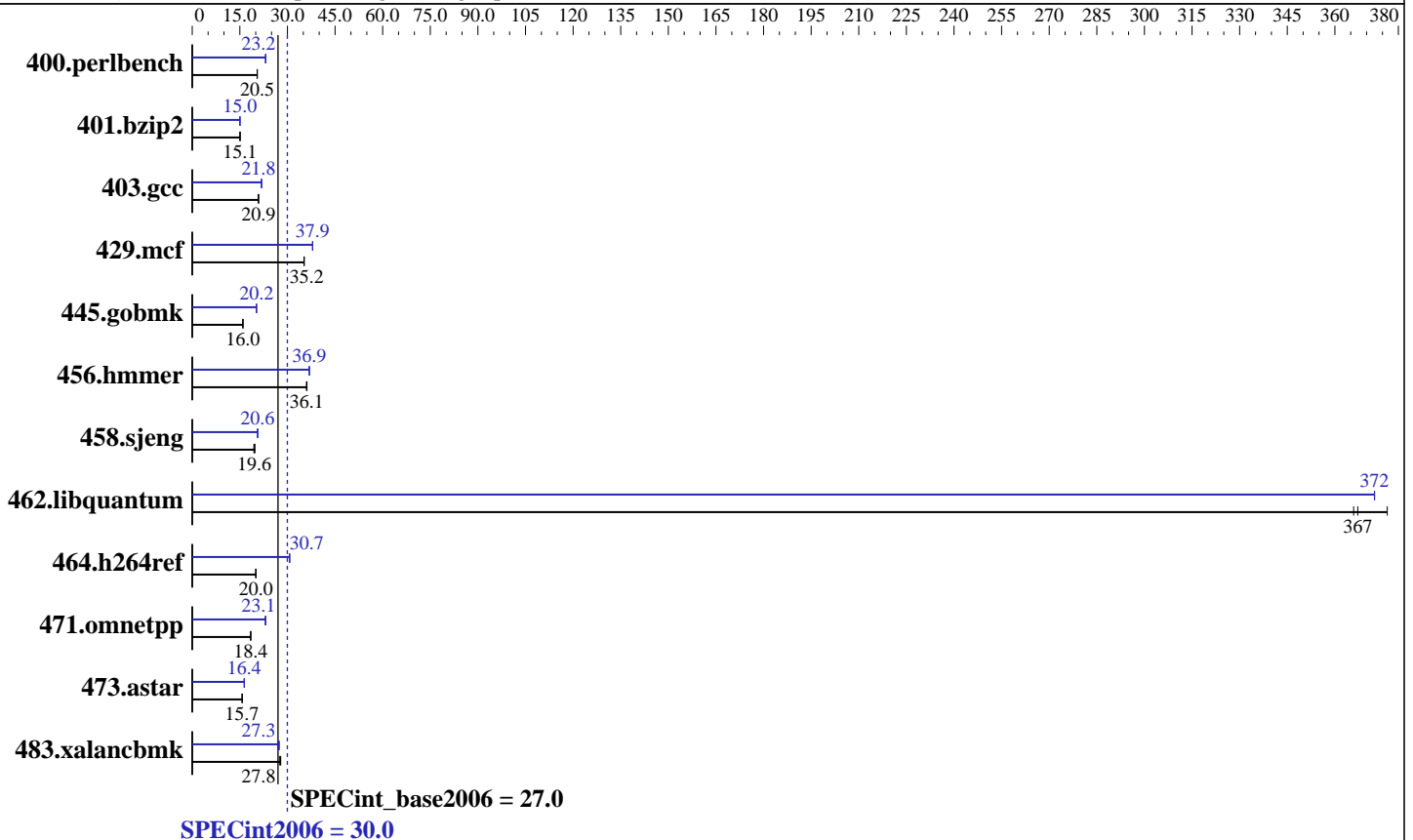
Test sponsor: E4 Computer Engineering S.p.A.

Tested by: E4 Computer Engineering S.p.A.

Test date: Mar-2011

Hardware Availability: Mar-2010

Software Availability: Jun-2009



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 PC3-10600R-9, ECC, running at 1066 MHz)
 Disk Subsystem: 1 x 250GB SATA II Western Digital WD2502ABYS-01B7A0, 7200 rpm
 Other Hardware: None

Software

Operating System: openSUSE 11.1 (x86_64)
 Kernel 2.6.27.s7-9-default
 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: Yes
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	478	20.5	477	20.5	477	20.5	421	23.2	424	23.0	422	23.2
401.bzip2	641	15.1	641	15.1	641	15.1	642	15.0	642	15.0	642	15.0
403.gcc	386	20.8	385	20.9	386	20.9	369	21.8	369	21.8	369	21.8
429.mcf	259	35.2	259	35.3	259	35.2	241	37.9	240	38.0	240	37.9
445.gobmk	657	16.0	657	16.0	657	16.0	518	20.2	518	20.2	519	20.2
456.hammer	258	36.2	259	36.0	259	36.1	253	36.9	253	36.9	253	36.9
458.sjeng	618	19.6	612	19.8	623	19.4	587	20.6	588	20.6	587	20.6
462.libquantum	56.4	367	56.6	366	55.0	376	55.6	372	55.6	372	55.6	372
464.h264ref	1102	20.1	1105	20.0	1104	20.0	721	30.7	722	30.7	721	30.7
471.omnetpp	339	18.4	339	18.4	339	18.4	270	23.1	272	23.0	270	23.1
473.astar	446	15.7	446	15.7	446	15.7	429	16.4	428	16.4	427	16.4
483.xalancbmk	248	27.8	251	27.5	247	27.9	253	27.3	253	27.3	252	27.4

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

BIOS setting:
Hyper-Threading Technology : Enabled

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=physical,0

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64



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Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/opt/SmartHeap_8/lib -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

403.gcc: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64 -par-schedule-static=32768(*)

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Peak Compiler Invocation (Continued)

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

(*) Indicates a compiler flag that was found in a non-compiler variable.

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

401.bzip2: -DSPEC_CPU_LP64

403.gcc: -DSPEC_CPU_LP64

456.hmmer: -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 -opt-prefetch

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div -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 -auto-ilp32

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.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

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Peak Optimization Flags (Continued)

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel
-opt-prefetch -ansi-alias

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/opt/SmartHeap_8.1/lib -lsmarheap

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
-L/opt/SmartHeap_8/lib -lsmarheap64

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmarheap

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/flag_icc.20110413.html

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

http://www.spec.org/cpu2006/flags/flag_icc.20110413.xml

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

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