



SPEC[®] CINT2006 Result

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ASUSTeK Computer Inc.

SPECint[®]2006 = **35.5**

ASUS RS300-E6 (P7F-E) server system
(Intel Xeon X3470)

SPECint_base2006 = **31.0**

CPU2006 license: 9016

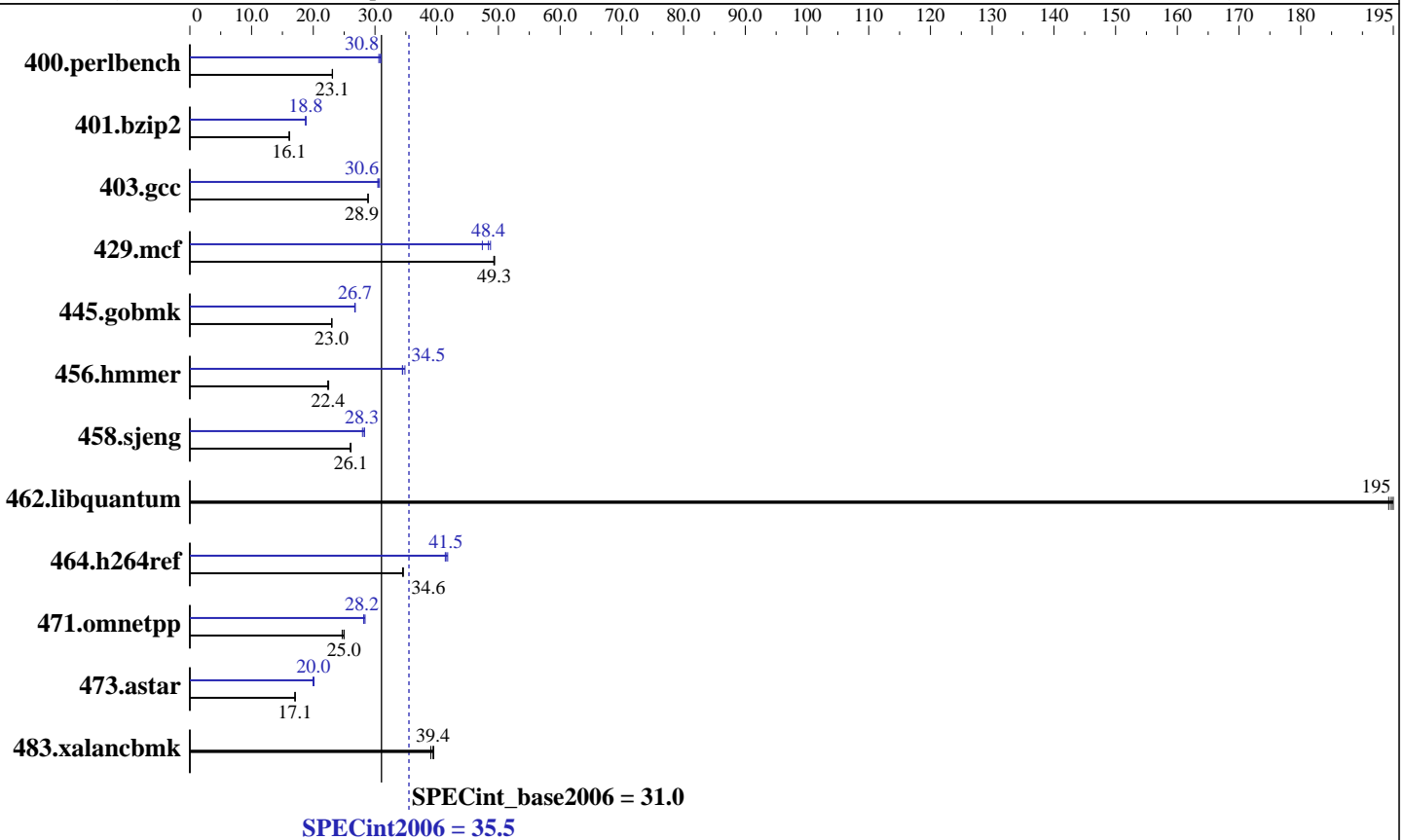
Test date: Oct-2009

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2009

Tested by: ASUSTeK Computer Inc.

Software Availability: Jul-2009



Hardware

CPU Name: Intel Xeon X3470
 CPU Characteristics: Intel Turbo Boost Technology up to 3.6 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (4 x 4 GB PC3-10600R, CL=9)
 Disk Subsystem: HITACHI HDT722525DLA380 250 GB, 7200RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1
 Build 20090511 Package ID: l_cproc_p_11.1.040
 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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	423	23.1	423	23.1	423	23.1	317	30.8	316	31.0	319	30.6
401.bzip2	598	16.1	599	16.1	599	16.1	515	18.8	513	18.8	514	18.8
403.gcc	279	28.9	279	28.9	279	28.9	264	30.5	262	30.7	263	30.6
429.mcf	185	49.3	185	49.3	185	49.4	192	47.4	187	48.7	189	48.4
445.gobmk	456	23.0	456	23.0	456	23.0	393	26.7	392	26.7	391	26.8
456.hammer	415	22.5	417	22.4	417	22.4	271	34.4	271	34.5	268	34.9
458.sjeng	466	26.0	464	26.1	464	26.1	428	28.3	428	28.3	433	28.0
462.libquantum	107	194	106	195	106	195	107	194	106	195	106	195
464.h264ref	640	34.6	642	34.5	640	34.6	530	41.8	535	41.4	533	41.5
471.omnetpp	253	24.7	250	25.0	250	25.0	222	28.2	220	28.4	222	28.2
473.astar	412	17.1	413	17.0	411	17.1	351	20.0	349	20.1	352	20.0
483.xalancbmk	177	39.0	175	39.4	175	39.5	177	39.0	175	39.4	175	39.5

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

Operating System Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter

Component Notes

Tested system case compliance with Intel ATX or SSI spec
390W or higher ATX Power Supply, 350W or higher SSI Server Power Supply
System was configured with ASPEED AST2050 VGA (on board VGA)

General Notes

The ASUS TS300-E6 (Intel Xeon X3470, 2.93 GHz) and the ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) models are electronically equivalent. The results have been measured on a ASUS RS300-E6 (Intel Xeon X3470, 2.93 GHz) model.

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 -parallel
-par-runtime-control -opt-prefetch -inline-calloc
-opt-malloc-options=3

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 -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: 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_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(pass 2) -static(pass 2)
-prof-use(pass 2) -auto-ilp32 -opt-prefetch

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

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: 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

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Peak Optimization Flags (Continued)

473.astar (continued):

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

483.xalancbmk: basepeak = yes

Peak Other Flags

Same as Base Other Flags

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20091208.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revD.20091208.xml>

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

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