



SPEC[®] CINT2006 Result

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ASUSTeK Computer Inc.

SPECint[®]2006 = 37.3

ASUS TS700-E6 (Z8PE-D12X) server system (Intel Xeon W5580)

SPECint_base2006 = 33.2

CPU2006 license: 9016

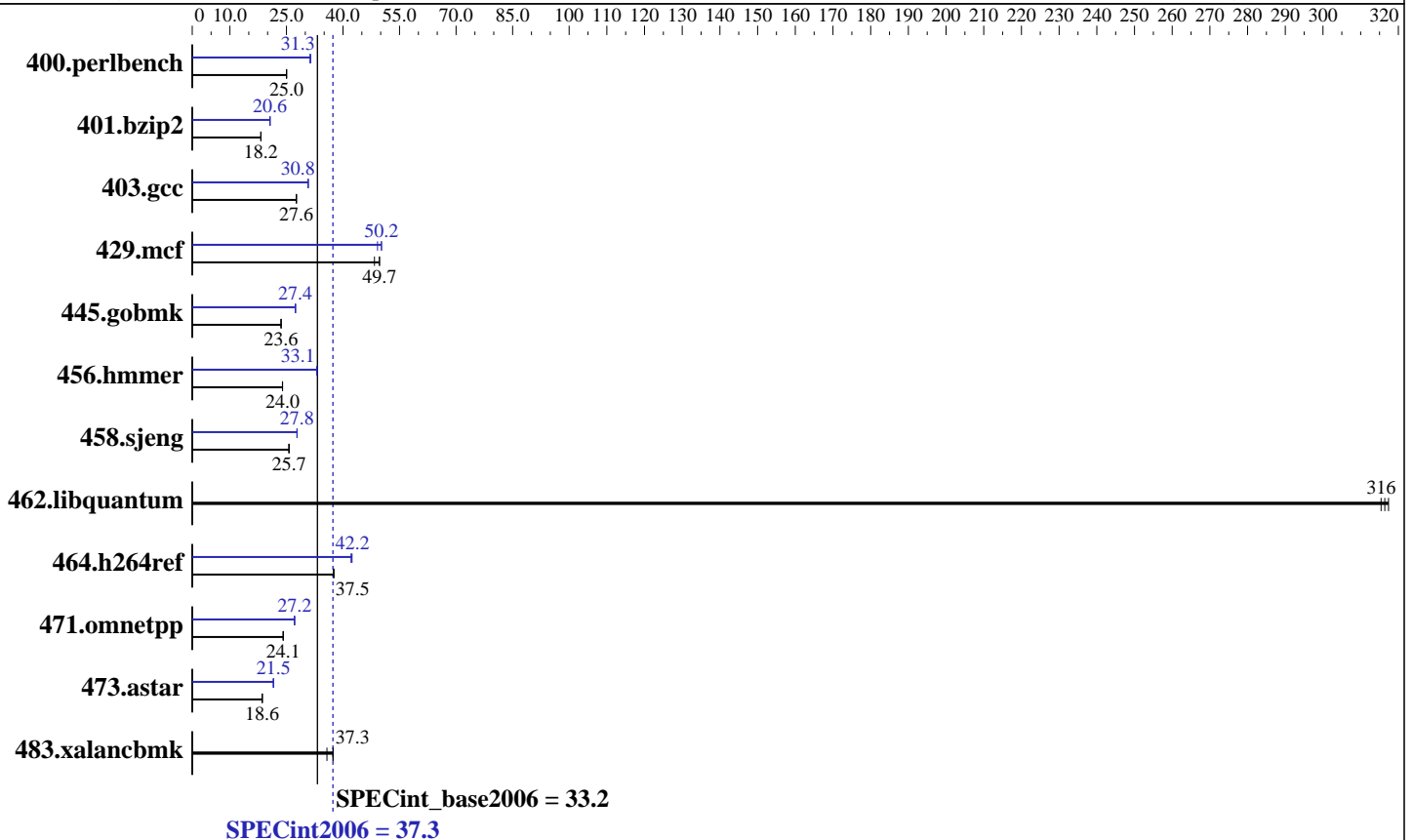
Test date: Apr-2009

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Mar-2009

Tested by: ASUSTeK Computer Inc.

Software Availability: Feb-2009



Hardware

CPU Name: Intel Xeon W5580
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3200
 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: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (12 X 4 GB PC3-10600R, CL=9)
 Disk Subsystem: HITACHI HDT725050VLA360 500GB SATAII, 7200RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2
 Kernel 2.6.16.60-0.34-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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	390	25.0	391	25.0	<u>390</u>	<u>25.0</u>	<u>312</u>	<u>31.3</u>	311	31.4	312	31.3
401.bzip2	529	18.2	531	18.2	<u>530</u>	<u>18.2</u>	468	20.6	467	20.7	<u>468</u>	<u>20.6</u>
403.gcc	<u>292</u>	<u>27.6</u>	291	27.7	292	27.6	262	30.8	<u>262</u>	<u>30.8</u>	262	30.8
429.mcf	189	48.3	184	49.7	<u>184</u>	<u>49.7</u>	182	50.2	<u>182</u>	<u>50.2</u>	186	49.2
445.gobmk	445	23.6	<u>445</u>	<u>23.6</u>	445	23.6	383	27.4	383	27.4	<u>383</u>	<u>27.4</u>
456.hammer	389	24.0	390	23.9	<u>389</u>	<u>24.0</u>	282	33.1	282	33.1	<u>282</u>	<u>33.1</u>
458.sjeng	<u>471</u>	<u>25.7</u>	472	25.6	471	25.7	435	27.8	<u>435</u>	<u>27.8</u>	435	27.8
462.libquantum	65.7	315	<u>65.5</u>	<u>316</u>	65.3	317	65.7	315	<u>65.5</u>	<u>316</u>	65.3	317
464.h264ref	590	37.5	589	37.5	<u>590</u>	<u>37.5</u>	522	42.4	<u>524</u>	<u>42.2</u>	525	42.2
471.omnetpp	<u>259</u>	<u>24.1</u>	259	24.2	259	24.1	230	27.2	<u>230</u>	<u>27.2</u>	231	27.1
473.astar	377	18.6	379	18.5	<u>378</u>	<u>18.6</u>	326	21.5	<u>326</u>	<u>21.5</u>	325	21.6
483.xalancbmk	<u>185</u>	<u>37.3</u>	185	37.4	193	35.7	<u>185</u>	<u>37.3</u>	185	37.4	193	35.7

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

Platform Notes

BIOS setting:
Hardware Prefetcher: Enabled
Adjacent Cache Line Prefetch: Enabled
Tested system case compliance with Intel EEB 3.61 spec
SSI Server Power Supply 650W or higher
System was configured with ASPEED AST2050 VGA (on board VGA)

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc



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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

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

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Peak Portability Flags (Continued)

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.bzp2: -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-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.hmmcr: -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

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Peak Optimization Flags (Continued)

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-ic11.0-int-linux64-revA.20090710.02.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.20090710.02.xml>

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

Tested with SPEC CPU2006 v1.1.
Report generated on Fri Jul 10 14:31:05 2009 by SPEC CPU2006 PS/PDF formatter v6323.