SPEC® CINT2006 Result

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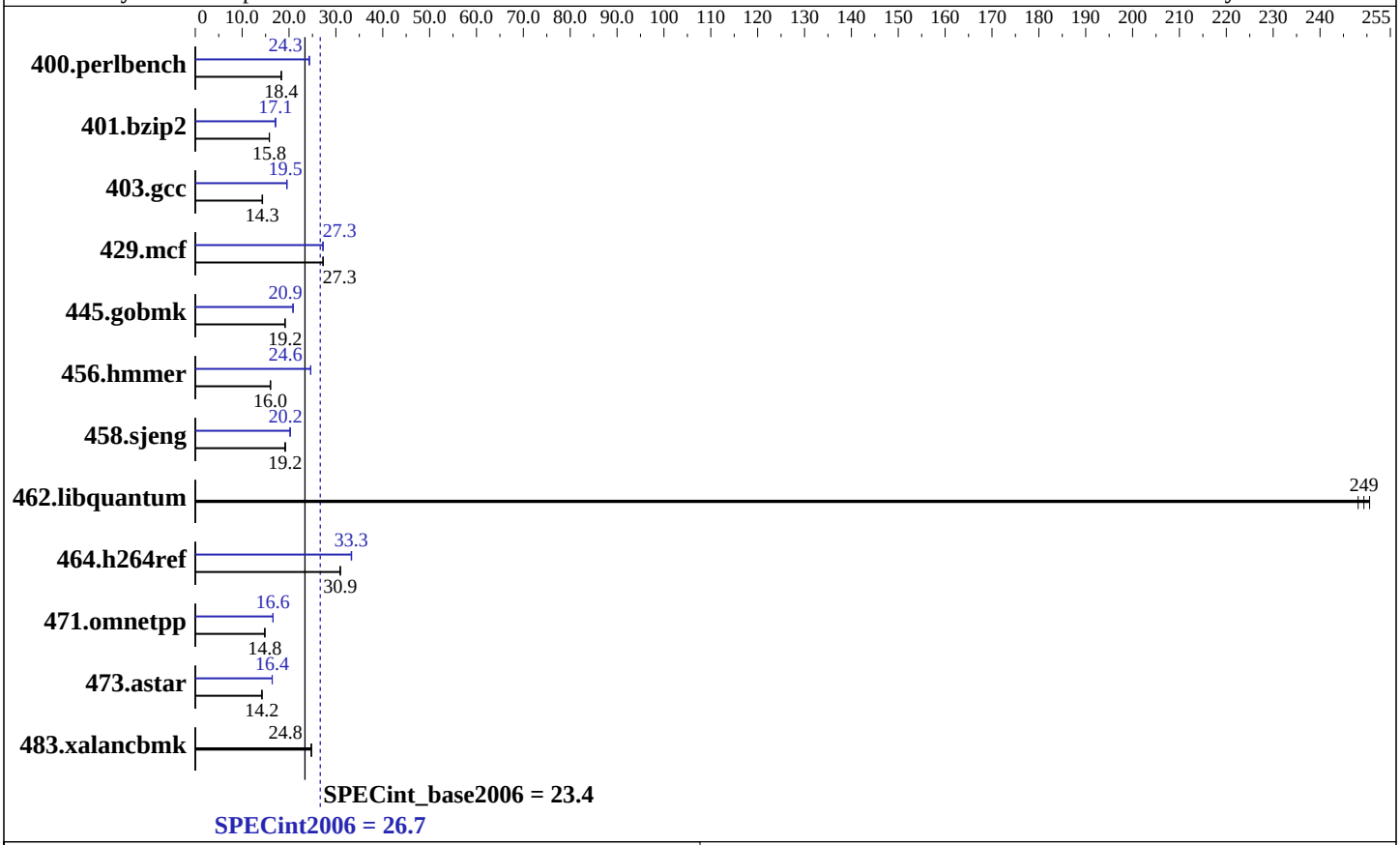
Supermicro Motherboard B7DBE

SPECint®2006 = 26.7

SPECint_base2006 = 23.4

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Feb-2009
Hardware Availability: Nov-2008
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Xeon E5440
CPU Characteristics:	Quad Core, 2.83 GHz, 1333 MHz System Bus
CPU MHz:	2833
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8 x 2GB DDR2-667 ECC Reg CL5, FBDIMM)
Disk Subsystem:	80 GB SATA, 7200RPM
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 11.0 for Linux Build 20080930 Package ID: l_cproc_p_11.0.066
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	533	18.3	532	18.4	**532**	**18.4**	402	24.3	**402**	**24.3**	401	24.4
401.bzip2	610	15.8	**611**	**15.8**	612	15.8	563	17.1	**563**	**17.1**	565	17.1
403.gcc	565	14.3	561	14.4	**562**	**14.3**	412	19.6	412	19.5	**412**	**19.5**
429.mcf	335	27.2	334	27.3	**334**	**27.3**	335	27.3	335	27.2	**335**	**27.3**
445.gobmk	**548**	**19.2**	548	19.2	548	19.2	**503**	**20.9**	503	20.9	503	20.9
456.hmmer	582	16.0	**582**	**16.0**	581	16.0	**379**	**24.6**	379	24.6	379	24.6
458.sjeng	633	19.1	**631**	**19.2**	629	19.2	599	20.2	597	20.3	**598**	**20.2**
462.libquantum	82.7	251	83.5	248	**83.1**	**249**	82.7	251	83.5	248	**83.1**	**249**
464.h264ref	717	30.9	714	31.0	**715**	**30.9**	663	33.4	665	33.3	**665**	**33.3**
471.omnetpp	420	14.9	423	14.8	**421**	**14.8**	**377**	**16.6**	377	16.6	377	16.6
473.astar	493	14.2	**494**	**14.2**	494	14.2	428	16.4	**428**	**16.4**	427	16.4
483.xalancbmk	278	24.8	**279**	**24.8**	279	24.7	278	24.8	**279**	**24.8**	279	24.7

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

General Notes

OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to
Adjacent Cache Line Prefetch = enabled (Default = disabled)
Tested system can be used with CSE-161M-320B.
To ensure system stability, SBE-710E-D28 - Enclosure chassis with two 1400W power supplies are required.
Products description can be obtained at
http://www.supermicro.com/servers/blade/module/SBI-7125B-T1.cfm
http://www.supermicro.com/servers/blade/enclosure/

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -par-runtime-control -opt-prefetch`

C++ benchmarks:
`-xSSE4.1 -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/11.0/066/bin/intel64/icc`

456.hmmer: `/opt/intel/Compiler/11.0/066/bin/intel64/icc`

C++ benchmarks:
`icpc`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -ansi-alias -opt-prefetch`

401.bzip2: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32 -opt-prefetch -ansi-alias`

403.gcc: `-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3`

429.mcf: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

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

456.hmmer: `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -auto-ilp32`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4`

462.libquantum: `basepeak = yes`

464.h264ref: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap`

473.astar: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap`

483.xalancbmk: `basepeak = yes`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.html
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.01.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.xml
http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.01.xml

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