SPEC® CINT2006 Result

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Acer Incorporated

(Test Sponsor: Acer Incorporation)

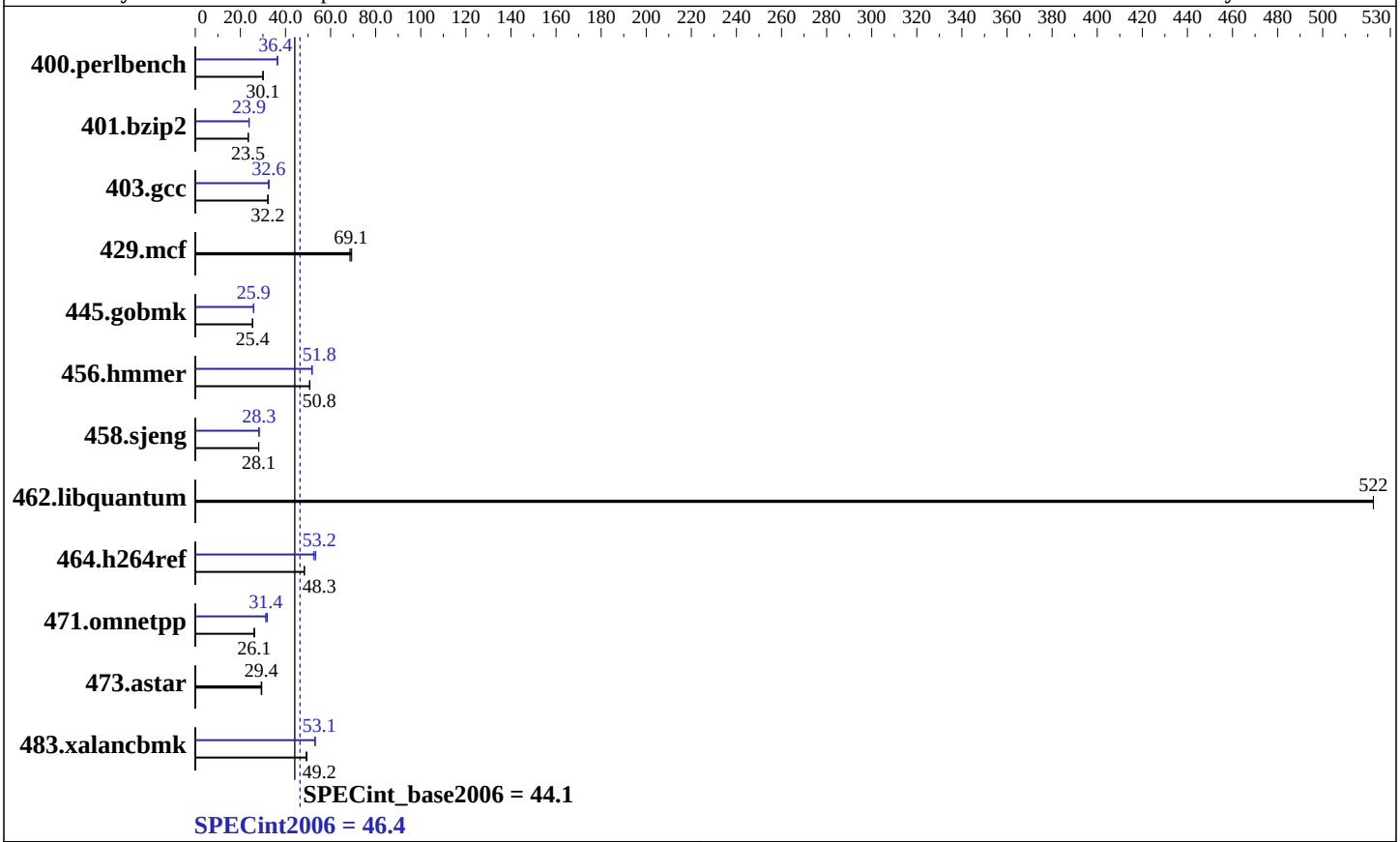
Acer AR320 F2 (Xeon E3-1220)

SPECint®2006 = 46.4

SPECint_base2006 = 44.1

CPU2006 license: 97
Test sponsor: Acer Incorporation
Tested by: Acer Incorporation

Test date: Dec-2011
Hardware Availability: Jan-2012
Software Availability: Dec-2011



Hardware

CPU Name:	Intel Xeon E3-1220
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	3100
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
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:	8 GB (2 x 4 GB 2Rx8 PC3-10600E-9,ECC)
Disk Subsystem:	1 x 250 GB SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.1 Kernel 2.6.32-131.0.15.el6.x86_64-default
Compiler:	C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	325	30.1	**325**	**30.1**	326	30.0	269	36.4	268	36.5	**268**	**36.4**
401.bzip2	411	23.5	**411**	**23.5**	411	23.5	**405**	**23.9**	405	23.8	404	23.9
403.gcc	250	32.2	250	32.2	**250**	**32.2**	247	32.6	**247**	**32.6**	247	32.6
429.mcf	**132**	**69.1**	133	68.6	131	69.4	**132**	**69.1**	133	68.6	131	69.4
445.gobmk	**413**	**25.4**	413	25.4	413	25.4	406	25.9	406	25.9	**406**	**25.9**
456.hmmer	183	50.9	184	50.6	**184**	**50.8**	180	51.8	**180**	**51.8**	180	51.8
458.sjeng	430	28.2	**430**	**28.1**	431	28.1	428	28.3	428	28.3	**428**	**28.3**
462.libquantum	**39.7**	**522**	39.7	522	39.7	522	**39.7**	**522**	39.7	522	39.7	522
464.h264ref	457	48.4	**458**	**48.3**	459	48.3	415	53.3	**416**	**53.2**	422	52.5
471.omnetpp	238	26.3	**239**	**26.1**	240	26.1	**199**	**31.4**	200	31.3	196	32.0
473.astar	240	29.2	**239**	**29.4**	238	29.5	240	29.2	**239**	**29.4**	238	29.5
483.xalancbmk	139	49.5	140	49.2	**140**	**49.2**	130	53.2	130	53.0	**130**	**53.1**

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

Operating System Notes

```
Large pages were disabled for this run.
```

General Notes

```
Binaries compiled on RHEL5.5
```

Base Compiler Invocation

C benchmarks:
```
icc  -m64
```

C++ benchmarks:
```
icpc -m64
```

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`

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Base Portability Flags (Continued)

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:
`-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32`

C++ benchmarks:
`-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs -L/smartheap -lsmartheap64`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

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Peak Portability Flags (Continued)

401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-ansi-alias

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

403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-ansi-alias

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

462.libquantum: basepeak = yes

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

C++ benchmarks:

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

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Peak Optimization Flags (Continued)

473.astar: `basepeak = yes`

483.xalancbmk: `-xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias -Wl,-z,muldefs -L/smartheap -lsmartheap`

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/Intel-ic12.1-official-linux64.20111122.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml`

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Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 01:58:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 21 February 2012.