SPEC® CINT2006 Result
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Acer Incorporated

Acer AR320 F2 (Intel Xeon E3-1230 v2)

SPECint®2006 = 50.7

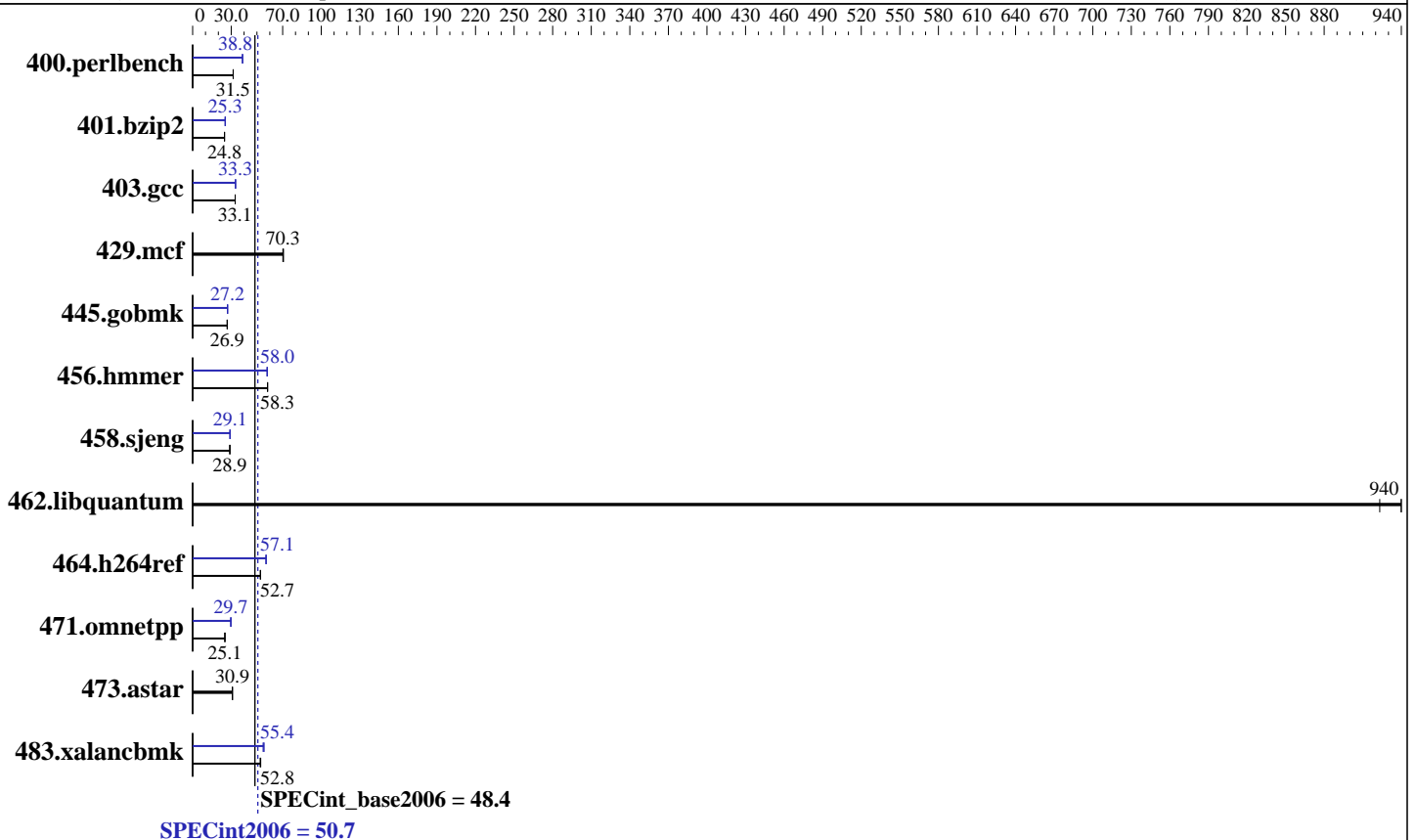SPECint_base2006 = 48.4

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

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

Benchmark	Score
400.perlbench	38.8 / 31.5
401.bzip2	25.3 / 24.8
403.gcc	33.3 / 33.1
429.mcf	70.3
445.gobmk	27.2 / 26.9
456.hmmer	58.0 / 58.3
458.sjeng	29.1 / 28.9
462.libquantum	940
464.h264ref	57.1 / 52.7
471.omnetpp	29.7 / 25.1
473.astar	30.9
483.xalancbmk	55.4 / 52.8

SPECint_base2006 = 48.4

SPECint2006 = 50.7

Hardware

CPU Name: Intel Xeon E3-1230 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz: 3300
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 (2 x 8 GB 2Rx8 PC3-10600E-9,ECC)
Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.1 (Santiago)
2.6.32-131.0.15.el6.x86_64
Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
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	310	31.5	**310**	**31.5**	310	31.5	**252**	**38.8**	252	38.8	252	38.8
401.bzip2	389	24.8	389	24.8	**389**	**24.8**	381	25.3	381	25.4	**381**	**25.3**
403.gcc	243	33.1	**243**	**33.1**	243	33.1	**241**	**33.3**	241	33.4	242	33.3
429.mcf	130	70.3	129	70.7	**130**	**70.3**	130	70.3	129	70.7	**130**	**70.3**
445.gobmk	390	26.9	390	26.9	**390**	**26.9**	**386**	**27.2**	386	27.2	386	27.2
456.hmmer	**160**	**58.3**	160	58.3	160	58.3	**161**	**58.0**	161	58.0	161	58.0
458.sjeng	**418**	**28.9**	418	28.9	418	29.0	**416**	**29.1**	416	29.1	416	29.1
462.libquantum	**22.0**	**940**	22.0	940	22.4	923	**22.0**	**940**	22.0	940	22.4	923
464.h264ref	**420**	**52.7**	420	52.7	420	52.7	**387**	**57.1**	387	57.1	387	57.1
471.omnetpp	**249**	**25.1**	250	25.0	248	25.2	**210**	**29.7**	210	29.8	211	29.6
473.astar	226	31.0	**227**	**30.9**	228	30.9	226	31.0	**227**	**30.9**	228	30.9
483.xalancbmk	131	52.5	**131**	**52.8**	130	52.9	124	55.5	**125**	**55.4**	126	54.8

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

Operating System Notes

    Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

    Sysinfo program /usr/cpu2006/config/sysinfo.rev6800
    $Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
    running on localhost.localdomain Fri Jun 15 19:14:09 2012

    This section contains SUT (System Under Test) info as seen by
    some common utilities. To remove or add to this section, see:
      http://www.spec.org/cpu2006/Docs/config.html#sysinfo

    From /proc/cpuinfo
       model name : Intel(R) Xeon(R) CPU E3-1230 V2 @ 3.30GHz
          1 "physical id"s (chips)
          8 "processors"
       cores, siblings (Caution: counting these is hw and system dependent. The
       following excerpts from /proc/cpuinfo might not be reliable. Use with
       caution.)
          cpu cores : 4
          siblings : 8
          physical 0: cores 0 1 2 3
       cache size : 8192 KB

    From /proc/meminfo
       MemTotal: 16300896 kB
       HugePages_Total: 0

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Platform Notes (Continued)

```
    Hugepagesize:        2048 kB

  /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 6.1 (Santiago)

  From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
    Linux localhost.localdomain 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10
    15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Jun 15 19:12 last=5

  SPEC is set to: /usr/cpu2006
    Filesystem      Type     Size  Used Avail Use% Mounted on
    /dev/mapper/VolGroup-lv_root
                    ext4      50G   42G  5.2G  90% /

  Additional information from dmidecode:
    Memory:
    2x Hynix/Hyundai HMT41GU7MFR8A-H9 8 GB 1333 MHz 2 rank

  (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"
OMP_NUM_THREADS = "4"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL6.1
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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:

```
    -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
```

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Peak Portability Flags

```
     400.perlbench: -DSPEC_CPU_LINUX_IA32
         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

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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