# SPEC® CINT2006 Result

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## Acer Incorporated

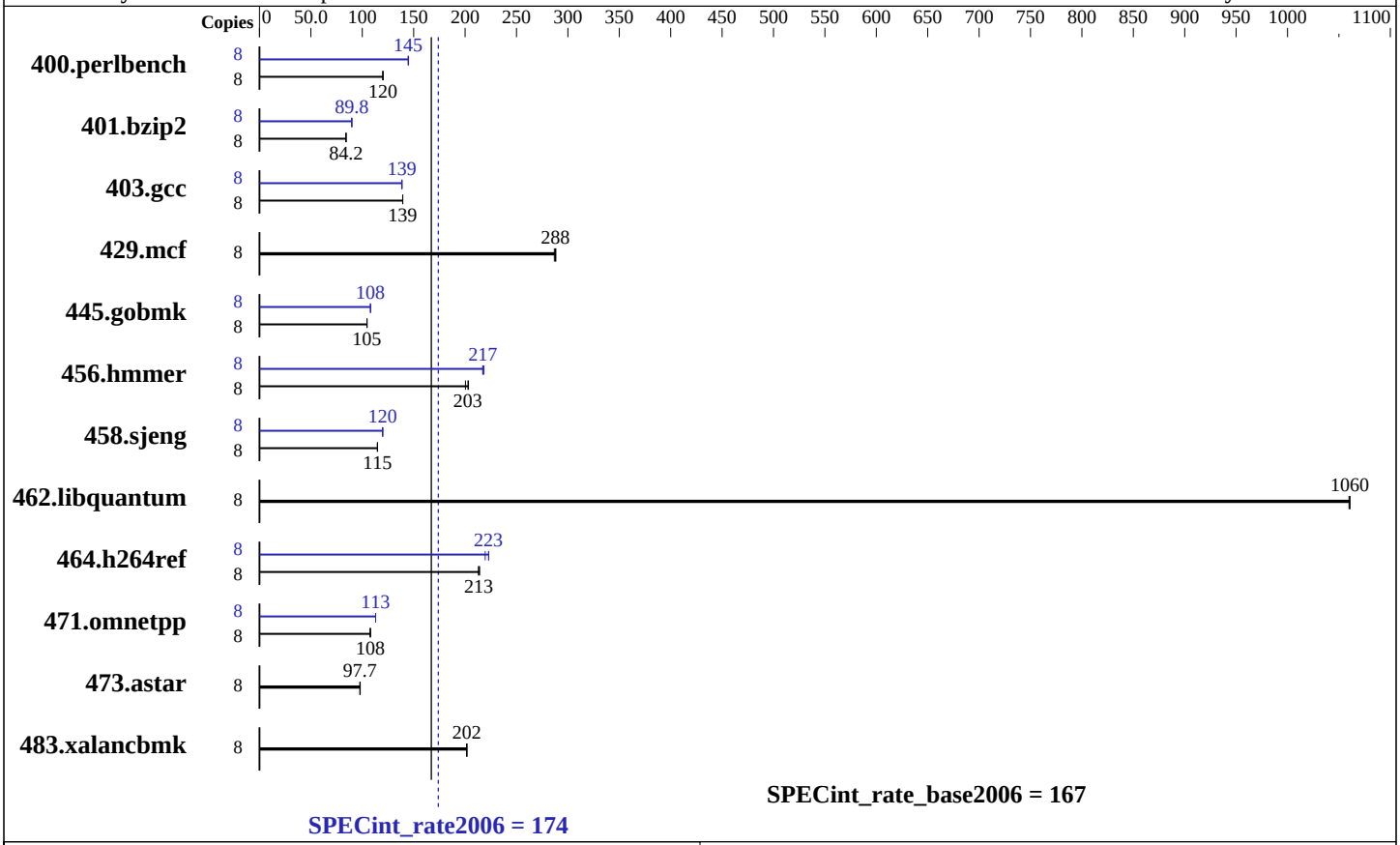
## Acer AR360 F2 (Xeon E5-2603)

SPECint®_rate2006 = 174

SPECint_rate_base2006 = 167

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

**Test date:** Jul-2012
**Hardware Availability:** Jul-2012
**Software Availability:** Dec-2011




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5-2603 |
| CPU Characteristics: | |
| CPU MHz: | 1800 |
| 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: | 256 KB I+D on chip per core |
| L3 Cache: | 10 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 128 GB (16 x 8 GB 2Rx4 PC3L-10600R-9, ECC) |
| Disk Subsystem: | 1 x 2 TB SAS, 7200 RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Red Hat Enterprise Linux Server release 6.2 (Santiago)<br>2.6.32-220.el6.x86_64 |
| Compiler: | C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux |
| Auto Parallel: | No |
| File System: | ext4 |
| System State: | Run level 3 (multi-user) |
| Base Pointers: | 32-bit |
| Peak Pointers: | 32/64-bit |
| Other Software: | Microquill SmartHeap V9.01 |

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## Results Table

| Benchmark | Base | | | | | | | Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Copies | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 8 | 650 | 120 | 652 | 120 | **651** | **120** | 8 | 539 | 145 | **540** | **145** | 540 | 145 |
| 401.bzip2 | 8 | **916** | **84.2** | 919 | 84.0 | 916 | 84.2 | 8 | 861 | 89.7 | **859** | **89.8** | 859 | 89.9 |
| 403.gcc | 8 | 462 | 139 | 462 | 139 | **462** | **139** | 8 | 464 | 139 | **465** | **139** | 466 | 138 |
| 429.mcf | 8 | 254 | 287 | 253 | 288 | **253** | **288** | 8 | 254 | 287 | 253 | 288 | **253** | **288** |
| 445.gobmk | 8 | 802 | 105 | 803 | 105 | **802** | **105** | 8 | 777 | 108 | **777** | **108** | 778 | 108 |
| 456.hmmer | 8 | 367 | 203 | **368** | **203** | 373 | 200 | 8 | **343** | **217** | 344 | 217 | 342 | 218 |
| 458.sjeng | 8 | **843** | **115** | 843 | 115 | 844 | 115 | 8 | 807 | 120 | **808** | **120** | 808 | 120 |
| 462.libquantum | 8 | 156 | 1060 | 156 | 1060 | **156** | **1060** | 8 | 156 | 1060 | 156 | 1060 | **156** | **1060** |
| 464.h264ref | 8 | **830** | **213** | 827 | 214 | 831 | 213 | 8 | **795** | **223** | 794 | 223 | 806 | 220 |
| 471.omnetpp | 8 | 463 | 108 | 464 | 108 | **463** | **108** | 8 | 443 | 113 | **443** | **113** | 443 | 113 |
| 473.astar | 8 | **575** | **97.7** | 575 | 97.7 | 573 | 98.0 | 8 | **575** | **97.7** | 575 | 97.7 | 573 | 98.0 |
| 483.xalancbmk | 8 | 274 | 202 | **274** | **202** | 274 | 202 | 8 | 274 | 202 | **274** | **202** | 274 | 202 |

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

## Submit Notes

```
The numactl mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate numactl commands to bind each copy to a specific processor.
For details, please see the config file.
```

## 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 Sat Jul 14 09:21:26 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 E5-2603 0 @ 1.80GHz
      2 "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  : 4
```

Continued on next page

## Platform Notes (Continued)

```
        physical 0: cores 0 1 2 3
        physical 1: cores 0 1 2 3
     cache size : 10240 KB

  From /proc/meminfo
     MemTotal:       132132504 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.2 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
     EST 2011 x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Jul 13 18:33

  SPEC is set to: /usr/cpu2006
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/mapper/VolGroup-lv_root
                    ext4    338G  113G  209G  36% /

  Additional information from dmidecode:
    Memory:
     14x Hynix Semiconducto HMT31GR7BFR4A 8 GB 1066 MHz 1 rank
     2x Hynix Semiconductor HMT31GR7BFR4A- 8 GB 1066 MHz 1 rank

  (End of data from sysinfo program)
```

## General Notes

```
 Environment variables set by runspec before the start of the run:
 LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"

  Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
  memory using RHEL5.5
  Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
  Filesystem page cache cleared with:
  echo 1>       /proc/sys/vm/drop_caches
  runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>
  The Acer AR360 F2 and AR380 F2 are electronically equivalent.
  This result was measured on Acer AR360 F2.
```

## Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/smartheap -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

## Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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) -auto-ilp32

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

403.gcc: -xAVX -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3

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

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 -auto-ilp32

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) -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

## 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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