SPEC® CINT2006 Result

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Acer Incorporated

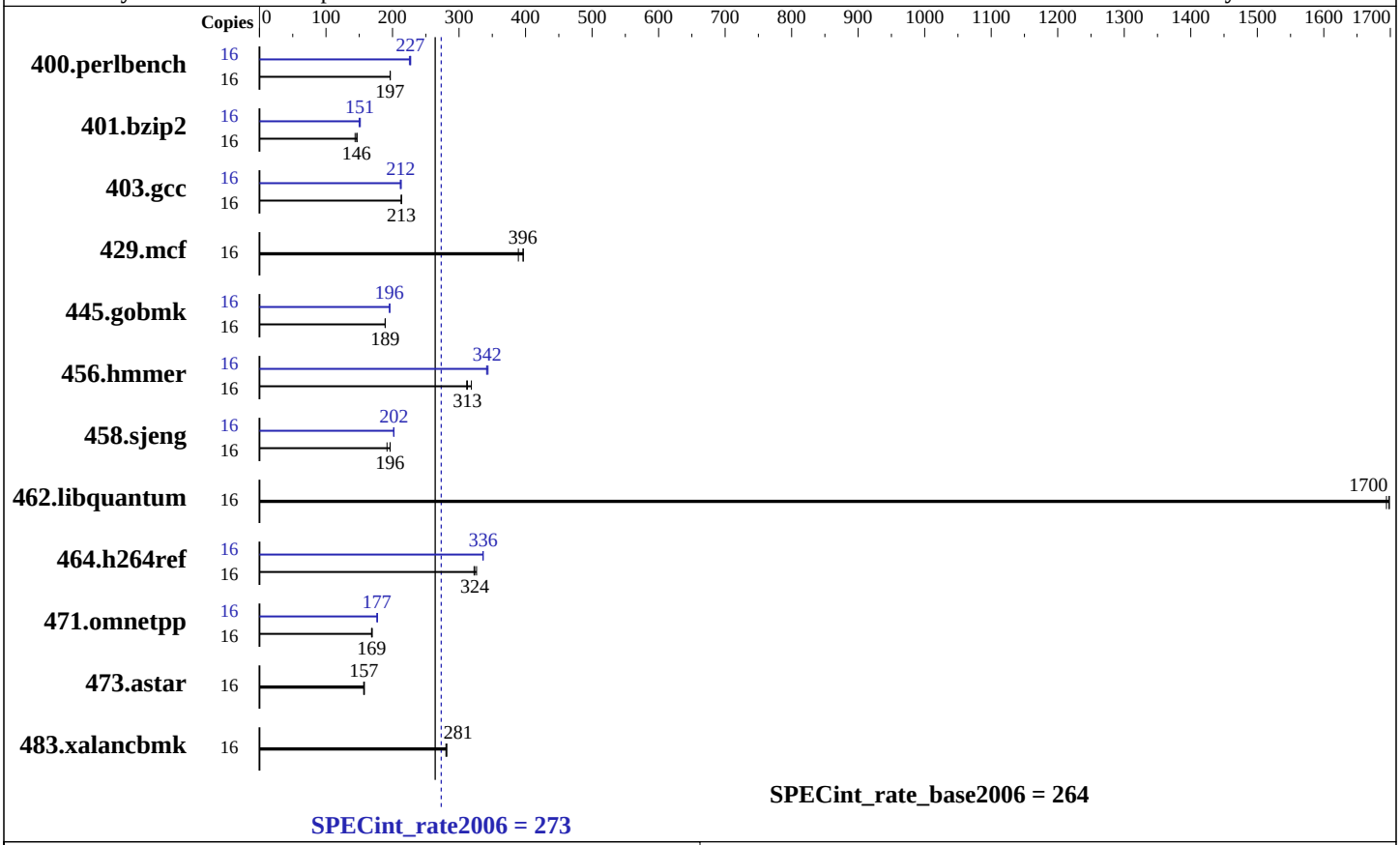
Altos R360 F2 (Intel Xeon E5-2650)

SPECint®_rate2006 = 273

SPECint_rate_base2006 = 264

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

Test date: May-2013
Hardware Availability: May-2013
Software Availability: Feb-2013



Hardware

CPU Name:	Intel Xeon E5-2650
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	8 cores, 1 chip, 8 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:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (4 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem:	1 x 500 GB SATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.3 (Santiago) 2.6.32-279.el6.x86_64
Compiler:	C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 5 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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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	16	796	196	795	197	**795**	**197**	16	694	225	**689**	**227**	688	227
401.bzip2	16	1074	144	**1057**	**146**	1052	147	16	**1025**	**151**	1018	152	1031	150
403.gcc	16	604	213	**604**	**213**	604	213	16	608	212	**607**	**212**	604	213
429.mcf	16	375	389	**368**	**396**	368	397	16	375	389	**368**	**396**	368	397
445.gobmk	16	888	189	**888**	**189**	887	189	16	859	195	**858**	**196**	856	196
456.hmmer	16	469	319	**478**	**313**	479	312	16	**436**	**342**	437	341	434	344
458.sjeng	16	1010	192	**986**	**196**	985	197	16	959	202	**959**	**202**	959	202
462.libquantum	16	195	1700	**195**	**1700**	196	1690	16	195	1700	**195**	**1700**	196	1690
464.h264ref	16	1098	323	1085	326	**1094**	**324**	16	1054	336	1053	336	**1053**	**336**
471.omnetpp	16	**592**	**169**	590	169	594	168	16	563	178	566	177	**566**	**177**
473.astar	16	717	157	**715**	**157**	712	158	16	717	157	**715**	**157**	712	158
483.xalancbmk	16	**392**	**281**	392	281	394	280	16	**392**	**281**	392	281	394	280

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

Submit Notes

```
The taskset mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate taskset commands to bind each copy to a specific processor.
For details, please see the config file.
This result was measured on Altos R360 F2.
Altos R360 F2 and Altos R380 F2 are electronically equivalent.
```

Operating System Notes

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

Platform Notes

```
Sysinfo program /usr/cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Tue May 28 05:43:30 2013

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 E5-2650 0 @ 2.00GHz
      1 "physical id"s (chips)
      16 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
   caution.)
```

Continued on next page

Platform Notes (Continued)

```
        cpu cores : 8
        siblings  : 16
        physical 0: cores 0 1 2 3 4 5 6 7
     cache size : 20480 KB

  From /proc/meminfo
     MemTotal:       32851048 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.3 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.3 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux localhost.localdomain 2.6.32-279.el6.x86_64 #1 SMP Wed Jun 13 18:24:36
     EDT 2012 x86_64 x86_64 x86_64 GNU/Linux

  run-level 5 May 27 15:34 last=3

  SPEC is set to: /usr/cpu2006
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/mapper/VolGroup-lv_root
                    ext4    443G   33G  388G   8% /

  Additional information from dmidecode:
    BIOS Acer Inc. P03 07/26/2012
    Memory:
     4x   8 GB
     1x DimmA2_Manufacturer DimmA2_PartNumber
     1x DimmA3_Manufacturer DimmA3_PartNumber
     1x DimmB2_Manufacturer DimmB2_PartNumber
     1x DimmB3_Manufacturer DimmB3_PartNumber
     1x DimmC2_Manufacturer DimmC2_PartNumber
     1x DimmC3_Manufacturer DimmC3_PartNumber
     1x DimmD2_Manufacturer DimmD2_PartNumber
     1x DimmD3_Manufacturer DimmD3_PartNumber
     1x DimmE1_Manufacturer DimmE1_PartNumber
     1x DimmE2_Manufacturer DimmE2_PartNumber
     1x DimmE3_Manufacturer DimmE3_PartNumber
     1x DimmF1_Manufacturer DimmF1_PartNumber
     1x DimmF2_Manufacturer DimmF2_PartNumber
     1x DimmF3_Manufacturer DimmF3_PartNumber
     1x DimmG1_Manufacturer DimmG1_PartNumber
     1x DimmG2_Manufacturer DimmG2_PartNumber
     1x DimmG3_Manufacturer DimmG3_PartNumber
     1x DimmH1_Manufacturer DimmH1_PartNumber
     1x DimmH2_Manufacturer DimmH2_PartNumber
```

Continued on next page

Platform Notes (Continued)

```
      1x DimmH3_Manufacturer DimmH3_PartNumber
      4x Hynix Semiconductor HMT31GR7CFR4C-PB 8 GB 1600 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:/usr/cpu2006/sh"

 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
```

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/sh -lsmartheap
```

Base Other Flags

C benchmarks:

Continued on next page

Base Other Flags (Continued)

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`

Continued on next page

Peak Optimization Flags (Continued)

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/sh -lsmartheap

473.astar: basepeak = yes

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-ic13-official-linux64.20130716.html
http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.20130716.xml
http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml

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Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 16:26:49 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 July 2013.