Acer Incorporated
Altos T310 F3 (Intel Xeon E3-1220 v3)

SPECint\_rate2006 = 175
SPECint\_rate_base2006 = 168

CPU2006 license: 97
Test sponsor: Acer Incorporated
Tested by: Acer Incorporated
Hardware Availability: Sep-2013
Software Availability: Feb-2013

- **CPU Name:** Intel Xeon E3-1220 v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.50 GHz
- **CPU MHz:** 3100
- **FPU:** Integrated
- **CPU(s) enabled:** 4 cores, 1 chip, 4 cores/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 2Rx4 PC3-12800E-11, ECC)
- **Disk Subsystem:** 1 x 500 GB SATA, 7200 RPM
- **Operating System:** Red Hat Enterprise Linux Server release 6.4 (Santiago)
- **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 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.0
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>139</td>
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<tr>
<td>401.bzip2</td>
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<td>81.3</td>
<td>471</td>
<td>81.9</td>
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<td>80.7</td>
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<td>103</td>
<td>401</td>
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<tr>
<td>456.hmmer</td>
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<td>245</td>
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<td>458.sjeng</td>
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<td>125</td>
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<td>462.libquantum</td>
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<td>51.7</td>
<td>1600</td>
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<td>464.h264ref</td>
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<td>79.5</td>
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<tr>
<td>483.xalancbmk</td>
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<td>199</td>
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<td>203</td>
<td>137</td>
<td>202</td>
<td>139</td>
<td>199</td>
</tr>
</tbody>
</table>

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.

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 speccputest Fri May 31 20:13:11 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 E3-1220 v3 @ 3.10GHz
  1 "physical id"s (chips)
  4 "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

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Platform Notes (Continued)

physical 0: cores 0 1 2 3
Cache size : 8192 KB

From /proc/meminfo
MemTotal: 16289252 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
Linux speccputest 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 May 31 20:11

SPEC is set to: /usr/cpu2006

Filesystem    Type    Size  Used Avail Use% Mounted on
/dev/sda3     ext4    413G  5.5G  386G   2% /

Additional information from dmidecode:
BIOS Acer
Memory:
2x 8 GB
2x Kingston ACR16D3LE1EFG/8G 8 GB 1600 MHz 2 rank
2x [Empty] [Empty]

(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

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| SPECint_rate2006 | 175 |
| SPECint_rate_base2006 | 168 |

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

Base Compiler Invocation (Continued)

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:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -W1,-z,muldefs -L/sh -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
Acer Incorporated
Altos T310 F3 (Intel Xeon E3-1220 v3)

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CPU2006 license: 97
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Peak Portability Flags

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<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>-DSPEC_CPU_LINUX</td>
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Peak Optimization Flags

**C benchmarks:**

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</tr>
<tr>
<td>401.bzip2</td>
<td>-xCORE-AVX2(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</td>
</tr>
<tr>
<td>403.gcc</td>
<td>-xCORE-AVX2 -ipo -O3 -no-prec-div</td>
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<tr>
<td>429.mcf</td>
<td>basepeak = yes</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias -opt-mem-layout-trans=3</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto-ilp32</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>basepeak = yes</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias</td>
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**C++ benchmarks:**

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Peak Optimization Flags (Continued)

483.xalancbmk: basepeak = yes

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Other Flags

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.20130716.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.20130716.xml

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

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