**Acer Incorporated**

**Acer AT350 F2 (Xeon E5-2690)**

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>SPECfp_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>88.6</strong></td>
<td><strong>83.8</strong></td>
</tr>
</tbody>
</table>

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Test date:** June-2012

**Hardware Availability:** May-2012

**Tested by:** Acer Incorporated

**Software Availability:** Dec-2011

---

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Xeon E5-2690</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>Intel Turbo Boost Technology up to 3.80 GHz</td>
</tr>
<tr>
<td>CPU MHZ:</td>
<td>2900</td>
</tr>
<tr>
<td>FPU:</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>16 cores, 2 chips, 8 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable:</td>
<td>1.2 chips</td>
</tr>
<tr>
<td>Primary Cache:</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache:</td>
<td>256 KB I+D on chip per core</td>
</tr>
</tbody>
</table>

### Software

| Operating System:        | Red Hat Enterprise Linux Server release 6.2 |
|                         | (Santiago)                                  |
|                         | 2.6.32-220.el6.x86_64                      |
| Compiler:                | C/C++: Version 12.1.0.225 of Intel C++ Studio XE |
|                          | for Linux;                                 |
|                          | Fortran: Version 12.1.0.225 of Intel Fortran |
|                          | Studio XE for Linux                        |
| Auto Parallel:           | Yes                                        |
| File System:             | ext4                                       |

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Acer AT350 F2 (Xeon E5-2690)

**SPEC CFP2006 Result**

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**Acer AT350 F2 (Xeon E5-2690)**

**SPECfp2006 = 88.6**

**SPECfp_base2006 = 83.8**

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**L3 Cache:** 20 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 500 GB SATA, 7200 RPM

**Other Hardware:** None

**System State:** Run level 3 (multi-user)

**Base Pointers:** 64-bit

**Peak Pointers:** 32/64-bit

---

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<tr>
<td>410.bwaves</td>
<td>41.6</td>
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<td>42.0</td>
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<td>41.2</td>
<td>329</td>
<td>42.1</td>
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<td>41.6</td>
<td>326</td>
<td>41.4</td>
<td>328</td>
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<tr>
<td>416.gamess</td>
<td>607</td>
<td>32.2</td>
<td>607</td>
<td>32.3</td>
<td>608</td>
<td>32.2</td>
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<td>40.0</td>
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<td>433.milc</td>
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<td>57.7</td>
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<td>58.4</td>
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<td>58.3</td>
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<td>434.zeusmp</td>
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<td>43.0</td>
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<td>444.namd</td>
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<td>453.povray</td>
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<td>111</td>
<td>48.1</td>
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<td>42.1</td>
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<td>41.9</td>
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<td>46.1</td>
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<tr>
<td>459.GemsFDTD</td>
<td>71.8</td>
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<td>71.6</td>
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<td>71.6</td>
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<td>60.6</td>
<td>175</td>
<td>60.3</td>
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<td>465.tonto</td>
<td>271</td>
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<td>48.6</td>
<td>203</td>
<td>48.5</td>
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<tr>
<td>470.lbm</td>
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<td>32.4</td>
<td>424</td>
<td>32.4</td>
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<td>421</td>
<td>32.4</td>
<td>424</td>
<td>32.4</td>
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<tr>
<td>481.wrf</td>
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<td>74.8</td>
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<td>75.2</td>
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<td>76.6</td>
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<td>482.sphinx3</td>
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<td>77.0</td>
<td>255</td>
<td>76.6</td>
<td>255</td>
<td>76.6</td>
<td>247</td>
<td>78.9</td>
</tr>
</tbody>
</table>

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 $ $Date:: 2011-10-11 #$ 6f2ebdfe5032aaa42e583f96b07f99d3
running on localhost.localdomain Mon Jun 18 19:11:27 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 E5-2690 0 @ 2.90GHz
Continued on next page
SPEC CFP2006 Result

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Acer AT350 F2 (Xeon E5-2690)

SPECfp2006 = 88.6
SPECfp_base2006 = 83.8

Platform Notes (Continued)

2 "physical id"s (chips)
32 "processors"
core, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB

From /proc/meminfo
MemTotal: 132129696 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)

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 Jun 18 19:02

SPEC is set to: /usr/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/VolGroup-lv_root ext4 328G 62G 249G 20% /

Additional information from dmidecode:
Memory:
16x Samsung M393B1K70BH1-CH9 8 GB 1333 MHz 1 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 = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
Transparent Huge Pages enabled with:

Continued on next page
Acer Incorporated
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General Notes (Continued)

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numacl i.e:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
icc  -m64

C++ benchmarks:
icpc  -m64

Fortran benchmarks:
ifort  -m64

Benchmarks using both Fortran and C:
icc  -m64 ifort  -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
  433.milc: -DSPEC_CPU_LP64
  434.zeusmp: -DSPEC_CPU_LP64
  435.gromacs: -DSPEC_CPU_LP64  -nofor_main
  436.cactusADM: -DSPEC_CPU_LP64  -nofor_main
  437.leslie3d: -DSPEC_CPU_LP64
  444.namd: -DSPEC_CPU_LP64
  447.dealII: -DSPEC_CPU_LP64
  450.soplex: -DSPEC_CPU_LP64
  453.povray: -DSPEC_CPU_LP64
  454.calculix: -DSPEC_CPU_LP64  -nofor_main
  459.GemsFDTD: -DSPEC_CPU_LP64
  465.tonto: -DSPEC_CPU_LP64
  470.lbm: -DSPEC_CPU_LP64
  481.wrf: -DSPEC_CPU_LP64  -DSPEC_CPU_CASE_FLAG  -DSPEC_CPU_LINUX
  482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xAVX  -ipo  -O3  -no-prec-div  -static  -parallel  -opt-prefetch  
-ansi-alias

C++ benchmarks:
-xAVX  -ipo  -O3  -no-prec-div  -static  -opt-prefetch  -ansi-alias

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Base Optimization Flags (Continued)

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

Peak Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

C++ benchmarks:
444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 2) -no-alias
-auto-ilp32

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Peak Optimization Flags (Continued)

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
            -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
            -static
416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
            -no-prec-div(pass 2) -prof-use(pass 2) -unroll12
            -inline-level=0 -scalar-rep- -static
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -prof-use(pass 2) -unroll12
              -inline-level=0 -opt-prefetch -parallel
465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
           -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
481.wrf: basepeak = yes

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
## SPEC CFP2006 Result

### Acer Incorporated

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Tested with SPEC CPU2006 v1.2.


Originally published on 9 October 2012.