



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Acer Incorporated

### SPECfp®\_rate2006 = 435

## Altos T350 F2 (Intel Xeon E5-2650)

### SPECfp\_rate\_base2006 = 424

CPU2006 license: 97

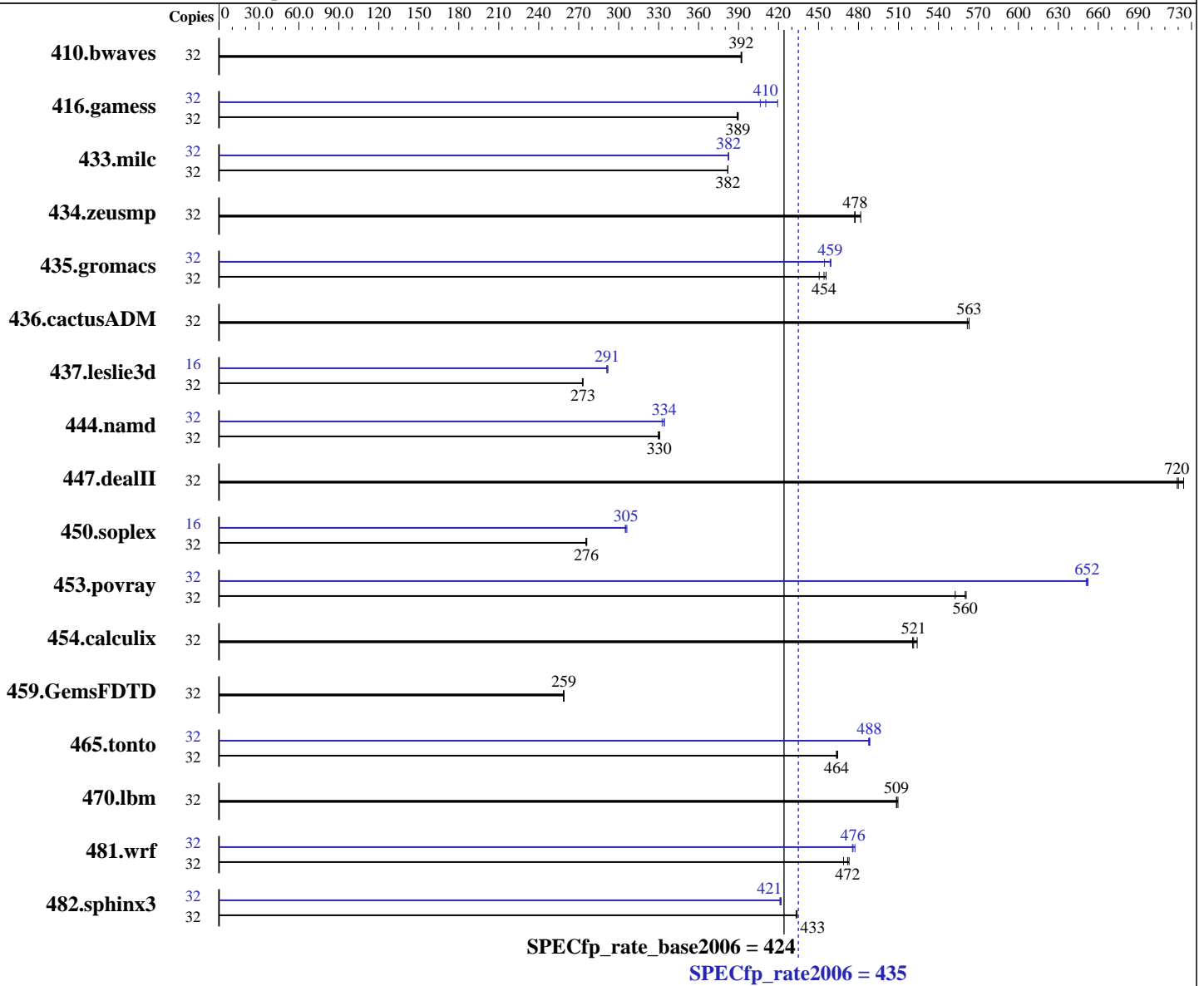
Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-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: 16 cores, 2 chips, 8 cores/chip, 2 threads/core  
 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

Continued on next page

### 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;  
 Fortran: Version 13.0.0.133 of Intel Fortran Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp\_rate2006 = 435

Altos T350 F2 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 424

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

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

L3 Cache: 20 MB I+D on chip per chip  
Other Cache: None  
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
Disk Subsystem: 1 x 900 GB SAS, 10K RPM  
Other Hardware: None

System State: Run level 3 (multi-user)  
Base Pointers: 32/64-bit  
Peak Pointers: 32/64-bit  
Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	32	<b>1109</b>	<b>392</b>	1108	392	1110	392	32	<b>1109</b>	<b>392</b>	1108	392	1110	392
416.gamess	32	1611	389	1607	390	<b>1609</b>	<b>389</b>	32	<b>1527</b>	<b>410</b>	1542	406	1494	419
433.milc	32	<b>769</b>	<b>382</b>	769	382	769	382	32	<b>768</b>	<b>382</b>	768	383	769	382
434.zeusmp	32	610	477	<b>610</b>	<b>478</b>	605	482	32	610	477	<b>610</b>	<b>478</b>	605	482
435.gromacs	32	507	451	<b>503</b>	<b>454</b>	501	456	32	<b>498</b>	<b>459</b>	497	459	503	455
436.cactusADM	32	681	562	679	563	<b>679</b>	<b>563</b>	32	681	562	679	563	<b>679</b>	<b>563</b>
437.leslie3d	32	<b>1101</b>	<b>273</b>	1103	273	1101	273	16	<b>516</b>	<b>291</b>	517	291	515	292
444.namd	32	<b>777</b>	<b>330</b>	778	330	776	331	32	772	333	768	334	<b>768</b>	<b>334</b>
447.dealII	32	<b>508</b>	<b>720</b>	506	724	509	719	32	<b>508</b>	<b>720</b>	506	724	509	719
450.soplex	32	969	275	<b>968</b>	<b>276</b>	967	276	16	<b>437</b>	<b>305</b>	438	305	436	306
453.povray	32	<b>304</b>	<b>560</b>	308	553	304	561	32	<b>261</b>	<b>652</b>	261	652	262	651
454.calculix	32	504	524	<b>506</b>	<b>521</b>	507	521	32	504	524	<b>506</b>	<b>521</b>	507	521
459.GemsFDTD	32	1313	259	1311	259	<b>1312</b>	<b>259</b>	32	1313	259	1311	259	<b>1312</b>	<b>259</b>
465.tonto	32	679	463	678	464	<b>679</b>	<b>464</b>	32	644	489	646	488	<b>645</b>	<b>488</b>
470.lbm	32	<b>864</b>	<b>509</b>	865	509	863	510	32	<b>864</b>	<b>509</b>	865	509	863	510
481.wrf	32	<b>757</b>	<b>472</b>	762	469	756	473	32	752	476	749	477	<b>751</b>	<b>476</b>
482.sphinx3	32	1437	434	<b>1439</b>	<b>433</b>	1440	433	32	1481	421	<b>1481</b>	<b>421</b>	1478	422

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.rev6818  
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191  
running on t350f2 Sat Jun 1 08:29:17 2013

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Acer Incorporated**

**SPECfp\_rate2006 = 435**

**Altos T350 F2 (Intel Xeon E5-2650)**

**SPECfp\_rate\_base2006 = 424**

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated

**Test date:** Jun-2013

**Hardware Availability:** May-2013

**Software Availability:** Feb-2013

## Platform Notes (Continued)

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
 2 "physical id"s (chips)
 32 "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 : 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:      132078104 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 t350f2 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 3 May 31 18:18

SPEC is set to: /usr/cpu2006

```
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sda3        ext4      700G  105G  560G  16% /
```

Additional information from dmidecode:

```
BIOS Intel Corp. SE5C600.86B.01.06.0002.110120121539 11/01/2012
```

Memory:

```
16x 8 GB
16x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz 2 rank
```

(End of data from sysinfo program)



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Acer Incorporated**

**SPECfp\_rate2006 = 435**

**Altos T350 F2 (Intel Xeon E5-2650)**

**SPECfp\_rate\_base2006 = 424**

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated

**Test date:** Jun-2013

**Hardware Availability:** May-2013

**Software Availability:** Feb-2013

## 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

Filesystem page cache cleared with:

echo 1> /proc/sys/vm/drop\_caches

runspec command invoked through numactl 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.deallI: -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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Acer Incorporated**

**SPECfp\_rate2006 = 435**

**Altos T350 F2 (Intel Xeon E5-2650)**

**SPECfp\_rate\_base2006 = 424**

**CPU2006 license:** 97

**Test sponsor:** Acer Incorporated

**Tested by:** Acer Incorporated

**Test date:** Jun-2013

**Hardware Availability:** May-2013

**Software Availability:** Feb-2013

## Base Optimization Flags

C benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

Fortran benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch`

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3`

## Peak Compiler Invocation

C benchmarks (except as noted below):

`icc -m64`

`482.sphinx3:icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

`450.soplex:icpc -m32`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

## Peak 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.deallI: -DSPEC_CPU_LP64`

`453.povray: -DSPEC_CPU_LP64`

Continued on next page

Standard Performance Evaluation Corporation

[info@spec.org](mailto:info@spec.org)

<http://www.spec.org/>

Page 5



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp\_rate2006 = 435

Altos T350 F2 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 424

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-2013

Hardware Availability: May-2013

Software Availability: Feb-2013

## Peak Portability Flags (Continued)

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

## Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)  
 -prof-use(pass 2) -static -auto-ilp32

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -opt-mem-layout-trans=3  
 -unroll2

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)  
 -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealIII: basepeak = yes

450.soplex: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)  
 -prof-use(pass 2) -opt-malloc-options=3

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)  
 -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
 -inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Acer Incorporated

SPECfp\_rate2006 = 435

Altos T350 F2 (Intel Xeon E5-2650)

SPECfp\_rate\_base2006 = 424

CPU2006 license: 97

Test sponsor: Acer Incorporated

Tested by: Acer Incorporated

Test date: Jun-2013

Hardware Availability: May-2013

Software Availability: Feb-2013

## Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto  
-inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)  
-prof-use(pass 2) -opt-prefetch -static -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.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.xml>

<http://www.spec.org/cpu2006/flags/Acer-Platform-Settings-V1.2-revA.20130423.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Jul 24 15:46:12 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 18 June 2013.