



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Huawei

SPECfp<sup>®</sup>\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175

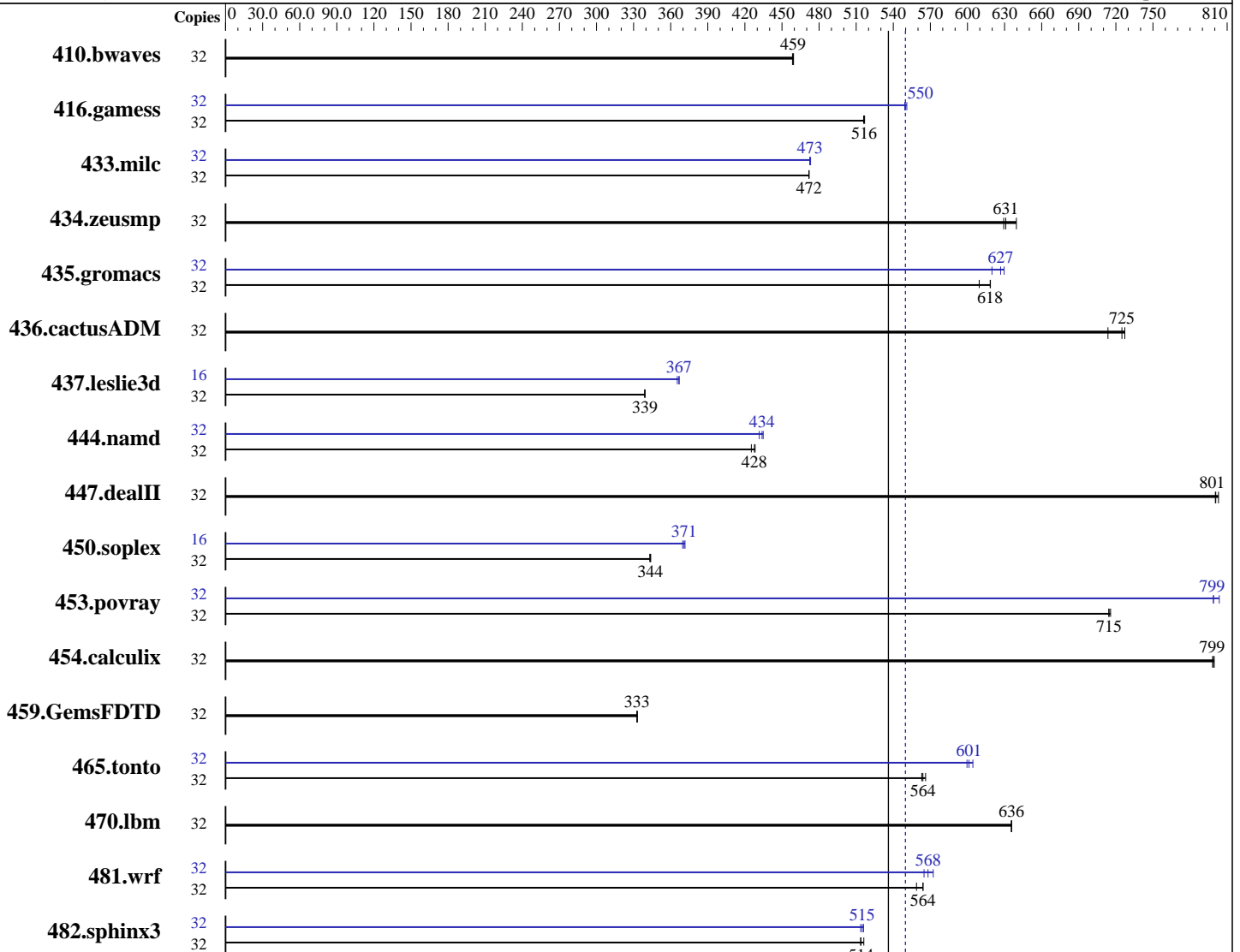
Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



SPECfp\_rate\_base2006 = 536

SPECfp\_rate2006 = 550

### Hardware

CPU Name: Intel Xeon E5-2618L v3  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz  
 CPU MHz: 2300  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chip  
 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 7.0 (Maipo)  
 3.10.0-123.el7.x86\_64  
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;  
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux  
 Auto Parallel: No  
 File System: xfs

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Huawei

SPECfp\_rate2006 = **550**

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = **536**

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1866 MHz)  
 Disk Subsystem: 1 x 500 GB SATA, 7200 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	947	459	949	458	<b>947</b>	<b>459</b>	32	947	459	949	458	<b>947</b>	<b>459</b>
416.gamess	32	<b>1213</b>	<b>516</b>	1214	516	1212	517	32	1137	551	<b>1140</b>	<b>550</b>	1141	549
433.milc	32	623	472	<b>623</b>	<b>472</b>	623	472	32	621	473	622	472	<b>621</b>	<b>473</b>
434.zeusmp	32	463	629	<b>461</b>	<b>631</b>	455	640	32	463	629	<b>461</b>	<b>631</b>	455	640
435.gromacs	32	375	609	369	619	<b>369</b>	<b>618</b>	32	369	620	363	630	<b>365</b>	<b>627</b>
436.cactusADM	32	<b>528</b>	<b>725</b>	526	727	536	714	32	<b>528</b>	<b>725</b>	526	727	536	714
437.leslie3d	32	888	339	887	339	<b>887</b>	<b>339</b>	16	<b>410</b>	<b>367</b>	412	365	410	367
444.namd	32	604	425	599	428	<b>600</b>	<b>428</b>	32	<b>591</b>	<b>434</b>	590	435	595	432
447.dealII	32	<b>457</b>	<b>801</b>	457	800	456	803	32	<b>457</b>	<b>801</b>	457	800	456	803
450.soplex	32	776	344	<b>777</b>	<b>344</b>	778	343	16	<b>360</b>	<b>371</b>	359	372	361	370
453.povray	32	238	714	<b>238</b>	<b>715</b>	238	716	32	212	804	<b>213</b>	<b>799</b>	213	799
454.calculix	32	331	798	330	800	<b>330</b>	<b>799</b>	32	331	798	330	800	<b>330</b>	<b>799</b>
459.GemsFDTD	32	<b>1020</b>	<b>333</b>	1020	333	1021	333	32	<b>1020</b>	<b>333</b>	1020	333	1021	333
465.tonto	32	559	563	556	566	<b>558</b>	<b>564</b>	32	525	600	521	604	<b>524</b>	<b>601</b>
470.lbm	32	692	636	<b>692</b>	<b>636</b>	692	635	32	692	636	<b>692</b>	<b>636</b>	692	635
481.wrf	32	640	559	<b>634</b>	<b>564</b>	634	564	32	<b>629</b>	<b>568</b>	633	565	625	572
482.sphinx3	32	1208	516	<b>1214</b>	<b>514</b>	1214	514	32	1209	516	<b>1211</b>	<b>515</b>	1214	514

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

BIOS configuration:  
Set Power Efficiency Mode to Custom  
Set Snoop Mode to COD

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## Platform Notes (Continued)

Baseboard Management Controller used to adjust the fan speed to 100%  
Sysinfo program /spec15/config/sysinfo.rev6914  
\$Rev: 6914 \$ \$Date:: 2014-06-25 # \$ e3fbb8667b5a285932ceab81e28219e1  
running on localhost.localdomain Sun Dec 14 13:04:13 2014

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 E5-2618L v3 @ 2.30GHZ
 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: 263719628 kB
HugePages_Total: 0
Hugepagesize: 2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server
```

```
uname -a:
Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57
EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Dec 12 18:18
```

```
SPEC is set to: /spec15
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-root xfs 462G 65G 397G 14% /
Additional information from dmidecode:
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175  
Test sponsor: Huawei  
Tested by: Huawei

Test date: Dec-2014  
Hardware Availability: Sep-2014  
Software Availability: Sep-2014

## Platform Notes (Continued)

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Insyde Corp. 1.19 10/10/2014

Memory:

8x Samsung M393A2G40DB0-CPB 16 GB 1 rank 2133 MHz, configured at 1867 MHz  
8x Samsung M393A2G40DB0-CPB 16 GB 2 rank 2133 MHz, configured at 1867 MHz

(End of data from sysinfo program)

## General Notes

Environment variables set by runspec before the start of the run:  
LD\_LIBRARY\_PATH = "/spec15/libs/32:/spec15/libs/64:/spec15/sh"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175  
Test sponsor: Huawei  
Tested by: Huawei

Test date: Dec-2014  
Hardware Availability: Sep-2014  
Software Availability: Sep-2014

## Base Portability Flags (Continued)

```
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:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32  
-ansi-alias -opt-mem-layout-trans=3

## Peak Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks (except as noted below):  
icpc -m64  
450.soplex: icpc -m32 -L/opt/intel/composer\_xe\_2015/lib/ia32

Fortran benchmarks:  
ifort -m64

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



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## 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.dealII: -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

```

## Peak Optimization Flags

C benchmarks:

```

433.milc: -xCORE-AVX2(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)
         -auto-ilp32

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-mem-layout-trans=3
            -unroll2

```

C++ benchmarks:

```

444.namd: -xCORE-AVX2(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.dealII: basepeak = yes

450.soplex: -xCORE-AVX2(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: -xCORE-AVX2(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

```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

## Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -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 -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(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 -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.1.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.1.xml>



# SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Huawei

SPECfp\_rate2006 = 550

Huawei RH1288 V3 (Intel Xeon E5-2618L v3)

SPECfp\_rate\_base2006 = 536

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

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 Wed Jan 14 10:26:57 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 13 January 2015.