SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

$SPECfp^{®}\_rate2006 =$ 294

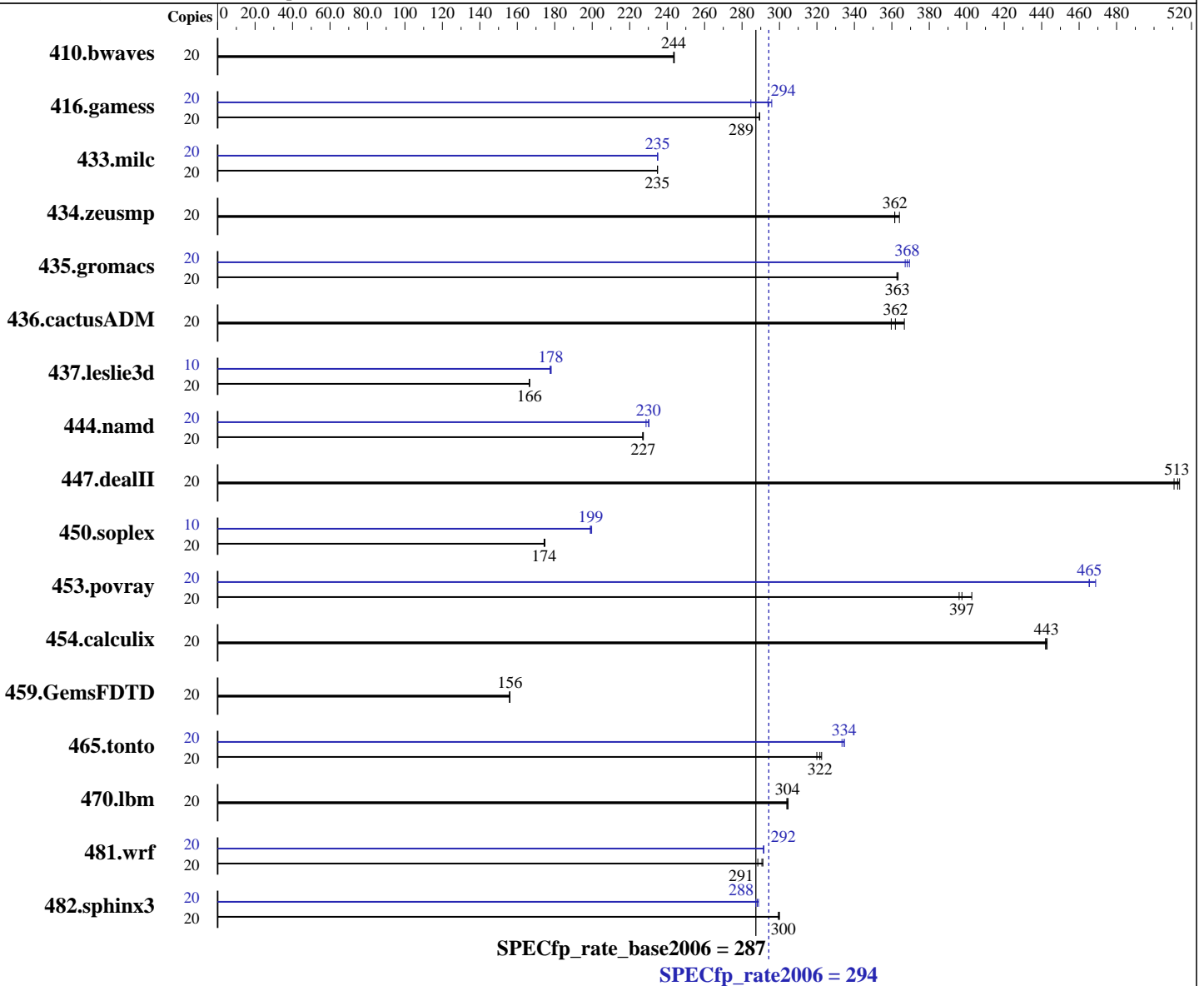Quanta S51G-1UL(Intel Xeon E5-2660 v2)

$SPECfp\_rate\_base2006 =$ 287

Benchmark	Copies	Result
410.bwaves	20	244
416.gamess	20 / 20	294 / 289
433.milc	20 / 20	235 / 235
434.zeusmp	20	362
435.gromacs	20 / 20	368 / 363
436.cactusADM	20	362
437.leslie3d	10 / 20	178 / 166
444.namd	20 / 20	230 / 227
447.dealII	20	513
450.soplex	10 / 20	199 / 174
453.povray	20 / 20	465 / 397
454.calculix	20	443
459.GemsFDTD	20	156
465.tonto	20 / 20	334 / 322
470.lbm	20	304
481.wrf	20 / 20	292 / 291
482.sphinx3	20 / 20	288 / 300

SPECfp_rate_base2006 = 287

SPECfp_rate2006 = 294

Hardware

CPU Name: Intel Xeon E5-2660 v2

CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz

CPU MHz: 2200

FPU: Integrated

CPU(s) enabled: 10 cores, 1 chip, 10 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

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
2.6.32-431.el6.x86_64

Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
Fortran: Version 14.0.0.080 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

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 = 294

SPECfp_rate_base2006 = 287

CPU2006 license: 9050
Test sponsor: Quanta Computer Inc.
Tested by: Quanta Computer Inc.

Test date: Jul-2014
Hardware Availability: Jun-2014
Software Availability: Nov-2013

L3 Cache:	25 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC3-14900R-13, ECC)
Disk Subsystem:	197 GB add more disk info here
Other Hardware:	None

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

Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	20	1115	244	**1116**	**244**	1116	244	20	1115	244	**1116**	**244**	1116	244
416.gamess	20	1354	289	1353	289	**1353**	**289**	20	1324	296	1375	285	**1333**	**294**
433.milc	20	782	235	**782**	**235**	782	235	20	**781**	**235**	781	235	782	235
434.zeusmp	20	500	364	503	362	**503**	**362**	20	500	364	503	362	**503**	**362**
435.gromacs	20	393	363	394	363	**393**	**363**	20	389	367	**388**	**368**	387	369
436.cactusADM	20	**660**	**362**	652	367	664	360	20	**660**	**362**	652	367	664	360
437.leslie3d	20	1128	167	1130	166	**1130**	**166**	10	**528**	**178**	528	178	530	178
444.namd	20	707	227	706	227	**706**	**227**	20	**697**	**230**	701	229	696	230
447.dealII	20	**446**	**513**	445	514	448	511	20	**446**	**513**	445	514	448	511
450.soplex	20	**956**	**174**	954	175	957	174	10	**418**	**199**	419	199	418	200
453.povray	20	**268**	**397**	264	403	269	396	20	227	469	**229**	**465**	229	465
454.calculix	20	373	442	373	443	**373**	**443**	20	373	442	373	443	**373**	**443**
459.GemsFDTD	20	1362	156	**1359**	**156**	1359	156	20	1362	156	**1359**	**156**	1359	156
465.tonto	20	**612**	**322**	615	320	610	323	20	590	333	588	335	**588**	**334**
470.lbm	20	902	305	904	304	**903**	**304**	20	902	305	904	304	**903**	**304**
481.wrf	20	767	291	775	288	**769**	**291**	20	**766**	**292**	766	292	766	291
482.sphinx3	20	**1300**	**300**	1299	300	1302	299	20	1357	287	1350	289	**1353**	**288**

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 /speccpu/speccpu_linux/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on localhost.localdomain Mon Jun 30 10:30:31 2014

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 =   294

SPECfp_rate_base2006 = 287

CPU2006 license: 9050
Test sponsor: Quanta Computer Inc.
Tested by: Quanta Computer Inc.

Test date: Jul-2014
Hardware Availability: Jun-2014
Software Availability: Nov-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 E5-2660 v2 @ 2.20GHz
      1 "physical id"s (chips)
      20 "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 : 10
      siblings  : 20
      physical 0: cores 0 1 2 3 4 8 9 10 11 12
   cache size : 25600 KB

From /proc/meminfo
   MemTotal:      132129504 kB
   HugePages_Total:       1
   Hugepagesize:      2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux localhost.localdomain 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54
   EST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jun 27 12:35

SPEC is set to: /speccpu/speccpu_linux
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda2       ext4  197G   11G  177G   6% /

Additional information from dmidecode:
  BIOS American Megatrends Inc. S1G_0625 06/25/2014
  Memory:
   8x Samsung M393B2G70QH0-CMA 16 GB 1866 MHz 2 rank

(End of data from sysinfo program)
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 = 294

SPECfp_rate_base2006 = 287

CPU2006 license: 9050　　　　　　　　　　　　　　　　　　　　　　**Test date:** Jul-2014
Test sponsor: Quanta Computer Inc.　　　　　　　　　　　　**Hardware Availability:** Jun-2014
Tested by: Quanta Computer Inc.　　　　　　　　　　　　**Software Availability:** Nov-2013

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/speccpu/speccpu_linux/libs/32:/speccpu/speccpu_linux/libs/64:/speccpu/speccpu_linux/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

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 -opt-prefetch -auto-p32 -ansi-alias
     -opt-mem-layout-trans=3

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 =   294

SPECfp_rate_base2006 =   287

CPU2006 license: 9050
Test sponsor: Quanta Computer Inc.
Tested by: Quanta Computer Inc.

Test date: Jul-2014
Hardware Availability: Jun-2014
Software Availability: Nov-2013

Base Optimization Flags (Continued)

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

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

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -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.dealII: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
```

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 = 294

SPECfp_rate_base2006 = 287

CPU2006 license: 9050		**Test date:**	Jul-2014
Test sponsor: Quanta Computer Inc.		**Hardware Availability:**	Jun-2014
Tested by: Quanta Computer Inc.		**Software Availability:**	Nov-2013

Peak Portability Flags (Continued)

```
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) -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.dealII: 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-

434.zeusmp: basepeak = yes

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

459.GemsFDTD: basepeak = yes
```

Quanta Computer Inc.

Quanta S51G-1UL(Intel Xeon E5-2660 v2)

SPECfp_rate2006 = 294

SPECfp_rate_base2006 = 287

CPU2006 license: 9050
Test sponsor: Quanta Computer Inc.
Tested by: Quanta Computer Inc.

Test date: Jul-2014
Hardware Availability: Jun-2014
Software Availability: Nov-2013

Peak Optimization Flags (Continued)

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 -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xAVX -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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Quanta-Computer-Inc-Platform-Settings-V1.0.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Quanta-Computer-Inc-Platform-Settings-V1.0.xml

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

Tested with SPEC CPU2006 v1.2.
Report generated on Fri Aug 15 17:46:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 August 2014.