



SPEC[®] CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-2S

SPECfp[®]_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19

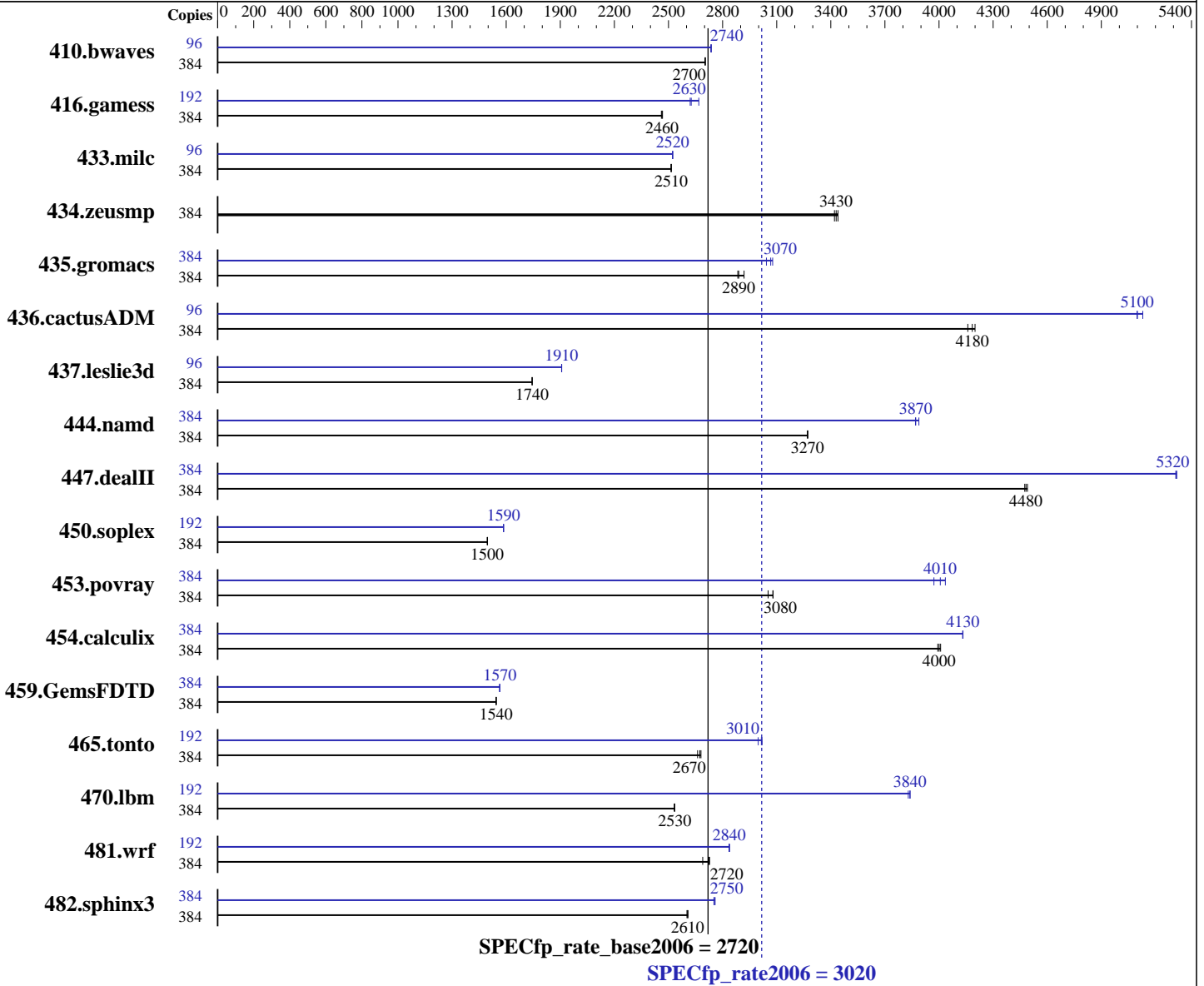
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2017

Hardware Availability: Apr-2017

Software Availability: Jul-2017



Hardware

CPU Name: SPARC64 XII
 CPU Characteristics: High Speed Mode up to 4.35 GHz
 CPU MHz: 4250
 FPU: Integrated
 CPU(s) enabled: 48 cores, 4 chips, 12 cores/chip, 8 threads/core
 CPU(s) orderable: 1 to 16 BBs; each BB contains 1 or 2 CPU chips; the number of orderable total cores is 2, 3, 4, .. 384
 Primary Cache: 64 KB I + 64 KB D on chip per core

Continued on next page

Software

Operating System: Oracle Solaris 11.3 (with June 2017 SRU)
 Compiler: C/C++/Fortran: Version 12.6 of Oracle Developer Studio
 Auto Parallel: No
 File System: tmpfs
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit
 Other Software: None



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Secondary Cache: 512 KB I+D on chip per core
L3 Cache: 32 MB I+D on chip per chip
Other Cache: None
Memory: 2 TB (64 x 32 GB 2Rx4 PC4-2400T-R)
Disk Subsystem: 1 x 600 GB 10K RPM SAS (for system disk)
Other Hardware: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	384	1931	2700	1930	2700	1930	2700	96	477	2740	477	2740	477	2740
416.gamess	384	3056	2460	3051	2460	3048	2470	192	1409	2670	1432	2630	1435	2620
433.milc	384	1401	2520	1402	2510	1402	2510	96	349	2520	349	2520	349	2520
434.zeusmp	384	1016	3440	1019	3430	1022	3420	384	1016	3440	1019	3430	1022	3420
435.gromacs	384	951	2880	949	2890	939	2920	384	901	3040	891	3080	894	3070
436.cactusADM	384	1093	4200	1097	4180	1103	4160	96	225	5100	225	5100	224	5130
437.leslie3d	384	2070	1740	2070	1740	2070	1740	96	473	1910	473	1910	473	1910
444.namd	384	941	3270	942	3270	942	3270	384	792	3890	796	3870	796	3870
447.dealII	384	980	4480	982	4480	978	4490	384	826	5320	827	5310	826	5320
450.soplex	384	2142	1500	2142	1500	2140	1500	192	1010	1590	1010	1590	1011	1580
453.povray	384	664	3080	663	3080	669	3050	384	514	3970	510	4010	506	4040
454.calculix	384	793	3990	790	4010	792	4000	384	767	4130	767	4130	767	4130
459.GemsFDTD	384	2637	1550	2638	1540	2639	1540	384	2607	1560	2603	1570	2603	1570
465.tonto	384	1410	2680	1413	2670	1420	2660	192	626	3020	627	3010	630	3000
470.lbm	384	2084	2530	2082	2530	2081	2530	192	687	3840	687	3840	689	3830
481.wrf	384	1595	2690	1572	2730	1574	2720	192	756	2840	755	2840	756	2840
482.sphinx3	384	2870	2610	2876	2600	2872	2610	384	2720	2750	2717	2750	2713	2760

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

Processes were assigned to specific processors using 'pbind' commands. The config file option 'submit' was used, along with a list of processors in the 'BIND' variable, to generate the pbind commands. (For details, please see the config file.)

Operating System Notes

Shell Environments:

ulimit -s 131072 was used to limit the space consumed by the stack (and therefore make more space available to the heap).

The "Logical Domains Manager" service was turned off using the command "svcadm disable ldmd".

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Operating System Notes (Continued)

System Tunables:

(/etc/system parameters)

autoup = 86400

Causes pages older than the listed number of seconds to be written by fsflush.

doiflush = 0

Controls whether file system metadata syncs will be executed during fsflush invocations.

dopageflush = 0

Controls whether memory is examined for modified pages during fsflush invocations.

zfs:zfs_arc_max=1073741824

Determines the maximum size of the ZFS Adaptive Replacement Cache (ARC).

Platform Notes

Firmware Settings:

(XSCF operations)

Set High Speed Mode via XSCF command "sethsmode -s on".

Sysinfo program /export/cpu2006/config/sysinfo

Revision 6993 of 2015-11-06 (c9426fd40261140bb4c02f7d35768596)

running on H2S-257-D0 Mon Mar 6 03:17:40 2017

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 /usr/sbin/psrinfo

SPARC64-XII (chipid 0, clock 4250 MHz)

SPARC64-XII (chipid 1, clock 4250 MHz)

SPARC64-XII (chipid 2, clock 4250 MHz)

SPARC64-XII (chipid 3, clock 4250 MHz)

4 chips

384 threads

4250 MHz

From kstat: 48 cores

From prtconf: 2093056 Megabytes

/etc/release:

Oracle Solaris 11.3 SPARC

uname -a:

SunOS H2S-257-D0 5.11 11.3 sun4v sparc sun4v

SPEC is set to: /export/cpu2006

disk: df -h /export/cpu2006

Filesystem	Size	Used	Available	Capacity	Mounted on
rpool/export	547G	26G	243G	10%	/export

(End of data from sysinfo program)



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu
Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

General Notes

The Building Block (BB) is just a Fujitsu SPARC M12-2S that is the basic unit to be expanded as if stacking up children's blocks.

File System:

tmpfs: output_root was used to put run directories in /tmp/cpu2006
zfs: operating system

SPEC CPU2006 benchmark:

Updated with runspec --update

Base Compiler Invocation

C benchmarks:

cc

C++ benchmarks:

CC

Fortran benchmarks:

f90

Benchmarks using both Fortran and C:

cc f90

Base Portability Flags

447.deallI: -DBOOST_NO_COMPILER_CONFIG

Base Optimization Flags

C benchmarks:

-std=c99 -m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput -xalias_level=std -xprefetch_level=2

C++ benchmarks:

-m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput -xalias_level=compatible
-library=stlport4

Fortran benchmarks:

-m32 -fast -xtarget=sparc64xii -xipo=2 -xpagesize=4M
-xsegment_align=4M -xthroughput -xvector=no%lib

Benchmarks using both Fortran and C:

-std=c99 -m32 -fast(cc) -fast(f95) -xtarget=sparc64xii -xipo=2
-xpagesize=4M -xsegment_align=4M -xthroughput -xalias_level=std
-xprefetch_level=2 -xvector=no%lib



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Base Other Flags

C benchmarks:
-xjobs=8

C++ benchmarks:
-xjobs=8

Fortran benchmarks:
-xjobs=8

Benchmarks using both Fortran and C:
-xjobs=8

Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Fortran benchmarks:
f90

Benchmarks using both Fortran and C:
cc f90

Peak Portability Flags

447.dealII: -DBOOST_NO_COMPILER_CONFIG

Peak Optimization Flags

C benchmarks:

433.milc: -std=c99 -m32 -fast -xtarget=sparc64xii -xpagesize=4M
-xsegment_align=4M -xthroughput -xipo=2 -xalias_level=std
-fsimple=1 -W2,-Ainline:rs=400
-Qoption cg -Qms_pipe+alldoall -W2,-Asac -xthroughput=no

470.lbm: -std=c99 -m32 -fast -xtarget=sparc64xii -xpagesize=4M
-xsegment_align=4M -xthroughput -xipo=2 -xalias_level=std
-xprefetch_level=2 -xpagesize=256M -xsegment_align=256M
-xthroughput=no -lbsdmalloc

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Mar-2017
Hardware Availability: Apr-2017
Software Availability: Jul-2017

Peak Optimization Flags (Continued)

482.sphinx3: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xO4 -xipo=2 -xprefetch=latx:0.6
-xinline_param=level:1 -xprefetch=no%auto -lbsdmalloc

C++ benchmarks:

444.namd: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xalias_level=compatible -xprefetch=no%auto
-Wc,-Qms_pipe+alldoall

447.deallI: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xtarget=sparc64xplus -xipo=1
-xalias_level=compatible -xrestrict -xprefetch=no%auto
-Qoption cg -Qiselect-funcalign=64 -xthroughput=yes
-library=stdcxx4 -template=extdef

450.soplex: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xipo=2 -Wc,-Qlp=0

453.povray: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xO4 -xtarget=sparc64xplus -xipo=2
-xalias_level=compatible -xlinkopt=2 -xprefetch=no%auto
-xunroll=7 -Qoption iropt -Ainline:rs=1024
-Qoption iropt -Ainline:cs=1024
-Qoption iropt -Ainline:inc=900 -lfast

Fortran benchmarks:

410.bwaves: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xipo=2 -xunroll=4 -xvector=%none
-xprefetch=no%auto

416.gamess: -m32 -fast -xtarget=sparc64xii -xpagesize=4M
-xsegment_align=4M -xthroughput -xvector=no%simd
-xprefetch=latx:0.1

434.zeusmp: basepeak = yes

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2017

Hardware Availability: Apr-2017

Software Availability: Jul-2017

Peak Optimization Flags (Continued)

437.leslie3d: -m32 -fast -xtarget=sparc64xii -xpagesize=4M
-xsegment_align=4M -xthroughput -xunroll=2 -xvector=%none
-xprefetch=latx:0.8 -Qoption cg -Qms_pipe+alldoall
-xinline_param=level:1 -xthroughput=no

459.GemsFDTD: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xunroll=9 -xprefetch=latx:0.2
-xprefetch_level=3 -Qoption cg -Qlp-av=128
-Qoption iropt -Rujam

465.tonto: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xipo=1 -xO4 -xunroll=3 -xprefetch=no%auto
-xthroughput=no -lbsdmalloc

Benchmarks using both Fortran and C:

435.gromacs: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast(cc) -fast(f95)
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xalias_level=strong -Wc,-Qicache-chbab=1
-Wc,-Qiselect-rsqrrta=2 -Wc,-Qiselect-rsqrrtalx=2
-qoption cg -Qicache-chbab=1 -qoption cg -Qiselect-rsqrrta=2
-qoption cg -Qiselect-rsqrrtalx=2

436.cactusADM: -std=c99 -m32 -fast(cc) -fast(f95) -xtarget=sparc64xii
-xpagesize=4M -xsegment_align=4M -xthroughput
-xtarget=sparc64xplus -xunroll=10 -xprefetch=latx:2.0
-xpagesize=256M -xsegment_align=256M -xthroughput=no
-lbsdmalloc

454.calculix: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast(cc) -fast(f95)
-xtarget=sparc64xii -xpagesize=4M -xsegment_align=4M
-xthroughput -xtarget=sparc64xplus -xipo=1
-Wc,-Qiselect-funcalign=64 -xinline_param=level:3
-Qoption cg -Qiselect-funcalign=64

481.wrf: -std=c99 -m32 -fast(cc) -fast(f95) -xtarget=sparc64xii
-xpagesize=4M -xsegment_align=4M -xthroughput -xunroll=9
-xprefetch=latx:0.4 -Qoption iropt -Rujam -xO4
-xthroughput=no



SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECfp_rate2006 = 3020

SPECfp_rate_base2006 = 2720

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-2017

Hardware Availability: Apr-2017

Software Availability: Jul-2017

Peak Other Flags

C benchmarks:

-xjobs=8

C++ benchmarks:

-xjobs=8

Fortran benchmarks:

-xjobs=8

Benchmarks using both Fortran and C:

-xjobs=8

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

<http://www.spec.org/cpu2006/flags/Oracle-Developer-Studio12.6.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-M12-2S.html>

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

<http://www.spec.org/cpu2006/flags/Oracle-Developer-Studio12.6.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-M12-2S.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.

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Apr 20 09:42:27 2017 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 19 April 2017.