



SPEC® CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

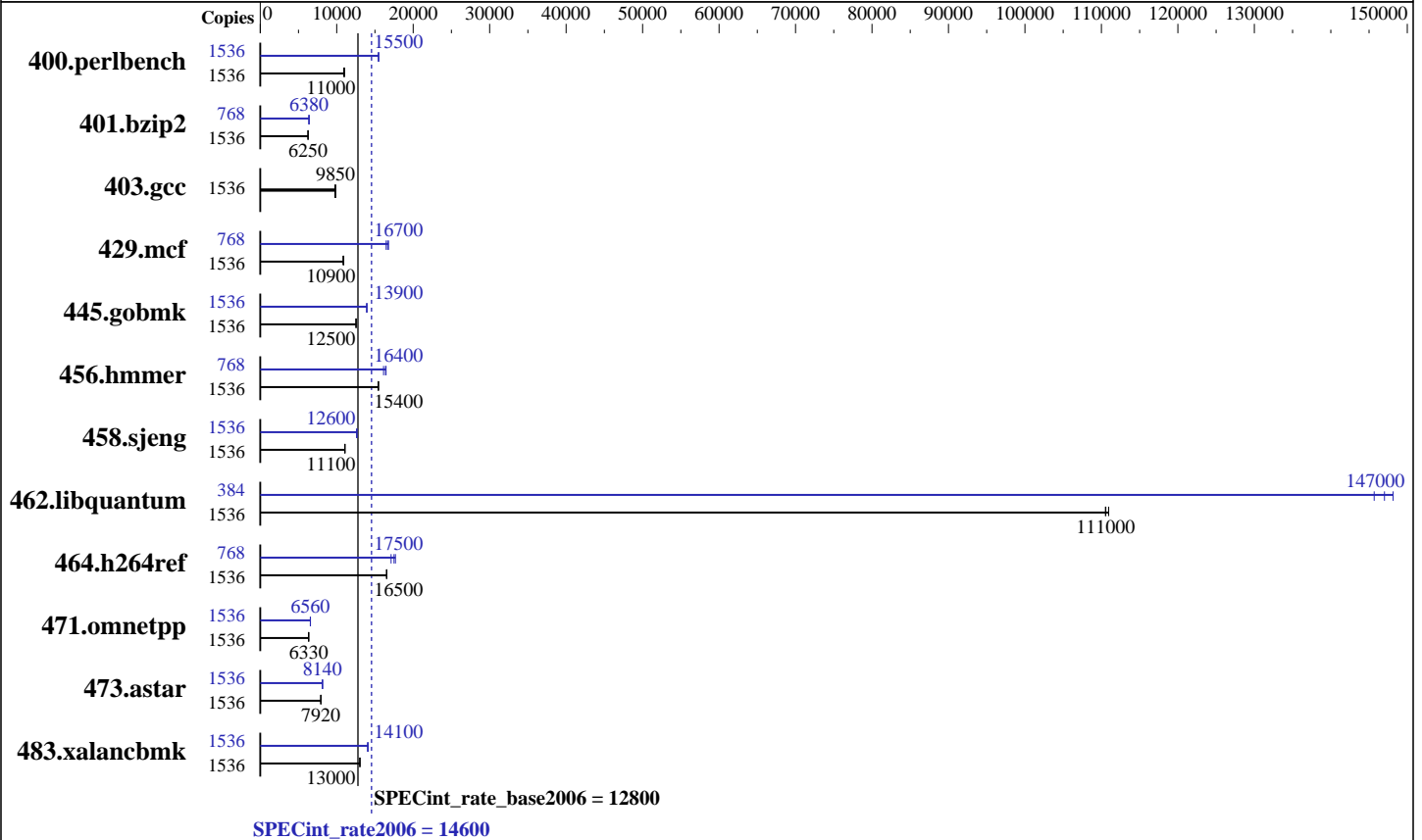
Fujitsu Fujitsu SPARC M12-2S

SPECint®_rate2006 = 14600

SPECint_rate_base2006 = 12800

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: 192 cores, 16 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
 Secondary Cache: 512 KB I+D on chip per core
 L3 Cache: 32 MB I+D on chip per chip
 Other Cache: None
 Memory: 8 TB (256 x 32 GB 2Rx4 PC4-2400T-R)
 Disk Subsystem: 1 x 600 GB 10K RPM SAS (for system disk)
 Other Hardware: None

Software

Operating System: Oracle Solaris 11.3 (with June 2017 SRU)
 Compiler: C/C++: 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 CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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

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

Results Table

Benchmark	Base						Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1536	1375	10900	<u>1363</u>	<u>11000</u>	1363	11000	<u>1536</u>	971	15500	969	15500	<u>970</u>	<u>15500</u>
401.bzip2	1536	2368	6260	<u>2373</u>	<u>6250</u>	2374	6240	<u>768</u>	<u>1162</u>	<u>6380</u>	1161	6380	1164	6370
403.gcc	1536	1266	9770	<u>1256</u>	<u>9850</u>	1255	9850	<u>1536</u>	1266	9770	<u>1256</u>	<u>9850</u>	1255	9850
429.mcf	1536	1283	10900	1296	10800	<u>1285</u>	<u>10900</u>	<u>768</u>	418	16800	425	16500	<u>421</u>	<u>16700</u>
445.gobmk	1536	<u>1285</u>	<u>12500</u>	1287	12500	1285	12500	<u>1536</u>	1155	13900	1158	13900	<u>1155</u>	<u>13900</u>
456.hammer	1536	929	15400	926	15500	<u>928</u>	<u>15400</u>	<u>768</u>	444	16100	<u>437</u>	<u>16400</u>	436	16500
458.sjeng	1536	1680	11100	<u>1679</u>	<u>11100</u>	1677	11100	<u>1536</u>	1471	12600	<u>1472</u>	<u>12600</u>	1472	12600
462.libquantum	1536	287	111000	<u>288</u>	<u>111000</u>	288	111000	<u>384</u>	53.7	148000	54.6	146000	<u>54.1</u>	<u>147000</u>
464.h264ref	1536	2057	16500	<u>2057</u>	<u>16500</u>	2056	16500	<u>768</u>	993	17100	961	17700	<u>971</u>	<u>17500</u>
471.omnetpp	1536	<u>1516</u>	<u>6330</u>	1515	6330	1517	6330	<u>1536</u>	<u>1464</u>	<u>6560</u>	1467	6550	1462	6560
473.astar	1536	<u>1361</u>	<u>7920</u>	1357	7950	1364	7910	<u>1536</u>	<u>1325</u>	<u>8140</u>	1323	8150	1327	8130
483.xalancbmk	1536	812	13000	<u>813</u>	<u>13000</u>	815	13000	<u>1536</u>	<u>755</u>	14000	<u>754</u>	<u>14100</u>	752	14100

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".

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).



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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

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

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-230-D0 Sat Mar 18 11:10:19 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 10, clock 4250 MHz)
SPARC64-XII (chipid 11, clock 4250 MHz)
SPARC64-XII (chipid 12, clock 4250 MHz)
SPARC64-XII (chipid 13, clock 4250 MHz)
SPARC64-XII (chipid 14, clock 4250 MHz)
SPARC64-XII (chipid 15, clock 4250 MHz)
SPARC64-XII (chipid 2, clock 4250 MHz)
SPARC64-XII (chipid 3, clock 4250 MHz)
SPARC64-XII (chipid 4, clock 4250 MHz)
SPARC64-XII (chipid 5, clock 4250 MHz)
SPARC64-XII (chipid 6, clock 4250 MHz)
SPARC64-XII (chipid 7, clock 4250 MHz)
SPARC64-XII (chipid 8, clock 4250 MHz)
SPARC64-XII (chipid 9, clock 4250 MHz)
16 chips
1536 threads
4250 MHz
```

From kstat: 192 cores

From prtconf: 8375296 Megabytes

```
/etc/release:
Oracle Solaris 11.3 SPARC
uname -a:
SunOS H2S-230-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  15G    259G        6%    /export
```

(End of data from sysinfo program)



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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

Base Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_SPARC
403.gcc: -DSPEC_CPU_SOLARIS
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

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

Base Other Flags

C benchmarks:

-xjobs=8

C++ benchmarks:

-xjobs=8



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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

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

Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_SPARC
403.gcc: -DSPEC_CPU_SOLARIS
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Peak Optimization Flags

C benchmarks:

400.perlbench: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xtarget=sparc64xplus -xipo=1
-xalias_level=std -xrestrict -xprefetch=no%auto -xO4
-Wc,-Qiselect-funcalign=4 -xthroughput=no -lfast

401.bzip2: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xalias_level=strong -xprefetch=no%auto
-Wc,-Qiselect-funcalign=4 -Wc,-Qicache-chbab=1
-xinline_param=max_inst_hard:1000,max_inst_soft:500,max_growth:60
-lfast

403.gcc: basepeak = yes

429.mcf: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xipo=2 -xalias_level=std -xprefetch=latx:0.2
-W2,-Asac -Wc,-Qiselect-funcalign=64

445.gobmk: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xO4 -xalias_level=std -xrestrict
-xprefetch=no%auto -Wc,-Qiselect-funcalign=64
-Wc,-Qgsched-T=4

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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)

456.hmmcr: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xipo=1 -xunroll=8 -Wc,-Qms_pipe-pref
-Wc,-Qiselect-funcalign=4
-xcache=32/128/4/4:256/128/8/4:8192/128/16/48

458.sjeng: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xO4 -xipo=2 -xalias_level=std -xunroll=4
-Wc,-Qiselect-funcalign=4 -W2,-Afully_unroll:always=on
-xprefetch=latx:0.6 -xcheck=%none

462.libquantum: -std=c99 -m32 -fast -xtarget=sparc64xii -xpagesize=256M
-xsegment_align=256M -xthroughput -m64
-xtarget=sparc64xplus -xipo=2
-xcache=32/128/4/4:256/128/8/4:8192/128/16/24
-xinline_param=level:1 -Wc,-Qiselect-funcalign=4
-xalias_level=layout -xprefetch=latx:0.2

464.h264ref: -std=c99 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xtarget=sparc64xplus -xipo=1
-Wc,-Qiselect-funcalign=4 -xthroughput=no
-xalias_level=layout -xprefetch=latx:0.2 -xcheck=%none

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xipo=1 -xalias_level=compatible -xunroll=2
-xprefetch_level=3 -W2,-Asac -xthroughput=no -lfast

473.astar: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xtarget=sparc64xplus -xalias_level=compatible
-xipo=2 -xunroll=6 -xrestrict=%source
-Wc,-Qiselect-funcalign=64 -Wc,-Qgsched-T=4
-xprefetch=latx:0.3 -lfast

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -m32 -fast
-xtarget=sparc64xii -xpagesize=256M -xsegment_align=256M
-xthroughput -xipo=2 -xalias_level=compatible -xdepend
-xprefetch_level=3 -xprefetch=latx:0.4 -library=stlport4
-W2,-Asac -Wc,-Qiselect-funcalign=64 -features=no%except
-lfast



SPEC CINT2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

Fujitsu

Fujitsu SPARC M12-2S

SPECint_rate2006 = 14600

SPECint_rate_base2006 = 12800

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

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 SPECint 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.