



SPEC® CINT2006 Result

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Fujitsu Limited

SPECint®2006 = 10.7

Fujitsu SPARC Enterprise M8000

SPECint_base2006 = 9.19

CPU2006 license: 19

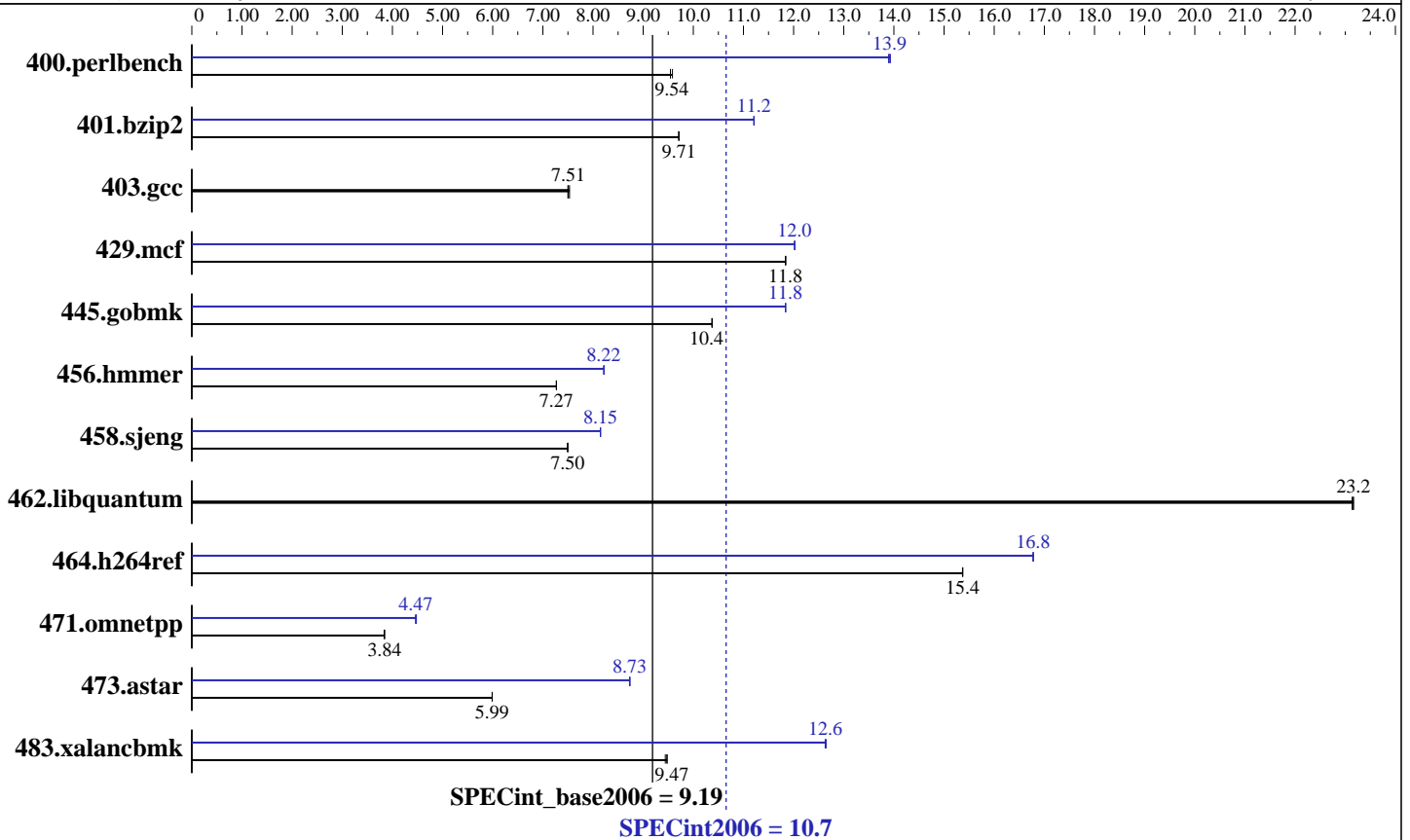
Test date: Mar-2007

Test sponsor: Fujitsu Limited

Hardware Availability: Apr-2007

Tested by: Fujitsu Limited

Software Availability: May-2007



Hardware

CPU Name: SPARC64 VI
 CPU Characteristics:
 CPU MHz: 2280
 FPU: Integrated
 CPU(s) enabled: 32 cores, 16 chips, 2 cores/chip, 2 threads/core
 CPU(s) orderable: 1 to 4 CMUs; each CMU contains 2 or 4 chips
 Primary Cache: 128 KB I + 128 KB D on chip per core
 Secondary Cache: 5 MB I+D on chip per chip
 L3 Cache: None
 Other Cache: None
 Memory: 64 GB (64 x 1 GB, see notes for details)
 Disk Subsystem: 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
 Other Hardware: None

Software

Operating System: Solaris 10 11/06
 Compiler: Sun Studio 12 (Early Access)
 Auto Parallel: No
 File System: ufs
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit
 Other Software: None



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	1019	9.58	1024	9.54	1024	9.54	701	13.9	703	13.9	702	13.9
401.bzip2	994	9.71	994	9.71	994	9.71	861	11.2	861	11.2	861	11.2
403.gcc	1074	7.50	1072	7.51	1069	7.53	1074	7.50	1072	7.51	1069	7.53
429.mcf	770	11.8	770	11.8	770	11.8	759	12.0	759	12.0	759	12.0
445.gobmk	1011	10.4	1011	10.4	1011	10.4	886	11.8	886	11.8	886	11.8
456.hammer	1283	7.27	1283	7.27	1283	7.27	1135	8.22	1135	8.22	1136	8.22
458.sjeng	1615	7.49	1614	7.50	1614	7.50	1485	8.15	1485	8.15	1485	8.15
462.libquantum	896	23.1	895	23.2	894	23.2	896	23.1	895	23.2	894	23.2
464.h264ref	1439	15.4	1440	15.4	1440	15.4	1319	16.8	1319	16.8	1319	16.8
471.omnetpp	1627	3.84	1627	3.84	1628	3.84	1401	4.46	1399	4.47	1396	4.48
473.astar	1172	5.99	1172	5.99	1172	5.99	804	8.73	803	8.74	804	8.73
483.xalancbmk	728	9.48	729	9.47	731	9.44	546	12.6	545	12.6	546	12.6

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

Operating System Notes

```

Shell Environment:
  Stack size set to unlimited via "ulimit -s unlimited"
  MPSSHEAP=4MB
  MPSSSTACK=4MB
  MADV=access_lwp
  LD_PRELOAD=mpss.so.1:madv.so.1

```

```

The run was bound to processor #27 using the "psrset" command
psrset -c processor id...: creates a set
psrset -e set_id command: runs command on a set

```

```

System Tunables:
(/etc/system parameters)
maxphys=4194304
  Defines the maximum size of I/O requests, in bytes.
maxpgio=1024
  Defines the maximum number of page I/O requests that can
  be queued by the paging system.
tune_t_fsflushr=1
  Controls how many seconds elapse between runs of the
  page flush daemon, fsflush.
autoup=60
  Causes pages older than the listed number of seconds to
  be written by fsflush.
bufhwm=3000
  Memory byte limit for caching I/O buffers

```

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Operating System Notes (Continued)

```
segmap_percent=1
Set maximum percent memory for file system cache
```

Platform Notes

"CMU" = CPU/Memory Unit; each holds 2 or 4 CPU chips.

Memory was 8-way interleaved by filling same capacity DIMMs in every other slot.

This result was measured on a Fujitsu SPARC Enterprise M8000 Server. Note that the Fujitsu SPARC Enterprise M8000 and Sun SPARC Enterprise M8000 are electrically equivalent.

Base Compiler Invocation

C benchmarks:

```
/opt/SUNWspr012_EA070303/bin/cc
```

C++ benchmarks:

```
/opt/SUNWspr012_EA070303/bin/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:

```
-fast -xipo=2 -xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused -xprefetch_level=2
```

C++ benchmarks:

```
-library=stlport4 -fast -xipo=2 -xtarget=sparc64vi
-xcache=128/64/2:6144/256/12 -xarch=sparcfmaf -fma=fused
-Qoption cg -fma=fused -xprefetch_level=2
```



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Peak Compiler Invocation

C benchmarks:
/opt/SUNWspol12_EA070303/bin/cc

C++ benchmarks:
/opt/SUNWspol12_EA070303/bin/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: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused
-xprefetch_level=2 -xalias_level=std -xrestrict -lfast

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused
-xalias_level=strong

403.gcc: basepeak = yes

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused
-xprefetch_level=3 -W2,-Apf:l1list=3 -W2,-Apf:noinnerl1list

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused

456.hmmer: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Wc,-fma=fused
-xalias_level=std

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Peak Optimization Flags (Continued)

458.sjeng: Same as 445.gobmk

462.libquantum: basepeak = yes

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Qoption cg -fma=fused

473.astar: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Qoption cg -fma=fused
-xalias_level=compatible -lfast

483.xalancbmk: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=sparc64vi -xcache=128/64/2:6144/256/12
-xarch=sparcfmaf -fma=fused -Qoption cg -fma=fused -lfast

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.20090714.02.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.20090714.02.xml>

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For other inquiries, please contact webmaster@spec.org.

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