SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Limited

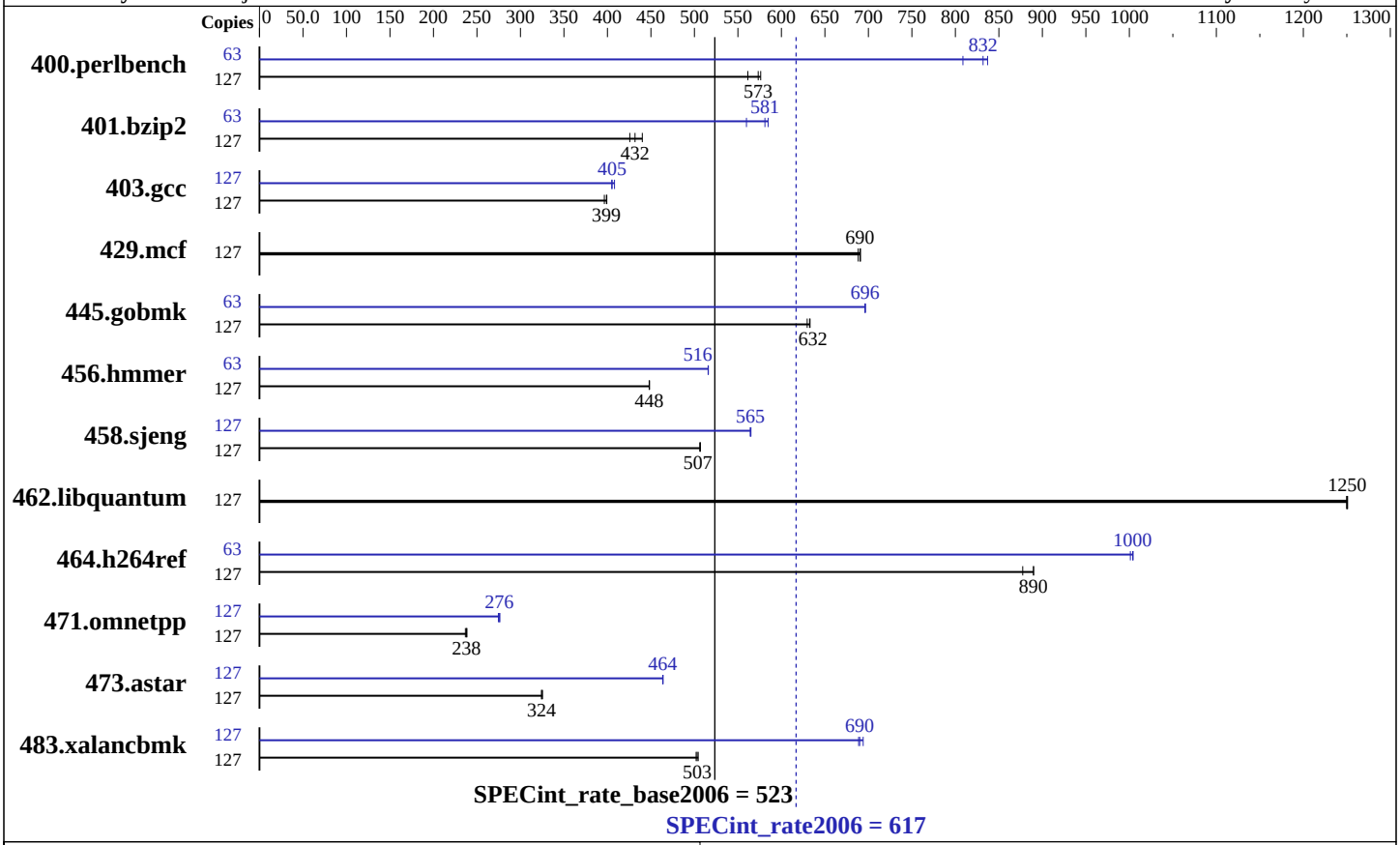
Fujitsu SPARC Enterprise M9000

SPECint®_rate2006 = 617

SPECint_rate_base2006 = 523

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

Test date: Apr-2007
Hardware Availability: Apr-2007
Software Availability: May-2007



Hardware

CPU Name:	SPARC64 VI
CPU Characteristics:	
CPU MHz:	2280
FPU:	Integrated
CPU(s) enabled:	64 cores, 32 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1 to 8 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:	256 GB (256 x 1 GB)
Disk Subsystem:	1095 GB RAID 0 using 15 x 73 GB, 10,000 RPM Fujitsu ETERNUS4000 Model 80
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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	127	2210	561	**2164**	**573**	2153	576	63	761	809	735	837	**740**	**832**
401.bzip2	127	2785	440	2879	426	**2839**	**432**	63	1086	560	1040	585	**1046**	**581**
403.gcc	127	2579	396	2561	399	**2563**	**399**	127	2505	408	**2522**	**405**	2525	405
429.mcf	127	1683	688	1676	691	**1677**	**690**	127	1683	688	1676	691	**1677**	**690**
445.gobmk	127	2116	630	**2107**	**632**	2105	633	63	949	697	949	696	**949**	**696**
456.hmmer	127	**2643**	**448**	2645	448	2643	448	63	1139	516	**1139**	**516**	1140	516
458.sjeng	127	3036	506	**3033**	**507**	3033	507	127	**2722**	**565**	2720	565	2723	564
462.libquantum	127	2106	1250	2104	1250	**2104**	**1250**	127	2106	1250	2104	1250	**2104**	**1250**
464.h264ref	127	**3159**	**890**	3158	890	3203	877	63	1393	1000	1388	1000	**1389**	**1000**
471.omnetpp	127	3353	237	**3335**	**238**	3329	238	127	**2877**	**276**	2890	275	2873	276
473.astar	127	2749	324	2740	325	**2749**	**324**	127	1922	464	1923	464	**1923**	**464**
483.xalancbmk	127	1746	502	**1742**	**503**	1737	504	127	**1270**	**690**	1263	694	1272	689

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

Operating System Notes

```
Processes were bound to cores using "submit" and "pbind".

 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


 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=30
       Controls how many seconds elapse between runs of the
       page flush daemon, fsflush.
    autoup=300
       Causes pages older than the listed number of seconds to
       be written by fsflush.
    bufhwm=3000
       Memory byte limit for caching I/O buffers
    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 all slots with
the same capacity DIMMs.

This result was measured on a Fujitsu SPARC Enterprise
M9000 Server.  Note that the Fujitsu SPARC Enterprise
M9000 and Sun SPARC Enterprise M9000 are electrically
equivalent.
```

Base Compiler Invocation

C benchmarks:
```
/opt/SUNWspro12_EA070303/bin/cc
```

C++ benchmarks:
```
/opt/SUNWspro12_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
```

Peak Compiler Invocation

C benchmarks:
```
/opt/SUNWspro12_EA070303/bin/cc
```

C++ benchmarks:
```
/opt/SUNWspro12_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: -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

429.mcf: basepeak = yes

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: Same as 403.gcc

458.sjeng: Same as 445.gobmk

462.libquantum: basepeak = yes

464.h264ref: Same as 403.gcc

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

Continued on next page

Peak Optimization Flags (Continued)

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`

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 v1.0.
Report generated on Tue Jul 22 11:49:46 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 May 2007.