



# SPEC® CINT2006 Result

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Fujitsu Limited

SPECint®2006 = 12.6

Fujitsu SPARC Enterprise M3000

SPECint\_base2006 = 11.5

CPU2006 license: 19

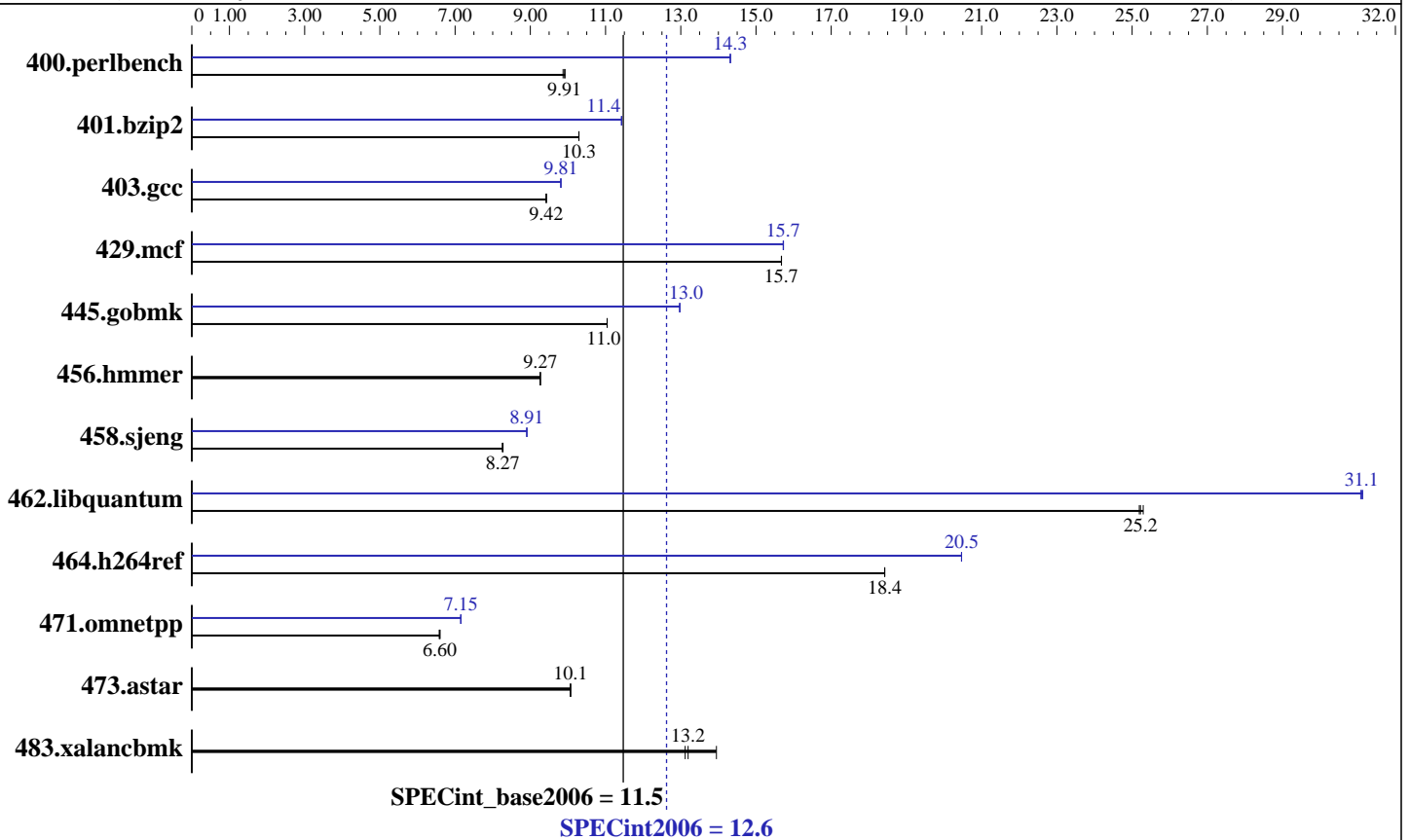
Test date: Sep-2008

Test sponsor: Fujitsu Limited

Hardware Availability: Oct-2008

Tested by: Fujitsu Limited

Software Availability: Oct-2008



## Hardware

CPU Name: SPARC64 VII  
 CPU Characteristics:  
 CPU MHz: 2520  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 chip  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 5 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (2 GB x 8), 2-way interleaved  
 Disk Subsystem: 73 GB 10,000 RPM Fujitsu MAY2073RC SAS  
 Other Hardware: None

## Software

Operating System: Solaris 10 10/08  
 Compiler: Sun Studio 12 with patches  
 124861-08, 124863-06, 124867-07, 127143-03,  
 127000-05, 127001-01  
 (see patch information below)  
 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	990	9.87	<b>986</b>	<b>9.91</b>	985	9.92	682	14.3	682	14.3	<b>682</b>	<b>14.3</b>
401.bzip2	<b>938</b>	<b>10.3</b>	938	10.3	938	10.3	<b>845</b>	<b>11.4</b>	845	11.4	845	11.4
403.gcc	855	9.42	854	9.43	<b>854</b>	<b>9.42</b>	820	9.81	821	9.81	<b>820</b>	<b>9.81</b>
429.mcf	<b>582</b>	<b>15.7</b>	582	15.7	582	15.7	580	15.7	<b>580</b>	<b>15.7</b>	580	15.7
445.gobmk	<b>950</b>	<b>11.0</b>	950	11.0	950	11.0	809	13.0	<b>809</b>	<b>13.0</b>	809	13.0
456.hammer	<b>1007</b>	<b>9.27</b>	1007	9.27	1007	9.27	<b>1007</b>	<b>9.27</b>	1007	9.27	1007	9.27
458.sjeng	<b>1463</b>	<b>8.27</b>	1466	8.25	1462	8.27	1358	8.91	<b>1359</b>	<b>8.91</b>	1359	8.91
462.libquantum	823	25.2	<b>822</b>	<b>25.2</b>	819	25.3	<b>666</b>	<b>31.1</b>	667	31.1	666	31.1
464.h264ref	1201	18.4	1201	18.4	<b>1201</b>	<b>18.4</b>	1081	20.5	1081	20.5	<b>1081</b>	<b>20.5</b>
471.omnetpp	<b>948</b>	<b>6.60</b>	950	6.58	947	6.60	874	7.15	<b>874</b>	<b>7.15</b>	874	7.15
473.astar	697	10.1	<b>697</b>	<b>10.1</b>	698	10.1	697	10.1	<b>697</b>	<b>10.1</b>	698	10.1
483.xalancbmk	<b>523</b>	<b>13.2</b>	526	13.1	495	13.9	<b>523</b>	<b>13.2</b>	526	13.1	495	13.9

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

## Compiler Invocation Notes

Sun Studio compiler patches are available at  
[http://developers.sun.com/sunstudio/downloads/patches/ss12\\_patches.jsp](http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp)

## Operating System Notes

Processes were assigned to a specific processor(processor\_id 3) using 'psrset' command. (as below)

```
# psrset -c 3
# psrset -e 1 runspec -c ...
```

Shell Environments:  
Default setting.

System Tunables:  
(/etc/system parameters)

```
tune_t_fsflushr=10
Controls how many seconds elapse between runs of the
page flush daemon, fsflush.
autoup=600
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.
```

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<b>CPU2006 license:</b> 19	<b>Test date:</b> Sep-2008
<b>Test sponsor:</b> Fujitsu Limited	<b>Hardware Availability:</b> Oct-2008
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## Operating System Notes (Continued)

Other System Settings:

The webconsole service was turned off using `svcadm disable webconsole`.

## Platform Notes

Memory is 2-way interleaved by filling all slots with the same capacity DIMMs.

This result is measured on a Fujitsu SPARC Enterprise M3000 Server. Note that the Fujitsu SPARC Enterprise M3000 and Sun SPARC Enterprise M3000 are electrically equivalent.

## 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:

`-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std -ll2amm`

C++ benchmarks:

`-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=compatible -lfast`



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## 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: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xalias\_level=std -Xc -xipo=2 -xrestrict  
-lfast

401.bzip2: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xalias\_level=strong

403.gcc: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xipo=2 -m32 -xarch=sparcvis2  
-xalias\_level=std -xprefetch\_auto\_type=indirect\_array\_access  
-xprefetch\_level=2 -l12amm

429.mcf: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xipo=2  
-xprefetch\_level=3 -W2,-Apf:l1list=3 -W2,-Apf:noninnerl1list

445.gobmk: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xalias\_level=std -xrestrict

456.hmmer: basepeak = yes

458.sjeng: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xipo=2

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## Peak Optimization Flags (Continued)

462.libquantum: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xipo=2 -xprefetch\_level=2 -xchip=ultra3cu  
-lbsdmalloc

464.h264ref: -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xipo=2 -xalias\_level=std -m32  
-xarch=sparcvis2 -xprefetch=no -l12amm

C++ benchmarks:

471.omnetpp: -library=stlport4 -xprofile=collect:./feedback(pass 1)  
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M  
-fma=fused -xalias\_level=compatible -xipo=2  
-xprefetch\_level=2 -Qoption cg -Qlp-av=0 -lfast

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.html>

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

<http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.r3.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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