



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER250 (1100MHz)

SPECint\_rate2000 = 15.3  
SPECint\_rate\_base2000 = 13.1

SPEC license #: 19 Tested by: Fujitsu Limited Test date: May-2003 Hardware Avail: Jul-2003 Software Avail: May-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	268	12.1	2	241	13.5
175.vpr	2	310	10.5	2	281	11.6
176.gcc	2	169	15.1	2	159	16.1
181.mcf	2	593	7.04	2	370	11.3
186.crafty	2	147	15.8	2	144	16.1
197.parser	2	355	11.8	2	326	12.8
252.eon	2	275	11.0	2	179	16.9
253.perlbnk	2	257	16.2	2	256	16.3
254.gap	2	194	13.2	2	182	14.0
255.vortex	2	189	23.3	2	146	30.3
256.bzip2	2	275	12.7	2	263	13.2
300.twolf	2	481	14.5	2	384	18.1

### Hardware

CPU: SPARC64 V  
 CPU MHz: 1100  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip  
 CPU(s) orderable: 1 to 2 (increments of 1)  
 Parallel: None  
 Primary Cache: 128KBI+128KBD on chip  
 Secondary Cache: 1MB(I+D) on chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8192MB  
 Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
 Other Hardware: None

### Software

Operating System: Solaris8 2/02 with current patches (see notes)  
 Compiler: Fujitsu Parallelnavi 1.0.2  
 Sun ONE Studio 8  
 (EA2 version of Sun ONE Studio 8 used)  
 Sun Performance Library 8  
 File System: ufs  
 System State: multi user

## Notes/Tuning Information

Baseline (except 252.eon, for Sun ONE Studio 8 EA2):

```
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback
```

(252.eon, for Sun ONE Studio 8 EA2):

```
-fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes
```

Peak

(for Sun ONE Studio 8 EA2)

```
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback
```

```
164.gzip: -xO5 -xchip=ultra2 -xcache=128/64/2:1024/64/2 -xarch=v8plusb -xipo=2
```

```
-xalias_level=std -xprefetch -xprefetch_level=2 -W2,-whole,-Ainline ONESTEP=yes
```

```
175.vpr: -fast -xchip=ultra2 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
```

```
-xalias_level=std -xipo=2 -xsfpconst -xdepend -W2,-whole
```

```
-Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
```

```
-lmopt -lm ONESTEP=yes
```

```
176.gcc: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
```

```
-xipo=2 -xprefetch=latx:2.0 -W2,whole
```



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## Notes/Tuning Information (Continued)

```

-Wc,-Qgsched-trace_late=1,-Qgsched-T4 -l12amm ONESTEP=yes
181.mcf: -fast -xchip=ultra2 -xcache=128/64/2:1024/64/2 -xarch=v8plusb
-xipo=2 -xdepend -Wc,-Qms_pipe-pref,-Qeps:enabled=1 -xprefetch_level=3
-W2,-Apf:l1list=3:noninnerl1list -lprism32 ONESTEP=yes
186.crafty: -fast -xchip=ultra3cu -xcache=128/64/2:1024/64/2
-xarch=v8plusb -xipo=2 -xalias_level=strong -xprefetch=latx:1.2
-W2,-Ashort_ldst ONESTEP=yes
197.parser: -fast -xchip=ultra3cu -xcache=128/64/2:1024/64/2 -xarch=v8plusb
-xipo=2 -xalias_level=strong -xdepend -xregs=syst
-Wc,-Qgsched-trace_late=1,-Qgsched-T6,-Qipa:valueprediction -lprism32 ONESTEP=yes
252.eon: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2 -xarch=v8plusb -xipo=2
-xregs=syst -xalias_level=compatible -noex -xunroll=3 -xprefetch=latx:0.8
-Qoption cg -Qgsched-trace_late=1,-Qgsched-T4,-Qeps:enabled=1,-Qeps:ws=32
-Qoption iropt -Mt2000 -lmopt ONESTEP=yes
253.perlbnk: -dn -xO5 -xchip=ultra3 -xcache=128/64/2:1024/64/2
-xarch=v8plus -xipo=2 ONESTEP=yes
254.gap: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2
-xarch=v8plusb -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3
-W2,-whole,-Abcopy -Wc,-Qgsched-trace_late=1,-Qgsched-T4 ONESTEP=yes
255.vortex: -fast -xchip=ultra2 -xcache=128/64/2:1024/64/2
-xarch=v8plusb -xrestrict -xipo=2 -xdepend -xprefetch=latx:2.4
-W2,-crit,Ainline:recursion=1:cs=500:irs=6000,-Aheap,-reroll=1,-Aunroll,-Ms15,-Mt300,-Mr6000
-Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qdepgraph-early_cross_call=1
-Wc,-Qiselect-funcalign=32,-Qpeep-Sh0 -l12amm -lprism32 ONESTEP=yes
256.bzip2: -fast -xchip=ultra3 -xcache=128/64/2:1024/64/2
-xarch=v8plusb -xipo -xalias_level=strong -xdepend -xregs=syst
-xrestrict -xprefetch=latx:1.6 -W2,-Abopt
-Wc,-Qiselect-funcalign=64,-Qeps:enabled=1 ONESTEP=yes
(for Parallelnavi 1.0.2)
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodata,xi=10,
nounroll,largepage,bcopy,prefetch=4 -dy
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
Portability:
176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream
253.perlbnk: -DSPEC_CPU2000_SOLARIS
254.gap: -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
-DSYS_HAS_CALLOC_PROTO -DSYS_HAS_IOCTL_PROTO

```

### Note:

```

System Tunables: (for /etc/system)
consistent_coloring=1,
set shmsys:shminfo_shmmax=2147483648,set shmsys:shminfo_shmmni=256,
set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
(for /etc/opt/FJSVpnm/lpg.conf)
TSS=1024M, SHMSEGSIZE=256M
Shell Environments:
LD_LIBRARY_PATH="/opt3/SUNWspro/prod/lib/v8plusb"
PRISM_HEAP=268435456
PRISM_MODE=2
ONESTEP=yes was set for all baseline and peak benchmarks.
Feedback directed optimization was used for all baseline and peak benchmarks
except 252.eon(base).

```



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Stack size set to unlimited via "ulimit -s unlimited"

Sun ONE Studio 8 EA2 (Early Access 2), posted at URL <http://access1.sun.com/s1sprod/> as updated through 27-Mar-2003, was used for this submission.

Sun ONE Studio 8 (final) will ship May-2003.

All patches for Solaris8 posted at

[http://access1.sun.com/patch.public/cgi-bin/show\\_list.cgi/wrk/Sun\\_ONE\\_Studio\\_7\\_SPARC\\_SunOS\\_5.8](http://access1.sun.com/patch.public/cgi-bin/show_list.cgi/wrk/Sun_ONE_Studio_7_SPARC_SunOS_5.8) as of date 2003/04/21 were applied: 108434-11, 108435-11, 111697-04, 111721-03.