



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER250 (1100MHz)

SPECint2000 = 680
SPECint_base2000 = 578

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | |
|-------------|----------------|--------------|------------|---------|-------|--|
| 164.gzip | 1400 | 270 | 518 | 240 | 583 | |
| 175.vpr | 1400 | 300 | 467 | 270 | 519 | |
| 176.gcc | 1100 | 158 | 698 | 156 | 706 | |
| 181.mcf | 1800 | 532 | 338 | 303 | 593 | |
| 186.crafty | 1000 | 148 | 677 | 142 | 704 | |
| 197.parser | 1800 | 352 | 511 | 323 | 557 | |
| 252.eon | 1300 | 272 | 478 | 178 | 729 | |
| 253.perlbmk | 1800 | 259 | 695 | 255 | 706 | |
| 254.gap | 1100 | 190 | 578 | 180 | 612 | |
| 255.vortex | 1900 | 187 | 1017 | 142 | 1335 | |
| 256.bzip2 | 1500 | 265 | 567 | 253 | 593 | |
| 300.twolf | 3000 | 469 | 639 | 383 | 784 | |

Hardware

CPU: SPARC64 V
 CPU MHz: 1100
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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 -xalias_level=std
 -xipo=2 -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=latex:2.0 -W2,whole -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



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Notes/Tuning Information (Continued)

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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 iropt -Mt2000
        -Qoption cg -Qgsched-trace_late=1,-Qgsched-T4,-Qeps:enabled=1,-Qeps:ws=32
        -lmopt ONESTEP=yes
253.perlbnk: -dn -x05 -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 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_shmmmax=2147483648,set shmsys:shminfo_shmmni=256,
set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmmin=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).

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

Small configuration memory system mode used ("4cpu mode", enabled via system console).

System board used with only one CPU present.

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

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as of date 2003/04/21 were applied: 108434-11, 108435-11, 111697-04, 111721-03.