



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER250 (1320MHz)

SPECint_rate2000 = 20.0
SPECint_rate_base2000 = 17.4

SPEC license #: 19 Tested by: Fujitsu Limited Test date: Dec-2003 Hardware Avail: Feb-2004 Software Avail: Dec-2003

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	225	14.5	2	202	16.1
175.vpr	2	217	14.9	2	195	16.6
176.gcc	2	138	18.5	2	124	20.5
181.mcf	2	319	13.1	2	236	17.7
186.crafty	2	119	19.4	2	116	19.9
197.parser	2	274	15.3	2	250	16.7
252.eon	2	228	13.2	2	145	20.8
253.perlbnk	2	209	19.9	2	209	20.0
254.gap	2	162	15.7	2	150	17.0
255.vortex	2	145	30.5	2	112	39.5
256.bzip2	2	200	17.4	2	190	18.3
300.twolf	2	309	22.5	2	278	25.1

Hardware

CPU: SPARC64 V
CPU MHz: 1320
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: 2MB(I+D) on chip
L3 Cache: None
Other Cache: None
Memory: 4096MB (512MB x 8)
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)
Other Hardware: None

Software

Operating System: Solaris 8 2/02 with current patches (see notes)
Compiler: Fujitsu Parallelnavi 2.3
Sun ONE Studio 8
Sun Performance Library 8
File System: ufs
System State: multi user

Notes/Tuning Information

```
FDO: (for Parallelnavi 2.3)
fdo_pre0=rm -rf `pwd`/*.f.d
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
FDO: (for Sun ONE Studio 8)
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback

Integer base flags:
(using C compiler of Sun ONE Studio 8)
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO
(using C++ compiler of Sun ONE Studio 8)
-fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes

Integer peak flags:
(using C compiler of Parallelnavi 2.3)
300.twolf: -Kfast_GP2=3 -O5 -KGREG,largepage,memalias,cfunc,
use_rodata,xi=20 ONESTEP=yes FDO
```



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Notes/Tuning Information (Continued)

(using C compiler of Sun ONE Studio 8)

```

164.gzip: -xO5 -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
          -xalias_level=std -xipo=2 -xprefetch -W2,-whole,-Ainline
          -Wc,-Qiselect-funcalign=64 ONESTEP=yes FDO
175.vpr: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
          -xarch=v8plus -xchip=ultra -xalias_level=std -xdepend -xipo=2
          -xprefetch=latx:1.6 -xsfpcnst -W2,-whole -Wc,-Qeps:do_spec_load=1
          -Wc,-Qeps:enabled=1,-Qeps:rp_filtering_margin=100,
          -Qiselect-funcalign=64 -lprism32 ONESTEP=yes FDO
176.gcc: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
          -xipo=2 -xprefetch=latx:1.6 -W2,-whole
          -Wc,-Qgsched-T4,-Qgsched-trace_late=1,-Qiselect-funcalign=64
          -ll2amm ONESTEP=yes FDO
181.mcf: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
          -xchip=ultra2 -xdepend -xipo=2 -W2,-Apf:l1list=3:noinnerl1list
          -Wc,-Qeps:enabled=1,-Qms_pipe-pref -lprism32 ONESTEP=yes FDO
186.crafty: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
            -xarch=v8plusa -xalias_level=strong -xipo=2
            -xprefetch=latx:0.8 -W2,-Ashort_ldst -Wc,-Qiselect-funcalign=64
            ONESTEP=yes FDO
197.parser: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
            -xalias_level=strong -xdepend -xipo=2 -xprefetch=latx:0.8
            -xregs=syst -Wc,-Qgsched-T6,-Qgsched-trace_late=1,
            -Qipa:valueprediction,-Qiselect-funcalign=64
            -lprism32 ONESTEP=yes FDO
253.perlbnk: -dn -xO5 -xarch=v8plus -xchip=ultra3 -xcache=128/64/2:2048/64/4
            -xipo=2 -Wc,-Qiselect-funcalign=64
            ONESTEP=yes FDO
254.gap: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
          -xalias_level=strong -xipo=2 -xprefetch_level=3 -xprefetch=latx:2.0
          -xvector -W2,-Abcopy,-whole -Wc,-Qgsched-T4,-Qgsched-trace_late=1,
          -Qiselect-funcalign=64 ONESTEP=yes FDO
255.vortex: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
            -xchip=ultra -xdepend -xipo=2 -xrestrict -xprefetch=latx:1.6
            -W2,-Aheap,-Ainline:recursion=1:cs=500:irs=6000,-Aunroll,-crit
            -W2,-Ms15,-Mt300,-Mr6000,-reroll=1 -Wc,-Qdepgraph-early_cross_call=1
            -Wc,-Qeps:do_spec_load=1,-Qeps:enabled=1,-Qiselect-funcalign=64
            -Wc,-Qpeep-Sh0 -ll2amm -lprism32 ONESTEP=yes FDO
256.bzip2: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
            -xipo -xalias_level=strong -xdepend -xregs=syst -xrestrict
            -xprefetch=latx:0.8 -W2,-Abopt -Wc,-Qiselect-funcalign=64
            -Wc,-Qeps:enabled ONESTEP=yes FDO

```

(using C++ compiler of Sun ONE Studio 8)

```

252.eon: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
         -noex -xalias_level=compatible -xipo=2
         -xprefetch=latx:0.8 -xregs=syst -xunroll=3
         -Qoption cg -Qeps:enabled=1,-Qeps:ws=32,-Qgsched-T4,
         -Qgsched-trace_late=1,-Qiselect-funcalign=64
         -Qoption iropt -Mt2000 -lmopt ONESTEP=yes FDO

```

Portability:

```

176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream

```



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Notes/Tuning Information (Continued)

```
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
```

System Tunables:

```
(for /etc/system)
set consistent_coloring=1
set shmsys:shminfo_shmmax=2147483648, set shmsys:shmmni=256,
set shmsys:shminfo_shmseg=400, set shmsys:shmmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
```

```
(for /etc/opt/FJSVpnm/lpg.conf)
TSS=1024M, SHMSEGSIZE=256M
```

Shell Environments:

```
Stack size set to unlimited via "ulimit -s unlimited"
LD_LIBRARY_PATH="/opt/SUNWspro/prod/lib/v8plusb"
PRISM_HEAP=268435456
PRISM_MODE=2
```

Sun ONE Studio 8, posted at URL <http://www.sun.com/software/sundev/suncc/> was used for this submission.

All patches for Solaris 8 posted at

http://access1.sun.com/patch.public/cgi-bin/show_list.cgi/wrk/Sun_ONE_Studio_8_SPARC_SunOS_5.8 as of date 2003/12/17 were applied: 108434-13, 108435-13, 111697-04, 111721-04.

Processes were bound to CPUs using "submit=pbind"