CINT2000 Result

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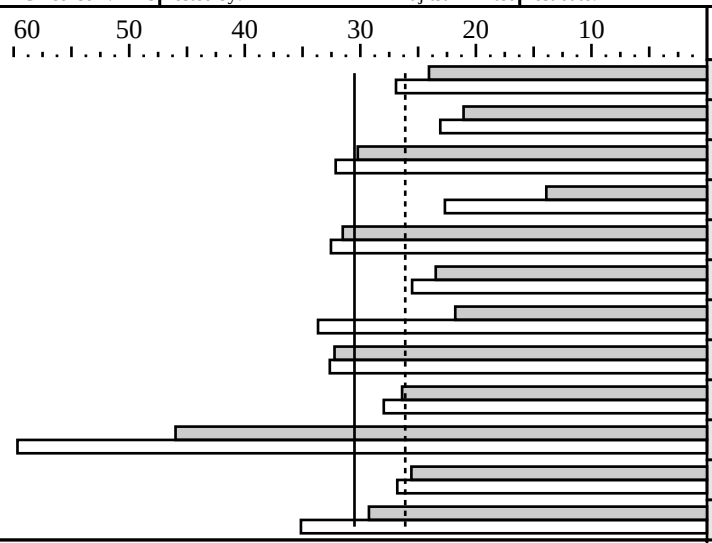
Fujitsu Limited
PRIMEPOWER450 (1100MHz)

SPECint_rate2000 = 30.5

SPECint_rate_base2000 = 26.1

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	4	270	24.1	4	241	26.9
175.vpr	4	308	21.1	4	281	23.1
176.gcc	4	169	30.2	4	159	32.1
181.mcf	4	601	13.9	4	368	22.7
186.crafty	4	147	31.5	4	143	32.5
197.parser	4	356	23.5	4	327	25.5
252.eon	4	277	21.8	4	179	33.7
253.perlbmk	4	259	32.2	4	256	32.6
254.gap	4	193	26.4	4	182	28.0
255.vortex	4	192	46.0	4	148	59.7
256.bzip2	4	272	25.6	4	260	26.8
300.twolf	4	476	29.3	4	396	35.1

Hardware

CPU:	SPARC64 V
CPU MHz:	1100
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 chips, 1 core/chip
CPU(s) orderable:	1 to 4 (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 Performance Library 8 (EA2 version of Sun ONE Studio 8 used)
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 -ll2amm 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:llist=3:noinnerllist -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.perlbmk: -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 -ll2amm -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.perlbmk: -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/FJSVpnrm/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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Notes/Tuning Information (Continued)

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