CINT2000 Result

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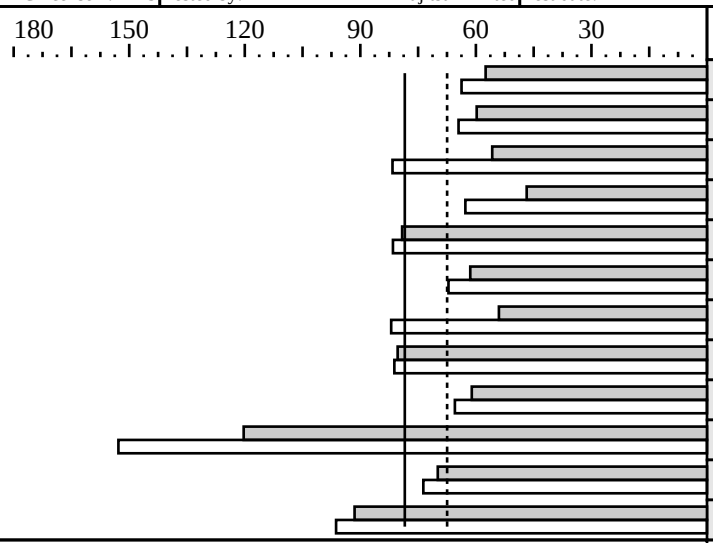
Fujitsu Limited
PRIMEPOWER650 (1350MHz)

SPECint_rate2000 = 78.5

SPECint_rate_base2000 = 67.5

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	226	57.5	8	204	63.7
175.vpr	8	217	59.8	8	201	64.5
176.gcc	8	183	55.8	8	125	81.6
181.mcf	8	357	46.8	8	266	62.7
186.crafty	8	117	79.1	8	114	81.5
197.parser	8	272	61.5	8	249	67.1
252.eon	8	223	54.0	8	147	82.0
253.perlbmk	8	208	80.3	8	206	81.2
254.gap	8	167	61.1	8	156	65.5
255.vortex	8	147	120	8	115	153
256.bzip2	8	199	69.9	8	189	73.6
300.twolf	8	304	91.5	8	289	96.3

Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	1 to 8 (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:	32768MB
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 Sun Performance Library 8
File System:	ufs
System State:	multi user

Notes/Tuning Information

```
Baseline (except 252.eon, for Sun ONE Studio 8):
   -fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback
Baseline (252.eon, for Sun ONE Studio 8):
   -fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes

Peak
(for Sun ONE Studio 8)
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback
164.gzip: -xO5 -xchip=ultra2 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
    -xalias_level=std -xipo=2 -xprefetch
    -W2,-whole,-Ainline ONESTEP=yes
175.vpr: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra2 -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
```

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Notes/Tuning Information (Continued)

```
176.gcc: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xprefetch=latx:2.0 -W2,whole
    -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -ll2amm ONESTEP=yes
181.mcf: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra2 -xipo=2 -xdepend -Wc,-Qms_pipe-pref,-Qeps:enabled=1
    -xprefetch_level=3 -W2,-Apf:llist=3:noinnerllist -lprism32 ONESTEP=yes
186.crafty: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xipo=2 -xalias_level=strong
    -W2,-Ashort_ldst ONESTEP=yes
197.parser: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xipo=2 -xalias_level=strong -xdepend -xregs=syst
    -Wc,-Qgsched-trace_late=1,-Qgsched-T6,-Qipa:valueprediction -lprism32 ONESTEP=yes
252.eon: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -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.perlbmk: -dn -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/4
    -xarch=v8plus -xipo=2 ONESTEP=yes
254.gap: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3
    -W2,-whole,-Abcopy -Wc,-Qgsched-trace_late=1,-Qgsched-T4 ONESTEP=yes
255.vortex: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra2 -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 -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra3 -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
    ONESTEP=yes

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)
 set consistent_coloring=1,
 set shmsys:shminfo_shmmax=4294967296,set shmsys:shminfo_shmmni=256,
 set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmin=1
 set tune_t_fsflushr = 86400
 set autoup = 86400
System Tunables: (for /etc/opt/FJSVpnrm/lpg.conf)
 TSS=2048M, SHMSEGSIZE=256M
Shell Environments:
```

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Notes/Tuning Information (Continued)

```
  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".
Sun ONE Studio 8, posted at URL http://wwws.sun.com/software/sundev/suncc/
was used for this submission.
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: 108434-12, 108435-12, 111697-04, 111721-03.
```