CINT2000 Result

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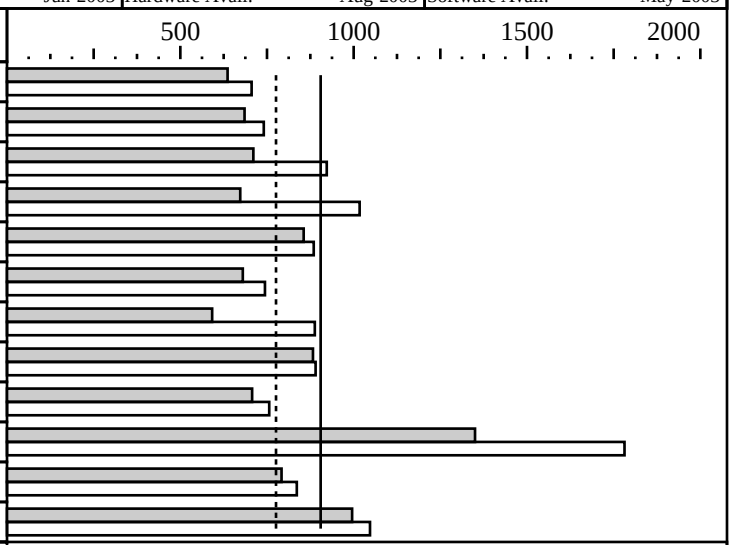
Fujitsu Limited
PRIMEPOWER650 (1350MHz)

SPECint2000 = 905

SPECint_base2000 = 776

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	220	636	198	706
175.vpr	1400	204	685	189	741
176.gcc	1100	155	711	119	922
181.mcf	1800	268	673	177	1017
186.crafty	1000	117	856	113	885
197.parser	1800	265	680	242	744
252.eon	1300	220	592	146	888
253.perlbmk	1800	204	883	202	890
254.gap	1100	156	707	145	756
255.vortex	1900	141	1350	107	1781
256.bzip2	1500	189	792	179	836
300.twolf	3000	301	996	286	1047



Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 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:	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 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=1024M, 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).
Small configuration memory system mode used ("4cpu mode", enabled via front panel).
Stack size set to unlimited via "ulimit -s unlimited".
System board used with only one CPU present.
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.
```