CINT2000 Result

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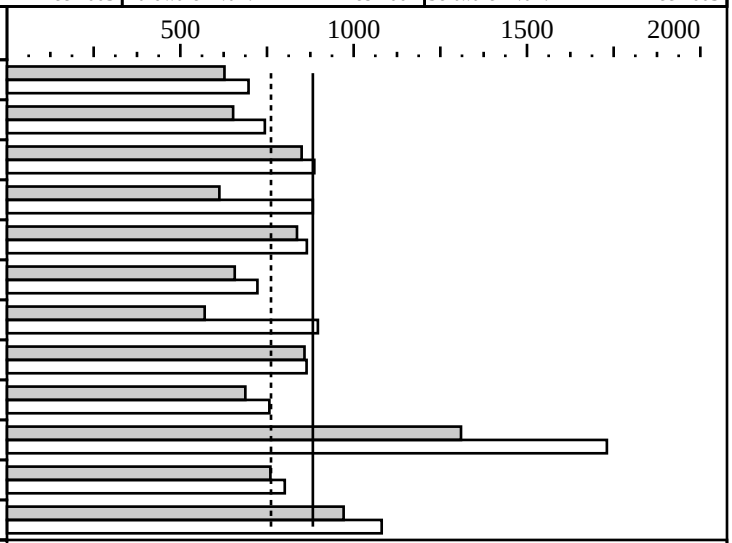
Fujitsu Limited
PRIMEPOWER450 (1320MHz)

SPECint2000 = 882

SPECint_base2000 = 762

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
164.gzip	1400	223	627	201	697
175.vpr	1400	215	652	188	744
176.gcc	1100	129	850	124	886
181.mcf	1800	294	613	204	882
186.crafty	1000	120	836	116	865
197.parser	1800	274	657	249	722
252.eon	1300	228	570	145	897
253.perlbmk	1800	210	858	208	864
254.gap	1100	160	688	145	757
255.vortex	1900	145	1310	110	1730
256.bzip2	1500	197	760	187	801
300.twolf	3000	309	971	278	1081



Hardware

CPU:	SPARC64 V
CPU MHz:	1320
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1 to 4 (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 (512MB x 16)
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 Parallenavi 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 -xsfpconst -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:llist=3:noinnerllist
              -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.perlbmk:  -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
253.perlbmk:  -DSPEC_CPU2000_SOLARIS
254.gap:      -DSYS_IS_USG -DSYS_HAS_TIME_PROTO -DSYS_HAS_SIGNAL_PROTO
```

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Notes/Tuning Information (Continued)

-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:shmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
(for /etc/opt/FJSVpnrm/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

System board used with only on CPU present.
Sun ONE Studio 8, posted at URL http://wwws.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.