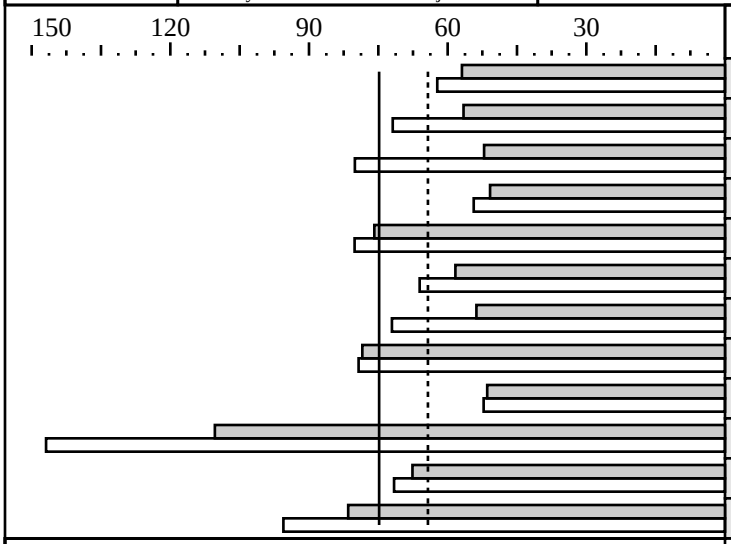
CINT2000 Result

Fujitsu Limited
PRIMEPOWER900 (1350MHz)

SPECint_rate2000 = 74.9

SPECint_rate_base2000 = 64.3

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	228	56.9	8	209	62.3
175.vpr	8	230	56.6	8	181	71.9
176.gcc	8	196	52.1	8	127	80.1
181.mcf	8	329	50.8	8	307	54.4
186.crafty	8	122	75.9	8	116	80.1
197.parser	8	286	58.3	8	253	66.1
252.eon	8	224	53.8	8	167	72.1
253.perlbmk	8	213	78.5	8	211	79.3
254.gap	8	198	51.4	8	195	52.2
255.vortex	8	160	110	8	120	147
256.bzip2	8	206	67.6	8	194	71.6
300.twolf	8	342	81.5	8	291	95.5

Hardware

CPU:	SPARC64 V
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	1 to 16 (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:	64GB
Disk Subsystem:	1 x 36.4GB SCSI (10000rpm)
Other Hardware:	System with one PPAR, see Notes

Software

Operating System:	Solaris8 2/02 with current patches (see notes)
Compiler:	Fujitsu Parallelnavi 1.0.2 Sun ONE Studio 7 with current patches (see notes) Sun Performance Library 7
File System:	ufs
System State:	multi user

Notes/Tuning Information

```
Baseline (except 252.eon, for Sun ONE Studio 7): -fast -xtarget=ultra3 -xcrossfile
fdo_pre0=rm -rf `pwd`/../feedback.profile `pwd`/SunWS_cache
PASS1=-xprofile=collect:`pwd`/../feedback
PASS2=-xprofile=use:`pwd`/../feedback
(252.eon, for Sun ONE Studio 7): -fast -xchip=ultra3 -xarch=v8plus -xcrossfile
Peak
(for Sun ONE Studio 7)
   fdo_pre0=rm -rf `pwd`/../feedback.profile `pwd`/SunWS_cache
   PASS1=-xprofile=collect:`pwd`/../feedback
   PASS2=-xprofile=use:`pwd`/../feedback
164.gzip: -xO5 -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -xarch=v8plusb -xalias_level=std
    -W2,-whole -xcrossfile -W2,-Ainline -xprefetch -xprefetch_level=2
175.vpr: -fast -xchip=ultra2 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
    -xalias_level=std -xipo=1 -xsfpconst -xdepend -W2,-whole
    -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
176.gcc: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
    -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xprefetch -ll2amm
181.mcf: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
    -xcrossfile -xprefetch -xdepend -Wc,-Qms_pipe-pref,-Qlp=1-fa=1-av=256-t=2-fl=1
186.crafty: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4
```

Notes/Tuning Information (Continued)

-xarch=v8plusb -xinline=%auto -Wc,-Qgsched-trace_late=1,-Qgsched-T4
-xalias_level=strong -xregs=syst -W2,-Ashort_ldst,-Aivel:duplicate_loops -xipo=1
197.parser: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -xarch=v8plusb
-xdepend -xcrossfile -xregs=syst -Wc,-Qgsched-trace_late=1,-Qgsched-T4
-xalias_level=strong -Wc,-Qipa:valueprediction -lprism32
252.eon: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plus
-xcrossfile -xregs=syst -xsafe=mem -Qoption iropt -Mt2000 -Qoption cg
-Qgsched -trace_late=1,-Qgsched-trace_spec_load=1,-Qgsched-T4
-xunroll=3 -lmopt
253.perlbmk: -dn -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/2
-xarch=v8plus -xcrossfile
254.gap: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xarch=v8plusb -xcrossfile -xalias_level=std -xprefetch
-W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4
255.vortex: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4
-xarch=v8plusb -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1
-W2,-Aheap,-reroll=1,-Aunroll,-Ms15,-Mt300,-Mr6000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=64
-Wc,-Qpeep-Sh0 -xrestrict -xdepend -xcrossfile -ll2amm -lprism32
256.bzip2: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4
-xarch=v8plusb -W2,-Abopt -xcrossfile -xalias_level=strong
-Wc,-Qiselect-funcalign=64 -xdepend -xregs=syst -xsafe=mem
(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,
shmsys:shminfo_shmmax=8589934592, shmsys:shminfo_shmmni=256,
shmsys:shminfo_shmseg=400,shminfo_shmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=4096M, SHMSEGSIZE=256M
Shell Environments:
LD_LIBRARY_PATH="/opt/SUNWspro/prod/lib/v8plusb"
PRISM_HEAP=268435456
PRISM_MODE=2
ONESTEP=yes was set for all baseline and peak benchmarks.
Feedback directed optimization (FDO) was used for all baseline and peak benchmarks except 252.eon(base).
Stack size set to unlimited via "ulimit -s unlimited"
All patches of Sun ONE Studio 7 posted at URL http://access1.sun.com/sundev/s1s7-patches.html
as of date 2003/02/21 were applied: 111704-06, 111706-04, 111709-02, 111715-04, 111718-01
111705-03, 111708-03, 111714-04, 111716-02, 111723-02
All patches for Sun_ONE_Studio_7_SPARC_SunOS_5.8 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 2003/02/21 were applied: 108434-10, 108435-10, 111697-04, 111721-02
System configured at installation time in PPAR(Physical PARtitioning) mode.
One partition used, extending over the whole system.

Notes/Tuning Information (Continued)

4 CPUs and 32 GB installed on each of the two system boards.