CINT2000 Result

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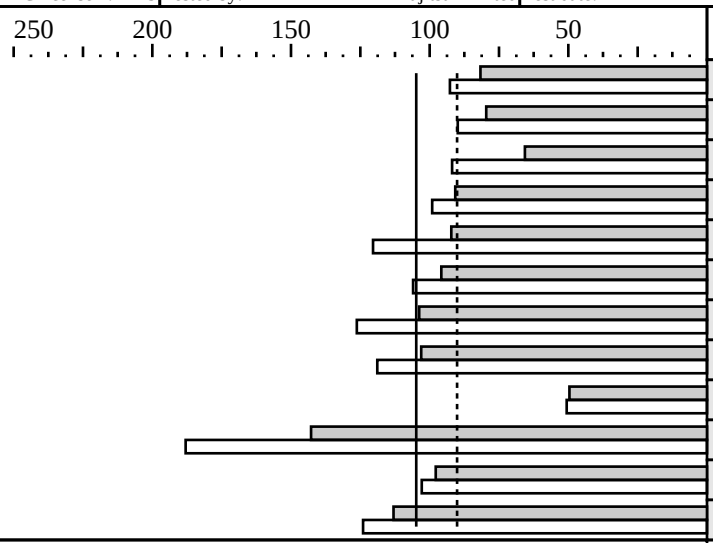
Fujitsu Limited
PRIMEPOWER800/1000/2000 (788MHz)

SPECint_rate2000 = 105

SPECint_rate_base2000 = 90.1

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Aug-2002 | Hardware Avail: Aug-2002 | Software Avail: May-2002



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	16	318	81.7	16	280	92.7
175.vpr	16	326	79.6	16	289	89.9
176.gcc	16	311	65.7	16	222	91.9
181.mcf	16	368	90.8	16	337	99.1
186.crafty	16	201	92.2	16	154	120
197.parser	16	349	95.8	16	315	106
252.eon	16	232	104	16	191	126
253.perlbmk	16	324	103	16	281	119
254.gap	16	412	49.6	16	404	50.6
255.vortex	16	247	143	16	188	188
256.bzip2	16	285	97.8	16	271	103
300.twolf	16	493	113	16	449	124

Hardware

CPU:	SPARC64 GP
CPU MHz:	788
FPU:	Integrated
CPU(s) enabled:	16 cores, 16 chips, 1 core/chip
CPU(s) orderable:	4 to 16/4 to 32/8 to 128
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	16GB
Disk Subsystem:	1 x 36GB, 1 x 18GB SCSI (10000rpm)
Other Hardware:	Ethernet

Software

Operating System:	Solaris 8 2/02 with patches 108434-07 and 108435-07.
Compiler:	Fujitsu Parallelnavi 1.0.2 with patches 911403-01 and 911746-01. 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 Parallelnavi 1.0.2): -Kfast_GP=3,largepage
fdo_pre0=rm -rf ‘pwd‘/*.fbk
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
(252.eon, for Sun ONE Studio 7): -fast -xcrossfile
fdo_pre0=rm -rf ‘pwd‘/../feedback.profile ‘pwd‘/SunWS_cache
PASS1=-xprofile=collect:‘pwd‘/../feedback
PASS2=-xprofile=use:‘pwd‘/../feedback

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 -xtarget=ultra3 -xalias_level=std -W2,-whole -xcrossfile
    -W2,-Ainline -xprefetch -Wc,-Qgsched-trace_late=1,-Qgsched-spec_load=1 -ll2amm
175.vpr: -fast -xarch=v8plusb -xalias_level=std -xcrossfile -xsfpconst
    -xdepend -W2,-whole,-Mt600,-Mr4000 -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
    -xregs=syst -xprefetch=auto,latx:5.0 -lprism32 -lmopt -lm
176.gcc: -fast -xtarget=ultra3 -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -ll2amm
```

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Notes/Tuning Information (Continued)

186.crafty: -fast -xtarget=ultra3 -xarch=v8plus -xF -xinline= -xcrossfile -Wc,-Qgsched-spec_load=1,-Qiselect-funcalign=64
-xalias_level=strong -xregs=syst -W2,-Ashort_ldst,-Aivel:duplicate_loops -xprefetch=auto,latx:5.0
197.parser: -fast -xarch=v8plusb -xdepend -xprefetch=no%auto
-xcrossfile -xregs=syst -Wc,-Qgsched-trace_late=1,-Qgsched-T4
-xalias_level=strong -Wc,-Qipa:valueprediction
-W2,-Ashort_ldst,-Mt5000 -Wc,-Qiselect-funcalign=32 -lprism32
252.eon: -fast -xtarget=ultra3 -xcrossfile -xalias_level=compatible -xsafe=mem -Qoption iropt
-Mt2000,-xrestrict -Qoption cg -Qgsched-trace_spec_load=1,-Qgsched-trace_late=1
253.perlbmk: -xO5 -xtarget=ultra3 -xarch=v8plusb -xcrossfile -xalias_level=strong -xsafe=mem
-Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qgsched-trace_spec_load=1 -Wc,-Qinline_memcpy=32
-Wc,-Qiselect-funcalign=32,-Qicache-chbab=1 -Wc,-Qiselect-sw_pf_tbl_th=20 -W2,-Adata_access -xprefetch=auto,latx:5.0 -ll2amm -dn
255.vortex: -fast -xtarget=ultra3 -xcrossfile -W2,-Aheap,-reroll=1,-Aunroll,-Ms1,-Mt600,-Mr13000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0
-xrestrict -xdepend -W2,-Amemopt
-ll2amm -lprism32
256.bzip2: -fast -xtarget=ultra3 -W2,-whole,-crit
-xcrossfile -xalias_level=strong -Wc,-Qiselect-funcalign=32
-xdepend -xregs=syst -xsfpconst -Wc,-Qgsched-trace_spec_load=1 -xsafe=mem -ll2amm -lprism32

(for Parallelnavi 1.0.2):
fdo_pre0=rm -rf ‘pwd‘/*.fbk
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
181.mcf: -Kfast_GP=2,GREG,eval,preex,popt,unroll=2,prefetch=4,largepage,preload -x-
254.gap: -Kfast_GP=3,popt,eval,cfunc,largepage,xi=10
300.twolf: -Kfast_GP=5,eval,GREG,popt,cfunc,staticclump,use_rodata,xi=10,largepage,bcopy,nounroll,prefetch=4

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

Note:
System Tunables: (for /etc/system)
consistent_coloring=1, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=1477846784, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024,shminfo_shmmin=1
(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=8192M, SHMSEGSIZE=256M
Shell Environments:
LD_LIBRARY_PATH="/usr/lib:/opt/SUNWspro/lib/v8plusb:/opt/SUNWspro/prod/lib/v8plusb:/opt/FSUNf90/lib"
LD_LIBRARY_PATH_64="/usr/lib/64:/opt/SUNWspro/lib/v9:/opt/SUNWspro/prod/lib/v9"
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.
All patches of Sun ONE Studio 7 posted at URL http://access1.sun.com/sundev/s1s7-patches.html
as of date 2002/6/4 were applied: 111704-01, 111705-01, 111706-01,
111708-01, 111709-01, 111715-01, 111716-01.