CINT2000 Result

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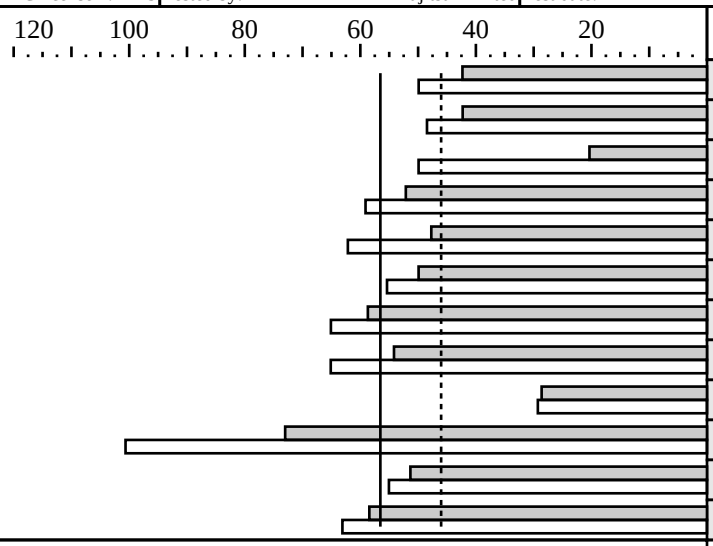
Fujitsu Limited
PRIMEPOWER650 (810MHz)

SPECint_rate2000 = 56.5

SPECint_rate_base2000 = 46.0

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	8	307	42.3	8	260	49.9
175.vpr	8	307	42.3	8	268	48.5
176.gcc	8	502	20.3	8	204	49.9
181.mcf	8	320	52.1	8	283	59.1
186.crafty	8	194	47.7	8	149	62.2
197.parser	8	335	49.9	8	302	55.4
252.eon	8	206	58.7	8	185	65.1
253.perlbmk	8	308	54.2	8	257	65.1
254.gap	8	357	28.6	8	349	29.3
255.vortex	8	242	73.0	8	175	101
256.bzip2	8	271	51.3	8	253	55.0
300.twolf	8	476	58.4	8	441	63.1

Hardware

CPU:	SPARC64 GP
CPU MHz:	810
FPU:	Integrated
CPU(s) enabled:	8 cores, 8 chips, 1 core/chip
CPU(s) orderable:	2 to 8
Parallel:	None
Primary Cache:	128KBI+128KBD on chip
Secondary Cache:	8MB(I+D) off chip, per CPU
L3 Cache:	None
Other Cache:	None
Memory:	32GB
Disk Subsystem:	36GB
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=8589934592, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024,shminfo_shmmin=1
 (for /etc/opt/FJSVpnrm/lpg.conf)
  TSS=4096M, 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.
 Extended Interleave Mode enabled.
```