



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER200 (700MHz)

SPECint_rate2000 = 11.5
SPECint_rate_base2000 = 10.0

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

| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|-------------|-------------|--------------|------------|--------|---------|-------|
| 164.gzip | 2 | 348 | 9.34 | 2 | 304 | 10.7 |
| 175.vpr | 2 | 340 | 9.55 | 2 | 328 | 9.92 |
| 176.gcc | 2 | 412 | 6.19 | 2 | 236 | 10.8 |
| 181.mcf | 2 | 368 | 11.3 | 2 | 368 | 11.3 |
| 186.crafty | 2 | 260 | 8.93 | 2 | 174 | 13.3 |
| 197.parser | 2 | 389 | 10.7 | 2 | 385 | 10.8 |
| 252.eon | 2 | 245 | 12.3 | 2 | 220 | 13.7 |
| 253.perlbnk | 2 | 371 | 11.3 | 2 | 315 | 13.3 |
| 254.gap | 2 | 424 | 6.02 | 2 | 417 | 6.13 |
| 255.vortex | 2 | 282 | 15.6 | 2 | 264 | 16.7 |
| 256.bzip2 | 2 | 318 | 10.9 | 2 | 318 | 10.9 |
| 300.twolf | 2 | 579 | 12.0 | 2 | 504 | 13.8 |

Hardware

CPU: SPARC64 GP
 CPU MHz: 700
 FPU: Integrated
 CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
 CPU(s) orderable: 1 to 2
 Parallel: None
 Primary Cache: 128KBI+128KBD on chip
 Secondary Cache: 8MB(I+D) off chip, per CPU
 L3 Cache: None
 Other Cache: None
 Memory: 8192MB
 Disk Subsystem: 1 x 36.4GB 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: single 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 -xtarget=ultra3
 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: -x05 -xtarget=ultra3 -xalias_level=std -W2,-whole -xcrossfile
 -W2,-Ainline -xprefetch -Wc,-Qgsched-trace_late=1,-Qgsched-spec_load=1 -l12amm
 176.gcc: -fast -xtarget=ultra3 -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -l12amm
 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



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Notes/Tuning Information (Continued)

```

-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.perlbnk: -x05 -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 -l12amm -dn
255.vortex: -fast -xtarget=ultra3 -xcrossfile
-W2,-Aheap,-reroll=1,-Aunroll,-Msl,-Mt600,-Mr13000,-crit
-Wc,-Qdepgaph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0 -xrestrict -xdepend -W2,-Amemopt -l12amm -lprism32

```

(for Parallelnavi 1.0.2):

fdo_pre0=rm -rf `pwd`/*.fbk

PASS1=-Kpg

PASS2=-Kpu=\$(EXEBASE).fbk

175.vpr: -Kfast_GP=4,staticclump,eval,preex,popt,switchopt,cond,GREG,nounroll,largepage,NOFLTLD=5,fconst,xi=30

181.mcf: basepeak=yes

254.gap: -Kfast_GP=3,popt,eval,cfunc,largepage,xi=10

256.bzip2: basepeak=yes

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.perlbnk: -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/FJSVpnmr/lpg.conf)

TSS=4G, 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.

System board used with only one CPU present.

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.