



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER800/1000/2000 (788MHz)

SPECint_rate2000 = 205
SPECint_rate_base2000 = 178

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.zip	32	319	163	32	282	184
175.vpr	32	332	157	32	298	175
176.gcc	32	326	125	32	236	173
181.mcf	32	373	179	32	340	196
186.crafty	32	202	184	32	155	239
197.parser	32	351	191	32	319	210
252.eon	32	234	207	32	193	250
253.perlbnk	32	326	205	32	282	237
254.gap	32	414	98.6	32	406	101
255.vortex	32	248	284	32	199	355
256.bzip2	32	286	195	32	278	200
300.twolf	32	498	223	32	457	244

Hardware

CPU: SPARC64 GP
CPU MHz: 788
FPU: Integrated
CPU(s) enabled: 32 cores, 32 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.zip: -xO5 -xtarget=ultra3 -xalias_level=std -W2,-whole -xcrossfile
-W2,-Ainline -xprefetch -Wc,-Qgsched-trace_late=1,-Qgsched-spec_load=1 -l12amm

175.vpr: -fast -xarch=v8plusb -xalias_level=std -xcrossfile -xsfpcnst
-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 -l12amm



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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.perlbnk: -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 -l12amm -dn
255.vortex: -fast -xtarget=ultra3 -xcrossfile -W2,-Aheap,-reroll=1,-Aunroll,-Msl,-Mt600,-Mr13000,-crit
            -Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0
            -xrestrict -xdepend -W2,-Amemopt
            -l12amm -lprism32
256.bzip2: -fast -xtarget=ultra3 -W2,-whole,-crit
           -xcrossfile -xalias_level=strong -Wc,-Qiselect-funcalign=32
           -xdepend -xregs=syst -xsfpcnst -Wc,-Qgsched-trace_spec_load=1 -xsafe=mem -l12amm -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.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_shmni=1024, shmsys:shminfo_shmseg=1024,shminfo_shmmin=1

(for /etc/opt/FJSVpnm/lpg.conf)

TSS=16384M, 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/sls7-patches.html>

as of date 2002/6/4 were applied: 111704-01, 111705-01, 111706-01,

111708-01, 111709-01, 111715-01, 111716-01.