



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER400 (500MHz)

SPECint_rate2000 = 8.24
SPECint_rate_base2000 = 7.53

SPEC license #: 19 Tested by: Fujitsu Limited Test date: Feb-2001 Hardware Avail: Feb-2001 Software Avail: Apr-2001

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	2	461	7.04	2	459	7.08
175.vpr	2	470	6.92	2	441	7.36
176.gcc	2	452	5.65	2	336	7.60
181.mcf	2	455	9.18	2	438	9.54
186.crafty	2	292	7.94	2	264	8.80
197.parser	2	532	7.85	2	531	7.86
252.eon	2	368	8.21	2	340	8.88
253.perlbnk	2	507	8.23	2	478	8.74
254.gap	2	518	4.93	2	518	4.92
255.vortex	2	377	11.7	2	363	12.1
256.bzip2	2	452	7.70	2	440	7.90
300.twolf	2	992	7.02	2	683	10.2

Hardware

CPU: SPARC64 GP
CPU MHz: 501
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 1 to 4
Parallel: None
Primary Cache: 128KBI+128KBD on chip
Secondary Cache: 8MB(I+D) off chip, per CPU
L3 Cache: None
Other Cache: None
Memory: 2048MB
Disk Subsystem: 1 x 36.4GB SCSI (10025rpm)
Other Hardware: Ethernet

Software

Operating System: Solaris 8
Compiler: Fujitsu Parallelnavi 1.0.1
Sun Forte Developer 6 update 1
File System: ufs
System State: single user

Notes/Tuning Information

Baseline (except 252.eon, for Parallelnavi 1.0.1): -Kfast_GP=3,largepage

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

PASS1=-Kpg

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

(252.eon, for Forte Developer 6 update 1): -fast -xcrossfile -xarch=v8plus

fdo_pre0=rm -rf `pwd`/./feedback.profile `pwd`/SunWS_cache

PASS1=-xprofile=collect:`pwd`/./feedback

PASS2=-xprofile=use:`pwd`/./feedback

Peak (for Parallelnavi 1.0.1):

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

PASS1=-Kpg

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

164.gzip: -Kfast_GP=3,largepage

175.vpr: -Kfast_GP=4,staticclump,memalias,switchopt,cond,GREG,nounroll,largepage,onefile,NOFLTLTD=3,xi=30

181.mcf: -Kfast_GP=2,nounroll,memalias,restp,prefetch=4,largepage -x-

186.crafty: -Kfast_GP=3,switchopt,cond,noiopt,staticclump,xi=6,memalias,largepage

197.parser: -Kfast_GP=3,switchopt,cond,staticclump,use_rodata,largepage,funcalign=128

253.perlbnk: -Kfast_GP=3,memalias,switchopt,largepage,bcopy

254.gap: -Kfast_GP=3,largepage

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org



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Notes/Tuning Information (Continued)

```
256.bzip2: Kfast_GP=3,NOFLTLTD=1,use_rodata,staticclump,xi=8,cfunc,memalias,restp,largepage,funcalign=128
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodata,xi=10,nounroll,largepage,bcopy
(for Forte Developer 6 update 1)
fdo_pre0=rm -rf `pwd`/../../feedback.profile `pwd`/SunWS_cache
PASS1=-xprofile=collect:`pwd`/../../feedback
PASS2=-xprofile=use:`pwd`/../../feedback
176.gcc: -fast -xcrossfile -W2,-whole -Wc,-Qgsched-trace_late=1,-Qgsched-T4,-Qiselect-funcalign=64
-xarch=v8plus -xprefetch
252.eon: -fast -xcrossfile -xregs=syst -xsafe=mem -Qoption iropt -Mt500,-restrict_g,-restrict
-Qoption cg -Qgsched-trace_late=1,-Qgsched-trace_spec_load=1,-Qgsched-T4 -xarch=v8plus
-lmopt
255.vortex: -fast -xsafe=mem -xcrossfile -W2,-Aheap,-reroll=1,-Aunroll,-Msl,-Mt500,-Mr6000,-crit
-Wc,-Qdepgraph-early_cross_call=1 -Wc,-Qiselect-funcalign=32 -Wc,-Qpeep-Sh0
-xrestrict -xdepend -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xarch=v8plus
```

Portability:

```
176.gcc: -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty: -DSUN
252.eon: -library=iostream,no%Cstd
253.perlbnk: -DSPEC_CPU2000_SOLARIS -lnsl -lsocket
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, tune_t_fsflushr=86400, autoup=86400,
shmsys:shminfo_shmmax=268435456, shmsys:shminfo_shmmni=1024, shmsys:shminfo_shmseg=1024
(for /etc/opt/FJSVpnm/lpg.conf)
TSS=512M, SHMSEGSIZE=256M
ONESTEP=yes was set for all baseline and peak benchmarks.
Feedback directed optimization was used for all baseline and peak benchmarks.
```

Also used:

```
-Xa (base and peak, except where noted) for 176.gcc (base only), 181.mcf, 186.crafty, 197.parser (peak only), 254.gap
-dy (base) for all benchmarks except 252.eon, -dy (peak) for all except 176.gcc, 252.eon, 255. vortex
-DWANT_STD_PROTO for 181.mcf (base and peak), -DCPU2000 for 186.crafty (base and peak),
-DSUN -DCPU2000 for 197.parser (peak)
```

The flags listed above as "also used" were used for the actual compilation, but they had no effect (-D flags), were the compiler's default (-Xa), or the compiler's default when -Klargepage is used (-dy).

They are not necessary for result reproduction and can be omitted.