



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER200 (600MHz)

SPECint2000 = **406**
SPECint_base2000 = **374**

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

| Benchmark | Reference Time | Base Runtime | Base Ratio | Runtime | Ratio | 100 200 300 400 500 600 | | | | | |
|-------------|----------------|--------------|------------|---------|-------|-------------------------------|--|--|--|--|--|
| 164.gzip | 1400 | 387 | 362 | 380 | 369 | [Bar chart showing ratio 369] | | | | | |
| 175.vpr | 1400 | 415 | 337 | 388 | 361 | [Bar chart showing ratio 361] | | | | | |
| 176.gcc | 1100 | 393 | 280 | 297 | 371 | [Bar chart showing ratio 371] | | | | | |
| 181.mcf | 1800 | 556 | 324 | 456 | 395 | [Bar chart showing ratio 395] | | | | | |
| 186.crafty | 1000 | 245 | 408 | 215 | 466 | [Bar chart showing ratio 466] | | | | | |
| 197.parser | 1800 | 478 | 377 | 463 | 389 | [Bar chart showing ratio 389] | | | | | |
| 252.eon | 1300 | 307 | 424 | 287 | 454 | [Bar chart showing ratio 454] | | | | | |
| 253.perlbnk | 1800 | 412 | 437 | 399 | 451 | [Bar chart showing ratio 451] | | | | | |
| 254.gap | 1100 | 456 | 241 | 439 | 250 | [Bar chart showing ratio 250] | | | | | |
| 255.vortex | 1900 | 337 | 563 | 323 | 588 | [Bar chart showing ratio 588] | | | | | |
| 256.bzip2 | 1500 | 396 | 379 | 395 | 380 | [Bar chart showing ratio 380] | | | | | |
| 300.twolf | 3000 | 658 | 456 | 601 | 499 | [Bar chart showing ratio 499] | | | | | |

Hardware

CPU: SPARC64 GP
CPU MHz: 600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 1 core/chip
CPU(s) orderable: 1 to 2
Parallel: None
Primary Cache: 128KBI+128KBD on chip
Secondary Cache: 4MB(I+D) off chip, per CPU
L3 Cache: None
Other Cache: None
Memory: 4096MB
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)
Other Hardware: Ethernet

Software

Operating System: Solaris 8 4/01
Compiler: Fujitsu Parallelnavi 1.0.2
Sun Forte Developer 6 update 2
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 Forte Developer 6 update 2): -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 1.0.2):
fdo_pre0=rm -rf `pwd`/*.fbk
PASS1=-Kpg
PASS2=-Kpu=\$(EXEBASE).fbk
164.gzip: -Kfast_GP=4
175.vpr: -Kfast_GP=4,staticclump,memalias,switchopt,cond,GREG,nounroll,largepage,onefile,NOFLTLD=3,xi=30
181.mcf: -Kfast_GP=2,nounroll,memalias,restp,prefetch=2,largepage -x-
197.parser: -Kfast_GP=4,switchopt,cond,staticclump,use_rodata,largepage
253.perlbnk: -Kfast_GP=4,memalias,switchopt,largepage,bcopy
254.gap: -Kfast_GP=3,largepage,memalias,unroll=4
256.bzip2: -Kfast_GP=3,largepage



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Notes/Tuning Information (Continued)

```

300.twolf: -Kfast_GP=5,GREG,memalias,cfunc,staticclump,use_rodata,xi=10,largepage,nounroll,bcopy
(for Forte Developer 6 update 2)
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 -DUSG
186.crafty: -fast -xcrossfile -Wc,-Qgsched-trace_late=1,-Qgsched-T4 -xalias_level=strong
-xregs=syst -xchip=ultra2 -xarch=v8plus -W2,-Amemopt
252.eon: -fast -xcrossfile -xsafe=mem -Qoption iropt -Mt500,-restrict_g,-restrict
-Qoption cg -Qgsched-trace_late=1,-Qgsched-T4 -xarch=v8plus
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 -W2,-Amemopt

```

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
(for /etc/opt/FJSPvnm/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.
System board used with only one CPU present.