# CINT2000 Result

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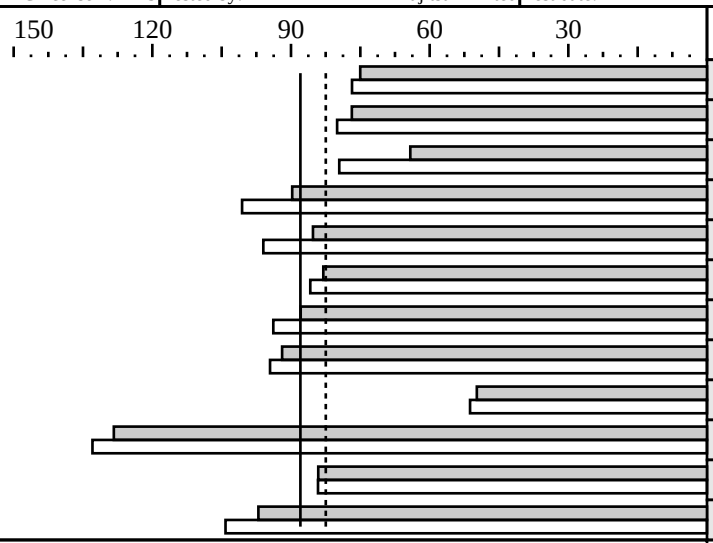
## Fujitsu Limited
## PRIMEPOWER850 (675MHz)

SPECint_rate2000 = 88.0

SPECint_rate_base2000 = 82.5

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Oct-2001 | Hardware Avail: Nov-2001 | Software Avail: Dec-2001




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 16 | 346 | 75.0 | 16 | 338 | 76.8 |
| 175.vpr | 16 | 338 | 76.8 | 16 | 325 | 80.0 |
| 176.gcc | 16 | 318 | 64.2 | 16 | 257 | 79.6 |
| 181.mcf | 16 | 372 | 89.7 | 16 | 332 | 101 |
| 186.crafty | 16 | 218 | 85.2 | 16 | 193 | 96.0 |
| 197.parser | 16 | 402 | 83.0 | 16 | 389 | 85.8 |
| 252.eon | 16 | 274 | 87.9 | 16 | 257 | 93.8 |
| 253.perlbmk | 16 | 363 | 91.9 | 16 | 353 | 94.5 |
| 254.gap | 16 | 410 | 49.8 | 16 | 398 | 51.3 |
| 255.vortex | 16 | 275 | 128 | 16 | 265 | 133 |
| 256.bzip2 | 16 | 331 | 84.1 | 16 | 331 | 84.2 |
| 300.twolf | 16 | 574 | 97.1 | 16 | 535 | 104 |

### Hardware

| | |
|---|---|
| CPU: | SPARC64 GP |
| CPU MHz: | 675 |
| FPU: | Integrated |
| CPU(s) enabled: | 16 cores, 16 chips, 1 core/chip |
| CPU(s) orderable: | 4 to 16 |
| 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: | 2 x 18GB SCSI (10025rpm) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Solaris 8 7/01 |
| Compiler: | Fujitsu Parallelnavi 1.0.2 with patch 911403-01<br>Sun Forte Developer 6 update 2 |
| 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 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.perlbmk: -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
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,-Ms1,-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/FJSVpnrm/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.
 Extended Interleave Mode enabled.
```