# CINT2000 Result

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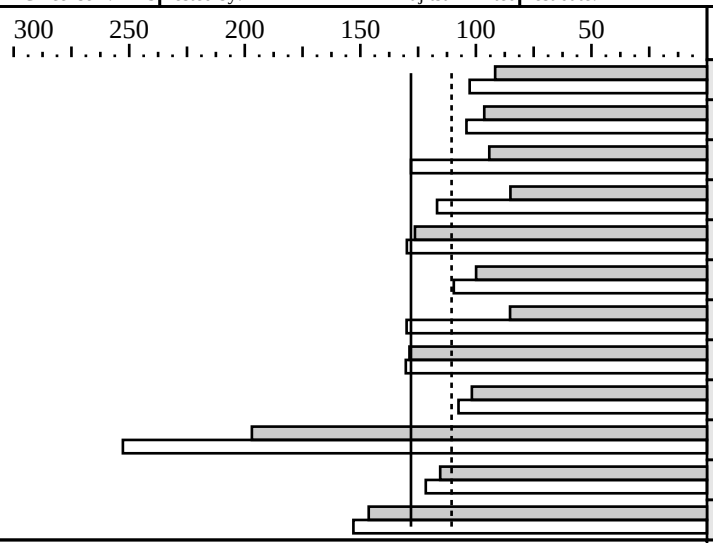
## Fujitsu Limited
## PRIMEPOWER850 (1080MHz)

SPECint_rate2000 = 128

SPECint_rate_base2000 = 111

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Jun-2003 | Hardware Avail: Jul-2003 | Software Avail: May-2003




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 16 | 283 | 91.7 | 16 | 253 | 103 |
| 175.vpr | 16 | 270 | 96.4 | 16 | 250 | 104 |
| 176.gcc | 16 | 217 | 94.2 | 16 | 159 | 128 |
| 181.mcf | 16 | 393 | 85.1 | 16 | 286 | 117 |
| 186.crafty | 16 | 147 | 126 | 16 | 143 | 130 |
| 197.parser | 16 | 334 | 99.9 | 16 | 305 | 110 |
| 252.eon | 16 | 283 | 85.2 | 16 | 186 | 130 |
| 253.perlbmk | 16 | 260 | 129 | 16 | 256 | 130 |
| 254.gap | 16 | 201 | 102 | 16 | 190 | 108 |
| 255.vortex | 16 | 179 | 197 | 16 | 140 | 253 |
| 256.bzip2 | 16 | 241 | 115 | 16 | 229 | 122 |
| 300.twolf | 16 | 380 | 146 | 16 | 364 | 153 |

### Hardware

| | |
|---|---|
| CPU: | SPARC64 V |
| CPU MHz: | 1080 |
| FPU: | Integrated |
| CPU(s) enabled: | 16 cores, 16 chips, 1 core/chip |
| CPU(s) orderable: | 1 to 16 (increments of 1) |
| Parallel: | None |
| Primary Cache: | 128KBI+128KBD on chip |
| Secondary Cache: | 2MB(I+D) on chip |
| L3 Cache: | None |
| Other Cache: | None |
| Memory: | 65536MB |
| Disk Subsystem: | 1 x 36.4GB SCSI (10000rpm) |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | Solaris8 2/02 with current patches (see notes) |
| Compiler: | Fujitsu Parallelnavi 1.0.2<br>Sun ONE Studio 8<br>Sun Performance Library 8 |
| File System: | ufs |
| System State: | multi user |

## Notes/Tuning Information

```
Baseline (except 252.eon, for Sun ONE Studio 8):
   -fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback
Baseline (252.eon, for Sun ONE Studio 8):
   -fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes

Peak
(for Sun ONE Studio 8)
   fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
   PASS1=-xprofile=collect:./feedback
   PASS2=-xprofile=use:./feedback
164.gzip: -xO5 -xchip=ultra2 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
    -xalias_level=std -xipo=2 -xprefetch
    -W2,-whole,-Ainline ONESTEP=yes
175.vpr: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
    -xchip=ultra2 -xalias_level=std -xipo=2 -xsfpconst -xdepend -W2,-whole
    -Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qeps:rp_filtering_margin=100
    -lmopt -lm ONESTEP=yes
```

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## Notes/Tuning Information (Continued)

176.gcc: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra3 -xipo=2 -xprefetch=latx:2.0 -W2,whole
-Wc,-Qgsched-trace_late=1,-Qgsched-T4 -ll2amm ONESTEP=yes
181.mcf: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra2 -xipo=2 -xdepend -Wc,-Qms_pipe-pref,-Qeps:enabled=1
-xprefetch_level=3 -W2,-Apf:llist=3:noinnerllist -lprism32 ONESTEP=yes
186.crafty: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xipo=2 -xalias_level=strong
-W2,-Ashort_ldst ONESTEP=yes
197.parser: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xipo=2 -xalias_level=strong -xdepend -xregs=syst
-Wc,-Qgsched-trace_late=1,-Qgsched-T6,-Qipa:valueprediction -lprism32 ONESTEP=yes
252.eon: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra3 -xipo=2 -xregs=syst -xalias_level=compatible -noex -xunroll=3
-xprefetch=latx:0.8 -Qoption iropt -Mt2000
-Qoption cg -Qgsched-trace_late=1,-Qgsched-T4,-Qeps:enabled=1,-Qeps:ws=32
-lmopt ONESTEP=yes
253.perlbmk: -dn -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/4
-xarch=v8plus -xipo=2 ONESTEP=yes
254.gap: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra3 -xipo=2 -xalias_level=strong -xvector -xprefetch_level=3
-W2,-whole,-Abcopy -Wc,-Qgsched-trace_late=1,-Qgsched-T4 ONESTEP=yes
255.vortex: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra2 -xrestrict -xipo=2 -xdepend -xprefetch=latx:2.4
-W2,-crit,-Ainline:recursion=1:cs=500:irs=6000,-Aheap,-reroll=1,-Aunroll,-Ms15,-Mt300,-Mr6000
-Wc,-Qeps:enabled=1,-Qeps:do_spec_load=1,-Qdepgraph-early_cross_call=1
-Wc,-Qiselect-funcalign=32,-Qpeep-Sh0 -ll2amm -lprism32 ONESTEP=yes
256.bzip2: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xchip=ultra3 -xipo -xalias_level=strong -xdepend -xregs=syst
-xrestrict -xprefetch=latx:1.6 -W2,-Abopt
-Wc,-Qiselect-funcalign=64,-Qeps:enabled ONESTEP=yes

(for Parallelnavi 1.0.2)
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodata,
xi=10,nounroll,largepage,bcopy,prefetch=4 -dy
PASS1=-Kpg PASS2=-Kpu=$(EXEBASE).fbk
ONESTEP=yes

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 -DSYS_HAS_IOCTL_PROTO

Note:
System Tunables: (for /etc/system)
set consistent_coloring=1,
set shmsys:shminfo_shmmax=8589934592,set shmsys:shminfo_shmmni=256,
set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
System Tunables:(for /etc/opt/FJSVpnrm/lpg.conf)
TSS=4096M, SHMSEGSIZE=256M
Shell Environments:

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## Notes/Tuning Information (Continued)

```
  LD_LIBRARY_PATH="/opt3/SUNWspro/prod/lib/v8plusb"
  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
except 252.eon(base).
Processes were bound to CPUs using "submit=pbind".
Stack size set to unlimited via "ulimit -s unlimited".
Sun ONE Studio 8, posted at URL http://wwws.sun.com/software/sundev/suncc/
was used for this submission.
All patches for Solaris8 posted at
  http://access1.sun.com/patch.public/cgi-bin/show_list.cgi/wrk/Sun_ONE_Studio_7_SPARC_SunOS_5.8
as of date 2003/04/21 were applied: 108434-12, 108435-12, 111697-04, 111721-03.
```