



# 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.perlbnk	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  
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,NOFLTLTD=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
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.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=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.
Extended Interleave Mode enabled.

```