



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER900 (1350MHz)

SPECint\_rate2000 = 79.2

SPECint\_rate\_base2000 = 68.7

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	232	55.9	8	210	61.8
175.vpr	8	214	60.6	8	190	68.3
176.gcc	8	152	67.0	8	127	80.3
181.mcf	8	325	51.3	8	223	74.8
186.crafty	8	118	78.8	8	113	81.9
197.parser	8	274	61.0	8	252	66.3
252.eon	8	221	54.6	8	147	82.3
253.perlbnk	8	208	80.1	8	206	80.9
254.gap	8	169	60.5	8	169	60.5
255.vortex	8	149	118	8	116	152
256.bzip2	8	202	68.9	8	190	73.1
300.twolf	8	303	91.8	8	282	98.6

**Hardware**

CPU: SPARC64 V  
CPU MHz: 1350  
FPU: Integrated  
CPU(s) enabled: 8 cores, 8 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: 32768MB  
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  
Sun ONE Studio 8  
(EA2 version of Sun ONE Studio 8 used)  
Sun Performance Library 8

File System: ufs  
System State: multi user

## Notes/Tuning Information

Baseline (except 252.eon, for Sun ONE Studio 8 EA2):  
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes  
fdo\_pre0=rm -rf ./feedback.profile ./SunWS\_cache  
PASS1=-xprofile=collect:./feedback  
PASS2=-xprofile=use:./feedback  
(252.eon, for Sun ONE Studio 8 EA2):  
-fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes

Peak  
(for Sun ONE Studio 8 EA2)  
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 -xipo=2  
-xalias\_level=std -xprefetch -xprefetch\_level=2 -W2,-whole,-Ainline ONESTEP=yes

175.vpr: -fast -xchip=ultra2 -xcache=128/64/2:2048/64/4 -xarch=v8plusb  
-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

176.gcc: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plusb  
-xipo=2 -xprefetch=latx:2.0 -W2,whole



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## Notes/Tuning Information (Continued)

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-Wc,-Qgsched-trace_late=1,-Qgsched-T4 -l12amm ONESTEP=yes
181.mcf: -fast -xchip=ultra2 -xcache=128/64/2:2048/64/4 -xarch=v8plusb
-xipo=2 -xdepend -Wc,-Qms_pipe-pref,-Qeps:enabled=1 -xprefetch_level=3
-W2,-Apf:l1list=3:noninnerl1list -lprism32 ONESTEP=yes
186.crafty: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4
-xarch=v8plusb -xipo=2 -xalias_level=strong -xprefetch=latx:1.2
-W2,-Ashort_ldst ONESTEP=yes
197.parser: -fast -xchip=ultra3cu -xcache=128/64/2:2048/64/4 -xarch=v8plusb
-xipo=2 -xalias_level=strong -xdepend -xregs=syst
-Wc,-Qgsched-trace_late=1,-Qgsched-T6,-Qipa:valueprediction -lprism32 ONESTEP=yes
252.eon: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4 -xarch=v8plusb -xipo=2
-xregs=syst -xalias_level=compatible -noex -xunroll=3 -xprefetch=latx:0.8
-Qoption cg -Qgsched-trace_late=1,-Qgsched-T4,-Qeps:enabled=1,-Qeps:ws=32
-Qoption iropt -Mt2000 -lmopt ONESTEP=yes
253.perlbmk: -dn -xO5 -xchip=ultra3 -xcache=128/64/2:2048/64/4
-xarch=v8plus -xipo=2 ONESTEP=yes
254.gap: basepeak=yes
255.vortex: -fast -xchip=ultra2 -xcache=128/64/2:2048/64/4
-xarch=v8plusb -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 -l12amm -lprism32 ONESTEP=yes
256.bzip2: -fast -xchip=ultra3 -xcache=128/64/2:2048/64/4
-xarch=v8plusb -xipo -xalias_level=strong -xdepend -xregs=syst
-xrestrict -xprefetch=latx:1.6 -W2,-Abopt
-Wc,-Qiselect-funcalign=64,-Qeps:enabled=1 ONESTEP=yes
(for Parallelnavi 1.0.2)
300.twolf: -Kfast_GP=5,GREG,popt,cfunc,staticclump,use_rodatta,
xi=10,nounroll,largepage,bcopy,prefetch=4 -dy
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
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)
consistent_coloring=1,
set shmsys:shminfo_shmmmax=8589934592,set shmsys:shminfo_shmmni=256,
set shmsys:shminfo_shmseg=400,set shmsys:shminfo_shmmmin=1
set tune_t_fsflushr = 86400
set autoup = 86400
(for /etc/opt/FJSVpnm/lpg.conf)
TSS=4096M, SHMSEGSIIZE=256M
Shell Environments:
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).
Stack size set to unlimited via "ulimit -s unlimited"
as updated through 27-Mar-2003, was used for this submission.

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## Notes/Tuning Information (Continued)

Sun ONE Studio 8 (final) will ship May-2003.

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](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: 108434-11, 108435-11, 111697-04, 111721-03.

PPAR(Physical PARTitioning) configuration