



CINT2000 Result

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Fujitsu Limited
PRIMEPOWER900 (1890MHz)

SPECint2000 = 1345
SPECint_base2000 = 1174

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: May-2004 | Hardware Avail: Sep-2004 | Software Avail: Apr-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	156	900	140	1000	
175.vpr	1400	126	1111	124	1130	
176.gcc	1100	118	934	77.7	1415	
181.mcf	1800	144	1249	123	1462	
186.crafty	1000	83.3	1201	76.9	1300	
197.parser	1800	168	1070	154	1171	
252.eon	1300	143	908	94.2	1379	
253.perlbnk	1800	138	1303	136	1320	
254.gap	1100	103	1072	98.2	1120	
255.vortex	1900	88.0	2158	75.0	2534	
256.bzip2	1500	127	1181	122	1233	
300.twolf	3000	212	1413	195	1541	

Hardware

CPU: SPARC64 V
 CPU MHz: 1890
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip
 CPU(s) orderable: 1 to 16 (increments of 1)
 Parallel: None
 Primary Cache: 128KBI + 128KBD on chip
 Secondary Cache: 3MB(I+D) on chip
 L3 Cache: None
 Other Cache: None
 Memory: 8192MB
 Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)
 Other Hardware: None

Software

Operating System: Solaris 9 4/04
 Compiler: Fujitsu Parallelnavi 2.3 with patch 913287-01
 Sun Studio 8
 Sun Performance Library 8
 File System: ufs
 System State: multi user

Notes/Tuning Information

```
FDO: (for Parallelnavi 2.3)
fdo_pre0=rm -rf `pwd`/*.f.d
PASS1=-Kpg
PASS2=-Kpu=$(EXEBASE).fbk
FDO: (for Sun Studio 8)
fdo_pre0=rm -rf ./feedback.profile ./SunWS_cache
PASS1=-xprofile=collect:./feedback
PASS2=-xprofile=use:./feedback
```

```
Integer base flags:
(using C compiler of Sun Studio 8)
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO
(using C++ compiler of Sun Studio 8)
-fast -xchip=ultra3cu -xarch=v8plusb -xipo=2 ONESTEP=yes
```

```
Integer peak flags:
(using C compiler of Parallelnavi 2.3)
300.twolf: -Kfast_GP2=3,GREG,eval,preex,cfunc -O3 ONESTEP=yes FDO
```



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Notes/Tuning Information (Continued)

(using C compiler of Sun Studio 8)

164.gzip: -xO5 -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xalias_level=std -xipo=2 -xprefetch -W2,-whole,-Ainline
-Wc,-Qiselect-funcalign=64 ONESTEP=yes FDO

175.vpr: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xalias_level=std -xchip=ultra -xipo=2 -xprefetch=latx:1.6
-xsfpcnst -W2,-whole -Wc,-Qeps:do_spec_load=1,
-Qeps:enabled=1,-Qeps:rp_filtering_margin=100,
-Qiselect-funcalign=64 -lmopt -lm ONESTEP=yes FDO

176.gcc: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xipo=2 -W2,-whole -Wc,-Qgsched-T4,-Qgsched-trace_late=1,
-Qiselect-funcalign=64 -ll2amm ONESTEP=yes FDO

181.mcf: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xipo=2 -xprefetch_level=3 -W2,-Apf:l1list=3:noinnerl1list
-Wc,-Qeps:enabled=1 ONESTEP=yes FDO

186.crafty: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xalias_level=strong -xipo=2 -xpagesize=512K -W2,-Ashort_ldst
ONESTEP=yes FDO

197.parser: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xalias_level=strong -xipo=2 -xregs=syst
-Wc,-Qgsched-T6,-Qgsched-trace_late=1,
-Qipa:valueprediction,-Qiselect-funcalign=64
ONESTEP=yes FDO

253.perlbnk: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xipo=2 -xalias_level=std -Wc,-Qeps:enabled=1,
-Qiselect-funcalign=64 ONESTEP=yes FDO

254.gap: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xalias_level=strong -xipo=2 -xprefetch_level=3
-xprefetch=latx:2.0 -xvector -W2,-Abcopy
-Wc,-Qiselect-funcalign=64 ONESTEP=yes FDO

255.vortex: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xchip=ultra -xipo=2 -xrestrict -xprefetch=latx:1.6
-W2,-Aheap,-Ainline:recursion=1:cs=500:irs=6000,-Aunroll,-crit,
-Ms15,-Mt300,-Mr6000,-reroll=1 -Wc,-Qdepgraph-early_cross_call=1,
-Qeps:do_spec_load=1,-Qeps:enabled=1,-Qiselect-funcalign=64,
-Qpeep-Sh0 -ll2amm ONESTEP=yes FDO

256.bzip2: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-xipo -xalias_level=strong -xregs=syst -xrestrict
-xprefetch=latx:0.8 -W2,-Abopt -Wc,-Qiselect-funcalign=64,
-Qeps:enabled ONESTEP=yes FDO

(using C++ compiler of Sun Studio 8)

252.eon: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
-noex -xalias_level=compatible -xipo=2 -xregs=syst -xunroll=3
-Qoption cg -Qeps:enabled=1,-Qeps:ws=32,-Qgsched-T4,
-Qgsched-trace_late=1,-Qiselect-funcalign=64
-Qoption iropt -Mt2000 -lmopt ONESTEP=yes FDO

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 -DSYS_HAS_IOCTL_PROTO



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SPECint2000 =	1345
SPECint_base2000 =	1174

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Notes/Tuning Information (Continued)

System Tunables:

```
(for /etc/system)
set consistent_coloring=1
set tune_t_fsflushr=86400
set autoup=86400
```

Shell Environments:

```
Stack size set to unlimited via "ulimit -s unlimited"
MPSSHEAP=4M
MPSSSTACK=4M
LD_PRELOAD=mpss.so.1
```

System board used with only ONE CPU present.

Small configuration memory system mode used ("4cpu mode", enabled via system console).

Sun Studio 8, posted at URL <http://www.sun.com/software/products/studio/> was used for this submission.