



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER900 (2160MHz)

SPECint2000 = 1620  
SPECint\_base2000 = 1501

SPEC license #: 19 | Tested by: Fujitsu Limited | Test date: Dec-2005 | Hardware Avail: Feb-2006 | Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
164.gzip	1400	123	1140	121	1154	
175.vpr	1400	104	1342	101	1385	
176.gcc	1100	102	1084	65.6	1676	
181.mcf	1800	111	1617	92.9	1938	
186.crafty	1000	62.3	1606	59.6	1677	
197.parser	1800	139	1292	127	1415	
252.eon	1300	76.9	1690	74.5	1744	
253.perlbmk	1800	113	1588	113	1598	
254.gap	1100	87.9	1252	85.4	1288	
255.vortex	1900	64.7	2938	62.9	3019	
256.bzip2	1500	101	1479	99.0	1515	
300.twolf	3000	186	1610	186	1610	

### Hardware

CPU: SPARC64 V  
 CPU MHz: 2160  
 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: 4MB(I+D) on chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8GB (512MB x 16)  
 Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
 Other Hardware: None

### Software

Operating System: Solaris 10  
 Compiler: Sun Studio 11  
 File System: ufs  
 System State: multi user

## Notes/Tuning Information

FDO: (for Sun Studio 11)  
 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 11)  
 -fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO  
 (using C++ compiler of Sun Studio 11)  
 -fast -xipo=2 ONESTEP=yes FDO

Integer peak flags:  
 (using C compiler of Sun Studio 11)  
 164.gzip: -xarch=v8plusb -xchip=ultra2 -xcache=128/64/2:4096/64/4  
 -xalias\_level=std -xipo=2 -W2,-whole -xO5 ONESTEP=yes FDO  
 175.vpr: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4  
 -xalias\_level=std -xchip=ultra2 -xipo=2 ONESTEP=yes FDO  
 176.gcc: -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4  
 -xipo=2 -l12amm ONESTEP=yes FDO



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## Notes/Tuning Information (Continued)

```

181.mcf:      -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -xprefetch_level=3 -W2,-Apf:l1list=3:noninnerl1list
              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 -Wc,-Qgsched-T6,
              -Qgsched-trace_late=1,-Qipa:valueprediction ONESTEP=yes FDO
253.perlbnk:  -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -xalias_level=std 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 -xvector
              -W2,-Abcopy ONESTEP=yes FDO
255.vortex:   -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -xrestrict -W2,-crit,-Ainline:recursion=1:cs=500:irs=6000
              -Wc,-Qdepgaph-early_cross_call=1 -l12amm ONESTEP=yes FDO
256.bzip2:    -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 -xalias_level=strong -xrestrict ONESTEP=yes FDO
300.twolf:    -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -xipo=2 ONESTEP=yes FDO

```

(using C++ compiler of Sun Studio 11)

```

252.eon:      -fast -xarch=v8plusb -xchip=ultra3cu -xcache=128/64/2:4096/64/4
              -noex -xalias_level=compatible -xipo=2
              -Qoption cg -Qeps:enabled=1,-Qeps:ws=32 ONESTEP=yes FDO

```

### Portability:

```

176.gcc:      -Dalloca=__builtin_alloca -DHOST_WORDS_BIG_ENDIAN
186.crafty:   -DSUN
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

```

### 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 11, posted at URL <http://www.sun.com/software/products/studio/index.xml> was used for this submission.