



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER900 (2160MHz)

SPECint\_rate2000 = 140  
SPECint\_rate\_base2000 = 127

SPEC license #: 19 Tested by: Fujitsu Limited Test date: Apr-2005 Hardware Avail: Jun-2005 Software Avail: Apr-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	8	135	96.0	8	129	101
175.vpr	8	110	119	8	108	121
176.gcc	8	130	78.7	8	72.0	142
181.mcf	8	130	128	8	107	156
186.crafty	8	70.9	131	8	65.6	142
197.parser	8	143	117	8	132	127
252.eon	8	80.6	150	8	79.1	153
253.perlbnk	8	123	136	8	122	137
254.gap	8	97.6	105	8	95.6	107
255.vortex	8	71.1	248	8	69.2	255
256.bzip2	8	109	127	8	105	132
300.twolf	8	188	148	8	171	162

### Hardware

CPU: SPARC64 V  
CPU MHz: 2160  
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: 4MB(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: Solaris 9 4/04  
Compiler: (C/C++)  
Fujitsu Parallelnavi 2.3 with patch 913287-01  
Sun Studio 9  
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 9)
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 9)
-fast -xtarget=ultra3cu -xipo=2 ONESTEP=yes FDO
(using C++ compiler of Sun Studio 9)
-fast -xipo=2 ONESTEP=yes FDO
```

```
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 9)

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

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 -xregs=syst -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,-Qdepgraph-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

(using C++ compiler of Sun Studio 9)

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

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

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
```

Processes were bound to CPUs using "submit=pbind"

Extended Interleave Mode enabled.



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4 CPUs each on 2 system board. Unused CPUs have physically removed.

Sun Studio 9, posted at URL <http://www.sun.com/software/products/studio/previous/9/index.xml> was used for this submission.