



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER900 (2160MHz)

SPECint\_rate2000 = 276  
SPECint\_rate\_base2000 = 250

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	16	137	190	16	130	200
175.vpr	16	114	227	16	109	239
176.gcc	16	133	153	16	75.0	272
181.mcf	16	134	249	16	113	295
186.crafty	16	71.0	261	16	65.8	282
197.parser	16	143	233	16	132	252
252.eon	16	81.4	296	16	80.2	301
253.perlbnk	16	123	271	16	122	273
254.gap	16	102	200	16	98.0	208
255.vortex	16	72.1	489	16	70.2	502
256.bzip2	16	110	254	16	106	263
300.twolf	16	189	294	16	173	322

### Hardware

CPU: SPARC64 V  
CPU MHz: 2160  
FPU: Integrated  
CPU(s) enabled: 16 cores, 16 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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(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:noinnerl1list  
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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Sun Studio 9, posted at URL <http://www.sun.com/software/products/studio/previous/9/index.xml> was used for this submission.