



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER1500 (2160MHz)

SPECint\_rate2000 = 265  
SPECint\_rate\_base2000 = 236

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.zip	16	142	183	16	136	191
175.vpr	16	118	219	16	117	223
176.gcc	16	167	122	16	75.7	270
181.mcf	16	153	218	16	128	262
186.crafty	16	71.0	262	16	66.3	280
197.parser	16	147	227	16	136	245
252.eon	16	81.5	296	16	80.0	302
253.perlbnk	16	126	265	16	125	267
254.gap	16	110	185	16	108	189
255.vortex	16	78.5	449	16	76.6	461
256.bzip2	16	116	240	16	111	250
300.twolf	16	188	296	16	171	327

### Hardware

CPU: SPARC64 V  
CPU MHz: 2160  
FPU: Integrated  
CPU(s) enabled: 16 cores, 16 chips, 1 core/chip  
CPU(s) orderable: 1 to 32 (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: 65536MB  
Disk Subsystem: 1 x 36.4GB SCSI (10000rpm)  
Other Hardware: None

### Software

Operating System: Solaris 9 9/04  
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
set memscrub_period_sec=172800
```

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 4 system boards. 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.