



# CINT2000 Result

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Fujitsu Limited  
PRIMEPOWER450 (1980MHz)

SPECint\_rate2000 = 64.6

SPECint\_rate\_base2000 = 60.8

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
164.gzip	4	132	49.3	4	131	49.8
175.vpr	4	123	52.9	4	119	54.5
176.gcc	4	102	49.9	4	73.9	69.1
181.mcf	4	168	49.8	4	145	57.6
186.crafty	4	68.7	67.6	4	65.8	70.5
197.parser	4	156	53.5	4	143	58.2
252.eon	4	85.8	70.3	4	83.2	72.5
253.perlbnk	4	127	66.0	4	126	66.5
254.gap	4	100	50.8	4	98.9	51.6
255.vortex	4	74.8	118	4	73.4	120
256.bzip2	4	122	56.9	4	120	58.2
300.twolf	4	204	68.3	4	204	68.2

### Hardware

CPU: SPARC64 V  
CPU MHz: 1980  
FPU: Integrated  
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip  
CPU(s) orderable: 1 to 4 (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: 16GB (1GB 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: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 -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

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

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