



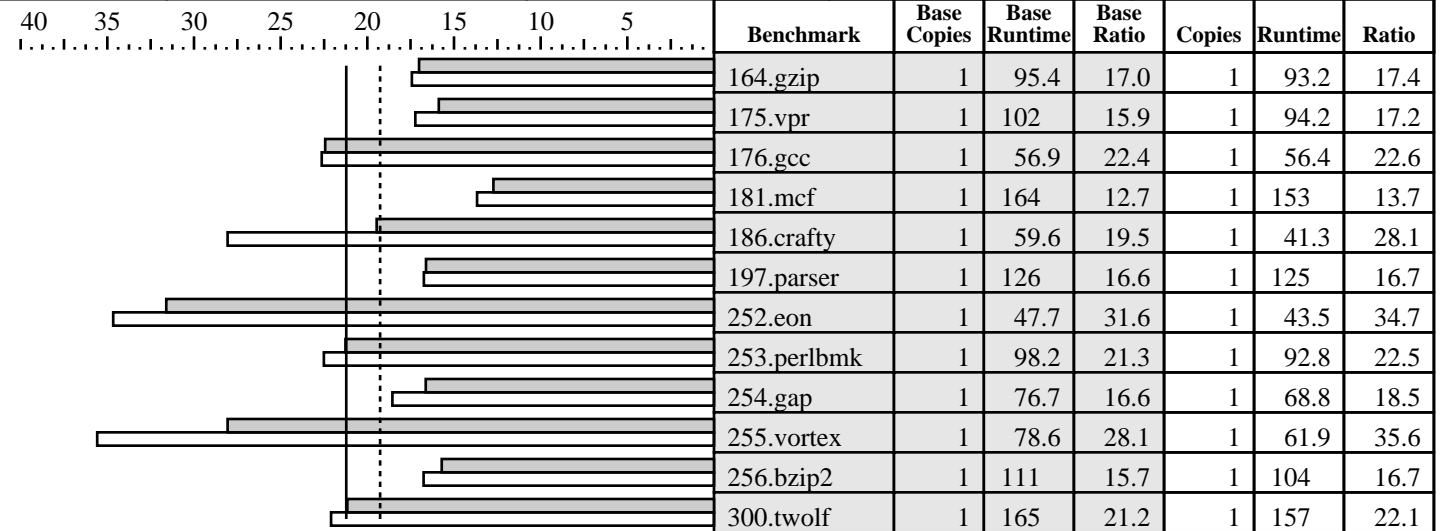
# CINT2000 Result

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Sun Microsystems  
Sun Fire X4100

SPECint\_rate2000 = 21.2  
SPECint\_rate\_base2000 = 19.3

SPEC license #: 6 Tested by: Sun Microsystems, Santa Clara Test date: Aug-2005 Hardware Avail: Oct-2005 Software Avail: Nov-2005



### Hardware

CPU: AMD Opteron (TM) 254  
 CPU MHz: 2800  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
 CPU(s) orderable: 1,2 (order by # of chips)  
 Parallel: No  
 Primary Cache: 64KBI + 64KBD (on chip) per core  
 Secondary Cache: 1024KB (I+D) (on chip) per core  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 8GB (4x2GB, PC3200 CL3 DDR SDRAM ECC Registered)  
 Disk Subsystem: SAS, 36GB, 10K RPM  
 Other Hardware: None

### Software

Operating System: Solaris 10 3/05 HW1  
 Compiler: Sun Studio 11  
 File System: ufs  
 System State: Multi-user

## Notes/Tuning Information

Compiler invocation:

C: cc  
CXX: CC

FDO: PASS1= -xprofile=collect:./feedback PASS2= -xprofile=use:./feedback  
fdo\_pre0: rm -rf ./feedback.profile

Integer base flags:

Base tuning for C programs : -fast -xcrossfile -xalias\_level=std +FDO ONESTEP=yes  
Base tuning for C++ programs: -fast -xcrossfile -xarch=amd64 +FDO ONESTEP=yes

Integer peak flags:

ONESTEP=yes +FDO for all benchmarks

164.gzip: -fast -xpagesize=2m -xcrossfile -M /usr/lib/ld/map.bssalign  
 175.vpr: -fast -xpagesize=2m -W2,-Ainline:inc=200:cs=500 -M /usr/lib/ld/map.bssalign -lmopt -lm  
 176.gcc: -fast -xipo=2 -Wd,-iropt-prof -xalias\_level=strong -xrestrict  
 181.mcf: -fast -xpagesize=2m -xcrossfile -M /usr/lib/ld/map.bssalign  
 186.crafty: -fast -xrestrict -xipo=2 -xprefetch -xarch=amd64 -xpagesize=2m



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## Notes/Tuning Information (Continued)

```

-M /usr/lib/ld/map.bssalign -Wd,-iropt-prof -W2,-Ashort_ldst:ldld
-W2,-Ainline:rs=50
197.parser: -fast -xpagesize=2m -xipo=2 -W2,-Ainline:inc=200:cs=500 -M /usr/lib/ld/map.bssalign
252.eon: -fast -xipo=2 -qoption CC -iropt-prof -xvector -qoption iropt -Abcopy -xalias_level
-xarch=amd64 -xrestrict -Qoption ube -xcallee=yes -xregs=frameptr
253.perlbnk: -fast -xcrossfile -M /usr/lib/ld/map.bssalign -lbsdmalloc
254.gap: -fast -xipo=2 -Wd,-iropt-prof -xvector -W2,-Abcopy -lbsdmalloc -xprefetch
-W2,-Ainline:cp=5:rs=1300:irs=3300:inc=100 -W2,-Arestrict_g
255.vortex: -fast -xipo=2 -Wd,-iropt-prof -lbsdmalloc -xrestrict -xprefetch -M /usr/lib/ld/map.bssalign
256.bzip2: -fast -xpagesize=2m -xcrossfile -xarch=sse2 -Xc -M /usr/lib/ld/map.bssalign -lbsdmalloc
300.twolf: -fast -xipo=2 -Wd,-iropt-prof -xrestrict -M /usr/lib/ld/map.bssalign

Portability:
186.crafty: -DUNIX -DHAS_LONGLONG -DLITTLE_ENDIAN_ARCH
252.eon: -DFMAX_IS_DOUBLE -DSPEC_CPU2000_LP64 -DUSE_STRERROR
253.perlbnk: -DSPEC_CPU2000_SOLARIS_X86
254.gap: -DSYS_IS_USG -DSYS_HAS_SIGNAL_PROTO -DSYS_HAS_TIME_PROTO -DSYS_HAS_CALLOC_PROTO

```

### Shell Environments:

Stack size set to unlimited via "ulimit -s unlimited"

### Kernel Parameters (/etc/system):

```
autoup=900
tune_t_fsflushr=1
```

Processes were bound to CPU using submit=pbind

Default BIOS setting was used ; Only one CPU was present on the system