OMPM2001 Result

Copyright ©1999-2002, Standard Performance Evaluation Corporation

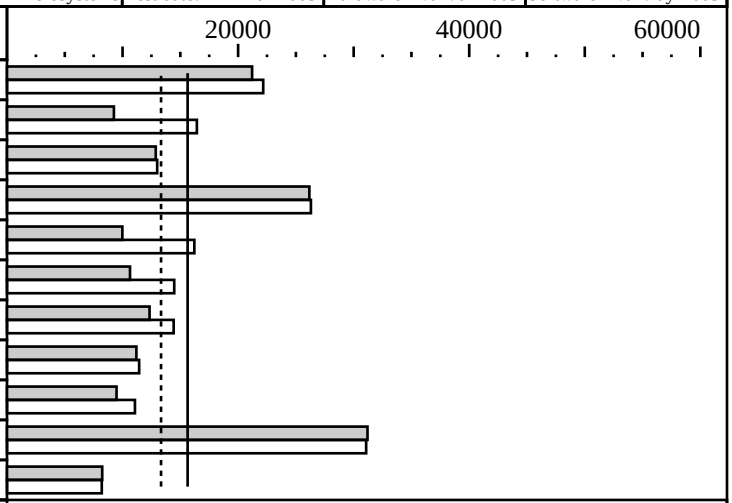
Sun Microsystems
Sun Fire 6800

SPECompMpeak2001 = 15630

SPECompMbase2001 = 13332

SPEC license #:	HPG0010	Tested by:	Sun Microsystems, Palo Alto	Test site:	Sun Microsystems	Test date:	Mar-2003	Hardware Avail:	Mar-2003	Software Avail:	May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	283	21210	271	22172
312.swim_m	6000	649	9251	365	16431
314.mgrid_m	7300	567	12874	562	12997
316.applu_m	4000	153	26165	152	26300
318.galgel_m	5100	511	9984	315	16212
320.equake_m	2600	244	10645	180	14472
324.apsi_m	3400	276	12337	236	14424
326.gafort_m	8700	777	11197	761	11435
328.fma3d_m	4600	485	9480	415	11073
330.art_m	6400	205	31197	206	31081
332.ammp_m	7000	850	8240	854	8201



Hardware

CPU:	UltraSPARC III Cu
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	24
CPU(s) orderable:	2-24
Primary Cache:	32KBI+64KBD on chip
Secondary Cache:	8MB(I+D) off chip
L3 Cache:	None
Other Cache:	None
Memory:	48GB 16-way interleaved
Disk Subsystem:	1X36GB 550GB (4 9X18GB Sun StorEdge T3 arrays)
Other Hardware:	--

Software

OpenMP Threads:	24
Parallel:	OpenMP
Operating System:	Solaris 9 12/02
Compiler:	Sun ONE Studio 8 (pre-FCS build 3/9) Sun Performance Library 8 (pre-FCS build 3/9)
File System:	ufs with ufs logging
System State:	Multi-User

Notes/Tuning Information

```
Base Flags:
  ONESTEP=yes for all benchmarks

  C:   -fast -xopenmp -xalias_level=std -xipo=2 -xprefetch_level=3
       -Xc -xprofile -lmtmalloc
  f90: -fast -autopar -openmp -xipo=2 -xprefetch_level=3 -xprofile

Extra art Base Flags:
  330.art_m:     -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

Portablility Flags:
  318.galgel_m:  -e -fixed

Peak Flags:
  ONESTEP=yes for all benchmarks

  310.wupwise_m: -fast -openmp -autopar -xipo=2 -Qoption iropt
                 -Athr,-Ainline:inc=800:cp=1 -xprefetch_level=3
                 -xpagesize=512k
  312.swim_m:    -fast -xautopar -xreduction -Qoption iropt
                 -Ainline:cs=700,-Atile:skewp:b384 -xpad=common:3022
```

Copyright ©1999-2002, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
                -xprefetch=latx:1.6
  314.mgrid_m:  -fast -autopar -openmp -xipo=2 -xprefetch_level=3
                -xpagesize=64k
  316.applu_m:  -fast -openmp -xipo=2 -Qoption iropt -Aujam:inner=g
  318.galgel_m: -fast -xipo=2 -openmp -autopar -xarch=v8plusb
                -xlic_lib=sunperf
  320.equake_m: -fast -xopenmp -xrestrict -xalias_level=strong
                -W2,-Ainline:call_in_pragma -xpagesize=64k
                -xprefetch_level=3 -xprofile -lmtmalloc -lmopt -lm
  324.apsi_m:   -fast -autopar -openmp -xipo=2 -xprofile
  326.gafort_m: -fast -openmp -xprofile
  328.fma3d_m:  -fast -openmp -Qoption iropt -Athr,-Apf:pdl=1
                -xipo=2 -xprofile -lmtmalloc
  330.art_m:    -fast -xopenmp -xalias_level=std -xipo=2
                -xprefetch_level=3 -W2,-Apf:outer=0 -xprofile
                -lmtmalloc
  332.ammp_m:   -fast -xopenmp -xalias_level=strong
                -xprefetch_level=3 -lmopt -lm -lmtmalloc

Alternate Source for Base:
  ISO C and C++ compatible sources
    Available as SPEC OMP Source: ompm2001-isoc-20020619.tar.gz
    320.equake_m, 330.art_m, 332.ammp_m

Alternate Source for Peak:
  Compatibility with LAPACK version 3, RM_SOURCES=lapak.f90
    Available as SPEC OMP Source:  ompm2001-galgel-20020117.tar.gz
    318.galgel_m

  SPEC OMPL2001 compatible source for 64-bit systems
    Available as SPEC OMP Source:  ompm2001-ompl64-20020925.tar.gz
    320.equake_m, 324.apsi_m, 326.gafort_m

  ISO C and C++ compatible sources
    Available as SPEC OMP Source: ompm2001-isoc-20020619.tar.gz
    330.art_m

Feedback is done as follows, unless otherwise noted:
  fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
  PASS1:     -xprofile=collect:./feedback
  PASS2:     -xprofile=use:./feedback

Base User Environment:
  limit stacksize 512k  (in /bin/csh)
  setenv STACKSIZE 2048
  setenv OMP_DYNAMIC FALSE
  setenv MT_BIND_PROCESSOR TRUE
  setenv MPSSTACK 4M
  setenv MPSSHEAP 4M
  setenv LD_PRELOAD mpss.so.1

Peak User Environment:
  Same as base with the following exception
  318.galgel: STACKSIZE=16384; ENV_OMP_NUM_THREADS = 18
  324.apsi:   unlimit stacksize
  326.gafort: limit stacksize 128m
```

Copyright ©1999-2002, Standard Performance Evaluation Corporation

Sun Microsystems
Sun Fire 6800

SPECompMpeak2001 = 15630
SPECompMbase2001 = 13332

SPEC license #: HPG0010 | Tested by: Sun Microsystems, Palo Alto | Test site: Sun Microsystems | Test date: Mar-2003 | Hardware Avail: Mar-2003 | Software Avail: May-2003

Notes/Tuning Information (Continued)

```
    328.fma3d:  unlimit stacksize
    330.art:    limit stacksize 8m

  Kernel Paramters (/etc/system):
    set autoup=900
    set tune_t_fsflushr=1
    set shmsys:shminfo_shmmax=0xffffffffffffffff
    set shmsys:shminfo_shmseg=512
    set shmsys:shminfo_shmmni=4096

  Sun ONE Studio 8 (FCS) will ship May 2003

  System configuration details located (as of Mar 2003) at
    http://www.sun.com/servers/midrange/sunfire6800
```