OMPM2001 Result

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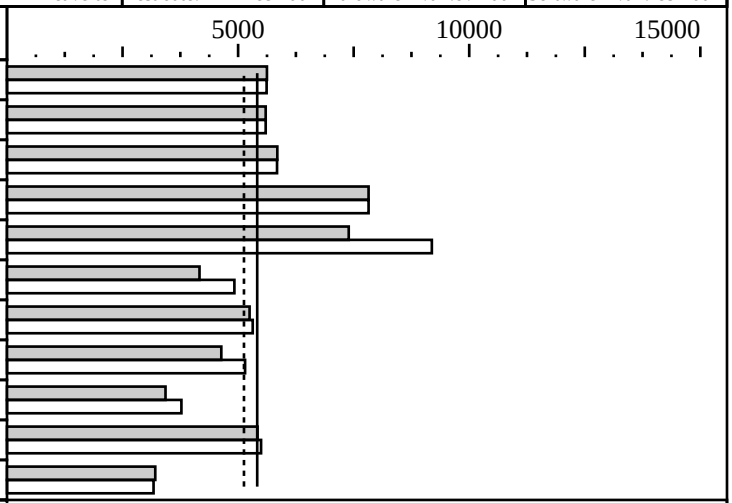
Sun Microsystems
Sun Fire 6800

SPECompMpeak2001 = 5413

SPECompMbase2001 = 5127

SPEC license #:	HPG0010	Tested by:	Sun Microsystems, Palo Alto	Test site:	Beaverton	Test date:	Dec-2001	Hardware Avail:	Nov-2001	Software Avail:	Feb-2002

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	1067	5624	1068	5617
312.swim_m	6000	1072	5597	1072	5597
314.mgrid_m	7300	1248	5848	1250	5842
316.applu_m	4000	511	7823	511	7823
318.galgel_m	5100	690	7393	555	9191
320.equake_m	2600	624	4165	529	4920
324.apsi_m	3400	648	5248	640	5316
326.gafort_m	8700	1876	4636	1689	5151
328.fma3d_m	4600	1341	3429	1219	3773
330.art_m	6400	1181	5420	1164	5497
332.ammp_m	7000	2182	3208	2208	3171



Hardware

CPU:	UltraSPARC III Cu
CPU MHz:	900
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
Disk Subsystem:	1X18GB (SCSI, internal) 550GB (4 9X18GB Sun StorEdge T3 arrays, external)
Other Hardware:	--

Software

OpenMP Threads:	8
Parallel:	--
Operating System:	Solaris 8 2/02 ptmalloc: publically available malloc implementation
Compiler:	Forte Developer 7 EA2 (Early Access 2)
File System:	UFS
System State:	Multi User

Notes/Tuning Information

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Other Software:
  ptmalloc: publically available malloc implementation
  Available as SPEC OMP2001 Source: omp2001-ptmalloc-20020206.tar.gz
  or at www.malloc.de/en/index.html (as of Dec 2001)
  Based on GNU C library, ptmalloc

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

Portablility and Extra flags:
  Extra Base C flags: -Xc
  318.galgel_m portability flags: -e -fixed
  330.art_m extra flags: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

Peak flags:
  310.wupwise: -fast -openmp -Qoption iropt -Ainline:call_in_pragma
             -Qoption iropt -Athr -xipo
```

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Notes/Tuning Information (Continued)

```
    312.swim: basepeak = yes
    314.mgrid: -fast -xarch=v9b -openmp -xprefetch_level=3
               -Qoption iropt -Apf:const,-Apf:largedim -xprofile
    316.applu: basepeak=yes
    318.galgel: -fast -Qoption iropt -whole,-Apf:const -openmp
               -autopar -xipo -xlic_lib=sunperf -xprofile
               RM_SOURCES=lapak.f90;srcalt=eigQR
    320.equake: -fast -xrestrict -xalias_level=strong
               -xopenmp -W2,-Ainline:call_in_pragma -xprofile
               -xprefetch_level=3 -xprofile -lmtmalloc -lmopt -lm
    324.apsi: -fast -autopar -openmp -xipo -xprofile
    326.gafort: -fast -openmp -Qoption iropt -Ainline:call_in_pragma
               -xprofile
    328.fma3d: -fast -openmp -Qoption iropt -Athr -xipo
               -xprofile -lmtmalloc
    330.art: -fast -xopenmp -xalias_level=strong
               -xprefetch_level=2 -xprofile -lmopt -lm -lptmalloc
    332.ammp: -fast -xopenmp -xalias_level=strong
               -xprefetch_level=3 -lmopt -lm -lmtmalloc

  Peak sources:
    318.galgel: eigQR.f90 (for portability to lapack version 3)
      Available as SPEC OMP2001 Source: omp2001-galgel-20020117.tar.gz

  The following user environment was used for base runs:
    unlimit stacksize   (in /bin/csh)
    setenv STACKSIZE 2048
    setenv OMP_DYNAMIC FALSE
    setenv MT_BIND_PROCESSOR TRUE

  The user environment for peak runs was same as for base:
    exceptions/additions noted below:
    318.galgel: STACKSIZE=4096
    330.art: limit stacksize 8m (in /bin/csh)

  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

  ONESTEP=yes for all benchmarks in base and peak

  Forte Developer 7 (final) will ship May, 2002

  System configuration details located (as of Dec 2001) at
  http://www.sun.com/servers/midrange/sunfire6800
```