OMPM2001 Result

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Advanced Micro Devices

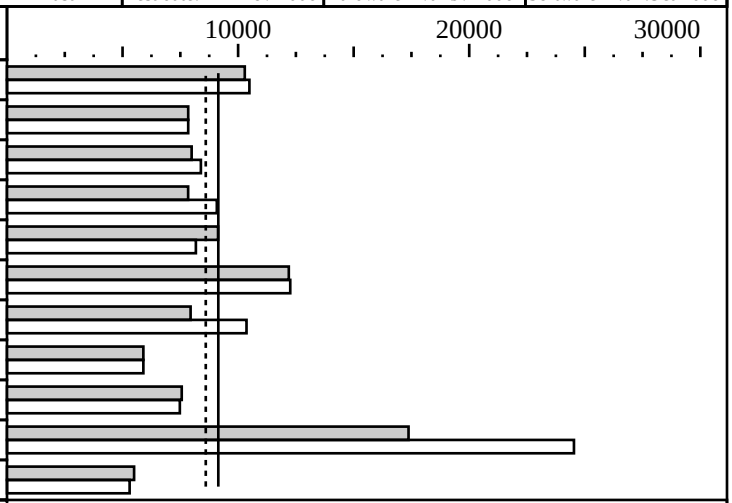
Tyan Thunder n6650w (S2915) (AMD Opteron 8220)

SPECompMpeak2001 = 9143

SPECompMbase2001 = 8601

SPEC license #:HPG0017 | Tested by: AMD | Test site: Austin TX | Test date: Nov-2006 | Hardware Avail: Nov-2006 | Software Avail: Oct-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	583	10288	572	10489
312.swim_m	6000	765	7841	765	7841
314.mgrid_m	7300	914	7989	870	8389
316.applu_m	4000	510	7838	441	9079
318.galgel_m	5100	558	9133	624	8173
320.equake_m	2600	213	12193	212	12256
324.apsi_m	3400	428	7944	328	10363
326.gafort_m	8700	1475	5900	1475	5900
328.fma3d_m	4600	608	7560	615	7478
330.art_m	6400	368	17374	261	24532
332.ammp_m	7000	1273	5499	1319	5306



Hardware

CPU:	AMD Opteron(tm) Processor 8220
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	8x512MB, PC2-4200R CL4
Disk Subsystem:	250GB 7200 rpm SATA
Other Hardware:	None

Software

OpenMP Threads:	4
Parallel:	OpenMP + Auto Concurrentization
Operating System:	SLES9 SP3 64bit
Compiler:	PGI Fortran 6.2-4
File System:	Linux/ext3
System State:	Multi-User

Notes/Tuning Information

```
Extra art Base Flags
  330.art_m (extra): -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

Base tuning:
  C       : pgcc  -mp -tp=k8-64 -fastsse -O4 -Minline=levels:8 -mcmodel=medium
  Fortran : pgf90 -mp -tp=k8-64 -fastsse -O4 -Minline=levels:8 -mcmodel=medium
  ONESTEP=yes

Peak tuning:
 ONESTEP=yes for all peak tests.

 310.wupwise_m   : -mp -tp=k8-64 -fastsse -Minline=level:8  -mcmodel=medium
 312.swim_m      : basepeak=yes
 314.mgrid_m     : -mp -tp=k8-64 -fastsse    -Mnofptrap -Mlongbranch
 316.applu_m     :  -mp -tp=k8-64 -fastsse -O4  -Minline=levels:8 -Mipa=fast,inline -Mfprelaxed=rsqrt -mcmodel=medium
                    srcalt = ompl.32
 318.galgel_m    : -mp -tp=k8-64 -fastsse -Mconcur -Mipa=fast,inline -Mfprelaxed=rsqrt -mcmodel=medium
                    -I/opt/acml3.5.0/pgi64/include -L/opt/acml3.5.0/pgi64/lib -lacml
                    RM_SOURCES=lapak.f90
 320.equake_m    : -mp -tp=k8-64 -fastsse -Mipa=fast,inline -Mfprelaxed=rsqrt -mcmodel=medium
                    srcalt = ompl.32
 324.apsi_m      : -mp -tp=k8-64 -fastsse -O4 -Minline=levels:8 -mcmodel=medium
                    srcalt = ompl.32
```

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Notes/Tuning Information (Continued)

```
 326.gafort_m    : basepeak=yes
 328.fma3d_m     : -mp -tp=k8-64 -fastsse -O4  -Mvect=assoc -Minline -mcmodel=medium
330.art_m      : -mp -fast  -Mscalarsse -Mcache_align -Mflushz -Minline -Mpa=fast,inline -Mfprelaxed=rsqrt -mcmodel=medium
 332.ammp_m      : -mp -tp=k8-64 -fastsse  -O -Minline  -Mframe -Mipa=fast,inline -Mfprelaxed=rsqrt
Portability flags:
 318.galgel_m    : -Mfixed -Mextend

Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=4
  export OMP_DYNAMIC=FALSE
  export PGI=/opt/pgi
  export LD_LIBRARY_PATH=/opt/acml3.5.0/pgi64/lib
  ulimit -s unlimited

Default BIOS settings used.
System can be built using a standard EATX case, Matrox Millennium G450 PCI
graphics adapter and an Antec True550 EPS12V power supply.
PGI compiler flags are in AMD-20061107-pgi62_flags.txt.
```