OMPM2001 Result

Copyright ©1999-2007, Standard Performance Evaluation Corporation

Advanced Micro Devices

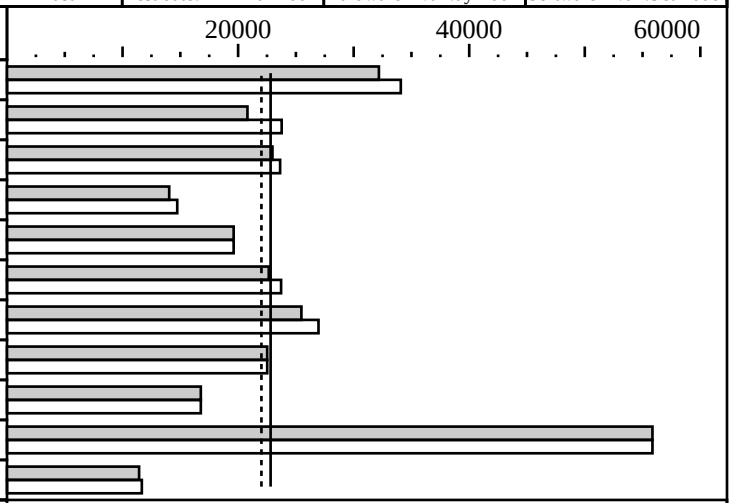
Tyan Thunder n4250 (S4985) (Opteron(TM) 8222 SE)

SPECompMpeak2001 = 22812

SPECompMbase2001 = 22018

SPEC license #:	HPG0017	Tested by:	AMD	Test site:	Austin TX	Test date:	Mar-2007	Hardware Avail:	May-2007	Software Avail:	Oct-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	186	32185	176	34079
312.swim_m	6000	288	20808	252	23770
314.mgrid_m	7300	318	22971	309	23635
316.applu_m	4000	285	14037	272	14732
318.galgel_m	5100	260	19614	260	19614
320.equake_m	2600	115	22654	110	23719
324.apsi_m	3400	133	25478	126	26958
326.gafort_m	8700	386	22518	386	22518
328.fma3d_m	4600	274	16773	274	16773
330.art_m	6400	115	55857	115	55857
332.ammp_m	7000	612	11432	600	11668



Hardware

CPU:	Opteron(TM) Processor 8222 SE
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1,2,4
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	16x512MB, PC2-5300R CL4
Disk Subsystem:	250GB 7200 rpm SATA
Other Hardware:	None

Software

OpenMP Threads:	8
Parallel:	OpenMP
Operating System:	SLES9 SP3 64bit
Compiler:	QLogic PathScale Compiler Suite ver. 2.5
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       : pathcc  -mp -Ofast -mcmodel=medium
  Fortran : pathf90 -mp -Ofast -OPT:early_mp=on -mcmodel=medium
  ONESTEP=yes
   310.wupwise_m: -mp -Ofast -msse3 -LNO:prefetch_ahead=5:prefetch=3
                  -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
                  -IPA:linear=on:plimit=50000:callee_limit=5000
   312.swim_m: -mp -O3 -OPT:Ofast -m3dnow -mcmodel=medium -LNO:simd=0
   314.mgrid_m: -mp -Ofast -CG:gcm=off:cflow=off -LNO:fusion=2:prefetch=0 -msse3
                -OPT:early_mp=on:unroll_times_max=8:unroll_size=256:ro=3
                -mcmodel=medium
   316.applu_m: -mp -Ofast -mcmodel=medium -CG:local_fwd_sched=on
                -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
                -TENV:X=3
   318.galgel_m: basepeak=yes
   320.equake_m: -Ofast -mp -OPT:alias=disjoint
   324.apsi_m: -mp -O3 -OPT:Ofast -TENV:x=4 -LNO:fusion=2:prefetch=0
   326.gafort_m: basepeak=yes
   328.fma3d_m: basepeak=yes
   330.art_m: basepeak=yes
```

Copyright ©1999-2007, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
    332.ammp_m: -mp -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
                -fno-math-errno -TENV:X=4 -LNO:prefetch=0
                use_submit_for_speed=1
                submit= PSC_OMP_GUIDED_CHUNK_MAX=700 $command


Portablility flags:
 318.galgel_m    : -fixedform -col80

Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=8
  export OMP_DYNAMIC=FALSE
  export PSC_OMP_AFFINITY=TRUE
  export PSC_OMP_STATIC_FAIR=TRUE
  export PSC_OMP_THREAD_SPIN=1000000000
  ulimit -s unlimited

Default BIOS settings used
AMD PowerNow!(TM) disabled by use of command "powersave -f"
```