OMPM2001 Result

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Advanced Micro Devices

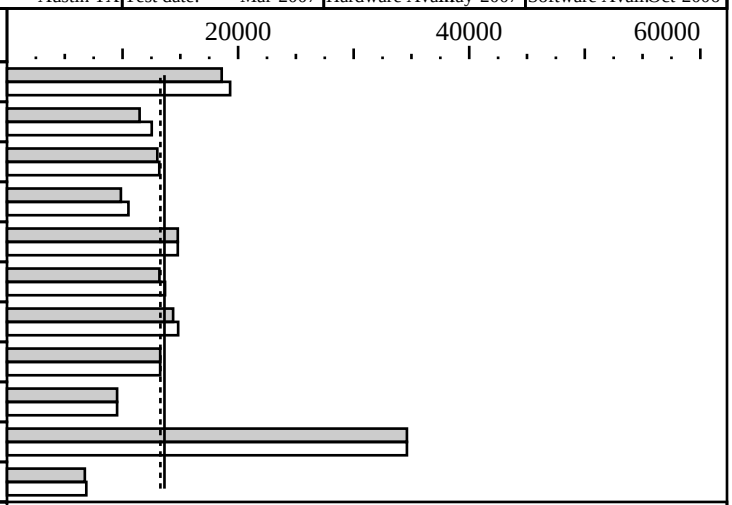
Tyan Thunder n6550W (S2915) (Opteron(TM) 2222 SE)

SPECompMpeak2001 = 13627

SPECompMbase2001 = 13275

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	323	18579	311	19309
312.swim_m	6000	523	11475	479	12525
314.mgrid_m	7300	561	13009	554	13179
316.applu_m	4000	406	9856	381	10509
318.galgel_m	5100	345	14780	345	14780
320.equake_m	2600	197	13191	190	13676
324.apsi_m	3400	237	14375	230	14812
326.gafort_m	8700	656	13259	656	13256
328.fma3d_m	4600	483	9528	483	9528
330.art_m	6400	185	34609	185	34609
332.ammp_m	7000	1039	6735	1020	6863



Hardware

CPU:	Opteron(TM) Processor 2222 SE
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	None
Other Cache:	None
Memory:	8x1GB, PC2-5300R CL4
Disk Subsystem:	250GB 7200 rpm SATA
Other Hardware:	None

Software

OpenMP Threads:	4
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 -INLINE:aggressive=on
   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: -Ofast -OPT:early_mp=on -mp -LNO:vintr=0
   328.fma3d_m: basepeak=yes
   330.art_m: basepeak=yes
```

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

Alternate Source:
     310.wupwise_m     : Approved srcalt ompl.32 used for peak
     312.swim_m        : Approved srcalt ompl.32 used for peak
     314.mgrid_m       : Approved srcalt ompl    used for peak
     316.mgrid_m       : Approved srcalt ompl    used for peak
     320.equake_m      : Approved srcalt ompl.32 used for peak
     324.apsi_m        : Approved srcalt ompl    used for peak
Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=4
  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, with DRAM bank interleave set to auto
For flag definitions see AMD-20070424-psc25_flags.txt
```