OMPM2001 Result

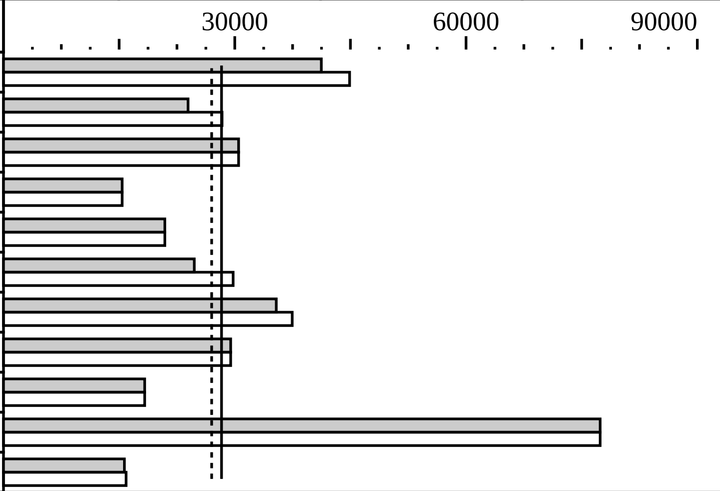
Tyan Computer Corporation
Tyan Thunder n425QE (S4985E)

SPECompMpeak2001 = 28283

SPECompMbase2001 = 27001

SPEC license #	Tested by:	Test site:	Test date:	Hardware Avail:	Software Avail:
HPG0017	Advanced Micro Devices	Austin, TX	Mar-2008	Apr-2008	Nov-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	146	41227	134	44895
312.swim_m	6000	251	23941	212	28351
314.mgrid_m	7300	239	30496	239	30496
316.applu_m	4000	260	15391	260	15391
318.galgel_m	5100	244	20928	244	20928
320.equake_m	2600	105	24748	87.3	29789
324.apsi_m	3400	96.1	35383	90.8	37452
326.gafort_m	8700	295	29469	295	29469
328.fma3d_m	4600	251	18314	251	18314
330.art_m	6400	82.7	77397	82.7	77397
332.ammp_m	7000	446	15684	440	15902



Hardware

CPU:	AMD Opteron Processor 8356
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	16 cores, 4 chips, 4 cores/chip
CPU(s) orderable:	1-4
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	2 MB I+D on chip per chip
Other Cache:	None
Memory:	32GB (16x2GB, PC2-5300, CL5 dual-rank)
Disk Subsystem:	250GB 7200 RPM SATA
Other Hardware:	None

Software

OpenMP Threads:	16
Parallel:	OpenMP
Operating System:	SLES10 SP1 64bit
Compiler:	PathScale Compiler Suite ver. 3.1
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
Peak Tuning:
   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: basepeak=yes
   316.applu_m: basepeak=yes
   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
   332.ammp_m: -mp -Ofast -mcpu=opteron -mcmodel=medium
```

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Notes/Tuning Information (Continued)

```
Portablility flags:
 318.galgel_m    : -fixedform -col80

Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=16
  export OMP_DYNAMIC=FALSE
  export PSC_OMP_AFFINITY_MAP=15,14,13,12,11,10,9,8,7,6,5,4,3,2,1,0
  export PSC_OMP_STATIC_FAIR=TRUE
  export PSC_OMP_THREAD_SPIN=1000000000
  ulimit -s unlimited
For flag descriptions, see file AMD-Apr2008-psc31_flags.txt
Phoenix BIOS v.2.02.
Default BIOS settings used, except ECC was set to "basic" instead of none.
```