

## OMPM2001 Result

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Advanced Micro Devices Tyan Thunder n4250QE (S4985E) (Opteron(TM) 8350)	SPECompMpeak2001 = NA SPECompMbase2001 = NA
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**SPEC has determined that this result was not in compliance with the SPEC OMP2001 run and reporting rules. Specifically, the submitter reported that the result would not meet the SPEC HPG requirements for continued availability.**

SPEC license # HPG0017	Tested by: Advanced Micro Devices	Test site: Austin TX	Test date: Aug-2007	Hardware Avail: Sep-2007	Software Avail: Jul-2007
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Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	Graph Scale
310.wupwise_m	6000	NA	NA	NA	NA	
312.swim_m	6000	NA	NA	NA	NA	
314.mgrid_m	7300	NA	NA	NA	NA	
316.applu_m	4000	NA	NA	NA	NA	
318.galgel_m	5100	NA	NA	NA	NA	
320.quake_m	2600	NA	NA	NA	NA	
324.apsi_m	3400	NA	NA	NA	NA	
326.gafort_m	8700	NA	NA	NA	NA	
328.fma3d_m	4600	NA	NA	NA	NA	
330.art_m	6400	NA	NA	NA	NA	
332.amp_m	7000	NA	NA	NA	NA	
SPECompMbase2001			NA			
SPECompMpeak2001					NA	

<b>Hardware</b>		<b>Software</b>	
<b>Hardware Vendor:</b>	Advanced Micro Devices	<b>OpenMP Threads:</b>	16
<b>Model Name:</b>	Tyan Thunder n4250QE (S4985E) (Opteron(TM) 8350)	<b>Parallel:</b>	OpenMP
<b>CPU:</b>	Opteron(TM) 8350	<b>Operating System:</b>	SLES10 SP1 64bit
<b>CPU MHz:</b>	2000	<b>Compiler:</b>	QLogic PathScale Compiler Suite ver. 3.0
<b>FPU:</b>	Integrated	<b>File System:</b>	Linux/Ext3
<b>CPU(s) enabled:</b>	16 cores, 4 chips, 4 cores/chip	<b>System State:</b>	Multi-User
<b>CPU(s) orderable:</b>	1, 2, 3, 4 chips		
<b>Primary Cache:</b>	64KBI + 64KBD on chip per core		
<b>Secondary Cache:</b>	512KB (I+D) on chip per core		
<b>L3 Cache:</b>	2MB (I+D) on chip per chip		
<b>Other Cache:</b>	None		
<b>Memory:</b>	16x1GB, PC2-5300 CL5		
<b>Disk Subsystem:</b>	160GB 7200 rpm SATA		
<b>Other Hardware:</b>	None		

## Notes / Tuning Information

### Extra art Base Flags

```
330.art_m (extra): -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
```

### Base tuning:

```
C      : pathcc -gnu3 -mp -Ofast -mcpu=opteron -mcmmodel=medium
Fortran : pathf90 -mp -Ofast -mcpu=opteron -OPT:early_mp=on -mcmmodel=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
              -INLINE:aggressive=on
              ompl.32 src.alt used
312.swim_m: -mp -O3 -OPT:Ofast -m3dnow -mcmmodel=medium -LNO:simd=0
           ompl.32 src.alt used
314.mgrid_m: basepeak=yes
           ompl src.alt used
316.applu_m: basepeak=yes
           ompl src.alt used
318.galgel_m: basepeak=yes
320.equake_m: -gnu3 -Ofast -mp -OPT:alias=disjoint
           ompl.32 src.alt used
324.apsi_m: -mp -O3 -OPT:Ofast -TENV:x=4 -LNO:fusion=2:prefetch=0
           ompl src.alt used
326.gafort_m: basepeak=yes
328.fma3d_m: basepeak=yes
330.art_m: basepeak=yes
332.ampm_m: -gnu3 -mp -Ofast -mcpu=opteron -mcmmodel=medium
           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=16
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  
Qlogic Pathscale 3.0 compiler flags are described in AMD-20070828-psc30\_flags.txt

Submitted\_by: "Waldecker, Brian" Submitted: Wed Sep 12 11:29:12 2007

Submission: omp2001-20070820-00259.sub

For questions about this result, please contact the tester.

For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org)

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