

# SPEC® CFP2006 Result

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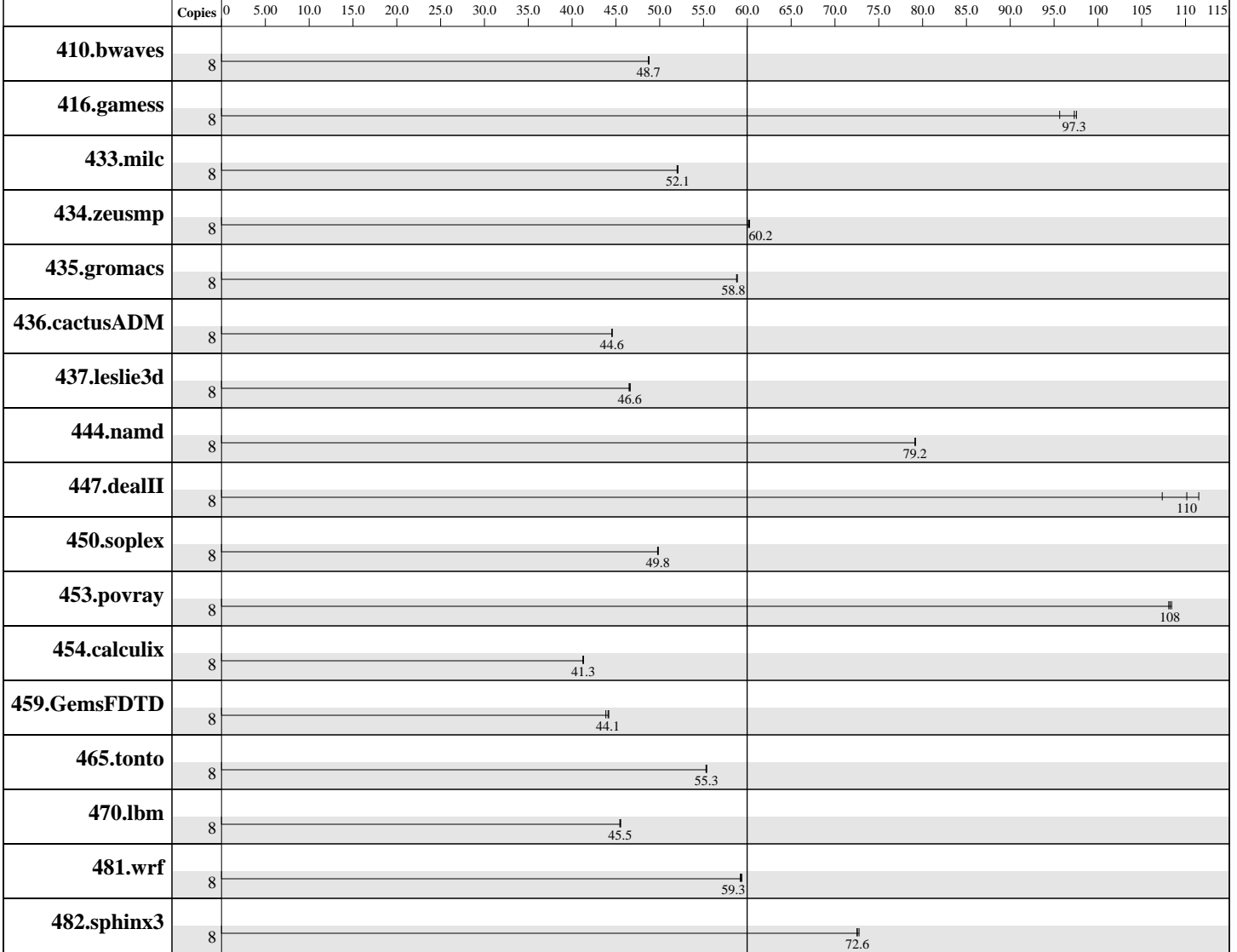
## Tyan

SPECfp®\_rate2006 = Not Run

Tyan Thunder n425QE (S4985E), AMD Opteron 2350

SPECfp\_rate\_base2006 = 60.0

CPU2006 license #: 49 | Test sponsor: Advanced Micro Devices | Test date: Sep-2007 | Hardware Availability: Sep-2007 | Software Availability: Jul-2007



### Hardware

CPU Name: AMD Opteron 2350  
 CPU Characteristics:  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 2,4 chips  
 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: 16 GB (8x2GB, DDR2-667 CL5 Reg Dual Rank)

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### Software

Operating System: SuSE Linux Enterprise Server 10 SP1 64-bit kernel  
 Compiler: gcc, g++, gfortran 4.1.2  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user, run level 3  
 Base Pointers: 64-bit  
 Peak Pointers: None  
 Other Software: None

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## Hardware (Continued)

Disk Subsystem: 1x150GB SATA, 7200 RPM  
Other Hardware: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	<u>2230</u>	<u>48.7</u>	2230	48.8	2230	48.7							
416.gamess	8	<u>1610</u>	<u>97.3</u>	1640	95.6	1610	97.6							
433.milc	8	1410	52.1	1410	52.0	<u>1410</u>	<u>52.1</u>							
434.zeusmp	8	<u>1210</u>	<u>60.2</u>	1210	60.1	1210	60.3							
435.gromacs	8	<u>971</u>	<u>58.8</u>	971	58.8	972	58.8							
436.cactusADM	8	2150	44.5	<u>2150</u>	<u>44.6</u>	2140	44.6							
437.leslie3d	8	<u>1610</u>	<u>46.6</u>	1610	46.6	1620	46.5							
444.namd	8	810	79.2	811	79.1	<u>811</u>	<u>79.2</u>							
447.dealII	8	<u>831</u>	<u>110</u>	853	107	821	112							
450.soplex	8	1340	49.8	<u>1340</u>	<u>49.8</u>	1340	49.8							
453.povray	8	<u>393</u>	<u>108</u>	394	108	393	108							
454.calculix	8	1600	41.3	<u>1600</u>	<u>41.3</u>	1600	41.2							
459.GemsFDTD	8	<u>1920</u>	<u>44.1</u>	1940	43.9	1920	44.2							
465.tonto	8	1420	55.4	1420	55.3	<u>1420</u>	<u>55.3</u>							
470.lbm	8	2410	45.5	<u>2420</u>	<u>45.5</u>	2420	45.5							
481.wrf	8	<u>1510</u>	<u>59.3</u>	1510	59.2	1510	59.4							
482.sphinx3	8	2140	72.7	2150	72.5	<u>2150</u>	<u>72.6</u>							

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## General Notes

wrf needs wrf\_data\_header\_size=8  
to read the unformatted data input file correctly

The tested system can be assembled using a  
PC Power & Cooling T1KWSR 1000W Turbo-Cool 12V power supply.

## Base Compiler Invocation

C benchmarks:  
gcc

C++ benchmarks:  
g++

Fortran benchmarks:  
gfortran

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## Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

gcc gfortran

## Base Portability Flags

C benchmarks:

-DSPEC\_CPU\_LP64

C++ benchmarks (except as noted below):

-DSPEC\_CPU\_LP64

453.povray: -DSPEC\_CPU\_LP64

Fortran benchmarks:

-DSPEC\_CPU\_LP64

Benchmarks using both Fortran and C (except as noted below):

-DSPEC\_CPU\_LP64

436.cactusADM: -DSPEC\_CPU\_LP64

481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX -DSPEC\_CPU\_CASE\_FLAG

## Base Optimization Flags

C benchmarks:

-O3 -funroll-loops -fno-inline-functions

C++ benchmarks:

-O3 -funroll-loops

Fortran benchmarks:

-O3 -funroll-loops -fno-inline-functions

Benchmarks using both Fortran and C:

-O3 -funroll-loops -fno-inline-functions

## Base Other Flags

C benchmarks:

No flags used

C++ benchmarks:

No flags used

Fortran benchmarks:

No flags used

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## Base Other Flags (Continued)

Benchmarks using both Fortran and C:  
No flags used

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