



# CFP2000 Result

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**Advanced Micro Devices**  
Tyan Thunder K9HM (S3992), AMD Opteron (TM) 2218

**SPECfp2000 = 1970**  
**SPECfp\_base2000 = 1810**

SPEC license #: 49 Tested by: AMD Austin, TX Test date: Jul-2006 Hardware Avail: Sep-2006 Software Avail: Oct-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	57.6	2778	57.6	2777	
171.swim	3100	114	2722	116	2667	
172.mgrid	1800	108	1664	108	1664	
173.applu	2100	135	1560	129	1632	
177.mesa	1400	137	1022	68.0	2060	
178.galgel	2900	97.2	2984	89.2	3252	
179.art	2600	56.3	4620	56.3	4620	
183.quake	1300	74.2	1752	72.2	1802	
187.facerec	1900	93.6	2031	93.6	2031	
188.amp	2200	187	1175	156	1407	
189.lucas	2000	104	1931	88.9	2249	
191.fma3d	2100	131	1609	129	1627	
200.sixtrack	1100	139	789	139	790	
301.apsi	2600	182	1431	182	1428	

### Hardware

CPU: AMD Opteron (TM) 2218  
 CPU MHz: 2600  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1,2  
 Parallel: no  
 Primary Cache: 64KBI + 64KBD on chip per core  
 Secondary Cache: 1024KB (I+D) on chip per core  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 4x512MB, DDR2-667 CL4 ECC Reg  
 Disk Subsystem: IDE, 120 GB  
 Other Hardware: None

### Software

Operating System: Windows Server 2003 Enterprise Edition SP1 (32-bit)  
 Compiler: Intel C++ 9.0 build 20050912Z for IA32, Intel Fortran 9.0 build 20050912Z for IA32, Microsoft Visual Studio .NET 7.0.9466 (libraries) PGI Fortran compiler 6.0-5 for Windows XP, PGI C compiler 6.0-5 for Windows XP, ACML Version 2.5.3 (bundled with PGI 6.0-5)  
 File System: NTFS  
 System State: default

## Notes/Tuning Information

```
+FDO:
  icl, ifort : PASS1=-Qprof_gen PASS2=-Qprof_use
  pgf90      : PASS1=-Mpfi      PASS2=-Mpfo
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran 90 compiler.
pgcc is the PGI C compiler.
ONESTEP is set to 1 for every compile with the PGI compilers.
Portability:
178.galgel: -Mfixed
Baseline: C : pgcc -fastsse -Mipa=fast,inline
Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline +FDO
Peak tuning:
168.wupwise: pgf90 -fastsse -Mipa=fast,inline -Mvect
171.swim: ifort -Qipo -O3 -QaxN -QxW -Qunroll0 +FDO
172.mgrid: pgf90 -fastsse -Mipa=fast,inline
173.applu: ifort -Qipo -O3 -QaxN -QxW -auto +FDO
177.mesa: icl -Qipo -QxW -Qunroll1 -Qansi_alias +FDO
```



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## Notes/Tuning Information (Continued)

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-Qoption,c,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
178.galgel:      pgf90  -fastsse -Mipa=fast,safe -Munix -lacml
                  RM_SOURCES=lapak.f90
179.art:         pgcc   basepeak=yes
183.quake:      icl    -O3 -Qipo -QxW +FDO
187.facerec:    pgf90  basepeak=1
188.amp:        icl    -Oa  -QxW  -Zp4 -Qansi_alias
189.lucas:      ifort  -Qipo -QxW -Qunroll1
191.fma3d:      pgf90  -Mipa=fast,inline -fastsse -Mnovect +FDO
200.sixtrack:   pgf90  -fastsse -Mipa=fast,inline
301.apsi:       pgf90  -fastsse -Mipa=fast,inline
system can be built using a standard ATX case and a Zippy 700W PSL-6701P power supply
Half memory slots populated on CPU in dual channel configuration

```