



CFP2000 Result

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Advanced Micro Devices
Tyan Thunder K9HM (S3992), AMD Opteron (TM) 2210

SPECfp2000 = **1457**
SPECfp_base2000 = **1348**

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	78.5	2038	78.2	2047	
171.swim	3100	141	2198	150	2069	
172.mgrid	1800	150	1204	150	1202	
173.applu	2100	172	1218	168	1252	
177.mesa	1400	197	710	97.4	1438	
178.galgel	2900	131	2212	119	2430	
179.art	2600	73.8	3522	73.8	3522	
183.quake	1300	95.3	1364	93.3	1394	
187.facerec	1900	127	1500	127	1500	
188.amp	2200	252	872	218	1008	
189.lucas	2000	132	1515	115	1746	
191.fma3d	2100	178	1178	176	1193	
200.sixtrack	1100	200	549	200	550	
301.apsi	2600	253	1027	254	1025	

Hardware

CPU: AMD Opteron (TM) 2210
CPU MHz: 1800
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)

-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