



CFP2000 Result

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Advanced Micro Devices
TYAN Tomcat K8E (S2865), AMD Opteron (TM) 180

SPECfp_rate2000 = 30.6
SPECfp_rate_base2000 = 28.3

SPEC license #: 49 | Tested by: AMD, Austin TX | Test date: Aug-2005 | Hardware Avail: Nov-2005 | Software Avail: Jun-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	72.8	51.0	2	73.4	50.6
171.swim	2	329	21.8	2	279	25.7
172.mgrid	2	182	22.9	2	182	22.9
173.applu	2	239	20.4	2	216	22.5
177.mesa	2	149	21.8	2	79.2	41.0
178.galgel	2	146	46.2	2	146	46.0
179.art	2	87.2	69.1	2	87.2	69.1
183.equake	2	123	24.5	2	122	24.7
187.facerec	2	128	34.4	2	129	34.3
188.amp	2	206	24.8	2	174	29.3
189.lucas	2	205	22.7	2	207	22.4
191.fma3d	2	189	25.8	2	187	26.0
200.sixtrack	2	150	17.0	2	150	17.0
301.apsi	2	209	28.9	2	209	28.8

Hardware

CPU: AMD Opteron (TM) 180 (939-pin)
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1
 Parallel: no
 Primary Cache: 64KBI + 64KBD/core
 Secondary Cache: 1024KB (I+D)/core
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 4x512 MB, DDR400 CL2
 Disk Subsystem: SATA, Western Digital WD740GD, 74 GB 10000 RPM
 Other Hardware: None

Software

Operating System: Microsoft Windows Server 2003 Enterprise Edition SP1
 Compiler: Intel C++ 9.0 build 20050430z for IA32, Intel Fortran 9.0 build 20050430z for IA32, PGI Fortran compiler 6.0-4 for Windows XP, PGI C compiler 6.0-4 for Windows XP, ACML Version 2.5.3 (bundled with PGI 6.0-4) Microsoft Visual Studio .NET 7.0.9466 (libraries)
 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 -Mnovect
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
```



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Notes/Tuning Information (Continued)

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177.mesa:          icl      -Qipo -arch:SSE2 -Qunroll11 -Qansi_alias +FDO
                  -Qoption,f,-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.equake:       icl      -fast -arch:SSE2 -QaxW +FDO
187.facerec:     pgf90    -fastsse -Mipa=fast,inline +FDO
188.ampp:        icl      -Oa -arch:SSE2 -Zp4 -Qansi_alias
189.lucas:       ifort    -Qipo -QxW -Qunroll11
191.fma3d:       pgf90    -Mipa=fast,inline -fastsse -Mno vect +FDO
200.sixtrack:    pgf90    -fastsse -Mipa=fast,inline
301.apsi:        pgf90    -fastsse -Mipa=fast,inline

```

The tested system can be built using a standard ATX case and an Antec True 550W EPS12V power supply.

All memory slots populated on all CPU(s).

BIOS Version 2.01

'start /b /wait /affinity' command was used to bind CPU(s) to processes.