



# CFP2000 Result

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Advanced Micro Devices  
Rioworks HDAMA Motherboard, AMD Opteron 246

SPECfp2000 = 1293  
SPECfp\_base2000 = 1209

SPEC license #: 49 Tested by: AMD, Austin, TX Test date: Jul-2003 Hardware Avail: Aug-2003 Software Avail: May-2003

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	122	1308	111	1436	
171.swim	3100	179	1733	155	1996	
172.mgrid	1800	163	1105	162	1114	
173.applu	2100	203	1033	189	1110	
177.mesa	1400	99.5	1407	97.7	1433	
178.galgel	2900	163	1782	140	2074	
179.art	2600	181	1434	167	1557	
183.quake	1300	125	1037	106	1230	
187.facerec	1900	133	1425	130	1465	
188.amp	2200	183	1200	179	1226	
189.lucas	2000	147	1358	147	1357	
191.fma3d	2100	176	1192	176	1192	
200.sixtrack	1100	225	489	201	548	
301.apsi	2600	240	1085	230	1132	

### Hardware

CPU: Opteron 246  
CPU MHz: 2000  
FPU: Integrated  
CPU(s) enabled: 1 core, 1 chip, 1 core/chip  
CPU(s) orderable: 2  
Parallel: No  
Primary Cache: 64KBI + 64KBD on chip  
Secondary Cache: 1024KB(I+D) on chip  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 2x512MB PC2700 DDR Registered SDRAM CL2.5  
Disk Subsystem: 120GB 7200 RPM IDE  
Other Hardware: None

### Software

Operating System: Microsoft Windows Server 2003, Enterprise Edition  
Compiler: Intel C/C++ 7.0 build 20021212Z and Intel Fortran 7.0 build 20021212Z  
Compaq Visual Fortran Compiler Version 6.6 (Update B)  
Microsoft Visual Studio .NET (libraries)  
MicroQuill SmartHeap Library 6.0  
File System: NTFS  
System State: Default

## Notes/Tuning Information

+FDO: PASS1=-Qprof\_gen PASS2=-Qprof\_use  
icl and ifl are the Intel C/C++ and Fortran compilers  
f90 is the Compaq Fortran compiler  
shlw32M6.lib is the SmartHeap library V6.0 from MicroQuill [www.microquill.com](http://www.microquill.com)  
Portability:  
178.galgel: -FI -Fe\$@ -link -stack:32000000  
Baseline: C icl +FDO -O3 -QxW -Qipo  
Baseline: Fortran ifl +FDO -O3 -QxW -Qipo  
Peak tuning:  
168.wupwise: ifl +FDO -QxK -Qipo -Ow  
171.swim: f90 -Optimize:5 -alignment:dcommons  
-Alignment:records -Alignment:sequence -Architecture:k7  
-Assume:noaccuracy\_sensitive -Math\_Library:fast -Tune:k7  
172.mgrid: ifl +FDO -O3 -QaxW -Qipo -Oa -Qprefetch-  
173.applu: ifl +FDO -O3 -QxK -Qipo -Qscalar\_rep- -Zp8  
177.mesa: icl +FDO -O3 -QxW -Qipo -Oa -Qscalar\_rep-  
178.galgel: f90 -Optimize:5 -fast



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## Notes/Tuning Information (Continued)

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179.art:          icl          -Qipo -Oa          -Qunroll14 -Zp4
183.equake:      icl          -O3 -QxK  -Qipo -Oa  shlw32M6.lib -Zp4
187.facerec:     ifl +FDO -O3 -QaxW -Qipo          -Qscalar_rep- -Qunroll11
188.ampp:        icl          -QxW          -Oa
189.lucas:       ifl +FDO -O3 -QxW  -Qipo          -Qprefetch-
191.fma3d:       ifl basepeak=1
200.sixtrack:    ifl          -Qipo -Oa          -Zp4
301.apsi:        f90 -Optimize:5 -fast

```

ONESTEP is used for all base and peak runs

The tested system can be assembled using an ATX case such as the Antec KS-282, a 460W power supply, like a Sparkle FSP460-60PFN.