



CFP2000 Result

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Supermicro H8DAR-8 (AMD Opteron (TM) 275)

SPECfp_rate2000 = 56.0

SPECfp_rate_base2000 = 53.4

SPEC license #01176 | Tested by: Supermicro | Test date: May-2005 | Hardware Avail: Mar-2005 | Software Avail: Jul-2004

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	75.4	98.4	4	75.4	98.4
171.swim	4	331	43.4	4	250	57.6
172.mgrid	4	176	47.3	4	176	47.3
173.applu	4	224	43.5	4	200	48.8
177.mesa	4	87.6	74.2	4	81.8	79.4
178.galgel	4	153	88.1	4	142	94.8
179.art	4	277	43.6	4	305	39.6
183.quake	4	121	49.9	4	121	49.9
187.facerec	4	134	65.6	4	130	68.0
188.amp	4	220	46.3	4	200	51.0
189.lucas	4	191	48.6	4	185	50.0
191.fma3d	4	198	49.1	4	184	52.9
200.sixtrack	4	166	30.7	4	166	30.7
301.apsi	4	222	54.3	4	222	54.3

Hardware

CPU: AMD Opteron (TM) 275
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1, 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: 8 x 1024MB PC3200 REG ECC CL3 DDR SDRAM
 Disk Subsystem: 1 X 300GB IDE
 Other Hardware: None

Software

Operating System: Windows Enterprise Server 2003
 Compiler: Intel C++ 8.0 build 20040714Z, Intel Fortran 8.1 build 20041019Z, PGI Fortran compiler 5.2-4 for Windows XP, AMD Core Math library Version 2.1 (ACML), Microsoft Visual Studio .NET 7.0.9466 (libraries), MicroQuill Smartheap Library 7.0
 File System: NTFS
 System State: Default

Notes/Tuning Information

Tested by Supermicro

```
+FDO: PASS1=-Qprof_gen PASS2=-Qprof_use
+ACML is linking with AMD Core Math Library V2.1
ONESTEP is set for all peak runs.
ifort is the Intel Fortran compiler, icl is the Intel C++ compiler and
pgf90 is the PGI Fortran compiler.
The Intel C++ 8.0 and the Intel Fortran 8.1 compilers are setup in the following order:
  "c:\program files\intel\fortran\compiler80\ia32\bin\ifortvars.bat"
  "c:\program files\intel\cpp\compiler80\ia32\bin\iclvars.bat"
To make sure that the correct libraries are selected, the following link option is
added for the peak runs where Intel Fortran 8.1 compiler is used:
  LDOPT = -Fe$@ -link -LIBPATH:"c:\program files\intel\fortran\compiler80\ia32\lib"
(denoted by +LIBPATH:INTEL8.1 in the optimization flags listed below)
Portability:
  178.galgel: -Mfixed
Baseline: C      : icl  -fast -arch:SSE2 -QaxW +FDO
Baseline: Fortran: pgf90 -fastsse -Mipa=fast,inline
```



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Notes/Tuning Information (Continued)

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Peak tuning:
168.wupwise:      pgf90 basepeak=yes
171.swim:         ifort -Qipo -O3 -QaxN -QxW +FDO -Qunroll10 +LIBPATH:INTEL8.1
172.mgrid:       pgf90 basepeak=yes
173.applu:        ifort -Qipo -O3 -QaxN -QxW +FDO -auto +LIBPATH:INTEL8.1
177.mesa:         icl -Qipo -arch:SSE2 +FDO -Qunroll11 -Qansi_alias
                  -Qoption,f,-ip_ninl_max_stats=1500,-ip_ninl_max_total_stats=4500
179.art:          icl -Qipo -Zp4 +FDO
183.equake:       icl basepeak=yes
178.galgel:       pgf90 -fastsse -Mipa=fast,safe RM_SOURCES=lapak.f90 -Munix +ACML
Tested system can be used with a 420W (minimum) ATX power supply
                  -Qoption,f,-ip_ninl_max_stats=2500,-ip_ninl_max_total_stats=7000
188.ammp:         icl -Oa -arch:SSE2 -Zp4 -Qansi_alias
189.lucas:        ifort -Qipo -QxW -Qunroll11 +LIBPATH:INTEL8.1
191.fma3d:        ifort -Qipo -QaxN -QxW +FDO -Qansi-alias- +LIBPATH:INTEL8.1
200.sixtrack:     pgf90 basepeak=yes
301.apsi:         pgf90 basepeak=yes

```