



CFP2000 Result

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Compaq Computer Corporation
AlphaServer ES40 Model 6/667

SPECfp_rate2000 = 21.9
SPECfp_rate_base2000 = 19.7

SPEC license #: 2 | Tested by: Compaq NH | Test date: Sep-2000 | Hardware Avail: Feb-2000 | Software Avail: Jul-2000

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	364	20.4	4	334	22.2
171.swim	4	603	23.9	4	608	23.6
172.mgrid	4	496	16.8	4	462	18.1
173.applu	4	726	13.4	4	638	15.3
177.mesa	4	263	24.7	4	244	26.6
178.galgel	4	660	20.4	4	356	37.8
179.art	4	212	57.0	4	168	71.7
183.quake	4	656	9.20	4	652	9.25
187.facerec	4	289	30.5	4	243	36.3
188.ammmp	4	547	18.7	4	565	18.1
189.lucas	4	449	20.7	4	449	20.6
191.fma3d	4	535	18.2	4	514	19.0
200.sixtrack	4	436	11.7	4	427	11.9
301.apsi	4	647	18.7	4	617	19.6

Hardware

CPU: Alpha 21264A
CPU MHz: 667
FPU: Integrated
CPU(s) enabled: 4 cores, 4 chips, 1 core/chip
CPU(s) orderable: 1 to 4
Parallel: No
Primary Cache: 64KB(I)+64KB(D) on chip
Secondary Cache: 8MB off chip
L3 Cache: None
Other Cache: None
Memory: 16GB
Disk Subsystem: 1x18GB BD018122C0
Other Hardware: Ethernet

Software

Operating System: Tru64 UNIX V4.0G
Compiler: Compaq C X6.2-259-449AT
Compaq Fortran V5.3
/usr/bin/f77: fort (not fort90)
KAP Fortran V4.2
KAP C 4.0
File System: ufs
System State: Multi-user

Notes/Tuning Information

Baseline C: cc -arch ev6 -fast -O4 ONESTEP
Fortran: kf90 -arch ev6 -O5 -fkapargs='-ur=-1' ONESTEP

Peak: -g3 -arch ev6 -non_shared ONESTEP plus:
168.wupwise: f77 -fast -O4 -pipeline -unroll 2
171.swim: f90 -fast -O5 -transform_loops
172.mgrid: kf77 -O5 -transform_loops -tune ev6 -unroll 8
173.applu: f77 -fast -O5 -transform_loops -unroll 14
177.mesa: cc -fast -O4
178.galgel: kf90 -O4 -unroll 2 -ldxml
RM_SOURCES = lapak.f90
179.art: kcc -fast -O4 -ckapargs='-arl=4 -ur=4' -unroll 10
183.quake: kcc -fast -ckapargs='-arl=4' -xtaso_short
187.facerec: f90 -fast -O4
188.ammmp: cc -fast -O4 -xtaso_short
189.lucas: kf90 -fast -O5 -fkapargs='-ur=1' -unroll 1
191.fma3d: kf90 -O4



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Notes/Tuning Information (Continued)

```
200.sixtrack: f90 -fast -O5 -transform_loops  
301.apsi: kf90 -O5 -transform_loops -unroll 8 -fkpargs='-ur=1'
```

Portability: galgel: -fixed