



# CFP2000 Result

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**Hewlett-Packard Company**  
HP9000 Superdome 32-way (552MHz PA-8600)

SPECfp\_rate2000 = 112  
SPECfp\_rate\_base2000 = 105

SPEC license #: 3 | Tested by: HP Richardson, TX | Test date: Mar-2001 | Hardware Avail: May-2001 | Software Avail: Jul-2001

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	549	108	32	406	146
171.swim	32	848	136	32	848	136
172.mgrid	32	638	105	32	637	105
173.applu	32	708	110	32	708	110
177.mesa	32	422	123	32	419	124
178.galgel	32	431	250	32	430	250
179.art	32	1464	65.9	32	1296	74.5
183.equake	32	679	71.1	32	555	87.0
187.facerec	32	848	83.2	32	777	90.8
188.amp	32	870	93.8	32	791	103
189.lucas	32	793	93.6	32	783	94.8
191.fma3d	32	925	84.3	32	915	85.2
200.sixtrack	32	445	91.8	32	402	102
301.apsi	32	657	147	32	657	147

**Hardware**

CPU: PA-8600  
CPU MHz: 552  
FPU: Integrated  
CPU(s) enabled: 32 cores, 32 chips, 1 core/chip  
CPU(s) orderable: 4-32  
Parallel: No  
Primary Cache: 0.5MBI + 1.0MBD on chip  
Secondary Cache: none  
L3 Cache: N/A  
Other Cache: N/A  
Memory: 128GB  
Disk Subsystem: 5x9GB Fiberchannel (striped)  
1x9GB SCSI disk (root), 15x9GB FC disks (swap)  
Other Hardware: 8 cells, 500MHz CEC

**Software**

Operating System: HP-UX 11i Technical Computing OE  
Compiler: HP ANSI C 11.11.02  
Fortran90 11.01.40  
File System: hfs  
System State: Multi-user

## Notes/Tuning Information

**Portability Flags:**

178.galgel: +source=fixed

**Base Flags:**

f90: +O3 +Onofltacc -Wl,-a,archive -Wl,+FPD  
C: +I/+P +O4 +Odataprefetch -Wl,-a,archive

**Peak Flags:**

all: -Wl,+FPD -Wl,-a,archive  
168.wupwise: +cat +O3 +Odataprefetch +Onofltacc  
171.swim: +O3 +Onolimit +Oinline\_budget=1000  
172.mgrid: +O3 +Ocache\_pad\_common +Oloop\_unroll=6  
+Oinline\_budget=10  
173.applu: basepeak=true



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## Notes/Tuning Information (Continued)

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177.mesa: +I/+P +Oall +Odataprefetch +Opromote_indirect_calls
178.galgel: +O3 +Oloop_unroll=2
179.art: +I/+P +Oall +Onodataprefetch +Onofltacc
        +Optrs_strongly_typed +Opromote_indirect_calls
183.quake: +O4 +Olibcalls +Odataprefetch +Optrs_strongly_typed
        +Opromote_indirect_calls
187.facerec: +cat +O3 +Ofastaccess
188.ampp: +I/+P +Oall +Odataprefetch +Optrs_strongly_typed
        +Opromote_indirect_calls
189.lucas: +O3 +Onoinline
191.fma3d: +O3 +Onolimit
200.sixtrack: +cat +O3 +Onolibcalls +Onolimit +Onoinline
        +Onodataprefetch
301.apsi: basepeak=true
ONESTEP=true for 168.wupwise, 187.facerec, 200.sixtrack

```

### System tunables:

```

vps_pagesize 4096, vps_ceiling 16384
dbc_min_pct 20, dbc_max_pct 20
maxdsiz 0x7b03a000, maxssiz 256000000
DataPrefetch enabled (boot time firmware tunable)

```