



# OMP2001 Result

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Unisys  
ES7000/1

SPECompMpeak2001 = 30336

SPECompMbase2001 = 29096

SPEC license #PG0013A | Tested by: Intel Corporation | Test site: -- | Test date: Oct-2007 | Hardware Avail: Nov-2006 | Software Avail: Nov-2007

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	121	49459	114	52581	
312.swim_m	6000	303	19826	302	19893	
314.mgrid_m	7300	350	20841	255	28586	
316.aplu_m	4000	87.0	45982	82.7	48352	
318.galgel_m	5100	506	10075	464	10981	
320.earthquake_m	2600	67.8	38332	67.2	38717	
324.apsi_m	3400	85.3	39868	86.4	39337	
326.gafort_m	8700	295	29452	317	27412	
328.fma3d_m	4600	166	27648	166	27680	
330.art_m	6400	174	36755	174	36843	
332.ammp_m	7000	240	29215	236	29621	

### Hardware

CPU: Dual-Core Intel(R) Xeon(R) Processor 7140M  
 CPU MHz: 3400  
 FPU: Integrated  
 CPU(s) enabled: 64 cores, 32 chips, 2 cores/chip  
 CPU(s) orderable: 1-32 chips  
 Primary Cache: 32KB(I)+32KB(D)/core on chip  
 Secondary Cache: 4096KB/chip (I+D) on chip  
 L3 Cache: 16MB/chip  
 Other Cache: N/A  
 Memory: 128 GB  
 Disk Subsystem: SCSI  
 Other Hardware:

### Software

OpenMP Threads: 64  
 Parallel: OpenMP  
 Operating System: SUSE Linux Enterprise Server 10 (x86\_64)  
 Compiler: Intel FORTRAN Compiler 10.1.008 for Linux  
 File System: Linux ext3  
 System State: Default

## Notes/Tuning Information

Baseline optimization flags:

COPTIMIZE = -O3 -ipo -openmp -ansi\_alias -openmp-lib compat

FOPTIMIZE = -O3 -ipo -openmp -openmp-lib compat

export KMP\_LIBRARY=turnaround

export KMP\_STACKSIZE=31M

export OMP\_DYNAMIC=FALSE

export KMP\_BLOCKTIME=infinite

ONESTEP=yes

ulimit -s 1048576

base tuning

export KMP\_AFFINITY=none

peak tuning

export KMP\_AFFINITY=compact,1

export KMP\_CPUINFO\_FILE=/etc/cpuinfo

Portability Flags:

318.galgel\_m: -FI -132

Extra Flags:

330.art\_m: -DINTS\_PER\_CACHELINE=32 -DDBLS\_PER\_CACHELINE=16

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## Notes/Tuning Information (Continued)

all: -gcc-name=/usr/bin/gcc

New alternate sources

mgrid standard conformance to OpenMP 2.5; src.alt/intel

Flags file: Intel-ic10.1-intel64-linux-flags-file-20071211.html