



OMPM2001 Result

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Unisys
ES7000/1

SPECompMpeak2001 = 24632

SPECompMbase2001 = 23261

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	151	39786	143	41871	
312.swim_m	6000	307	19541	306	19580	
314.mgrid_m	7300	471	15490	368	19815	
316.applu_m	4000	82.7	48380	82.1	48749	
318.galgel_m	5100	536	9508	499	10219	
320.earthquake_m	2600	73.1	35581	70.9	36660	
324.apsi_m	3400	304	11187	243	13978	
326.gafort_m	8700	353	24642	361	24127	
328.fma3d_m	4600	224	20501	225	20482	
330.art_m	6400	176	36364	176	36448	
332.ammp_m	7000	263	26631	258	27116	

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: GCC 4.1.0
 File System: Linux ext3
 System State: Default

Notes/Tuning Information

Baseline optimization flags:

```
COPTIMIZE = -O3 --fopenmp -ansi -fwhole-program -combine
FOPTIMIZE = -O3 -fopenmp
```

```
export KMP_LIBRARY=turnaround
export KMP_STACKSIZE=31M
export KMP_BLOCKTIME=infinite
export OMP_DYNAMIC=FALSE
export KMP_STACKSIZE=31m
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: -ffixed-form -ffixed-line-length-132
```



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Notes/Tuning Information (Continued)

Extra Flags:

330.art_m: -DINTS_PER_CACHELINE=32 -DDBLS_PER_CACHELINE=16

New alternate sources

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

Intel replacement library for libgomp.so

-L/opt/intel/cce/10.1.008/lib -liomp5

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