



# OMPM2001 Result

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Cisco Systems  
B200 M2

SPECompMpeak2001 = 55759  
SPECompMbase2001 = 52986

SPEC license #HPG9019 | Tested by: Cisco Systems | Test site: -- | Test date: Feb-2011 | Hardware Avail: Mar-2011 | Software Avail: Feb-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	69.3	86631	69.3	86631	
312.swim_m	6000	153	39140	134	44808	
314.mgrid_m	7300	202	36056	187	39108	
316.applu_m	4000	116	34401	113	35436	
318.galgel_m	5100	112	45523	107	47738	
320.quake_m	2600	54.8	47423	48.0	54135	
324.apsi_m	3400	59.2	57422	60.2	56466	
326.gafort_m	8700	135	64495	126	68995	
328.fma3d_m	4600	107	42811	96.2	47794	
330.art_m	6400	45.1	141999	46.2	138398	
332.ammp_m	7000	155	45213	155	45213	

### Hardware

CPU: Intel(R) Xeon(R) Processor X5690  
 CPU MHz: 3459  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 1 thread/core  
 CPU(s) orderable: 1,2  
 Primary Cache: 32KB(I)+32KB(D)/core on chip  
 Secondary Cache: 256KB/core (I+D) on chip  
 L3 Cache: 12288KB (I+D) on chip  
 Other Cache: N/A  
 Memory: 48 GB (RDIMM 12x4-GB 1333 MHz)  
 Disk Subsystem: Seagate 300 GB ST9300603SS  
 Other Hardware:

### Software

OpenMP Threads: 24  
 Parallel: OpenMP  
 Operating System: Suse Enterprise Linux 11.0  
 Compiler: Intel C/C++ Compiler 11.1.059 for Linux  
 Intel FORTRAN Compiler 11.1.059 for Linux  
 GNU C Compiler 4.3.2  
 File System: Linux ext3  
 System State: Default

## Notes/Tuning Information

### BIOS settings notes:

Intel Hyper-Threading Technology (SMT): Enabled (default is Enabled)  
 Intel Turbo Boost Technology (Turbo) : Enabled (default is Enabled, Max 3.73GHz)

### Portability Flags:

318.galgel\_m: -FI -132

### Extra Flags:

330.art\_m: -DINTS\_PER\_CACHELINE=16 -DDBLS\_PER\_CACHELINE=8  
 all: -gcc-name=/usr/bin/gcc

### General Notes and Environment variables

export KMP\_LIBRARY=turnaround  
 export KMP\_STACKSIZE=31M  
 export KMP\_BLOCKTIME=infinite  
 export OMP\_DYNAMIC=FALSE  
 ONESTEP=yes

ulimit -s 64000

SMT Enabled, Turbo Enabled

For compiler/openmp flags description please refer:

Intel-ic11.1-intel64-linux-flags-file.html

Base optimization flags and environment variables:

Medium:

OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp

COPTIMIZE = -ansi\_alias

export KMP\_AFFINITY=compact,1



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## Notes/Tuning Information (Continued)

Peak optimization flags and environment variables:

Medium:

```
OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp -rcd
```

```
COPTIMIZE = -ansi_alias
```

```
export KMP_AFFINITY=compact,1
```

Peak per-benchmark optimization flags and environment variables:

```
310.wupwise_m  
basepeak=yes
```

```
312.swim_m  
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -opt-streaming-stores always -align -rcd  
srcalt = ompl.32  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
314.mgrid_m  
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -opt-streaming-stores never -align -rcd  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
316.applu_m  
export KMP_AFFINITY=proclist=[0,1,2,3,4,5,6,7,8,9,10,11],explicit  
export OMP_NUM_THREADS=12
```

```
318.galgel_m  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
320.equake_m  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
324.appsi_m  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
326.gafort_m  
srcalt = ompl.32  
export KMP_AFFINITY=scatter,0
```

```
328.fma3d_m  
FOPTIMIZE=-no-prec-sqrt -fp-model fast=2  
srcalt = ompl.32
```

```
330.art_m  
export KMP_AFFINITY=proclist=[0,2,4,6,8,10,1,3,5,7,9,11],explicit  
export OMP_NUM_THREADS=12
```

```
332.ammp_m  
basepeak=yes
```