



OMPM2001 Result

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Cisco Systems, Inc.
Cisco UCS B200 M2

SPECompMpeak2001 = 55072

SPECompMbase2001 = 52314

SPEC license #HPG9019 | Tested by: Cisco Systems, Inc. | Test site: | Test date: Mar-2010 | Hardware Avail: Apr-2010 | Software Avail: Feb-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	70.4	85261	70.4	85261	
312.swim_m	6000	153	39113	134	44908	
314.mgrid_m	7300	203	35879	188	38891	
316.applu_m	4000	115	34717	113	35466	
318.galgel_m	5100	113	45317	108	47358	
320.earthquake_m	2600	55.0	47301	48.3	53833	
324.apsi_m	3400	61.5	55273	62.0	54820	
326.gafort_m	8700	135	64241	128	68212	
328.fma3d_m	4600	111	41504	98.6	46640	
330.art_m	6400	45.9	139373	46.7	137045	
332.ammp_m	7000	159	43916	159	43916	

Hardware

CPU: Intel(R) Xeon(R) Processor X5680
 CPU MHz: 3333
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2
 Primary Cache: 32KB(I)+32KB(D)/core on chip
 Secondary Cache: 256KB/core (I+D) on chip per chip
 L3 Cache: 12 MB (I+D) on chip per chip
 Other Cache: None
 Memory: 48 GB (RDIMM 12x4 GB 1333 MHz)
 Disk Subsystem: 146 GB SAS, 10K RPM
 Other Hardware: None

Software

OpenMP Threads: 24
 Parallel: OpenMP
 Operating System: Red Hat EL 5.4, kernel 2.6.18-164
 Compiler: Intel C/C++ Compiler 11.1.059 for Linux
 Intel FORTRAN Compiler 11.1.059 for Linux
 GNU C Compiler 4.1.2 20070115
 File System: Linux ext3
 System State: Multi-user, run level 3

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 3.60GHz)

Portability Flags:

318.galgel_m: -FI -132

Extra Flags:

330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
 331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8
 all: -gcc-name=/usr/bin/gcc

General Notes and Environment variables

export KMP_LIBRARIY=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-Feb-25-2010.html

Base optimization flags and environment variables:

Medium:

OPTIMIZE = -O3 -xSSE4.2 -ipo1 -openmp

COPTIMIZE = -ansi_alias

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Notes/Tuning Information (Continued)

```
export KMP_AFFINITY=compact,1
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.quake_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
```