OMPM2001 Result

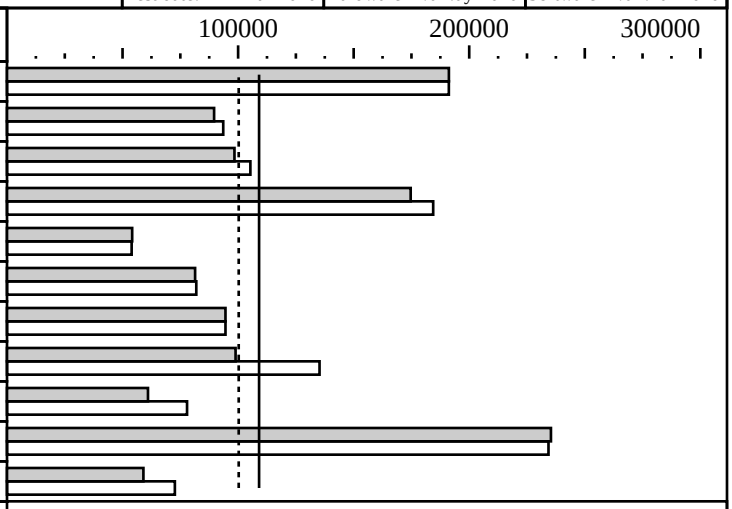
CISCO Systems, Inc.
Cisco UCS C460 M1

SPECompMpeak2001 = 109077

SPECompMbase2001 = 100258

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	31.4	191199	31.4	191185
312.swim_m	6000	67.0	89611	64.1	93563
314.mgrid_m	7300	74.2	98421	69.3	105307
316.applu_m	4000	22.9	174666	21.7	184407
318.galgel_m	5100	94.2	54161	94.6	53931
320.equake_m	2600	31.9	81391	31.7	81903
324.apsi_m	3400	36.0	94533	36.0	94535
326.gafort_m	8700	88.0	98901	64.3	135231
328.fma3d_m	4600	75.4	61003	59.0	77908
330.art_m	6400	27.2	235356	27.3	234298
332.ammp_m	7000	119	59024	96.4	72633



Hardware

CPU:	Intel(R) Xeon(R) Processor X7560
CPU MHz:	2260
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip 2 threads/core
CPU(s) orderable:	1,2,3,4
Primary Cache:	32KB I + 32KB D on chip per core
Secondary Cache:	256KB I+D on chip per core per chip
L3 Cache:	24MB I+D on chip per chip
Other Cache:	N/A
Memory:	512 GB (RDIMM 64x8 GB 1066 MHz)
Disk Subsystem:	146 GB SAS, 10K RPM
Other Hardware:	None

Software

OpenMP Threads:	64
Parallel:	OpenMP
Operating System:	Red Hat EL 5.3, kernel 2.6.18-128
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
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 2.66 GHz)

================================================================================
Extra Flags:
  318.galgel_m: -FI -132
  330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8 -D_OPENMP
  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

For compiler/openMP flags description please refer:
Intel-ic11.1-intel64-linux-flags-file-Feb-25-2010 .html
```

Notes/Tuning Information (Continued)

```
Base optimization flags and Environment variables:
================================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp
  COPTIMIZE  = -ansi-alias
  export OMP_NUM_THREADS=32
  export KMP_AFFINITY=compact,1

Peak optimization flags and Environment variables:
================================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp -rcd
  export KMP_AFFINITY=compact,1

Peak per-benchmark optimization flags and Environment variables:
================================================================================
310.wupwise_m
  export OMP_NUM_THREADS=32

================================================================================
312.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
  srcalt = ompl.32
  export OMP_NUM_THREADS=32

================================================================================
314.mgrid_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -fno-alias -rcd
  export OMP_NUM_THREADS=32

================================================================================
316.applu_m
  export KMP_AFFINITY=scatter,1

================================================================================
318.galgel_m
  export OMP_NUM_THREADS=32

================================================================================
320.equake_m
  export OMP_NUM_THREADS=32

================================================================================
324.appsi_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
  export OMP_NUM_THREADS=32

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

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

Notes/Tuning Information (Continued)

```
  srcalt = ompl.32

==============================================================================
330.art_m
  COPTIMIZE=-ansi-alias

==============================================================================
332.ammp_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
```