OMPM2001 Result

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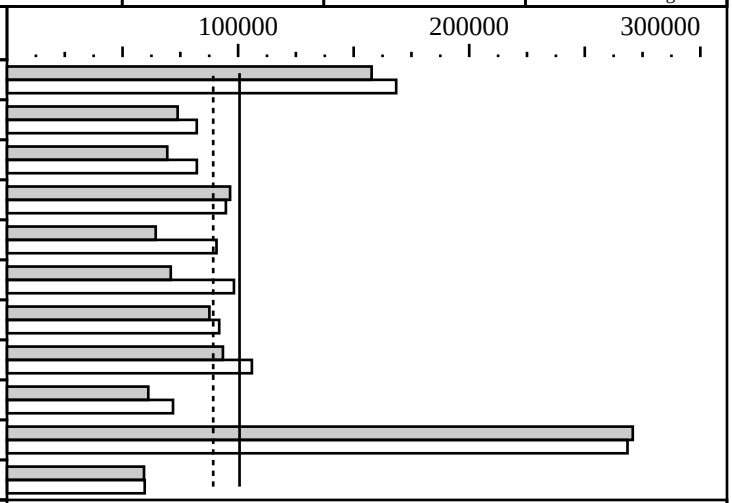
Intel Corporation
Intel(R) S2600CP

SPECompMpeak2001 = 100624

SPECompMbase2001 = 89231

SPEC license #: HPG0013 | Tested by: Intel Corporation | Test site: -- | Test date: Feb-2012 | Hardware Avail: Mar-2012 | Software Avail: Aug-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	38.0	157770	35.6	168403
312.swim_m	6000	81.3	73836	73.1	82113
314.mgrid_m	7300	105	69349	88.9	82144
316.applu_m	4000	41.4	96527	42.2	94708
318.galgel_m	5100	79.3	64352	56.3	90654
320.equake_m	2600	36.7	70863	26.5	98198
324.apsi_m	3400	38.8	87575	37.0	91829
326.gafort_m	8700	93.1	93434	82.1	105960
328.fma3d_m	4600	75.2	61135	64.0	71830
330.art_m	6400	23.6	270771	23.8	268484
332.ammp_m	7000	118	59287	117	59589



Hardware

CPU:	Intel(R) Xeon(R) Processor E5-2690
CPU MHz:	2900
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	1,2
Primary Cache:	32KB(I)+32KB(D) per core on chip
Secondary Cache:	256KB per core (I+D) on chip
L3 Cache:	20MB (I+D) per chip on chip
Other Cache:	N/A
Memory:	64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem:	1x1TB 7200 RPM Western Digital WD1002FAEX
Other Hardware:	

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	Red Hat EL 6.2, kernel 2.6.32-220
Compiler:	Intel C++ Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 Intel C++ Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 Intel Fortran Composer XE 2011 for Linux, Version 12.0.5.220 Build 20110719 GNU C Compiler 4.4.6-3 20110731
File System:	Linux ext3
System State:	Default

Notes/Tuning Information

```
    BIOS settings notes:
        Intel Hyper-Threading Technology (SMT): Enabled (default is Disabled)
        Intel Turbo Boost Technology (Turbo)  : Enabled (Max 3.8GHz)
    Portability Flags:
        318.galgel_m: -FI -132
    Extra Flags:
        330.art_m: -DINTS_PER_CACHELINE=32 -DDBLS_PER_CACHELINE=16
        all: -gcc-name=/usr/bin/gcc
General Notes and Enviroment variables
export KMP_LIBRARY=turnaround
export KMP_STACKSIZE=31M
export KMP_BLOCKTIME=infinite
export OMP_DYNAMIC=FALSE
ONESTEP=yes
For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file-Feb-22-2012.html
Base optimization flags and enviroment variables:
================================================================
Medium:
  OPTIMIZE  = -O2 -xAVX -ipo -openmp
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=compact,0
```

Notes/Tuning Information (Continued)

```
Peak optimization flags and enviroment variables:
================================================================================
Medium:
  OPTIMIZE  = -O3 -xAVX -ipo -openmp
  export KMP_AFFINITY=compact, 0

Peak per-benchmark optimization flags and enviroment variables:
================================================================================
310.wupwise_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp

================================================================================
312.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -opt-streaming-stores always -align
  srcalt = ompl.32
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

================================================================================
314.mgrid_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp -fno-alias
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

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

================================================================================
318.galgel_m
  export OMP_NUM_THREADS=16
  OPTIMIZE=-O2 -xAVX -ipo -openmp
  FOPTIMIZE=-mkl
  RM_SOURCES=lapak.f90
  export KMP_AFFINITY=compact,1

================================================================================
320.equake_m
  export OMP_NUM_THREADS=16
  export KMP_AFFINITY=compact,1

================================================================================
324.appsi_m
  OPTIMIZE=-O2 -xAVX -ipo -openmp

================================================================================
326.gafort_m
  srcalt = ompl.32
  OPTIMIZE=-O3 -xSSE4.2 -ipo -openmp
  export KMP_AFFINITY=scatter,0

================================================================================
328.fma3d_m
  FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
  export KMP_AFFINITY=compact,1
```

Notes/Tuning Information (Continued)

```
  srcalt = ompl.32

==============================================================================
330.art_m
  OPTIMIZE=-O2 -xSSE4.2 -ipo -openmp

==============================================================================
332.ammp_m
  OPTIMIZE=-O3 -xAVX -ipo -openmp
```