



OMPM2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Intel Corporation
Intel(R) G29051-202 (Endeavor Node)

SPECompMpeak2001 = 85206
SPECompMbase2001 = 76727

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	43.6	137651	40.1	149656	
312.swim_m	6000	87.2	68772	77.2	77770	
314.mgrid_m	7300	112	65328	97.7	74730	
316.applu_m	4000	49.3	81128	47.6	83986	
318.galgel_m	5100	90.1	56624	71.5	71364	
320.quake_m	2600	40.5	64160	29.1	89358	
324.apsi_m	3400	51.1	66556	52.3	65038	
326.gafort_m	8700	105	82940	94.6	91927	
328.fma3d_m	4600	90.5	50819	78.1	58927	
330.art_m	6400	28.8	222468	29.1	219887	
332.ammp_m	7000	147	47694	147	47623	

Hardware

CPU: Intel(R) Xeon(R) Processor E5-2670
 CPU MHz: 2600
 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: 1x600GB SSD SEAGATE ST9600205SS
 Other Hardware:

Software

OpenMP Threads: 32
 Parallel: OpenMP
 Operating System: Red Hat EL 6.1, kernel 2.6.32-131
 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) : Disabled

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 Environment 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 environment variables:

=====

Medium:

OPTIMIZE = -O2 -xAVX -ipo -openmp
 COPTIMIZE = -ansi-alias
 export KMP_AFFINITY=compact,0



OMPM2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Intel Corporation
Intel(R) G29051-202 (Endeavor Node)

SPECompMpeak2001 = 85206

SPECompMbase2001 = 76727

SPEC license #HPG0013 Tested by: Intel Corporation Test site: -- Test date: Feb-2012 Hardware AvailMar-2012 Software AvailAug-2011

Notes/Tuning Information (Continued)

Peak optimization flags and environment variables:

Medium:

```
OPTIMIZE = -O3 -xAVX -ipo -openmp
export KMP_AFFINITY=compact,0
```

Peak per-benchmark optimization flags and environment 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 = omp1.32
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 = omp1.32
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
```



OMPM2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Intel Corporation
Intel(R) G29051-202 (Endeavor Node)

SPECompMpeak2001 = 85206

SPECompMbase2001 = 76727

SPEC license #HPG0013 Tested by: Intel Corporation Test site: -- Test date: Feb-2012 Hardware AvailMar-2012 Software AvailAug-2011

Notes/Tuning Information (Continued)

srcalt = ompl.32

=====

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

=====

332.amp_m
OPTIMIZE=-O3 -xAVX -ipo -openmp