



OMPM2001 Result

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Intel Corporation
Intel SR1600UR

SPECompMpeak2001 = 54249
SPECompMbase2001 = 51510

SPEC license #HPG0013 | Tested by: Intel Corporation | Test site: -- | Test date: Feb-2010 | Hardware Avail: Mar-2010 | Software Avail: Feb-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	70.8	84794	70.8	84794
312.swim_m	6000	153	39216	134	44842
314.mgrid_m	7300	204	35843	188	38890
316.applu_m	4000	117	34063	118	34004
318.galgel_m	5100	114	44744	108	47094
320.quake_m	2600	55.4	46958	48.5	53606
324.apsi_m	3400	63.0	53947	63.3	53748
326.gafort_m	8700	137	63672	128	67784
328.fma3d_m	4600	113	40720	101	45615
330.art_m	6400	48.3	132542	48.3	132542
332.ammp_m	7000	163	42829	163	42829

Hardware

CPU: Intel(R) Xeon(R) Processor X5680
 CPU MHz: 3330
 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 on chip per core
 Secondary Cache: 256KB I+D on chip per core
 L3 Cache: 12MB I+D on chip per chip
 Other Cache: N/A
 Memory: 24 GB (RDIMM 6x4-GB 1333 MHz)
 Disk Subsystem: Seagate 500 GB ST300655SS
 Other Hardware:

Software

OpenMP Threads: 24
 Parallel: OpenMP
 Operating System: Red Hat EL 5.2, kernel 2.6.18-85
 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: Default

Notes/Tuning Information

BIOS settings notes:

Intel Hyper-Threading Technology (SMT): Enabled
 Intel Turbo Boost Technology (Turbo) : Disabled

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 Enviroment variables

export KMP_LIBRARY=turnaround
 export KMP_STACKSIZE=31M
 export KMP_BLOCKTIME=infinite
 export OMP_DYNAMIC=FALSE
 export OMP_NUM_THREADS=24
 ONESTEP=yes
 ulimit -s 64000

For compiler/openmp flags description please refer:
[Intel-ic11.1-intel64-linux-flags-file-Feb-25-2010.html](http://intel-ic11.1-intel64-linux-flags-file-Feb-25-2010.html)



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Notes/Tuning Information (Continued)

Base optimization flags and Environment variables:

Medium:

```
OPTIMIZE = -O3 -xSSE4.2 -ipo1 -openmp
export KMP_AFFINITY=scatter,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
basepeak=yes
```

```
312.swim_m
```

```
OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
srcalt = ompl.32
export OMP_NUM_THREADS=12
```

```
314.mgrid_m
```

```
OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -align -rcd
export OMP_NUM_THREADS=12
```

```
316.applu_m
```

```
basepeak=yes
```

```
318.galgel_m
```

```
export OMP_NUM_THREADS=12
```

```
320.equake_m
```

```
export OMP_NUM_THREADS=12
```

```
324.appsi_m
```

```
export OMP_NUM_THREADS=12
```

```
326.gafort_m
```

```
srcalt = ompl.32
```

```
328.fma3d_m
```

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

```
330.art_m
```



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Notes/Tuning Information (Continued)

basepeak=yes

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332. ammp_m
basepeak=yes