



OMPM2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Huawei
Huawei RH2288 V2

SPECompMpeak2001 = 97001
SPECompMbase2001 = 84552

SPEC license #HPG0024 Tested by: Huawei Test site: -- Test date: Jul-2012 Hardware Avail: Mar-2012 Software Avail: Jun-2012

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio	
310.wupwise_m	6000	37.8	158618	36.2	165628	
312.swim_m	6000	79.4	75520	72.3	83034	
314.mgrid_m	7300	103	71113	88.3	82707	
316.applu_m	4000	47.8	83622	44.0	90836	
318.galgel_m	5100	73.0	69818	55.7	91631	
320.quake_m	2600	38.3	67846	27.3	95142	
324.apsi_m	3400	38.8	87577	38.8	87575	
326.gafort_m	8700	97.1	89639	86.1	101098	
328.fma3d_m	4600	80.0	57471	70.4	65308	
330.art_m	6400	34.1	187671	25.4	251670	
332.ammp_m	7000	127	55266	128	54574	

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: 148 GB (ECC DDR3 RDIMM 16x8-GB 1600 MHz)
Disk Subsystem: 1 x 300 GB SAS, 10K RPM
Other Hardware:

Software

OpenMP Threads: 32
Parallel: OpenMP
Operating System: Red Hat EL 6.2, 2.6.32-220.el6.x86_64
Compiler: Intel C/C++ Compiler 12.1.5 20120612 for Linux
Intel FORTRAN Compiler 12.1.5 20120612 for Linux
GNU C Compiler 4.4.5 20110214
File System: Linux ext4
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 3.3GHz)

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-ic12.1-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

Huawei
Huawei RH2288 V2

SPECompMpeak2001 = 97001
SPECompMbase2001 = 84552

SPEC license #HPG0024 Tested by: Huawei Test site: -- Test date: Jul-2012 Hardware Avail: Mar-2012 Software Avail: Jun-2012

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

Huawei
Huawei RH2288 V2

SPECompMpeak2001 = 97001
SPECompMbase2001 = 84552

SPEC license #HPG0024 Tested by: Huawei Test site: -- Test date: Jul-2012 Hardware Avail: Mar-2012 Software Avail: Jun-2012

Notes/Tuning Information (Continued)

srcalt = ompl.32

=====

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

=====

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