



OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Quanta
Quanta QSSC-S4R Server System

SPECompLpeak2001 = 604593
SPECompLbase2001 = 585004

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	184	799458	183	804776
313.swim_l	12500	566	353387	534	374493
315.mgrid_l	13500	449	480920	446	484625
317.applu_l	13500	537	402537	508	425478
321.quake_l	13000	429	484519	415	501533
325.apsi_l	10500	296	566790	284	591428
327.gafort_l	11000	298	590987	272	647616
329.fma3d_l	23500	781	481569	775	485225
331.art_l	25000	213	1877290	215	1863391

Hardware		Software	
CPU:	Intel(R) Xeon(R) Processor X7560	OpenMP Threads:	64
CPU MHz:	2260	Parallel:	OpenMP
FPU:	Integrated	Operating System:	Red Hat EL 5.3, kernel 2.6.18-128
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip 2 threads/core	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
CPU(s) orderable:	1,2,3,4	File System:	Linux ext3
Primary Cache:	32KB I + 32KB D on chip per core	System State:	Default
Secondary Cache:	256KB I+D on chip per core		
L3 Cache:	24MB I+D on chip per chip		
Other Cache:	N/A		
Memory:	256 GB (64 x 4GB DDR3 - 1066 Dual Rank RDIMMs)		
Disk Subsystem:	Seagate 500 GB ST300655SS		
Other Hardware:			

Notes/Tuning Information

BIOS settings notes:

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

Extra Flags:

331.art_l: -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
export OMP_NUM_THREADS=64
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)

Base optimization flags and environment variables:

Large:



OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Quanta
Quanta QSSC-S4R Server System

SPECompLpeak2001 = 604593
SPECompLbase2001 = 585004

SPEC license #HPG0013 Tested by: Intel Corporation Test site: -- Test date: Mar-2010 Hardware AvailApr-2010 Software AvailMar-2010

Notes/Tuning Information (Continued)

```
OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp
COPTIMIZE = -ansi-alias
PORTABILITY = -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,1
```

Peak optimization flags and enviroment variables:

Large:

```
OPTIMIZE = -O3 -xSSE4.2 -ipol -openmp -rcd
export KMP_AFFINITY=compact,1
```

Peak per-benchmark optimization flags and enviroment variables:

311.wupwise_1

```
export KMP_AFFINITY=scatter,1
```

313.swim_m

```
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -opt-streaming-stores always -align -rcd
PORTABILITY = -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,1
export OMP_NUM_THREADS=32
```

315.mgrid_1

```
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp -fno-alias -rcd
```

317.applu_1

```
PORTABILITY = -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,0
```

321.equake_1

```
export KMP_AFFINITY=scatter,1
export OMP_NUM_THREADS=32
```

325.appsi_1

```
OPTIMIZE=-O3 -xSSE4.2 -ipol -openmp
export KMP_AFFINITY=scatter,0
```

327.gafort_1

```
PORTABILITY = -mcmmodel=medium -shared-intel
export KMP_AFFINITY=scatter,0
```

329.fma3d_1

```
FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
```

331.art_1

```
COPTIMIZE=-ansi-alias
```



OMPL2001 Result

Copyright 1999-2008, Standard Performance Evaluation Corporation

Quanta
Quanta QSSC-S4R Server System

SPECompLpeak2001 = 604593

SPECompLbase2001 = 585004

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

Notes/Tuning Information (Continued)