### Hardware

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Aug-2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability</td>
<td>Aug-2016</td>
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</table>

**CPU Name:** Intel Xeon Phi 7210  
**CPU Characteristics:** Intel Turbo Boost Technology off, Simultaneous Multithreading (SMT) off  
**CPU MHz:** 1300  
**CPU MHz Maximum:** 1500  
**FPU:** Integrated  
**CPU(s) enabled:** 64 cores, 1 chip, 64 cores/chip, 4 threads/core  
**CPU(s) orderable:** 1 chip  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 1 MB I+D on chip per two cores  
**L3 Cache:** None  
**Memory:** 96 GB (6 x 16 GB 2Rx8 PC4-2400T-REB-11, ECC)  
**Disk Subsystem:** Intel S3510 SSD 800GB, SATA3  
**Other Hardware:** None  
**Base Threads Run:** 64

### Software

**Operating System:** CentOS Linux release 7.2.1511  
**Compiler:** C/C++/Fortran: Version 16.0.3.210 of Intel Composer XE 2016 for Linux Build 20160415  
**Auto Parallel:** No  
**File System:** ext4  
**System State:** Runlevel 3 (multi-user with networking)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other Software:** None

### Results

<table>
<thead>
<tr>
<th>Test</th>
<th>Threads</th>
<th>SPECompG_base2012</th>
<th>OMP2012 license:3440A</th>
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<td>350.md</td>
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**SPECompG_base2012 = 4.29**

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Continued on next page
Colfax International  
(Test Sponsor: Indiana University) 
Intel Xeon Phi 7210, 1.30GHz,  
SMT off, Turbo off, flat DRAM+MCDRAM

SPECompG_peak2012 = Not Run  
SPECompG_base2012 = 4.29

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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Platform Notes

Sysinfo program /home/lijunj/SPEC/omp2012-1.1-run/Docs/sysinfo  
Revision 563 of 2016-06-10 (09729538caf6073d7c3b03fa376740a5)  
running on knl1.uits.indiana.edu Fri Oct 14 02:47:30 2016

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:  
http://www.spec.org/omp2012/Docs/config.html#sysinfo

From /proc/cpuinfo

model name : Intel(R) Xeon Phi(TM) CPU 7210 @ 1.30GHz  
1 "physical id"s (chips)  
64 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 64  
siblings : 64

physical 0: cores 0 1 2 3 4 5 6 7 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26  
27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51  
52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73  
cache size : 1024 KB
SPEC OMPG2012 Result

Colfax International
(Test Sponsor: Indiana University)
Intel Xeon Phi 7210, 1.30GHz,
SMT off, Turbo off, flat DRAM+MCDRAM

SPECompG_peak2012 = Not Run
SPECompG_base2012 = 4.29

OMP2012 license: 3440A
Test sponsor: Indiana University
Tested by: Indiana University

Platform Notes (Continued)

From /proc/meminfo
MemTotal:  115216920 kB
HugePages_Total:      0
Hugepagesize:  2048 kB

/usr/bin/lsb_release -d
CentOS Linux release 7.2.1511 (Core)

From /etc/*release* /etc/*version*
centos-release: CentOS Linux release 7.2.1511 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.2 (Source)
os-release:
  NAME="CentOS Linux"
  VERSION="7 (Core)"
  ID="centos"
  ID_LIKE="rhel fedora"
  VERSION_ID="7"
  PRETTY_NAME="CentOS Linux 7 (Core)"
  ANSI_COLOR="0;31"
  CPE_NAME="cpe:/o:centos:centos:7"
redhat-release: CentOS Linux release 7.2.1511 (Core)
system-release: CentOS Linux release 7.2.1511 (Core)
system-release-cpe: cpe:/o:centos:centos:7

uname -a:
Linux knl1.uits.indiana.edu 3.10.0-327.13.1.el7.xppsl_1.3.3.151.x86_64 #1 SMP
Fri Jun 10 15:04:35 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 13 14:15

SPEC is set to: /home/lijunj/SPEC/omp2012-1.1-run
Filesystem     Type Size  Used Avail Use% Mounted on
/dev/sda3      ext4  713G  78G  599G  12% /

Cannot run dmidecode; consider saying 'chmod +s /usr/sbin/dmidecode'

(End of data from sysinfo program)

General Notes

BIOS settings:
  Intel Simultaneous Multithreading (SMT): off
  Intel Turbo Boost Technology (Turbo): off
  Cluster Mode: quadrant
  Memory Mode: flat
SPEC OMPG2012 Result

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(Test Sponsor: Indiana University)
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Hardware Availability: Aug-2016
Tested by: Indiana University
Software Availability: Apr-2016

Base Compiler Invocation

C benchmarks:
  icc

C++ benchmarks:
  icpc

Fortran benchmarks:
  ifort

Base Portability Flags

- 350.md: -free
- 357.bt331: -mcmmodel=medium
- 363.swim: -mcmmodel=medium
- 367.imagick: -std=c99

Base Optimization Flags

C benchmarks:
  -O3 -ansi-alias -no-prec-div -qopenmp -ipo -xMIC-AVX512
  -fp-model fast=2

C++ benchmarks:
  -O3 -ansi-alias -no-prec-div -qopenmp -ipo -xMIC-AVX512
  -fp-model fast=2

Fortran benchmarks:
  -O3 -no-prec-div -qopenmp -ipo -xMIC-AVX512 -fp-model fast=2

The flags files that were used to format this result can be browsed at
http://www.spec.org/omp2012/flags/Intel-ic16.0-linux64.html
http://www.spec.org/omp2012/flags/colfax-knl.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/omp2012/flags/Intel-ic16.0-linux64.xml
http://www.spec.org/omp2012/flags/colfax-knl.xml
**SPEC OMPG2012 Result**

**Colfax International**  
(Test Sponsor: Indiana University)  
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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC OMP2012 v1.1.  
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