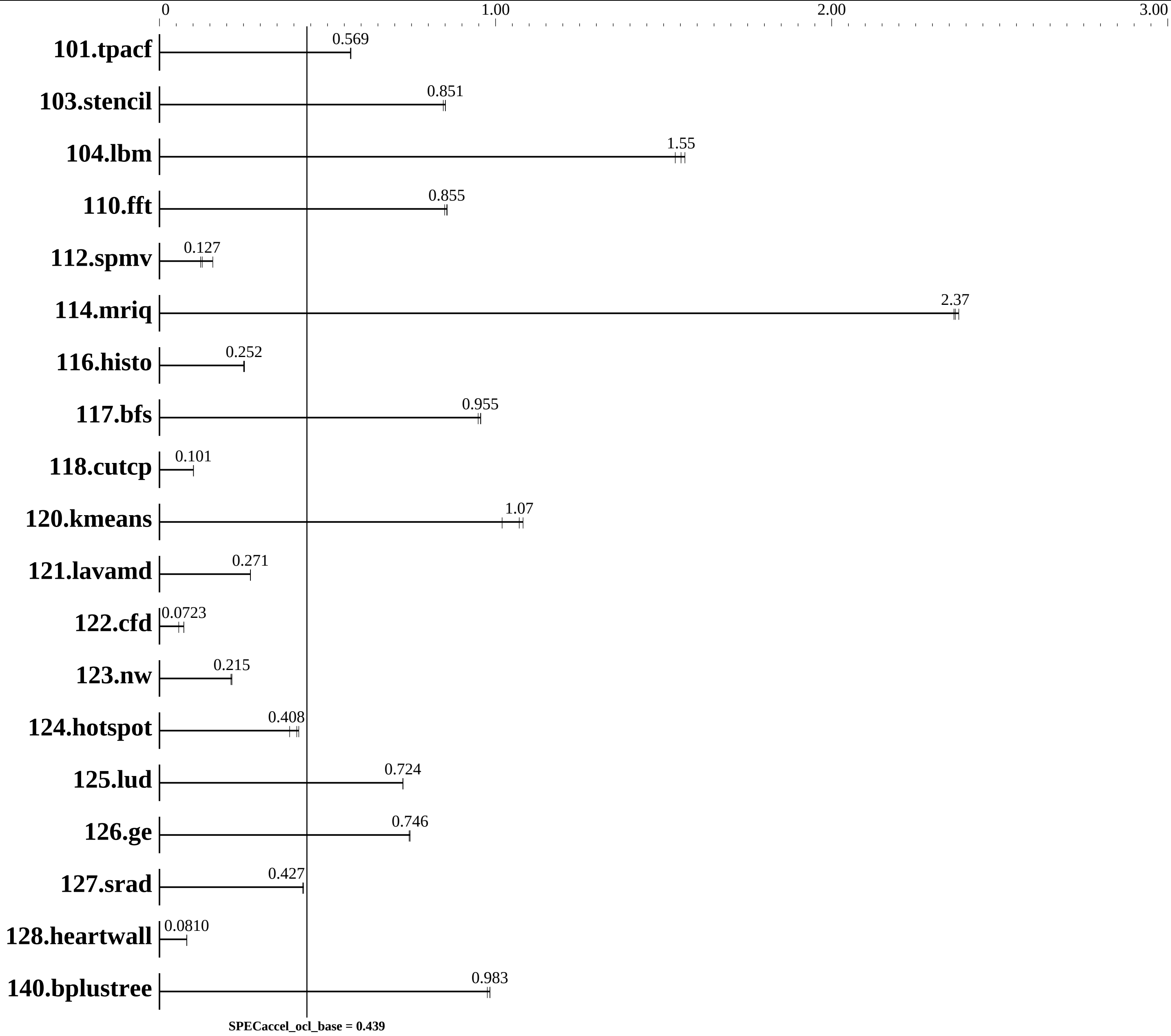
SPEC® ACCEL_OCL Result

SuperMicro
(Test Sponsor: KIT Institute for Data Processing and Electronics)
Intel Xeon Phi 5110P
7047GR-TRF

SPECaccel_ocl_peak = Not Run

SPECaccel_ocl_base = 0.439

ACCEL license:	HPG-052A	**Test date:**	Jun-2014
Test sponsor:	KIT Institute for Data Processing and Electronics	**Hardware Availability:**	Jun-2013
Tested by:	Karlsruhe Institute of Technology (KIT)	**Software Availability:**	Feb-2014



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Hardware

CPU Name:	Intel Xeon E5-2640
CPU Characteristics:	
CPU MHz:	2500
CPU MHz Maximum:	3000
FPU:	--
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	2
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	15 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (16 x 16 GB 2Rx8 PC3-12800R-9, ECC, running at 1333 MHz)
Disk Subsystem:	19 TB GlusterFS network storage 2 mirroring nodes with 16 disks hardware RAID6 each
Other Hardware:	--

Accelerator

Accel Model Name:	Xeon Phi 5110P
Accel Vendor:	Intel
Accel Name:	Intel Xeon Phi 5110P
Type of Accel:	APU
Accel Connection:	PCIe 2.0 16x
Does Accel Use ECC:	Yes
Accel Description:	Intel Xeon Phi 5110P APU, 1053 MHz 5.6 GiB GDDR5 RAM
Accel Driver:	Intel OpenCL 3.1.1.11385

Software

Operating System:	openSUSE 12.2 (x86_64) Kernel 3.4.47-2.38-desktop
Compiler:	Version 4.7.1 of GCC
File System:	fuse.glusterfs
System State:	Run level 3 (multi-user)
Other Software:	MPSS: intel-mic-kmod-2.1.6720-19.3.4.47.2.suse.x86_64

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
101.tpacf	188	0.568	188	0.570	**188**	**0.569**						
103.stencil	**147**	**0.851**	148	0.844	147	0.851						
104.lbm	**72.2**	**1.55**	71.6	1.56	73.0	1.53						
110.fft	**130**	**0.855**	131	0.849	130	0.856						
112.spmv	1202	0.122	**1157**	**0.127**	926	0.159						
114.mriq	46.1	2.36	**46.0**	**2.37**	45.8	2.38						
116.histo	455	0.250	451	0.253	**453**	**0.252**						
117.bfs	122	0.956	123	0.948	**123**	**0.955**						
118.cutcp	**978**	**0.101**	978	0.101	979	0.101						
120.kmeans	98.1	1.02	92.4	1.08	**93.4**	**1.07**						
121.lavamd	**403**	**0.271**	402	0.271	403	0.271						
122.cfd	**1744**	**0.0723**	2192	0.0575	1739	0.0725						
123.nw	**534**	**0.215**	533	0.216	541	0.213						
124.hotspot	**279**	**0.408**	294	0.387	275	0.415						
125.lud	164	0.724	**164**	**0.724**	164	0.725						
126.ge	209	0.743	208	0.746	**208**	**0.746**						
127.srad	267	0.426	**267**	**0.427**	266	0.429						
128.heartwall	1310	0.0809	**1308**	**0.0810**	1306	0.0812						
140.bplustree	110	0.984	111	0.975	**110**	**0.983**						

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

Platform Notes

```
Sysinfo program
/pdv/home/student/users/609bc1b89b8a955fb5270ebe25f0c37d/server2/ACCELV1/install/Docs/sysinfo
$Rev: 6874 $ $Date:: 2013-11-20 #$ 0953404ef7e75a5f9bbb534c6de3f831
running on ipepdvcompute2 Thu Jun  5 02:00:21 2014

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/accel/Docs/config.html#sysinfo

From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E5-2640 0 @ 2.50GHz
      2 "physical id"s (chips)
      24 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
```

Continued on next page

Platform Notes (Continued)

```
      caution.)
         cpu cores : 6
         siblings  : 12
         physical 0: cores 0 1 2 3 4 5
         physical 1: cores 0 1 2 3 4 5
      cache size : 15360 KB

   From /proc/meminfo
      MemTotal:       264648676 kB
      HugePages_Total:       0
      Hugepagesize:       2048 kB

   /usr/bin/lsb_release -d
      openSUSE 12.2 (x86_64)

   From /etc/*release* /etc/*version*
      SuSE-release:
         openSUSE 12.2 (x86_64)
         VERSION = 12.2
         CODENAME = Mantis
      os-release:
         NAME=openSUSE
         VERSION="12.2 (Mantis)"
         VERSION_ID="12.2"
         PRETTY_NAME="openSUSE 12.2 (Mantis) (x86_64)"
         ID=opensuse
         ANSI_COLOR="0;32"
         CPE_NAME="cpe:/o:opensuse:opensuse:12.2"

   uname -a:
      Linux ipepdvcompute2 3.4.47-2.38-desktop #1 SMP PREEMPT Fri May 31 20:17:40
      UTC 2013 (3961086) x86_64 x86_64 x86_64 GNU/Linux

   run-level 3 Apr 14 19:59

   SPEC is set to:
   /pdv/home/student/users/609bc1b89b8a955fb5270ebe25f0c37d/server2/ACCELV1/install
      Filesystem           Type             Size  Used Avail Use% Mounted on
      192.168.11.1:storage fuse.glusterfs    19T   16T  3.0T  84% /pdv

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

   (End of data from sysinfo program)
```

Base Runtime Environment

C benchmarks:
```
OpenCL Platform: Intel(R) OpenCL, OpenCL 1.2 LINUX
OpenCL Device #1: Intel(R) Many Integrated Core Acceleration Card, v 1.2
```

C++ benchmarks:
```
OpenCL Platform: Intel(R) OpenCL, OpenCL 1.2 LINUX
OpenCL Device #1: Intel(R) Many Integrated Core Acceleration Card, v 1.2
```

Base Compiler Invocation

C benchmarks:
```
gcc
```

C++ benchmarks:
```
g++
```

Base Optimization Flags

C benchmarks:
```
-O2 -lOpenCL
```

C++ benchmarks:
```
-O2 -lOpenCL
```

The flags file that was used to format this result can be browsed at
http://www.spec.org/accel/flags/gcc_flags.20150303.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/accel/flags/gcc_flags.20150303.00.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC ACCEL v1.0.
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