SPEC® ACCEL_OCL Result

SuperMicro

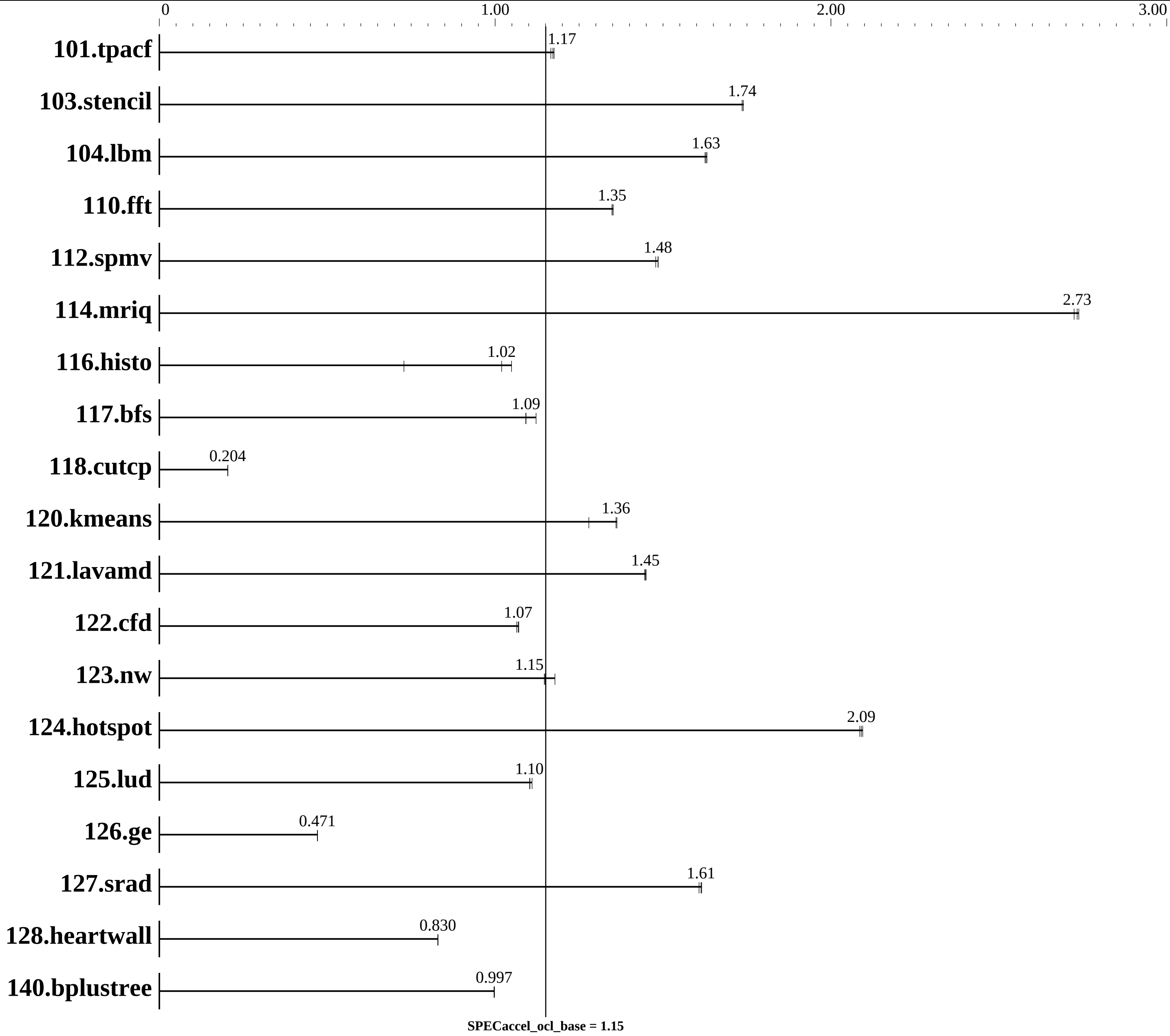
(Test Sponsor: KIT Institute for Data Processing and Electronics)

NVIDIA GeForce GTX 680 7046GT-TRF

SPECaccel_ocl_peak = Not Run

SPECaccel_ocl_base = 1.15

ACCEL license:	HPG-052A	**Test date:**	Jun-2014
Test sponsor:	KIT Institute for Data Processing and Electronics	**Hardware Availability:**	Mar-2012
Tested by:	Karlsruhe Institute of Technology (KIT)	**Software Availability:**	Oct-2013



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Hardware

CPU Name:	Intel Xeon E5540
CPU Characteristics:	
CPU MHz:	2530
CPU MHz Maximum:	2800
FPU:	--
CPU(s) enabled:	8 cores, 2 chips, 4 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:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	96 GB (12 x 8 GB 2Rx4 PC3-10600R, ECC, running at 1066 MHz)
Disk Subsystem:	19 TB GlusterFS network storage 2 mirroring nodes with 16 disks hardware RAID6 each
Other Hardware:	--

Accelerator

Accel Model Name:	GeForce GTX 680
Accel Vendor:	NVIDIA
Accel Name:	NVIDIA GeForce GTX 680
Type of Accel:	GPU
Accel Connection:	PCIe 2.0 16x
Does Accel Use ECC:	No
Accel Description:	NVIDIA GeForce GTX 680 GPU, 1536 CUDA cores, 1006 MHz 2 GB GDDR5 RAM
Accel Driver:	NVIDIA CUDA 5.5 Driver Version 331.22

Software

Operating System:	openSUSE 12.1 (x86_64) Kernel 3.3.2-1.1-desktop
Compiler:	Version 4.6.2 of GCC
File System:	fuse.glusterfs
System State:	Run level 5 (multi-user)
Other Software:	NVIDIA CUDA 5.5 Driver Version 331.22

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Results Table

	Base						Peak					
Benchmark	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
101.tpacf	91.0	1.18	91.8	1.17	**91.3**	**1.17**						
103.stencil	**72.0**	**1.74**	72.0	1.74	71.9	1.74						
104.lbm	68.9	1.63	68.7	1.63	**68.8**	**1.63**						
110.fft	**82.3**	**1.35**	82.1	1.35	82.3	1.35						
112.spmv	**99.0**	**1.48**	99.4	1.48	99.0	1.49						
114.mriq	39.8	2.74	40.0	2.72	**39.9**	**2.73**						
116.histo	109	1.05	156	0.728	**112**	**1.02**						
117.bfs	107	1.09	**107**	**1.09**	104	1.12						
118.cutcp	486	0.204	**486**	**0.204**	486	0.204						
120.kmeans	73.4	1.36	**73.5**	**1.36**	78.2	1.28						
121.lavamd	**75.3**	**1.45**	75.4	1.45	75.2	1.45						
122.cfd	118	1.06	**118**	**1.07**	118	1.07						
123.nw	100	1.15	**100**	**1.15**	97.6	1.18						
124.hotspot	54.7	2.09	**54.5**	**2.09**	54.4	2.09						
125.lud	107	1.11	108	1.10	**108**	**1.10**						
126.ge	**329**	**0.471**	329	0.471	329	0.471						
127.srad	70.6	1.62	**70.7**	**1.61**	70.9	1.61						
128.heartwall	128	0.829	128	0.830	**128**	**0.830**						
140.bplustree	108	0.997	108	0.998	**108**	**0.997**						

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/server1/ACCELV1/install/Docs/sysinfo
$Rev: 6874 $ $Date:: 2013-11-20 #$ 0953404ef7e75a5f9bbb534c6de3f831
running on ipepdvcompute1 Wed Jun  4 23:18:22 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 E5540 @ 2.53GHz
      2 "physical id"s (chips)
      16 "processors"
   cores, siblings (Caution: counting these is hw and system dependent.  The
   following excerpts from /proc/cpuinfo might not be reliable.  Use with
```

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SuperMicro
(Test Sponsor: KIT Institute for Data Processing and Electronics)
NVIDIA GeForce GTX 680
7046GT-TRF

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Test sponsor: KIT Institute for Data Processing and Electronics		**Hardware Availability:**	Mar-2012
Tested by: Karlsruhe Institute of Technology (KIT)		**Software Availability:**	Oct-2013

Platform Notes (Continued)

```
      caution.)
         cpu cores : 4
         siblings  : 8
         physical 0: cores 0 1 2 3
         physical 1: cores 0 1 2 3
      cache size : 8192 KB

   From /proc/meminfo
      MemTotal:       99195232 kB
      HugePages_Total:       0
      Hugepagesize:       2048 kB

   /usr/bin/lsb_release -d
      openSUSE 12.1 (x86_64)

   From /etc/*release* /etc/*version*
      SuSE-release:
         openSUSE 12.1 (x86_64)
         VERSION = 12.1
         CODENAME = Asparagus
      os-release:
         NAME=openSUSE
         VERSION = 12.1 (Asparagus)
         VERSION_ID="12.1"
         PRETTY_NAME="openSUSE 12.1 (Asparagus) (x86_64)"
         ID=opensuse

   uname -a:
      Linux ipepdvcompute1 3.3.2-1.1-desktop #1 SMP PREEMPT Fri Apr 13 22:52:58
      CEST 2012 (addbdfa) x86_64 x86_64 x86_64 GNU/Linux

   run-level 5 Feb 5 12:05

   SPEC is set to:
   /pdv/home/student/users/609bc1b89b8a955fb5270ebe25f0c37d/server1/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: NVIDIA CUDA, OpenCL 1.1 CUDA 6.0.1
    OpenCL Device #0: GeForce GTX 680, v 331.22
```

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Base Runtime Environment (Continued)

C++ benchmarks:

```
OpenCL Platform: NVIDIA CUDA, OpenCL 1.1 CUDA 6.0.1
OpenCL Device #0: GeForce GTX 680, v 331.22
```

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.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/accel/flags/gcc_flags.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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