



SPEC ACCEL™ OCL Result

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Myungin Inno

(Test Sponsor: Telecommunications Technology Association)

SPECaccel_ocl_peak = Not Run

NVIDIA Tesla A100-PCIE-40GB
GMR2208KS-D140-A100

SPECaccel_ocl_base = 13.2

ACCEL license: 068

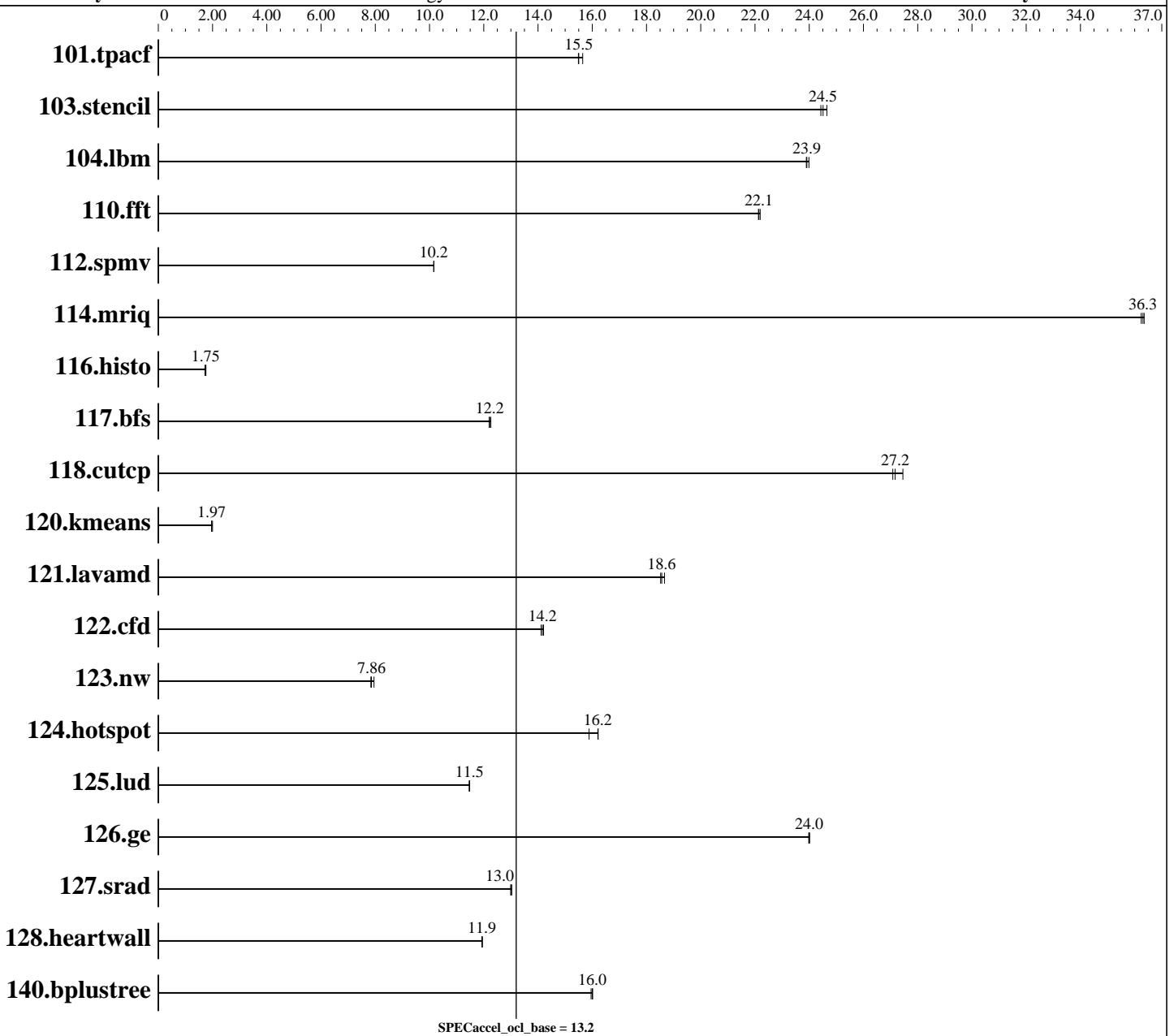
Test date: Nov-2022

Test sponsor: Telecommunications Technology Association

Hardware Availability: May-2020

Tested by: Telecommunications Technology Association

Software Availability: Oct-2021





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Hardware

CPU Name: Intel Xeon Gold 6140
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz: 2300
CPU MHz Maximum: 3700
FPU: Integrated
CPU(s) enabled: 36 cores, 2 chips, 18 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: 24.75 MB I+D on chip per chip
Other Cache: None
Memory: 384 GB (12 x 32 GB 2Rx4 PC4-2666V-R)
Disk Subsystem: 2 x 300 GB TOSHIBA AL14SEB030N SAS RAID1
Other Hardware: LSI MegaRAID SAS 9361-8i

Accelerator

Accel Model Name: Tesla A100-PCIE-40GB
Accel Vendor: NVIDIA
Accel Name: NVIDIA Tesla A100-PCIE-40GB
Type of Accel: GPU
Accel Connection: PCIe 3.0 16x
Does Accel Use ECC: Yes
Accel Description: NVIDIA Tesla A100-PCIE-40GB
Accel Driver: NVIDIA Driver Version 460.106.00

Software

Operating System: CentOS Linux release 7.9.2009 (Core)
Compiler: GCC version 4.8.5 20150623
File System: xfs
System State: Multi-user, run level 3
Other Software: NVIDIA CUDA 11.2



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
101.tpacf	6.90	15.5	6.91	15.5	6.84	15.6						
103.stencil	5.07	24.7	5.10	24.5	5.12	24.4						
104.lbm	4.67	24.0	4.68	23.9	4.69	23.9						
110.fft	5.00	22.2	5.02	22.1	5.01	22.1						
112.spmv	14.5	10.2	14.5	10.2	14.5	10.2						
114.mriq	3.00	36.3	3.01	36.2	3.00	36.3						
116.histo	64.9	1.76	65.2	1.75	66.4	1.72						
117.bfs	9.58	12.2	9.59	12.2	9.54	12.3						
118.cutcp	3.61	27.5	3.66	27.1	3.64	27.2						
120.kmeans	50.9	1.97	50.9	1.97	50.0	2.00						
121.lavamd	5.84	18.7	5.87	18.6	5.89	18.5						
122.cfd	8.93	14.1	8.87	14.2	8.90	14.2						
123.nw	14.7	7.84	14.5	7.95	14.6	7.86						
124.hotspot	7.18	15.9	7.03	16.2	7.03	16.2						
125.lud	10.4	11.5	10.4	11.5	10.4	11.5						
126.ge	6.46	24.0	6.45	24.0	6.46	24.0						
127.srad	8.75	13.0	8.76	13.0	8.78	13.0						
128.heartwall	8.88	11.9	8.87	12.0	8.88	11.9						
140.bplustree	6.77	16.0	6.75	16.0	6.74	16.0						

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

Platform Notes

```

Sysinfo program /home/tta1001/accel-1.4/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on myungin Thu Nov 24 17:07:05 2022

```

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) Gold 6140 CPU @ 2.30GHz
 2 "physical id"s (chips)
 72 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)

```

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Platform Notes (Continued)

```

cpu cores : 18
siblings  : 36
physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size : 25344 KB

```

From /proc/meminfo

```

MemTotal:      394874296 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

From /etc/*release* /etc/*version*

```

centos-release: CentOS Linux release 7.9.2009 (Core)
centos-release-upstream: Derived from Red Hat Enterprise Linux 7.8 (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 7.9.2009 (Core)
system-release: CentOS Linux release 7.9.2009 (Core)
system-release-cpe: cpe:/o:centos:centos:7

```

uname -a:

```

Linux myungin 3.10.0-1160.el7.x86_64 #1 SMP Mon Oct 19 16:18:59 UTC 2020
x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Nov 18 09:46

SPEC is set to: /home/tta1001/accel-1.4

```

Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/centos-home xfs  224G  10G  214G   5% /home

```

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

(End of data from sysinfo program)



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General Notes

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Spectre and Meltdown

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

Base Runtime Environment

C benchmarks:

OpenCL Platform: NVIDIA CUDA, OpenCL 1.2 CUDA 11.2.162

OpenCL Device #0: A100-PCIE-40GB, v 460.106.00

C++ benchmarks:

OpenCL Platform: NVIDIA CUDA, OpenCL 1.2 CUDA 11.2.162

OpenCL Device #0: A100-PCIE-40GB, v 460.106.00

Base Compiler Invocation

C benchmarks:

gcc

C++ benchmarks:

g++

Base Portability Flags

116.histo: -DSPEC_LOCAL_MEMORY_HEADROOM=2

Base Optimization Flags

C benchmarks:

-O2 -I/usr/local/cuda/include -L/usr/local/cuda/lib64 -lOpenCL

C++ benchmarks:

-O2 -I/usr/local/cuda/include -L/usr/local/cuda/lib64 -lOpenCL



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The flags file that was used to format this result can be browsed at

https://www.spec.org/accel/flags/gcc_flags.20221205.html

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

https://www.spec.org/accel/flags/gcc_flags.20221205.xml

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

Tested with SPEC ACCEL v1.4.
Report generated on Wed Dec 14 13:33:04 2022 by SPEC ACCEL PS/PDF formatter v1290.
Originally published on 14 December 2022.