### SPEC ACCEL™ OCL Result

**Harsper Co., LTD**  
**NVIDIA GeForce GTX 1080**  
**MG140-G1**

**SPECaccel_ocl_peak** = Not Run  
**SPECaccel_ocl_base** = 4.33

**ACCEL license:** HPG068A  
**Test sponsor:** Harsper Co., LTD  
**Test date:** May-2019  
**Tested by:** Telecommunications Technology Association  
**Hardware Availability:** Nov 2018  
**Software Availability:** Nov 2018

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Peak Score</th>
<th>Base Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.tpacf</td>
<td></td>
<td>6.37</td>
</tr>
<tr>
<td>103.stencil</td>
<td>3.42</td>
<td></td>
</tr>
<tr>
<td>104.lbm</td>
<td></td>
<td>5.47</td>
</tr>
<tr>
<td>110.fft</td>
<td></td>
<td>4.20</td>
</tr>
<tr>
<td>112.spmv</td>
<td>2.83</td>
<td></td>
</tr>
<tr>
<td>114.mriq</td>
<td></td>
<td></td>
</tr>
<tr>
<td>116.histo</td>
<td>1.88</td>
<td></td>
</tr>
<tr>
<td>117.bfs</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>118.cutcp</td>
<td></td>
<td>9.28</td>
</tr>
<tr>
<td>120.kmeans</td>
<td>1.29</td>
<td></td>
</tr>
<tr>
<td>121.lavamd</td>
<td></td>
<td>11.4</td>
</tr>
<tr>
<td>122.cfd</td>
<td></td>
<td>4.83</td>
</tr>
<tr>
<td>123.nw</td>
<td></td>
<td>4.29</td>
</tr>
<tr>
<td>124.hotspot</td>
<td></td>
<td>5.79</td>
</tr>
<tr>
<td>125.lud</td>
<td></td>
<td>4.37</td>
</tr>
<tr>
<td>126.ge</td>
<td></td>
<td>9.20</td>
</tr>
<tr>
<td>127.srad</td>
<td>3.17</td>
<td></td>
</tr>
<tr>
<td>128.heartwall</td>
<td>3.17</td>
<td></td>
</tr>
<tr>
<td>140.bplustree</td>
<td>2.60</td>
<td></td>
</tr>
</tbody>
</table>

**SPECaccel_ocl_base** = 4.33
## SPEC ACCEL OCL Result

### Harsper Co., LTD
NVIDIA GeForce GTX 1080
MG140-G1

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SPECCcel_ocl_peak</strong></td>
<td>Not Run</td>
</tr>
<tr>
<td><strong>SPECCcel_ocl_base</strong></td>
<td>4.33</td>
</tr>
</tbody>
</table>

**ACCEL license:** HPG068A  
**Test sponsor:** Harsper Co., LTD  
**Tested by:** Telecommunications Technology Association  
**Test date:** May-2019  
**Hardware Availability:** Nov 2018  
**Software Availability:** Nov 2018

### Hardware

- **CPU Name:** Intel Xeon Silver 4110  
- **CPU Characteristics:** Intel Turbo Boost Technology off.  
- **CPU MHz:** 2100  
- **CPU MHz Maximum:** 2100  
- **FPU:** integrated  
- **CPU(s) enabled:** 8 cores, 1 chip, 8 cores/chip, 2 threads/core  
- **CPU(s) orderable:** 1  
- **Primary Cache:** 32 KB I + 32 KB D on chip per core  
- **Secondary Cache:** 1 MB I+D on chip per core  
- **L3 Cache:** 11 MB I+D on chip per chip  
- **Memory:** 64 GB (4 x 16 GB 2Rx8 PC4-2666V-R)  
- **Disk Subsystem:** 1 x 250GB WDC WDS250G2B0B SATA  
- **Other Cache:** None  
- **Other Hardware:** --

### Accelerator

- **Accel Model Name:** GeForce GTX 1080  
- **Accel Vendor:** NVIDIA  
- **Accel Name:** NVIDIA GeForce GTX 1080  
- **Type of Accel:** GPU  
- **Accel Connection:** PCIe 3.0 16x  
- **Does Accel Use ECC:** No  
- **Accel Description:** NVIDIA GeForce GTX 1080, 2560 CUDA cores, 1556 MHz, 8.0 GiB GDDR5 RAM  
- **Accel Driver:** NVIDIA Driver Version 418.56

### Software

- **Operating System:** CentOS Linux release 7.6.1810 (Core) 3.10.0-957.el7.x86_64  
- **Compiler:** GCC version 4.8.5 20150623  
- **File System:** xfs  
- **System State:** Multi-user, run level 3  
- **Other Software:** NVIDIA CUDA 10.1
## SPEC ACCEL OCL Result

### Harsper Co.,LTD
NVIDIA GeForce GTX 1080
MG140-G1

**ACCEL license:** HPG068A  
**Test sponsor:** Harsper Co.,LTD  
**Tested by:** Telecommunications Technology Association  

**Test date:** May-2019  
**Hardware Availability:** Nov 2018  
**Software Availability:** Nov 2018

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds Base</th>
<th>Ratio Base</th>
<th>Seconds Peak</th>
<th>Ratio Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.tpacf</td>
<td>17.0</td>
<td>6.30</td>
<td>16.8</td>
<td>6.37</td>
</tr>
<tr>
<td>103.stencil</td>
<td>36.5</td>
<td>3.42</td>
<td>36.5</td>
<td>3.42</td>
</tr>
<tr>
<td>104.lbm</td>
<td>20.5</td>
<td>5.47</td>
<td>20.5</td>
<td>5.47</td>
</tr>
<tr>
<td>110.fft</td>
<td>26.5</td>
<td>4.19</td>
<td>26.4</td>
<td>4.20</td>
</tr>
<tr>
<td>112.spmv</td>
<td>52.0</td>
<td>2.83</td>
<td>52.0</td>
<td>2.83</td>
</tr>
<tr>
<td>114.mriq</td>
<td>7.91</td>
<td>13.8</td>
<td>7.90</td>
<td>13.8</td>
</tr>
<tr>
<td>116.histo</td>
<td>60.8</td>
<td>1.88</td>
<td>60.8</td>
<td>1.87</td>
</tr>
<tr>
<td>117.bfs</td>
<td>58.4</td>
<td>2.00</td>
<td>58.5</td>
<td>2.00</td>
</tr>
<tr>
<td>118.cutcp</td>
<td>10.7</td>
<td>9.27</td>
<td>10.7</td>
<td>9.28</td>
</tr>
<tr>
<td>120.kmeans</td>
<td>77.5</td>
<td>1.29</td>
<td>77.6</td>
<td>1.29</td>
</tr>
<tr>
<td>121.lavamd</td>
<td>9.57</td>
<td>11.4</td>
<td>9.58</td>
<td>11.4</td>
</tr>
<tr>
<td>122.cfd</td>
<td>26.0</td>
<td>4.84</td>
<td>26.1</td>
<td>4.83</td>
</tr>
<tr>
<td>123.nw</td>
<td>26.8</td>
<td>4.29</td>
<td>26.8</td>
<td>4.29</td>
</tr>
<tr>
<td>124.hotspot</td>
<td>19.7</td>
<td>5.80</td>
<td>19.8</td>
<td>5.77</td>
</tr>
<tr>
<td>125.lud</td>
<td>27.2</td>
<td>4.38</td>
<td>27.3</td>
<td>4.37</td>
</tr>
<tr>
<td>126.ge</td>
<td>16.8</td>
<td>9.20</td>
<td>16.8</td>
<td>9.21</td>
</tr>
<tr>
<td>127.srad</td>
<td>35.9</td>
<td>3.18</td>
<td>36.0</td>
<td>3.17</td>
</tr>
<tr>
<td>128.heartwall</td>
<td>33.4</td>
<td>3.17</td>
<td>33.7</td>
<td>3.15</td>
</tr>
<tr>
<td>140.bplustree</td>
<td>41.4</td>
<td>2.61</td>
<td>41.6</td>
<td>2.60</td>
</tr>
</tbody>
</table>

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

### Platform Notes

Sysinfo program /HPG/accel/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on harsper Mon May 27 14:51:17 2019

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) Silver 4110 CPU @ 2.10GHz  
1 "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 caution.)
SPEC ACCEL OCL Result

Harsper Co.,LTD
NVIDIA GeForce GTX 1080
MG140-G1

<table>
<thead>
<tr>
<th>ACCEL license:</th>
<th>HPG068A</th>
<th>Test date:</th>
<th>May-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor:</td>
<td>Harsper Co.,LTD</td>
<td>Hardware Availability:</td>
<td>Nov 2018</td>
</tr>
<tr>
<td>Tested by:</td>
<td>Telecommunications Technology Association</td>
<td>Software Availability:</td>
<td>Nov 2018</td>
</tr>
</tbody>
</table>

**SPECaccel_ocl_peak = Not Run**

**SPECaccel_ocl_base = 4.33**

---

**Platform Notes (Continued)**

```markdown
    cpu cores : 8
    siblings : 16
    physical 0: cores 0 1 2 3 4 5 6 7
    cache size : 11264 KB

From /proc/meminfo
    MemTotal: 65398344 kB
    HugePages_Total: 0
    Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
    centos-release: CentOS Linux release 7.6.1810 (Core)
    centos-release-upstream: Derived from Red Hat Enterprise Linux 7.6 (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 7.6.1810 (Core)
    system-release: CentOS Linux release 7.6.1810 (Core)
    system-release-cpe: cpe:/o:centos:centos:7

uname -a:
    Linux harsper 3.10.0-957.el7.x86_64 #1 SMP Thu Nov 8 23:39:32 UTC 2018 x86_64
    x86_64 x86_64 GNU/Linux

run-level 3 May 14 12:57

SPEC is set to: /HPG/accel

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dev/mapper/centos-root</td>
<td>xfs</td>
<td>50G</td>
<td>24G</td>
<td>27G</td>
<td>47%</td>
<td>/</td>
</tr>
</tbody>
</table>

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.

BIOS American Megatrends Inc. 2.0b 02/26/2018
Memory:
    2x NO DIMM NO DIMM
    4x Samsung M393A2K43BB1-CTD 16 GB 2 rank 2666 MT/s, configured at 2400 MT/s

(End of data from sysinfo program)
```
Harsper Co., LTD
NVIDIA GeForce GTX 1080
MG140-G1

SPECaccel_ocl_peak = Not Run
SPECaccel_ocl_base = 4.33

ACCEL license: HPG068A
Test sponsor: Harsper Co., LTD
Tested by: Telecommunications Technology Association

Test date: May-2019
Hardware Availability: Nov 2018
Software Availability: Nov 2018

---

**Base Runtime Environment**

C benchmarks:
- OpenCL Platform: NVIDIA CUDA, OpenCL 1.2 CUDA 10.1.133
- OpenCL Device #0: GeForce GTX 1080, v 418.56

C++ benchmarks:
- OpenCL Platform: NVIDIA CUDA, OpenCL 1.2 CUDA 10.1.133
- OpenCL Device #0: GeForce GTX 1080, v 418.56

---

**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

---

The flags file that was used to format this result can be browsed at
https://www.spec.org/accel/flags/gcc_flags.20190605.html

You can also download the XML flags source by saving the following link:
https://www.spec.org/accel/flags/gcc_flags.20190605.xml
Harsper Co., LTD
NVIDIA GeForce GTX 1080
MG140-G1

SPECaccel_ocl_peak = Not Run
SPECaccel_ocl_base = 4.33

ACCEL license: HPG068A
Test sponsor: Harsper Co., LTD
Tested by: Telecommunications Technology Association

Test date: May-2019
Hardware Availability: Nov 2018
Software Availability: Nov 2018

SPEC ACCEL is a trademark of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC ACCEL v1.2.
Originally published on 5 June 2019.