Uniwade
(Test Sponsor: Telecommunications Technology Association)

NVIDIA Tesla V100-PCIE-16GB
KN228T

SPECaccel_ocl_peak = Not Run
SPECaccel_ocl_base = 10.6

ACCEL license: HPG068A
Test sponsor: Telecommunications Technology Association
Test date: Sep-2021
Tested by: Telecommunications Technology Association
Hardware Availability: Oct 2017
Software Availability: Oct 2017

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## SPEC ACCEL OCL Result

### Uniwide
(Test Sponsor: Telecommunications Technology Association)

### NVIDIA Tesla V100-PCIE-16GB

#### KN228T

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</table>

### 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**: --
- **CPU(s) enabled**: 36 cores, 2 chips, 18 cores/chip, 2 threads/core
- **Primary Cache**: 32 KB I + 32 KB D on chip per core
- **Secondary Cache**: 1024 KB I+D on chip per core
- **L3 Cache**: 24.75 MB I+D on chip per chip
- **Other Cache**: None
- **Memory**: 512GB (16 x 32 GB 2Rx4 PC4-2666V-R)
- **Disk Subsystem**: 2x 300GB TOSHIBA AL14SEB030N SAS RAID1
- **Other Hardware**: LSI MegaRAID SAS 9361-8i

<table>
<thead>
<tr>
<th><strong>Accelerator</strong></th>
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<tr>
<td><strong>Accel Model Name</strong>: Tesla V100-PCIE-16GB</td>
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<td><strong>Accel Vendor</strong>: NVIDIA</td>
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<tr>
<td><strong>Accel Name</strong>: NVIDIA Tesla V100-PCIE-16GB</td>
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<td><strong>Type of Accel</strong>: GPU</td>
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<td><strong>Accel Connection</strong>: PCIe 3.0 16x</td>
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<tr>
<td><strong>Does Accel Use ECC</strong>: Yes</td>
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<td><strong>Accel Description</strong>: NVIDIA Tesla V100-PCIE-16GB</td>
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<tr>
<td><strong>Accel Driver</strong>: NVIDIA Driver Version 460.73.01</td>
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</tbody>
</table>

### Software

- **Operating System**: CentOS Linux release 7.6.1810 (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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info@spec.org
http://www.spec.org/
SPEC ACCEL OCL Result

Uniwide
(Test Sponsor: Telecommunications Technology Association)

NVIDIA Tesla V100-PCIE-16GB
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Results Table

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</tbody>
</table>

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

Platform Notes

Sysinfo program /home/tta101/accel-1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35
running on kn228t Tue Sep 28 14:41:02 2021

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

Continued on next page
# SPEC ACCEL OCL Result

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**NVIDIA Tesla V100-PCIE-16GB**

**KN228T**

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### Platform Notes (Continued)

- cpu cores : 18
- siblings : 18
- 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: 527816812 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 kn228t 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 Sep 28 10:53

SPEC is set to: /home/tta101/accel-1.3

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/centos-home xfs 224G 22G 203G 10% /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

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: Tesla V100-PCIE-16GB, v 460.73.01

C++ benchmarks:
- OpenCL Platform: NVIDIA CUDA, OpenCL 1.2 CUDA 11.2.162
- OpenCL Device #0: Tesla V100-PCIE-16GB, v 460.73.01

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.20211028.html](https://www.spec.org/accel/flags/gcc_flags.20211028.html)

You can also download the XML flags source by saving the following link:  
[https://www.spec.org/accel/flags/gcc_flags.20211028.xml](https://www.spec.org/accel/flags/gcc_flags.20211028.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 v1.3.  
Originally published on 27 October 2021.