# SPEC ACCEL™ ACC Result

## AMD
(Test Sponsor: NVIDIA Corporation)

### AMD EPYC 7352
Engineering Sample

<table>
<thead>
<tr>
<th>SPECaccel_acc_peak = Not Run</th>
<th>SPECaccel_acc_base = 3.77</th>
</tr>
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</table>

**ACCEL license:** 019  
**Test sponsor:** NVIDIA Corporation  
**Tested by:** NVIDIA Corporation  
**Test date:** Nov-2019  
**Hardware Availability:** Jul-2019  
**Software Availability:** Nov-2019

### Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>303.ostencil</td>
<td>2.51</td>
</tr>
<tr>
<td>304.olbm</td>
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<tr>
<td>353.clvrleaf</td>
<td>2.64</td>
</tr>
<tr>
<td>354.cg</td>
<td>6.45</td>
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<tr>
<td>355.seismic</td>
<td>3.54</td>
</tr>
<tr>
<td>356.sp</td>
<td>1.81</td>
</tr>
<tr>
<td>357.csp</td>
<td>5.10</td>
</tr>
<tr>
<td>359.miniGhost</td>
<td>2.21</td>
</tr>
<tr>
<td>360.ilbdc</td>
<td>2.60</td>
</tr>
<tr>
<td>363.swim</td>
<td>5.40</td>
</tr>
<tr>
<td>370.bt</td>
<td>1.99</td>
</tr>
</tbody>
</table>

**Hardware**

- **CPU Name:** AMD EPYC 7352 24-Core  
- **CPU Characteristics:**
  - CPU MHz: 2300  
  - CPU MHz Maximum: 3200  
  - FPU: --  
  - CPU(s) enabled: 48 cores, 2 chips, 24 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: 512 KB I+D on chip per core  
  - L3 Cache: 128 MB I+D on chip per chip  
  - Other Cache: None

**Accelerator**

- **Accel Model Name:** EPYC 7352  
- **Accel Vendor:** AMD  
- **Accel Name:** AMD EPYC 7352  
- **Type of Accel:** CPU  
- **Accel Connection:** Not applicable  
- **Does Accel Use ECC:** Yes  
- **Accel Description:** --  
- **Accel Driver:** --
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Hardware (Continued)

Memory: 256 GB
251.769 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxn PCn-nmmnR-n, ECC)'
Disk Subsystem: 219 GB add more disk info here
Other Hardware: None

Software

Operating System: Ubuntu 18.04.3 LTS
Ubuntu 18.04.3 LTS
5.2.0-8-generic
Compiler: C/C++/Fortran : Version 19.10 of PGI Professional
Edition
File System: ext4
System State: Run level 5 (add definition here)
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>303.ostencil</td>
<td>55.4</td>
<td>2.62</td>
<td>57.8</td>
<td>2.51</td>
<td>57.8</td>
<td>2.51</td>
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<tr>
<td>304.olbm</td>
<td>29.7</td>
<td>15.3</td>
<td>29.7</td>
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<td>29.7</td>
<td>15.3</td>
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<tr>
<td>314.omriq</td>
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<tr>
<td>350.md</td>
<td>65.0</td>
<td>3.88</td>
<td>66.1</td>
<td>3.81</td>
<td>71.6</td>
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<td>2.53</td>
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<td>65.0</td>
<td>8.16</td>
<td>64.7</td>
<td>8.19</td>
</tr>
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<td>353.clvleaf</td>
<td>171</td>
<td>2.60</td>
<td>169</td>
<td>2.64</td>
<td>167</td>
<td>2.67</td>
</tr>
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<td>354.cg</td>
<td>63.3</td>
<td>6.45</td>
<td>63.4</td>
<td>6.43</td>
<td>63.2</td>
<td>6.46</td>
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<td>3.54</td>
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<td>1.81</td>
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<td>1.82</td>
</tr>
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<td>357.esp</td>
<td>53.0</td>
<td>5.10</td>
<td>52.5</td>
<td>5.14</td>
<td>53.0</td>
<td>5.09</td>
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<td>2.22</td>
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<td>42.6</td>
<td>5.40</td>
<td>43.4</td>
<td>5.30</td>
<td>42.3</td>
<td>5.44</td>
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<tr>
<td>370.bt</td>
<td>112</td>
<td>1.99</td>
<td>111</td>
<td>2.01</td>
<td>112</td>
<td>1.99</td>
</tr>
</tbody>
</table>

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

Submit Notes

The config file option 'submit' was used.
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Platform Notes

Sysinfo program /local/home/cparrott/SPEC/ACCEL-1.3/Docs/sysinfo
$Rev: 6965 $ $Date:: 2015-04-21 #$ c05a7f14b1b1765e3fe1df68447e8a35

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 : AMD EPYC 7352 24-Core Processor
  2 "physical id"s (chips)
  96 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 24
siblings : 48
physical 0: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26 28 29 30
physical 1: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26 28 29 30
cache size : 512 KB

From /proc/meminfo
MemTotal: 263998740 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Ubuntu 18.04.3 LTS

From /etc/*release* /etc/*version*
debian_version: buster/sid
dgx-release:
  DGX_NAME="DGX Server"
  DGX_PRETTY_NAME="NVIDIA DGX Server"
  DGX_SWBUILD_DATE="2019-09-25"
  DGX_SWBUILD_VERSION="4.99.1"
  DGX_COMMIT_ID="1519feb"
  DGX_PLATFORM="DGX Server for DAYTONA_X"
  DGX_SERIAL_NUMBER="To be filled by O.E.M."

os-release:
  NAME="Ubuntu"
  VERSION="18.04.3 LTS (Bionic Beaver)"
  ID=ubuntu
  ID_LIKE=debian
  PRETTY_NAME="Ubuntu 18.04.3 LTS"
  VERSION_ID="18.04"

Continued on next page
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### General Notes

Environment variables set by runspec before the start of the run:
- ACC_NUM_CORES = "96"
- OMP_PROC_BIND = "true"

### Base Compiler Invocation

- **C benchmarks:**
  - pgcc

- **Fortran benchmarks:**
  - pgfortran

- **Benchmarks using both Fortran and C:**
  - pgcc pgfortran

---

Platform Notes (Continued)

```bash
uname -a:
Linux rome1 5.2.0-8-generic #9-Ubuntu SMP Mon Jul 8 13:07:27 UTC 2019 x86_64
x86_64 x86_64 GNU/Linux
```

```bash
run-level 5 Oct 15 14:16
```

SPEC is set to: /local/home/cparrott/SPEC/ACCEL-1.3

<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/sda2</td>
<td>ext4</td>
<td>219G</td>
<td>46G</td>
<td>162G</td>
<td>22%</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.

(End of data from sysinfo program)
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Base Optimization Flags

C benchmarks:
  -fast -ta=multicore -Mnouniform -acc -ta=multicore:nvomp

Fortran benchmarks:
  -fast -ta=multicore -Mnouniform -acc -ta=multicore:nvomp

Benchmarks using both Fortran and C:

353.clvrleaf: -fast -ta=multicore -Mnouniform -acc -ta=multicore:nvomp
359.miniGhost: -fast -ta=multicore -Mnouniform -acc -ta=multicore:nvomp
  -Mnomain

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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.
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