GIGA-BYTE TECHNOLOGY CO., LTD.
R282-Z90
(AMD EPYC 72F3, 3.70GHz)

| SPECspeed®2017_int_base = 13.9 |
| SPECspeed®2017_int_peak = 13.9 |

| CPU2017 License: 9082 | Test Date: Feb-2021 |
| Test Sponsor: GIGA-BYTE TECHNOLOGY CO., LTD. | Hardware Availability: Mar-2021 |
| Tested by: GIGA-BYTE TECHNOLOGY CO., LTD. | Software Availability: Mar-2021 |

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</table>

### Hardware

- **CPU Name:** AMD EPYC 72F3
- **Max MHz:** 4100
- **Nominal:** 3700
- **Enabled:** 16 cores, 2 chips
- **Orderable:** 1.2 chips
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **Cache L2:** 512 KB I+D on chip per core
- **Cache L3:** 256 MB I+D on chip per chip, 32 MB per core
- **Other:** None
- **Memory:** 1 TB (16 x 64 GB 4DRx16 PC4-3200AA-L)
- **Storage:** 1 x 1.92 TB SATA SSD
- **Other:** None

### Software

- **OS:** Ubuntu 20.04.1 LTS 5.4.0-65-generic
- **Compiler:** C/C++/Fortran: Version 3.0.0 of AOCC
- **Parallel:** Yes
- **Firmware:** Version M02 released Feb-2021
- **File System:** ext4
- **System State:** Run level 5 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** 64-bit
- **Other:** jemalloc: jemalloc memory allocator library v5.1.0
- **Power Management:** BIOS set to prefer performance at the cost of additional power usage
GIGA-BYTE TECHNOLOGY CO., LTD.
R282-Z90
(AMD EPYC 72F3 , 3.70GHz)

CPU2017 License: 9082
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Results Table

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</table>

PECspeed®2017_int_base = 13.9
PECspeed®2017_int_peak = 13.9

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.
'numactl' was used to bind copies to the cores.
See the configuration file for details.

Operating System Notes

'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152' was used to set environment locked pages in memory limit
runcpu command invoked through numactl i.e.:
umactl --interleave=all runcpu <etc>
'echo 8 > /proc/sys/vm/dirty_ratio' run as root to limit dirty cache to 8% of memory.
'echo 1 > /proc/sys/vm/swappiness' run as root to limit swap usage to minimum necessary.
'echo 1 > /proc/sys/vm/zone_reclaim_mode' run as root to free node-local memory and avoid remote memory usage.
'sync; echo 3 > /proc/sys/vm/drop_caches' run as root to reset filesystem caches.
'sysctl -w kernel.randomize_va_space=0' run as root to disable address space layout randomization (ASLR) to reduce run-to-run variability.
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root to enable Transparent Hugepages (THP) for this run.
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root for peak runs of 628.pop2_s and 638.imagick_s to enable THP only on request.
Environment Variables Notes

Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-15"
LD_LIBRARY_PATH = 
"/cpu2017/amd_speed_aocc300_milan_B_lib/64;/cpu2017/amd_speed_aocc300_milan_B_lib/32:" 
MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "16"

Environment variables set by runcpu during the 600.perlbench_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 602.gcc_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 605.mcf_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 623.xalancbmk_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 631.deepsjeng_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 641.leela_s peak run:
GOMP_CPU_AFFINITY = "0"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7742 CPU + 1TiB Memory using openSUSE 15.2

NA: 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.

The AMD64 AOCC Compiler Suite is available at http://developer.amd.com/amd-aocc/

jemalloc: configured and built with GCC v4.8.2 in RHEL 7.4 (No options specified)
jemalloc 5.1.0 is available here:
General Notes (Continued)

https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2

Platform Notes

BIOS settings:
cTDP = 280
Determinism Slider set to Power
SMT set to disable
IOMMU set to enable
Package Power Limit set to 280
NUMA nodes per socket set to NPS4

Sysinfo program /cpu2017/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on test Fri Feb 26 17:00:34 2021

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
https://www.spec.org/cpu2017/Docs/config.html#sysinfo

From /proc/cpuinfo

cpu cores : 8
siblings : 8
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7

From lscpu:

Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 48 bits physical, 48 bits virtual
CPU(s): 16
On-line CPU(s) list: 0-15
Thread(s) per core: 1
Core(s) per socket: 8
Socket(s): 2
NUMA node(s): 16
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1

(Continued on next page)
SPEC CPU®2017 Integer Speed Result

GIGA-BYTE TECHNOLOGY CO., LTD.
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Platform Notes (Continued)

Model name: AMD EPYC 72F3 8-Core Processor
Stepping: 1
Frequency boost: enabled
CPU MHz: 4007.842
CPU max MHz: 3700.0000
CPU min MHz: 1500.0000
BogoMIPS: 7400.23
Virtualization: AMD-V
L1d cache: 512 KiB
L1i cache: 512 KiB
L2 cache: 8 MiB
L3 cache: 512 MiB
NUMA node0 CPU(s): 0
NUMA node1 CPU(s): 1
NUMA node2 CPU(s): 2
NUMA node3 CPU(s): 3
NUMA node4 CPU(s): 4
NUMA node5 CPU(s): 5
NUMA node6 CPU(s): 6
NUMA node7 CPU(s): 7
NUMA node8 CPU(s): 8
NUMA node9 CPU(s): 9
NUMA node10 CPU(s): 10
NUMA node11 CPU(s): 11
NUMA node12 CPU(s): 12
NUMA node13 CPU(s): 13
NUMA node14 CPU(s): 14
NUMA node15 CPU(s): 15
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitation
Vulnerability Spectre v2: Mitigation; Full AMD retpoline, IBFB conditional, IBRS_FW, STIBP disabled, RSB filling
Vulnerability Srbd: Not affected
Vulnerability Tmx async abort: Not affected
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pg e mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid aperfmperf pni pclmulqdq monitor sse3 fma cx16 cmp14012500a cmov popcnt aes xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3nowprefetch osuw ibr skinit cwd tce topoext perfctr_core perfctr_nb bpx ext perfctr llc mwaitx cpb cdp l3 invpcid_single hw_pstate ssbd mba ibrs

(Continued on next page)
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Platform Notes (Continued)

ibpb stibp vmmcall fsgsbase bmi1 avx2 smep bmi2 erms invpcid cqm rdt_a rdseed adx
smap clflushopt clwb sha_ni xsaveopt xsaves xgetbv1 xsaveas cqm_llc cqm_occuLLc
ccm_mdm_total ccm_mdm_local clzero irperf xsaveerptr wbnoinvd arat npt lbv svm_lock
nrip_save tsc_scale vmcb_clean flushbyasid decodeassists pfssthreshold
v_vmsave_vmload vgif umip pkp ospe vaes vpclmulqdq rdpid overflow_recover succor smca

/proc/cpuinfo cache data
  cache size: 512 KB

From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
  physical chip.
  available: 16 nodes (0-15)
  node 0 cpus: 0
  node 0 size: 64328 MB
  node 0 free: 64228 MB
  node 1 cpus: 1
  node 1 size: 64509 MB
  node 1 free: 64452 MB
  node 2 cpus: 2
  node 2 size: 64511 MB
  node 2 free: 64457 MB
  node 3 cpus: 3
  node 3 size: 64510 MB
  node 3 free: 64452 MB
  node 4 cpus: 4
  node 4 size: 64511 MB
  node 4 free: 64465 MB
  node 5 cpus: 5
  node 5 size: 64510 MB
  node 5 free: 64440 MB
  node 6 cpus: 6
  node 6 size: 64511 MB
  node 6 free: 64438 MB
  node 7 cpus: 7
  node 7 size: 64474 MB
  node 7 free: 64313 MB
  node 8 cpus: 8
  node 8 size: 64511 MB
  node 8 free: 64454 MB
  node 9 cpus: 9
  node 9 size: 64510 MB
  node 9 free: 64452 MB
  node 10 cpus: 10
  node 10 size: 64511 MB
  node 10 free: 64454 MB
  node 11 cpus: 11
(Continued on next page)
Platform Notes (Continued)

node 11 free: 64463 MB
node 12 cpus: 12
node 12 size: 64511 MB
node 12 free: 64470 MB
node 13 cpus: 13
node 13 size: 64510 MB
node 13 free: 64471 MB
node 14 cpus: 14
node 14 size: 64511 MB
node 14 free: 64469 MB
node 15 cpus: 15
node 15 size: 64510 MB
node 15 free: 64453 MB

node distances:

node 0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15
0:  10  11  12  12  12  12  12  12  32  32  32  32  32  32  32  32
1:  11  10  12  12  12  12  12  12  32  32  32  32  32  32  32  32
2:  12  12  10  11  12  12  12  12  32  32  32  32  32  32  32  32
3:  12  12  11  10  12  12  12  12  32  32  32  32  32  32  32  32
4:  12  12  12  12  10  11  12  12  32  32  32  32  32  32  32  32
5:  12  12  12  12  11  10  12  12  32  32  32  32  32  32  32  32
6:  12  12  12  12  12  11  10  12  32  32  32  32  32  32  32  32
7:  12  12  12  12  12  11  10  10  32  32  32  32  32  32  32  32
8:  32  32  32  32  32  32  32  32  10  11  12  12  12  12  12  12
9:  32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
10: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
11: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
12: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
13: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
14: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12
15: 32  32  32  32  32  32  32  32  11  10  12  12  12  12  12  12

From /proc/meminfo
MemTotal: 1056723160 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

/usr/bin/lsb_release -d
Ubuntu 20.04.1 LTS

From /etc/*release* /etc/*version*
debian_version: bullseye/sid
os-release:
NAME="Ubuntu"

(Continued on next page)
**SPEC CPU®2017 Integer Speed Result**

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**CPU2017 License:** 9082

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**Hardware Availability:** Mar-2021

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**Software Availability:** Mar-2021

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**Platform Notes (Continued)**

VERSION="20.04.1 LTS (Focal Fossa)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 20.04.1 LTS"
VERSION_ID="20.04"
HOME_URL="https://www.ubuntu.com/
SUPPORT_URL="https://help.ubuntu.com/

uname -a:
    Linux test 5.4.0-65-generic #73-Ubuntu SMP Mon Jan 18 17:25:17 UTC 2021 x86_64 x86_64
    x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 5 Feb 26 16:57

SPEC is set to: /cpu2017

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<td>ext4</td>
<td>1.8T</td>
<td>18G</td>
<td>1.7T</td>
<td>2%</td>
<td>/</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id

<table>
<thead>
<tr>
<th>Vendor:</th>
<th>GIGABYTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product:</td>
<td>R282-Z90-00</td>
</tr>
<tr>
<td>Product Family:</td>
<td>Server</td>
</tr>
<tr>
<td>Serial:</td>
<td>1234567890abcdefgijkl</td>
</tr>
</tbody>
</table>

Additional information from dmidecode follows. 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.

Memory:

(Continued on next page)
GIGA-BYTE TECHNOLOGY CO., LTD.
R282-Z90 (AMD EPYC 72F3, 3.70GHz)

SPEC CPU®2017 Integer Speed Result
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SPECspeed®2017_int_base = 13.9
SPECspeed®2017_int_peak = 13.9

CPU2017 License: 9082
Test Sponsor: GIGA-BYTE TECHNOLOGY CO., LTD.
Test Date: Feb-2021
Tested by: GIGA-BYTE TECHNOLOGY CO., LTD.
Tested by: Hardware Availability: Mar-2021
Software Availability: Mar-2021

Platform Notes (Continued)

16x Samsung M386A8K40DM2-CWE 64 GB 4 rank 3200
16x Unknown Unknown

BIOS:
  BIOS Vendor: GIGABYTE
  BIOS Version: M02
  BIOS Date: 02/01/2021
  BIOS Revision: 5.21

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C       | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak) 657.xz_s(base, peak)
==============================================================================
AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

==============================================================================
C++     | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak)
        | 631.deepsjeng_s(base, peak) 641.leela_s(base, peak)
==============================================================================
AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

==============================================================================
Fortran | 648.exchange2_s(base, peak)
==============================================================================
AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

==============================================================================
## SPEC CPU®2017 Integer Speed Result

### GIGA-BYTE TECHNOLOGY CO., LTD.
R282-Z90
(AMD EPYC 72F3 , 3.70GHz)

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**Test Date:** Feb-2021  
**Hardware Availability:** Mar-2021  
**Software Availability:** Mar-2021

### Base Compiler Invocation

- **C benchmarks:** clang
- **C++ benchmarks:** clang++
- **Fortran benchmarks:** flang

### Base Portability Flags

- 600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
- 602.gcc_s: -DSPEC_LP64
- 605.mcf_s: -DSPEC_LP64
- 620.omnetpp_s: -DSPEC_LP64
- 623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
- 625.x264_s: -DSPEC_LP64
- 631.deepsjeng_s: -DSPEC_LP64
- 641.leela_s: -DSPEC_LP64
- 648.exchange2_s: -DSPEC_LP64
- 657.xz_s: -DSPEC_LP64

### Base Optimization Flags

- **C benchmarks:**
  - m64 -mno-adx -mno-sse4a -W1,-allow-multiple-definition
  - W1,-mllvm -W1,-enable-licm-vrp -W1,-mllvm -W1,-region-vectorize
  - W1,-mllvm -W1,-function-specialize
  - W1,-mllvm -W1,-align-all-nofallthru-blocks=6
  - W1,-mllvm -W1,-reduce-array-computations=3 -O3 -march=znver3
  - fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5
  - mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
  - fremap-arrays -mllvm -function-specialize -flv-function-specialization
  - mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
  - mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
  - DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc
  - lflang -lflangrti

- **C++ benchmarks:**
  - m64 -std=c++98 -mno-adx -mno-sse4a
  - W1,-mllvm -W1,-do-block-reorder=aggressive
  - W1,-mllvm -W1,-region-vectorize -W1,-mllvm -W1,-function-specialize

(Continued on next page)
SPEC CPU®2017 Integer Speed Result
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Software Availability: Mar-2021

Base Optimization Flags (Continued)

C++ benchmarks (continued):
-W1,-mllvm -W1,-align-all-nofallthru-blocks=6
-W1,-mllvm -W1,-reduce-array-computations=3 -O3 -march=znver3
-fveclib=AMDLIBM -ffast-math -flto -mllvm -enable-partial-unswitch
-mllvm -unroll-threshold=100 -finline-aggressive
-fllvm-function-specialization -mllvm -loop-unswitch-threshold=200000
-mllvm -reroll-loops -mllvm -aggressive-loop-unswitch
-mllvm -extra-vectorizer-passes -mllvm -reduce-array-computations=3
-mllvm -global-vectorize-slp=true -mllvm -convert-pow-exp-to-int=false
-z muldefs -mllvm -do-block-reorder=aggressive
-fvirtual-function-elimination -fvisibility=hidden -DSPEC_OPENMP
-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang
-lflangrti

Fortran benchmarks:
-m64 -mno-adx -mno-sse4a -W1,-mllvm -W1,-inline-recursion=4
-W1,-mllvm -W1,-lsr-in-nested-loop -W1,-mllvm -W1,-enable-iv-split
-W1,-mllvm -W1,-region-vectorize -W1,-mllvm -W1,-function-specialize
-W1,-mllvm -W1,-align-all-nofallthru-blocks=6
-W1,-mllvm -W1,-reduce-array-computations=3 -O3 -march=znver3
-fveclib=AMDLIBM -ffast-math -flto -z muldefs
-mllvm -unroll-aggressive -mllvm -unroll-threshold=100 -DSPEC_OPENMP
-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang
-lflangrti

Base Other Flags

C benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

C++ benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

Fortran benchmarks:
-Wno-return-type

Peak Compiler Invocation

C benchmarks:
clang

(Continued on next page)
## SPEC CPU®2017 Integer Speed Result

**GIGA-BYTE TECHNOLOGY CO., LTD.**

**R282-Z90**  
(AMD EPYC 72F3, 3.70GHz)

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**Hardware Availability:** Mar-2021  
**Software Availability:** Mar-2021

### Peak Compiler Invocation (Continued)

**C++ benchmarks:**  
`clang++`

**Fortran benchmarks:**  
`flang`

### Peak Portability Flags

Same as Base Portability Flags

### Peak Optimization Flags

**C benchmarks:**


602.gcc_s: Same as 600.perlbench_s

605.mcf_s: Same as 600.perlbench_s

625.x264_s: `basepeak = yes`

657.xz_s: `basepeak = yes`

**C++ benchmarks:**

620.omnetpp_s: `basepeak = yes`

623.xalancbmk_s: `-m64 -std=c++98 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-do-block-reorder=aggressive`

(Continued on next page)
Peak Optimization Flags (Continued)

623.xalancbmk_s (continued):
- W1,-mllvm -W1,-function-specialize
- W1,-mllvm -W1,-align-all-nofallthru-blocks=6
- W1,-mllvm -W1,-reduce-array-computations=3 -Ofast
- march=znver3 -fveclib=AMDLIBM -ffast-math -flto
- finline-aggressive -mllvm -unroll-threshold=100
- flv-function-specialization -mllvm -enable-licm-vrp
- mllvm -reroll-loops -mllvm -aggressive-loop-unswitch
- mllvm -reduce-array-computations=3
- mllvm -global-vectorize-slp=true
- mllvm -do-block-reorder=aggressive
- fvirtual-function-elimination -fvisibility=hidden
- DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm
- ljemalloc -lflang

631.deepsjeng_s: Same as 623.xalancbmk_s

641.leela_s: Same as 623.xalancbmk_s

Fortran benchmarks:

648.exchange2_s: basepeak = yes

Peak Other Flags

C benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

C++ benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

Fortran benchmarks:
-Wno-return-type

The flags files that were used to format this result can be browsed at

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/GIGA-BYTE-Platform-SPECcpu2017-Flags-V1.2-Milan.xml
**SPEC CPU®2017 Integer Speed Result**

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