**SPEC CPU®2017 Integer Rate Result**

**Supermicro**
A+ Server AS -1115SV-WTNRT  
(H13SVW-NT, AMD EPYC 8434P)

<table>
<thead>
<tr>
<th>Test Sponsor</th>
<th>Supermicro</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2017 License</td>
<td>001176</td>
</tr>
<tr>
<td>Tested by</td>
<td>Supermicro</td>
</tr>
<tr>
<td>Test Date</td>
<td>Aug-2023</td>
</tr>
<tr>
<td>Hardware Availability</td>
<td>Sep-2023</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Aug-2023</td>
</tr>
</tbody>
</table>

| SPECrate®2017_int_base | 389 |
| SPECrate®2017_int_peak | 416 |

**Copies**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>500.perlbench_r</td>
<td>96</td>
</tr>
<tr>
<td>502.gcc_r</td>
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<td>96</td>
</tr>
<tr>
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<td>96</td>
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<tr>
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<tr>
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<tr>
<td>557.xz_r</td>
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</table>

**Hardware**

- **CPU Name**: AMD EPYC 8434P
- **Max MHz**: 3100
- **Nominal**: 2500
- **Enabled**: 48 cores, 1 chip, 2 threads/core
- **Orderable**: 1 chip
- **Cache L1**: 32 KB I + 32 KB D on chip per core
- **L2**: 1 MB I+D on chip per core
- **L3**: 128 MB I+D on chip per chip, 16 MB shared / 6 cores
- **Memory**: 384 GB (6 x 64 GB 2Rx4 PC5-4800B-R)
- **Storage**: 1 x 4 TB NVMe SSD
- **Other**: None

**Software**

- **OS**: Ubuntu 22.04.3 LTS
- **Kernel**: 5.15.0-79-generic
- **Compiler**: C/C++/Fortran: Version 4.0.0 of AOCC
- **Parallel**: No
- **Firmware**: Version 1.0 released Aug-2023
- **File System**: ext4
- **System State**: Run level 5 (multi-user)
- **Base Pointers**: 64-bit
- **Peak Pointers**: 32/64-bit
- **Power Management**: BIOS and OS set to prefer performance at the cost of additional power usage.

---

**Power Management**

- BIOS and OS set to prefer performance at the cost of additional power usage.
Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
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</table>

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

Compiler Notes

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

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

'u limit -s unlimited' was used to set environment stack size limit
'u limit -l 2097152' was used to set environment locked pages in memory limit
runcpu command invoked through numactl i.e.: numactl --interleave=all r unc pu < etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
To free node-local memory and avoid remote memory usage,
'sysctl -w vm.zone_reclaim_mode=1' run as root.
To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run variability,
'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) only on request for base runs,
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root.
To enable THP for all allocations for peak runs,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
decho always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
Supermicro
A+ Server AS-1115SV-WTNRT
(H13SVW-NT, AMD EPYC 8434P)

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = 
MALLOC_CONF = "retain:true"

Environment variables set by runcpu during the 523.xalancbmk_r peak run:
MALLOC_CONF = "thp:never"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

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.

Platform Notes

BIOS Settings:
Determinism Control = Manual
Determinism Enable = Disable Performance Determinism
cTDP Control = Manual
cTDP = 225
Package Power Limit Control = Manual
Package Power Limit = 225
TSME = Disabled
SEV Control = Disabled

Sysinfo program /root/cpu2017znver4A1.1/bin/sysinfo
Rev: r6732 of 2022-11-07 fe91c89b7ed5c36ae2c92cc097bec197
running on smcsienacpu2017 Tue Aug 22 03:07:57 2023

SUT (System Under Test) info as seen by some common utilities.

Table of contents

1. uname -a
2. w
3. Username
4. ulimit -a
5. sysinfo process ancestry
6. /proc/cpuinfo
7. lscpu
8. numaclt1 --hardware
9. /proc/meminfo
10. who -r
11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.9)
12. Failed units, from systemctl list-units --state=failed
13. Services, from systemctl list-unit-files
14. Linux kernel boot-time arguments, from /proc/cmdline
15. cpupower frequency-info

(Continued on next page)
Platform Notes (Continued)

16. `sysctl`
17. `/sys/kernel/mm/transparent_hugepage`
18. `/sys/kernel/mm/transparent_hugepage/khugepaged`
19. OS release
20. Disk information
21. `/sys/devices/virtual/dmi/id`
22. `dmidecode`
23. BIOS

21. `dmidecode`

2. `w`

3. `uname -a`

4. `ulimit -a`

5. `sysinfo`

6. `/proc/cpuinfo`

(Continued on next page)
7. lscpu

From lscpu from util-linux 2.37.2:

Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Address sizes: 52 bits physical, 57 bits virtual
Byte Order: Little Endian
CPU(s): 96
On-line CPU(s) list: 0-95
Vendor ID: AuthenticAMD
Model name: AMD EPYC 8434P 48-Core Processor
CPU family: 25
Model: 160
Thread(s) per core: 2
Core(s) per socket: 48
Socket(s): 1
Stepping: 2
Frequency boost: enabled
CPU max MHz: 3107.9099
CPU min MHz: 1500.0000
BogoMIPS: 4992.63
Flags: fpu vme de pse cmp tsc msr pae mce cx8 apic sm mmovat pd mtrr pge 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 rlpm
pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe
popcnt vme xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy
abm sse4a misalignss prefetch ovvn ibs kflush wdt tce topoext
 perchr core perfctr nb bpex perfctr llc mwait cx cpb cat _13 cpd _13
invpcid_single hw_pstate ssbd mba ibrs ibpb stibp stibm fsgsbase bsmi
avx2 smep bmi2 erms invpcid cmn rdt_a avx512f avx512dq rdseed adx smap
avx512ifma cflshopt clwb avx512cd sha ni avx512bw avx512vl xsaveopt
xsave xgetbv1 xsave cqm llc cqm_occup llc cmx mmx_local
avx512_bf16 clzero irperf xsaveopt rdrspv rdpv wbnoinvd amd_pinp ccpp arat npt
lbv svm_lock mtr r save tsq_sca led vmcb_clean flushbyasid decodeasisiats
pausefilter pthreshold avic_vmsave_vmload vgif v_spec_ctrl avx512vbmi
umip pk uospe avx512_vbmi2 gfi vae vpcmulqdq avx512_vnni avx512_bitalg
avx512_vpopcntdq l1s7 rdpid overflow_recov succor amca farm flush_lld

Virtualization:

L1d cache: 1.5 MiB (48 instances)
L1i cache: 1.5 MiB (48 instances)
L2 cache: 48 MiB (48 instances)
L3 cache: 128 MiB (8 instances)
NUMA node(s): 1
NUMA node0 CPU(s): 0-95
Vulnerability Itlb multihit: Not affected
SPEC CPU®2017 Integer Rate Result

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(H13SVW-NT, AMD EPYC 8434P)

SPECrate®2017_int_base = 389
SPECrate®2017_int_peak = 416

CPU2017 License: 001176
Test Sponsor: Supermicro
Hardware Availability: Sep-2023
Test Date: Aug-2023
Software Availability: Aug-2023

Platform Notes (Continued)

Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: 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; Retpolines, IBPB conditional, IBRS_FW, STIBP always-on, RSB filling, PRBSB-eIBRS Not affected
Vulnerability Srbds: Not affected
Vulnerability Tax async abort: Not affected

From lscpu --cache:

NAME ONE-SIZE ALL-SIZE WAYS TYPE LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d 32K 1.5M  8 Data 1  64 1  64
L1i 32K 1.5M  8 Instruction 1  64 1  64
L2  1M 48M  8 Unified 2 2048 1  64
L3 16M 128M 16 Unified 3 16384 1  64

8. numactl --hardware
NOTE: a numactl 'node' might or might not correspond to a physical chip.
available: 1 nodes (0)
node 0 cpus: 0-95
node 0 size: 386495 MB
node 0 free: 384966 MB
node distances:
node 0
0: 10

9. /proc/meminfo

MemTotal: 395771688 kB

10. who -r
run-level 5 Aug 22 03:03

11. Systemd service manager version: systemd 249 (249.11-0ubuntu3.9)
Default Target Status
graphical degraded

12. Failed units, from systemctl list-units --state=failed
UNIT LOAD ACTIVE SUB DESCRIPTION
* systemd-networkd-wait-online.service loaded failed failed Wait for Network to be Configured

13. Services, from systemctl list-unit-files
STATE UNIT FILES
enabled ModemManager apparmor blk-availability cloud-config cloud-final cloud-init
cloud-init-local console-setup cron dmesg e2fsck_reap finalrd getty@ gpu-manager
grub-common grub-intrdr-fallback irqbalance keyboard-setup lvm2-monitor lxd-agent
multipathd networkd-dispatcher nvmefc-boot-connections nvmf-autoconnect open-iscsi
open-vm-tools pollinate rsyslog secureboot-db setvtrgb snaphd ssh systemd-networkd
systemd-networkd-wait-online systemd-pstore systemd-resolved systemd-timesyncd thermald
ua-reboot-cmds ubuntu-advantage udisks2 ufw unattended-upgrades vgauth

enabled-runtime netplan-ovs-cleanup systemd-fsck-root systemd-remount-fs

disabled console-getty debug-shell ipmielv iscsid nfsntables rsync serial-getty@
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Platform Notes (Continued)

systemd-boot-check-no-failures systemd-network-generator systemd-sysext
systemd-time-wait-sync upower

-------------
14. Linux kernel boot-time arguments, from /proc/cmdline
BOOT_IMAGE=/boot/vmlinuz-5.15.0-79-generic
root=UUID=b1f703cd-b1aa-4ada-a083-50dc8f47c86c
ro
-------------
15. cpupower frequency-info
analyzing CPU 0:
current policy: frequency should be within 1.50 GHz and 2.50 GHz. The governor "performance" may decide which speed to use within this range.

boost state support:
Supported: yes
Active: yes
Boost States: 0
Total States: 3
Pstate-P0: 2500MHz
-------------
16. sysctl
kernel.numa_balancing 0
kernel.randomize_va_space 0
vm.compaction_proactiveness 20
vm.dirty_background_bytes 0
vm.dirty_background_ratio 10
vm.dirty_bytes 0
vm.dirty_expire_centisecs 3000
vm.dirty_ratio 8
vm.dirty_writeback_centisecs 500
vm.dirtytime_expire_seconds 43200
vm.extfrag_threshold 500
vm.min_unmapped_ratio 1
vm.nr_hugepages 0
vm.nr_hugepages_mempolicy 0
vm.nr_overcommit_hugepages 0
vm.swappiness 1
vm.watermark_boost_factor 15000
vm.watermark_scale_factor 10
vm.zone_reclaim_mode 1
-------------
17. /sys/kernel/mm/transparent_hugepage
defrag [always] defer defer+madvise madvise never
enabled [always] madvise never
hpage_pmd_size 2097152
shmem_enabled always within_size advise [never] deny force
-------------
18. /sys/kernel/mm/transparent_hugepage/klhugepaged
alloc_sleep_millisecs 60000
defrag 1
max_ptes_none 511

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Platform Notes (Continued)

max_ptes_shared  256
max_ptes_swap 64
pages_to_scan 4096
scan_sleep_milliseconds 10000

19. OS release
   From /etc/*-release /etc/*-version
   os-release Ubuntu 22.04.3 LTS

20. Disk information
   SPEC is set to: /root/cpu2017znver4A1.1
   Filesystem  Type  Size  Used Avail Use% Mounted on
   /dev/nvme0n1p2  ext4  3.5T 17G 3.3T 1% /

21. /sys/devices/virtual/dmi/id
   Vendor:        Supermicro
   Product:       Super Server
   Product Family: SMC H13
   Serial:        123456789

22. dmidecode
   Additional information from dmidecode 3.3 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:
   6x Micron Technology MTC40F2046S1RC48BA1 64 GB 2 rank 4800

23. BIOS
   (This section combines info from /sys/devices and dmidecode.)
   BIOS Vendor: American Megatrends International, LLC.
   BIOS Version: 1.0
   BIOS Date: 08/11/2023
   BIOS Revision: 5.30

Compiler Version Notes

C | 502.gcc_r(peak)
---|-----------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C | 500.perlbench_r(base, peak) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak)
 | 557.xz_r(base, peak)
---|-----------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix

(Continued on next page)
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Compiler Version Notes (Continued)

InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C
  502gcc_r(peak)

AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C
  500perlbench_r(base, peak) 502gcc_r(base) 505mcf_r(base, peak) 525x264_r(base, peak)

AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C++
  523xalancbmk_r(peak)

AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C++
  520omnetpp_r(base, peak) 523xalancbmk_r(base) 531deepsjeng_r(base, peak) 541leela_r(base, peak)

AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C++
  523xalancbmk_r(peak)

AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

C++
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AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin

(Continued on next page)
Supermicro
A+ Server AS-1115SV-WTNRT
(H13SVW-NT, AMD EPYC 8434P)

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

SPECrate®2017_int_base = 389
SPECrate®2017_int_peak = 416

Test Date: Aug-2023
Hardware Availability: Sep-2023
Software Availability: Aug-2023

Compiler Version Notes (Continued)

Fortran | 548.exchange2_r(base, peak)
------------------------------------------------------------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#434 2022_10_28) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-4.0.0/bin
------------------------------------------------------------------------------------------------------------------------

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Base Portability Flags

500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LINUX -DSPEC_LP64
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather
-z muldefs -O3 -march=znver4 -fdce=AMDLIBM -ffast-math
-fstruct-layout=7 -mllvm -unroll-threshold=50
-mllvm -inline-threshold=1000 -fremap-arrays -fstrip-mining
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lflang

(Continued on next page)
### Base Optimization Flags (Continued)

C benchmarks (continued):
- `-lamdalloc`

C++ benchmarks:
- `-m64`  `-flto`  `-Wl,-mllvm` `-Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm` `-Wl,-reduce-array-computations=3`  `-z muldefs`  `-O3`
- `-march=znver4`  `-fveclib=AMDLIBM`  `-ffast-math`
- `-mllvm -unroll-threshold=100`  `-finline-aggressive`
- `-mllvm -loop-unswitch-threshold=200000`
- `-mllvm -reduce-array-computations=3`  `-zopt`
- `-fvirtual-function-elimination`  `-fvisibility=hidden`  `-lamdlibm`  `-lflang`
- `-lamdalloc-ext`

Fortran benchmarks:
- `-m64`  `-flto`  `-Wl,-mllvm` `-Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm` `-Wl,-reduce-array-computations=3`
- `-W1,-mllvm` `-W1,-inline-recursion=4`  `-Wl,-mllvm` `-W1,-lsr-in-nested-loop`
- `-W1,-mllvm` `-W1,-enable-iv-split`  `-z muldefs`  `-O3`  `-march=znver4`
- `-fveclib=AMDLIBM`  `-ffast-math`  `-fepilog-vectorization-of-inductions`
- `-mllvm -optimize-strided-mem-cost`  `-floop-transform`
- `-mllvm -unroll-aggressive`  `-mllvm -unroll-threshold=500`  `-lamdlibm`
- `-lflang`  `-lamdalloc`

### Base Other Flags

C benchmarks:
- `-Wno-unused-command-line-argument`

C++ benchmarks:
- `-Wno-unused-command-line-argument`

Fortran benchmarks:
- `-Wno-unused-command-line-argument`

### Peak Compiler Invocation

C benchmarks:
- `clang`

C++ benchmarks:
- `clang++`

(Continued on next page)
Supermicro
A+ Server AS-1115SV-WTNRT
(H13SVW-NT, AMD EPYC 8434P)

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Test Sponsor: Supermicro
Tested by: Supermicro

Peak Compiler Invocation (Continued)

Fortran benchmarks:
flang

Peak Portability Flags

500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
502.gcc_r: -D_FILE_OFFSET_BITS=64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LINUX -DSPEC_LP64
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Peak Optimization Flags

C benchmarks:

500.perlbench_r: basepeak = yes
502.gcc_r: -m32 -flto -z muldefs -Ofast -march=znver4
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mlvm -unroll-threshold=50 -fremap-arrays -fstrip-mining
-mlvm -inline-threshold=1000
-mlvm -reduce-array-computations=3 -zopt -fgnu89-inline
-lamdaloc
505.mcf_r: basepeak = yes
525.x264_r: basepeak = yes
557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes
523.xalancbmk_r: -m32 -flto -Wl,-mlvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mlvm -Wl,-reduce-array-computations=3
-Wl,-mlvm -Wl,-do-block-reorder=aggressive

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Supermicro
A+ Server AS-1115SV-WTNR
(H13SVW-NT, AMD EPYC 8434P)

SPECrate®2017_int_base = 389
SPECrate®2017_int_peak = 416

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Aug-2023
Hardware Availability: Sep-2023
Software Availability: Aug-2023

Peak Optimization Flags (Continued)

523.xalancbmk_r (continued):
-ffast-math -finline-aggressive
-mllvm -unroll-threshold=100
-mllvm -reduce-array-computations=3 -zopt
-mllvm -do-block-reorder=aggressive
-fvirtual-function-elimination -fvisibility=hidden
-lamdaloc-ext

531.deepsjeng_r.basepeak = yes
541.leela_r.basepeak = yes

Fortran benchmarks:
-m64 -flto -W1,-mllvm -Wl,-align-all-nofallthru-blocks=6
-W1,-mllvm -Wl,-reduce-array-computations=3
-W1,-mllvm -Wl,-inline-recursion=4 -W1,-mllvm -Wl,-lsr-in-nested-loop
-W1,-mllvm -Wl,-enable-iv-split -O3 -march=znver4 -fveclib=AMDLIBM
-ffast-math -fepilog-vectorization-of-inductions
-mllvm -optimize-strided-mem-cost -floop-transform
-mllvm -unroll-aggressive -mllvm -unroll-threshold=500 -lamdlibm
-lflang -lamdaloc

Peak Other Flags

C benchmarks (except as noted below):
-Wno-unused-command-line-argument

502.gcc_r: -L/usr/lib32 -Wno-unused-command-line-argument
-L/home/work/cpu2017/v119/aocc4/znver4/rate/amd_rate_aocc400_znver4_A_lib/lib32

C++ benchmarks (except as noted below):
-Wno-unused-command-line-argument

523.xalancbnk_r: -L/usr/lib32 -Wno-unused-command-line-argument
-L/home/work/cpu2017/v119/aocc4/znver4/rate/amd_rate_aocc400_znver4_A_lib/lib32

Fortran benchmarks:
-Wno-unused-command-line-argument

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-Siena-revA.html
**Supermicro**

A+ Server AS -1115SV-WTNRT  
(H13SVW-NT, AMD EPYC 8434P)

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Test Date: Aug-2023  
Hardware Availability: Sep-2023  
Software Availability: Aug-2023

You can also download the XML flags sources by saving the following links:


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Tested with SPEC CPU®2017 v1.1.9 on 2023-08-21 23:07:56-0400.  
Originally published on 2023-09-18.