SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Supermicro

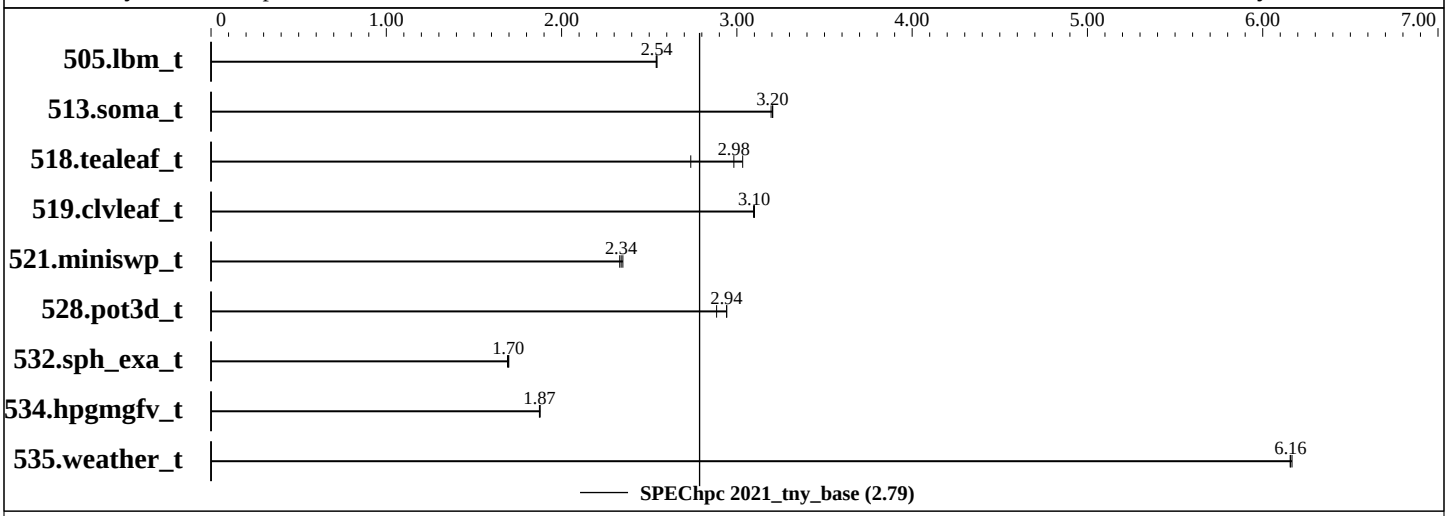
A+ Server 2115GT-HNTF (AMD EPYC 9174F)

SPEChpc 2021_tny_base = 2.79

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 6569
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Feb-2023
Hardware Availability: Nov-2022
Software Availability: Nov-2022



Results Table

Benchmark	Base									Peak								
	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Model	Ranks	Thrds/Rnk	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
505.lbm_t	OMP	8	4	**885**	**2.54**	885	2.54	886	2.54									
513.soma_t	OMP	8	4	1158	3.20	1155	3.20	**1155**	**3.20**									
518.tealeaf_t	OMP	8	4	**553**	**2.98**	544	3.03	603	2.74									
519.clvleaf_t	OMP	8	4	532	3.10	533	3.10	**532**	**3.10**									
521.miniswp_t	OMP	8	4	686	2.33	681	2.35	**684**	**2.34**									
528.pot3d_t	OMP	8	4	722	2.94	737	2.88	**722**	**2.94**									
532.sph_exa_t	OMP	8	4	1148	1.70	1153	1.69	**1149**	**1.70**									
534.hpgmgfv_t	OMP	8	4	626	1.88	627	1.87	**627**	**1.87**									
535.weather_t	OMP	8	4	523	6.17	**524**	**6.16**	524	6.16									

SPEChpc 2021_tny_base = 2.79

SPEChpc 2021_tny_peak = Not Run

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

SPEChpc™ 2021 Tiny Result

Copyright 2021-2023 Standard Performance Evaluation Corporation

Supermicro

A+ Server 2115GT-HNTF (AMD EPYC 9174F)

SPEChpc 2021_tny_base = 2.79

SPEChpc 2021_tny_peak = Not Run

hpc2021 License: 6569
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: Feb-2023
Hardware Availability: Nov-2022
Software Availability: Nov-2022

Hardware Summary

Type of System:	Homogenous
Compute Node:	A+ Server 2115GT-HNTF
Compute Nodes Used:	1
Total Chips:	1
Total Cores:	16
Total Threads:	32
Total Memory:	1152 GB
Max. Peak Threads:	--

Software Summary

Compiler:	AMD Optimizing C/C++ and Fortran Compilers (AOCC) Version 4.0.0 Build 389 for Linux
MPI Library:	OpenMPI Version 4.1.1
Other MPI Info:	None
Other Software:	None
Base Parallel Model:	OMP
Base Ranks Run:	8
Base Threads Run:	4
Peak Parallel Models:	Not Run
Minimum Peak Ranks:	--
Maximum Peak Ranks:	--
Max. Peak Threads:	--
Min. Peak Threads:	--

Node Description: A+ Server 2115GT-HNTF

Hardware

Number of nodes:	1
Uses of the node:	compute
Vendor:	Supermicro
Model:	A+ Server 2115GT-HNTF
CPU Name:	AMD EPYC 9174F
CPU(s) orderable:	1 chip
Chips enabled:	1
Cores enabled:	16
Cores per chip:	16
Threads per core:	2
CPU Characteristics:	Max. Boost Clock upto 4.4GHz
CPU MHz:	4100
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	256 MB I+D on chip per chip 32 MB shared / 2 cores
Other Cache:	None
Memory:	1152 GB (12 x 96 GB 2Rx8 PC5-4800B-R)
Disk Subsystem:	1 x 1.92 TB Samsung SATA III SSD
Other Hardware:	None
Accel Count:	--
Accel Model:	--
Accel Vendor:	--
Accel Type:	--
Accel Connection:	--
Accel ECC enabled:	--
Accel Description:	--
Adapter:	None
Number of Adapters:	0
Slot Type:	None
Data Rate:	None
Ports Used:	0

(Continued on next page)

Software

Accelerator Driver:	--
Adapter:	None
Adapter Driver:	None
Adapter Firmware:	None
Operating System:	Ubuntu 22.04.1 LTS Kernel 5.15.0-58-generic
Local File System:	ext4
Shared File System:	None
System State:	Multi-user, run level 5
Other Software:	None

Node Description: A+ Server 2115GT-HNTF

Hardware (Continued)

Interconnect Type: --

Submit Notes

```
The config file option 'submit' was used.
```

General Notes

```
MPI startup command:
  mpirun command was used to start MPI jobs.
```

Compiler Version Notes

```
==============================================================================
 CC  505.lbm_t(base) 513.soma_t(base) 518.tealeaf_t(base) 521.miniswp_t(base)
     534.hpgmgfv_t(base)
------------------------------------------------------------------------------
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-compiler-4.0.0/bin
------------------------------------------------------------------------------

==============================================================================
 CXXC 532.sph_exa_t(base)
------------------------------------------------------------------------------
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-compiler-4.0.0/bin
------------------------------------------------------------------------------

==============================================================================
 FC  519.clvleaf_t(base) 528.pot3d_t(base) 535.weather_t(base)
------------------------------------------------------------------------------
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-compiler-4.0.0/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`mpicc`

C++ benchmarks:
`mpicxx`

Fortran benchmarks:
`mpif90`

Base Portability Flags

519.clvleaf_t: `-DSPEC_USE_MPIFH`
528.pot3d_t: `-DSPEC_USE_MPIFH`
535.weather_t: `-DSPEC_USE_MPIFH`

Base Optimization Flags

C benchmarks:
`-O3 -ffast-math -flto -march=znver4 -fopenmp`

C++ benchmarks:
`-O3 -ffast-math -flto -march=znver4 -fopenmp`

Fortran benchmarks:
`-O3 -ffast-math -flto -march=znver4 -fopenmp`

Base Other Flags

C benchmarks (except as noted below):
`-Ispecmpitime -I/include`

521.miniswp_t: `-Ispecmpitime/ -I/include`

534.hpgmgfv_t: `-Ispecmpitime  -I/include`

C++ benchmarks:
`-Ispecmpitime  -I/include`

Fortran benchmarks (except as noted below):
`-I/include -I/include/`

(Continued on next page)

Base Other Flags (Continued)

519.clvleaf_t: `-Ispecmpitime -I/include -I/include/`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/hpc2021/flags/amd2021_flags.2022-11-10.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/hpc2021/flags/amd2021_flags.2022-11-10.xml`

SPEChpc 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 info@spec.org.

Tested with SPEChpc2021 v1.1.7 on 2023-02-15 22:44:43-0500.
Report generated on 2023-03-09 13:02:59 by hpc2021 PS formatter v1.0.3.
Originally published on 2023-03-09.