



SPEChpc™ 2021 Tiny Result

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Uniwide Technologies

(Test Sponsor: Telecommunications Technology Association)

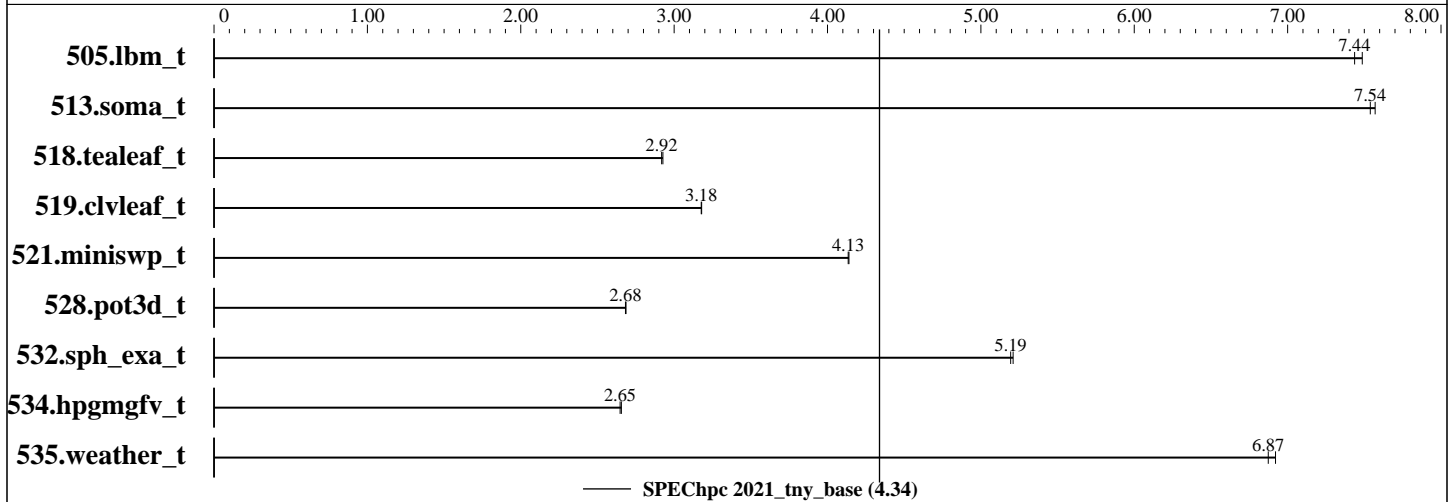
SPEChpc 2021_tny_base = 4.34

SPEChpc 2021_tny_peak = Not Run

Uniwide Technologies RB128 (Intel Xeon E5-2699 v4)

hpc2021 License: 068A
Test Sponsor: Telecommunications Technology Association
Tested by: Telecommunications Technology Association

Test Date: Oct-2022
Hardware Availability: May-2017
Software Availability: Jul-2021



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	6	44	303	7.44	301	7.49											
513.soma_t	OMP	6	44	489	7.57	491	7.54											
518.tealeaf_t	OMP	6	44	565	2.92	564	2.93											
519.clvleaf_t	OMP	6	44	519	3.18	519	3.18											
521.miniswp_t	OMP	6	44	386	4.14	387	4.13											
528.pot3d_t	OMP	6	44	792	2.68	791	2.69											
532.sph_exa_t	OMP	6	44	374	5.21	375	5.19											
534.hpgmgfv_t	OMP	6	44	444	2.65	442	2.66											
535.weather_t	OMP	6	44	469	6.87	466	6.92											

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



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Hardware Summary

Type of System: Homogenous Cluster
Compute Node: Compute Node
Interconnect: Gigabit Ethernet
File Server Node: File server
Compute Nodes Used: 3
Total Chips: 6
Total Cores: 132
Total Threads: 264
Total Memory: 1536 GB
Max. Peak Threads: --

Software Summary

Compiler: C/C++/Fortran: Version 11.2.0 of GNU Compilers
MPI Library: OpenMPI Version 4.1.3
Other MPI Info: None
Other Software: None
Base Parallel Model: OMP
Base Ranks Run: 6
Base Threads Run: 44
Peak Parallel Models: Not Run
Minimum Peak Ranks: --
Maximum Peak Ranks: --
Max. Peak Threads: --
Min. Peak Threads: --

Node Description: Compute Node

Hardware

Number of nodes: 3
Uses of the node: compute
Vendor: Uniwide Technologies
Model: Uniwide Technologies RB128
CPU Name: Intel Xeon E5-2699 v4
CPU(s) orderable: 1,2 chips
Chips enabled: 2
Cores enabled: 44
Cores per chip: 22
Threads per core: 2
CPU Characteristics: Intel Turbo Boost Technology up to 3.6 GHz
CPU MHz: 2200
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 55 MB I+D on chip per chip
Other Cache: None
Memory: 512 GB (16 x 32GB 2Rx4 PC4-2400T-R)
Disk Subsystem: 2 x 300GB SEAGATE ST300MM0048 SAS RAID1
Other Hardware: None
Accel Count: 0
Accel Model: --
Accel Vendor: --
Accel Type: --
Accel Connection: --
Accel ECC enabled: --
Accel Description: --
Adapter: BCM57840 NetXtreme II 10 Gigabit Ethernet
Number of Adapters: 1
Slot Type: PCIe x4
Data Rate: 10Gb/sec
Ports Used: 1

Software

Accelerator Driver: --
Adapter: BCM57840 NetXtreme II 10 Gigabit Ethernet
Adapter Driver: bnx2x
Adapter Firmware: bc 7.8.79
Operating System: CentOS Linux release 7.9.2009 (Core)
3.10.0-1160.66.1.el7.x86_64
Local File System: xfs
Shared File System: nfs
System State: Multi-user, run level 3
Other Software: None

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Node Description: Compute Node

Hardware (Continued)

Interconnect Type: Ethernet

Node Description: File server

Hardware

Number of nodes: 1
Uses of the node: Fileserver
Vendor: Uniwide Technologies
Model: Uniwide Technologies RB128
CPU Name: Intel Xeon E5-2699 v4
CPU(s) orderable: 1,2 chips
Chips enabled: 2
Cores enabled: 44
Cores per chip: 22
Threads per core: 2
CPU Characteristics: Intel Turbo Boost Technology up to 3.6 GHz
CPU MHz: 2200
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 55 MB I+D on chip per chip
Other Cache: None
Memory: 512 GB (16 x 32GB 2Rx4 PC4-2400T-R)
Disk Subsystem: 2 x 300GB SEAGATE ST300MM0048 SAS RAID1
Other Hardware: None
Accel Count: --
Accel Model: --
Accel Vendor: --
Accel Type: --
Accel Connection: --
Accel ECC enabled: --
Accel Description: --
Adapter: --
Number of Adapters: 0
Slot Type: --
Data Rate: --
Ports Used: 0
Interconnect Type: --

Software

Accelerator Driver: --
Adapter: --
Adapter Driver: --
Adapter Firmware: --
Operating System: CentOS Linux release 7.9.2009 (Core)
3.10.0-1160.66.1.el7.x86_64
Local File System: xfs
Shared File System: nfs
System State: Multi-User, run level 3
Other Software: None



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Interconnect Description: Gigabit Ethernet

Hardware

Software

Vendor: Broadcom : --
Model: BCM57840 NetXtreme II 10 Gigabit Ethernet
Switch Model: E8013
Number of Switches: 1
Number of Ports: 140
Data Rate: 10Gb/sec
Firmware: 2.4.6
Topology: Mesh
Primary Use: MPI Traffic, NFS

Submit Notes

The config file option 'submit' was used.

MPI startup command:

```
mpirun --bind-to socket -npersocket 1 --mca topo basic -np $ranks -hostfile /home/tta/hpc2021/hostfile $command
```

Compiler Version Notes

```
=====
FC 519.clvleaf_t(base) 528.pot3d_t(base) 535.weather_t(base)
-----
```

GNU Fortran (GCC) 11.2.0

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```
=====
CXXC 532.sph_exa_t(base)
-----
```

g++ (GCC) 11.2.0

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

gcc (GCC) 11.2.0

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Compiler Version Notes (Continued)

Base Compiler Invocation

C benchmarks:

`mpicc`

C++ benchmarks:

`mpicxx`

Fortran benchmarks:

`mpif90`

Base Optimization Flags

C benchmarks:

`-fopenmp -Ofast -march=native`

C++ benchmarks:

`-fopenmp -Ofast -march=native -std=c++14`

Fortran benchmarks:

`-fopenmp -Ofast -march=native -ffree-line-length-none
-fno-stack-protector`

Base Other Flags

C benchmarks (except as noted below):

`-Ispecmpitime`

521.miniswp_t: `-Ispecmpitime/`

534.hpgmgfv_t: `-Ispecmpitime`

C++ benchmarks:

`-Ispecmpitime`

Fortran benchmarks:

519.clvleaf_t: `-Ispecmpitime`



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The flags file that was used to format this result can be browsed at
<http://www.spec.org/hpc2021/flags/gcc.2021-10-28.html>

You can also download the XML flags source by saving the following link:
<http://www.spec.org/hpc2021/flags/gcc.2021-10-28.xml>

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For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

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