



# SPEChpc™ 2021 Tiny Result

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## KTNF

(Test Sponsor: Telecommunications Technology Association)

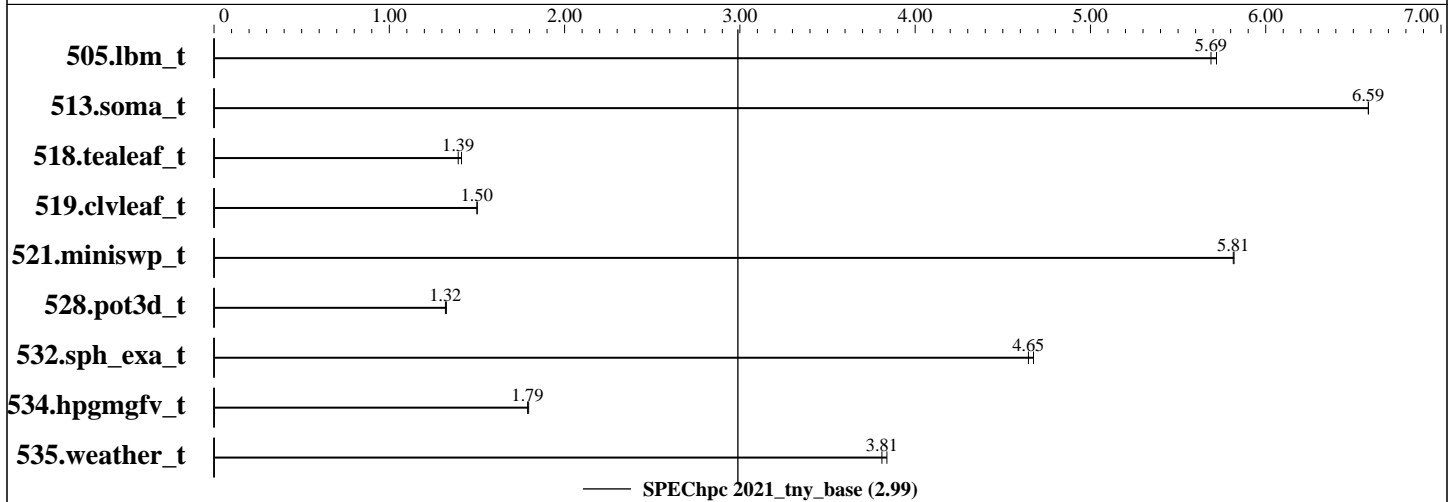
## KTNF KR580S2

SPEChpc 2021\_tny\_base = 2.99

SPEChpc 2021\_tny\_peak = Not Run

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

**Test Date:** May-2022  
**Hardware Availability:** May-2022  
**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	2	80	393	5.72	<b>396</b>	<b>5.69</b>											
513.soma_t	OMP	2	80	<b>562</b>	<b>6.59</b>	562	6.59											
518.tealeaf_t	OMP	2	80	1168	1.41	<b>1184</b>	<b>1.39</b>											
519.clvleaf_t	OMP	2	80	1098	1.50	<b>1100</b>	<b>1.50</b>											
521.miniswp_t	OMP	2	80	275	5.82	<b>275</b>	<b>5.81</b>											
528.pot3d_t	OMP	2	80	1603	1.33	<b>1610</b>	<b>1.32</b>											
532.sph_exa_t	OMP	2	80	417	4.68	<b>420</b>	<b>4.65</b>											
534.hpgmgfv_t	OMP	2	80	<b>657</b>	<b>1.79</b>	655	1.79											
535.weather_t	OMP	2	80	<b>846</b>	<b>3.81</b>	840	3.84											

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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: SMP  
Compute Node: Compute Node  
Interconnect: None  
Compute Nodes Used: 1  
Total Chips: 2  
Total Cores: 80  
Total Threads: 160  
Total Memory: 512 GB  
Max. Peak Threads: --

## Software Summary

Compiler: C/C++/Fortran: Version 11.2 of GNU Compilers  
MPI Library: OpenMPI Version 4.1.3  
Other MPI Info: None  
Other Software: None  
Base Parallel Model: OMP  
Base Ranks Run: 2  
Base Threads Run: 80  
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: 1  
Uses of the node: compute  
Vendor: KTNF  
Model: KTNF KR580S2  
CPU Name: Intel Xeon Platinum 8380  
CPU(s) orderable: 1,2 chips  
Chips enabled: 2  
Cores enabled: 80  
Cores per chip: 40  
Threads per core: 2  
CPU Characteristics: Intel Turbo Boost Technology up to 3.4 GHz  
CPU MHz: 2300  
Primary Cache: 32 KB I + 32 KB D on chip per core  
Secondary Cache: 1 MB I+D on chip per core  
L3 Cache: 60 MB I+D on chip per chip  
Other Cache: None  
Memory: 512 GB (8 x 64 GB 2Rx4 PC4-3200AA-R)  
Disk Subsystem: 2 x Samsung SSD 860 PRO 512GB (RAID 0)  
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

### Software

Accelerator Driver: --  
Adapter: None  
Adapter Driver: None  
Adapter Firmware: None  
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: None  
System State: Multi-user, run level 3  
Other Software: None

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## Node Description: Compute Node

### Hardware (Continued)

Interconnect Type: None

## Interconnect Description: None

### Hardware

Vendor: None  
Model: None  
Switch Model: None  
Number of Switches: 0  
Number of Ports: 0  
Data Rate: 0  
Firmware: None  
Topology: None  
Primary Use: None

### Software

: --

## Submit Notes

The config file option 'submit' was used.

MPI startup command:

```
mpirun --bind-to socket -npersocket 1 -np $ranks $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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## Compiler Version Notes (Continued)

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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warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  
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## Base Compiler Invocation

C benchmarks:  
mpicc

C++ benchmarks:  
mpicxx

Fortran benchmarks:  
mpif90

## Base Portability Flags

519.cvlleaf\_t: -ffree-line-length-none(\*)  
521.miniswp\_t: -DUSE\_KBA -DUSE\_ACCELDIR  
528.pot3d\_t: -ffree-line-length-none(\*)  
532.sph\_exa\_t: -DSPEC\_USE\_LT\_IN\_KERNELS  
535.weather\_t: -ffree-line-length-none(\*)

(\*) Indicates a portability flag that was found in a non-portability variable.

## Base Optimization Flags

C benchmarks:  
-fopenmp -Ofast -march=native

C++ benchmarks:  
-fopenmp -Ofast -march=native -std=c++14

Fortran benchmarks:  
-fopenmp -Ofast -march=native -fno-stack-protector



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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.html>

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

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For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

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