

SPEC® CINT2006 Result

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Loongson

(Test Sponsor: guee)

SPECint®_rate2006 = Not Run

Loongson-3A R4 (Loongson-3A4000)

SPECint_rate_base2006 = 55.1

CPU2006 license:

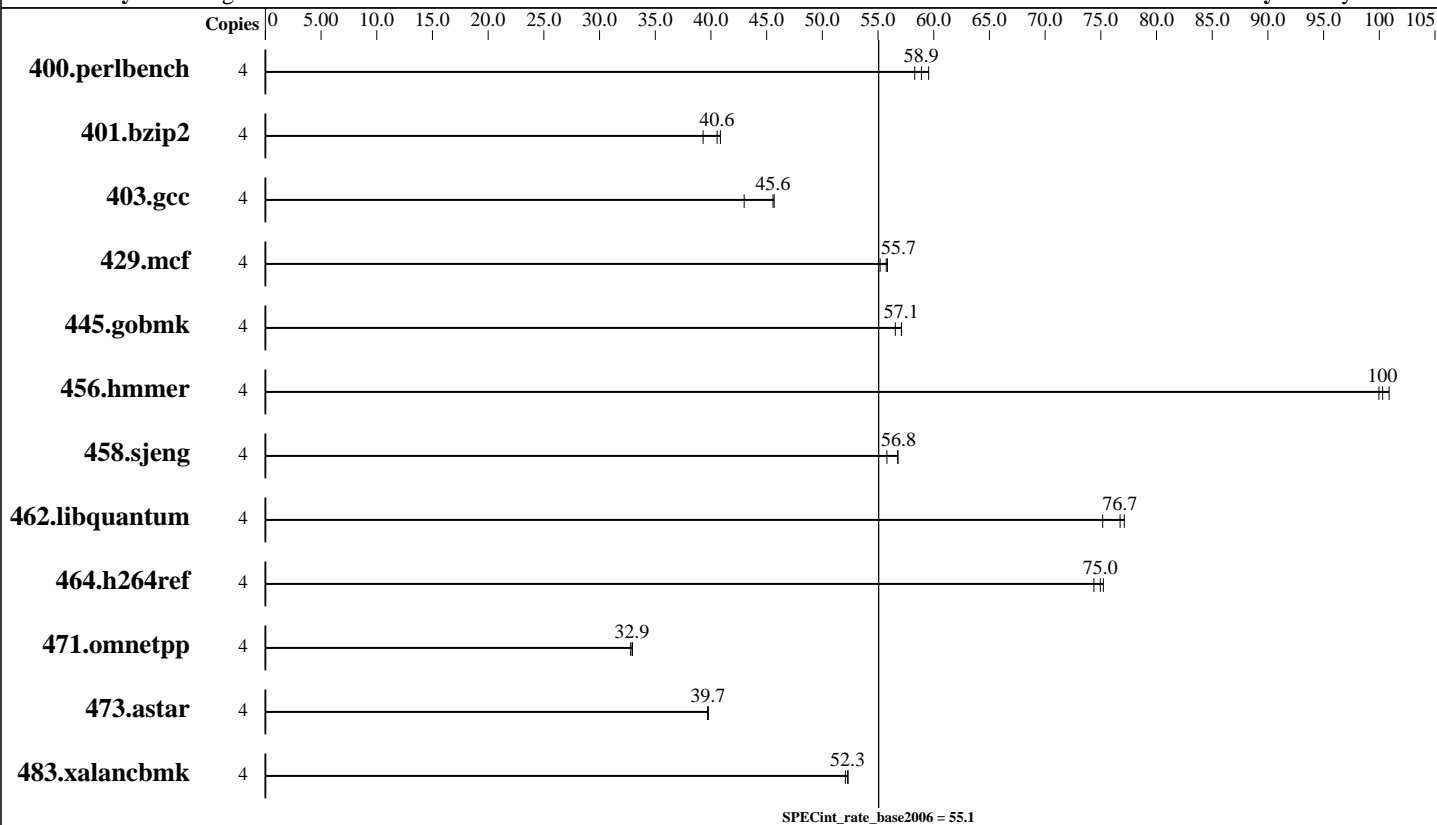
Test sponsor: guee

Tested by: guee

Test date: Aug-2021

Hardware Availability: Jan-2020

Software Availability: July-2021



Hardware

CPU Name: Loongson-3A R4 (Loongson-3A4000)
CPU Characteristics: Loongson-3A R4 (Loongson-3A4000)
CPU MHz: 1800
FPU: Integrated
CPU(s) enabled: 4 cores, could not determine chips, 4 cores/chip
CPU(s) orderable: 1
Primary Cache: 64KB I + 64KB D on chip per core
Secondary Cache: 256KB I+D on chip per core
L3 Cache: 8192KB I+D on chip per chip
Other Cache: None
Memory: 16 GB (2 x 8GB DDR4 2400)
15.290 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)'
Disk Subsystem: 76 GB add more disk info here
Other Hardware: None

Software

Operating System: Loongnix GNU/Linux 20 (DaoXiangHu)
4.19.0-12-loongson-3
Compiler: gcc/g++ 8.3
Auto Parallel: No
File System: ext4
System State: Run level 5 (add definition here)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: --

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	664	58.9	656	59.5	670	58.3							
401.bzip2	4	945	40.8	952	40.6	982	39.3							
403.gcc	4	705	45.7	707	45.6	749	43.0							
429.mcf	4	653	55.8	655	55.7	661	55.2							
445.gobmk	4	735	57.1	735	57.1	742	56.5							
456.hammer	4	370	101	373	100	372	100							
458.sjeng	4	852	56.8	853	56.8	867	55.8							
462.libquantum	4	1075	77.1	1080	76.7	1103	75.2							
464.h264ref	4	1177	75.2	1181	75.0	1190	74.4							
471.omnetpp	4	759	32.9	759	32.9	762	32.8							
473.astar	4	706	39.8	707	39.7	707	39.7							
483.xalancbmk	4	528	52.3	528	52.3	530	52.1							

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.

Platform Notes

```
Sysinfo program /home/guee/cpu2006/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ 8787f7622badcf24e01c368b1db4377c
running on 3a4000 Sat Aug 14 09:10:22 2021
```

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```
From /proc/cpuinfo
  model name : Loongson-3A R4 (Loongson-3A4000)
*
* 0 "physical id" tags found. Perhaps this is an older system,
* or a virtualized system. Not attempting to guess how to
* count chips/cores for this system.
*
  4 "processors"
  cores, siblings (Caution: counting these is hw and system dependent. The
  following excerpts from /proc/cpuinfo might not be reliable. Use with
  caution.)
```

```
From /proc/meminfo
  MemTotal:      16032992 kB
  HugePages_Total: 0
```

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Platform Notes (Continued)

Hugepagesize: 32768 kB

```
/usr/bin/lsb_release -d
Loongnix GNU/Linux 20 (DaoXiangHu)
```

```
From /etc/*release* /etc/*version*
```

```
debian_version: 10.4
```

```
loongnix-desktop_version: 10.4
```

```
os-release:
```

```
PRETTY_NAME="Loongnix GNU/Linux 20 (DaoXiangHu)"
```

```
NAME="Loongnix GNU/Linux"
```

```
VERSION_ID="20"
```

```
VERSION="20 (DaoXiangHu)"
```

```
VERSION_CODENAME=DaoXiangHu
```

```
ID=Loongnix
```

```
HOME_URL="https://www.loongnix.org/"
```

```
SUPPORT_URL="https://ask.loongnix.org/"
```

```
uname -a:
```

```
Linux 3a4000 4.19.0-12-loongson-3 #1 SMP Sat Jun 19 03:09:24 UTC 2021 mips64
GNU/Linux
```

```
run-level 5 Aug 14 02:31
```

```
SPEC is set to: /home/guee/cpu2006
```

```
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/nvme0n1p3  ext4  76G   24G   48G  34% /home
```

(End of data from sysinfo program)

Base Compiler Invocation

C benchmarks:

gcc

C++ benchmarks:

g++

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -mabi=n32 -DSPEC_CPU_LINUX_X64 -std=gnu90

401.bzip2: -DSPEC_CPU_LP64 -mabi=n32

403.gcc: -DSPEC_CPU_LP64 -mabi=64

429.mcf: -DSPEC_CPU_LP64 -mabi=n32

445.gobmk: -DSPEC_CPU_LP64 -mabi=n32

456.hmmer: -DSPEC_CPU_LP64 -mabi=n32

458.sjeng: -DSPEC_CPU_LP64 -mabi=n32

Continued on next page

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Page 3

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Base Portability Flags (Continued)

462.libquantum: -DSPEC_CPU_LP64 -mabi=64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64 -mabi=n32
471.omnetpp: -DSPEC_CPU_LP64 -mabi=n32
473.astar: -DSPEC_CPU_LP64 -mabi=64
483.xalancbmk: -DSPEC_CPU_LP64 -mabi=n32 -DSPEC_CPU_LINUX -std=c++03

Base Optimization Flags

C benchmarks:

-Ofast -mmsa -march=gs464v -mtune=gs464v -funroll-all-loops -static

C++ benchmarks:

-Ofast -mmsa -march=gs464v -mtune=gs464v -funroll-all-loops -static

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

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