

SPEC[®] CINT2006 Result

Copyright 2006-2021 Standard Performance Evaluation Corporation

Loongson

(Test Sponsor: guee)

SPECint[®]2006 =

Not Run

Loongson-3A R4 (Loongson-3A4000)

SPECint_base2006 =

17.5

CPU2006 license:

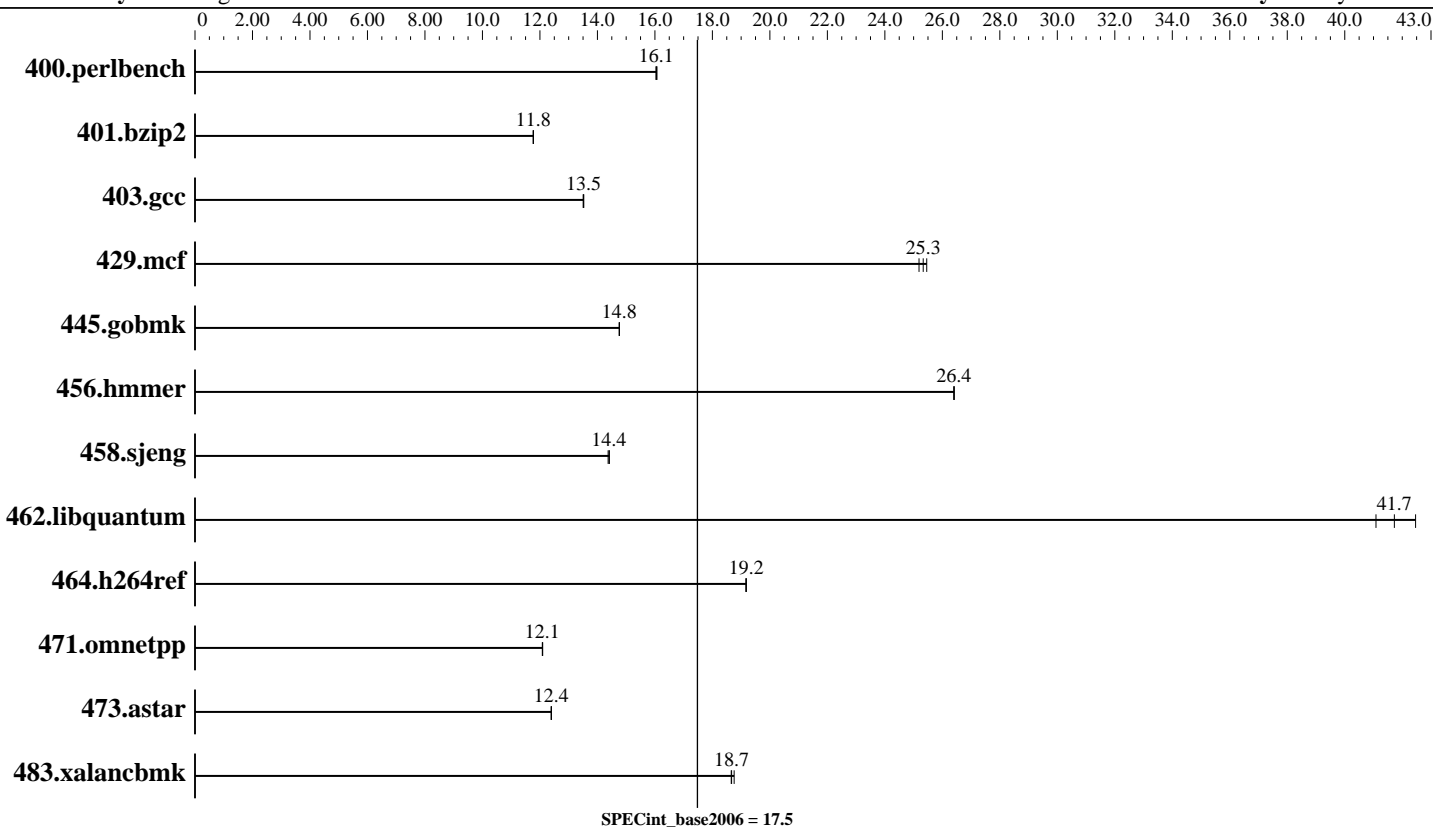
Test sponsor: guee

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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	608	16.1	609	16.1	609	16.0						
401.bzip2	820	11.8	820	11.8	820	11.8						
403.gcc	595	13.5	595	13.5	596	13.5						
429.mcf	360	25.3	358	25.5	362	25.2						
445.gobmk	711	14.8	711	14.8	711	14.8						
456.hammer	353	26.4	353	26.4	353	26.4						
458.sjeng	840	14.4	839	14.4	842	14.4						
462.libquantum	488	42.5	497	41.7	504	41.1						
464.h264ref	1154	19.2	1154	19.2	1154	19.2						
471.omnetpp	517	12.1	517	12.1	517	12.1						
473.astar	566	12.4	566	12.4	566	12.4						
483.xalancbmk	368	18.8	370	18.7	370	18.7						

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

Platform Notes

```
Sysinfo program /home/guee/cpu2006/Docs/sysinfo
$Rev: 6775 $ $Date:: 2011-08-16 #$ 8787f7622badcf24e01c368b1db4377c
running on 3a4000 Sat Aug 14 02:33:48 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
  Hugepagesize:    32768 kB
```

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

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Platform Notes (Continued)

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/nvme0nlp3	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.hmmmer: -DSPEC_CPU_LP64 -mabi=n32
458.sjeng: -DSPEC_CPU_LP64 -mabi=n32
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

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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.

Tested with SPEC CPU2006 v1.2.
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