

SPEC[®] CINT2006 Result

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Loongson

(Test Sponsor: guee)

SPECint[®]2006 = Not Run

Loongson-3A R4 (Loongson-3A4000)

SPECint_base2006 = 17.2

CPU2006 license:

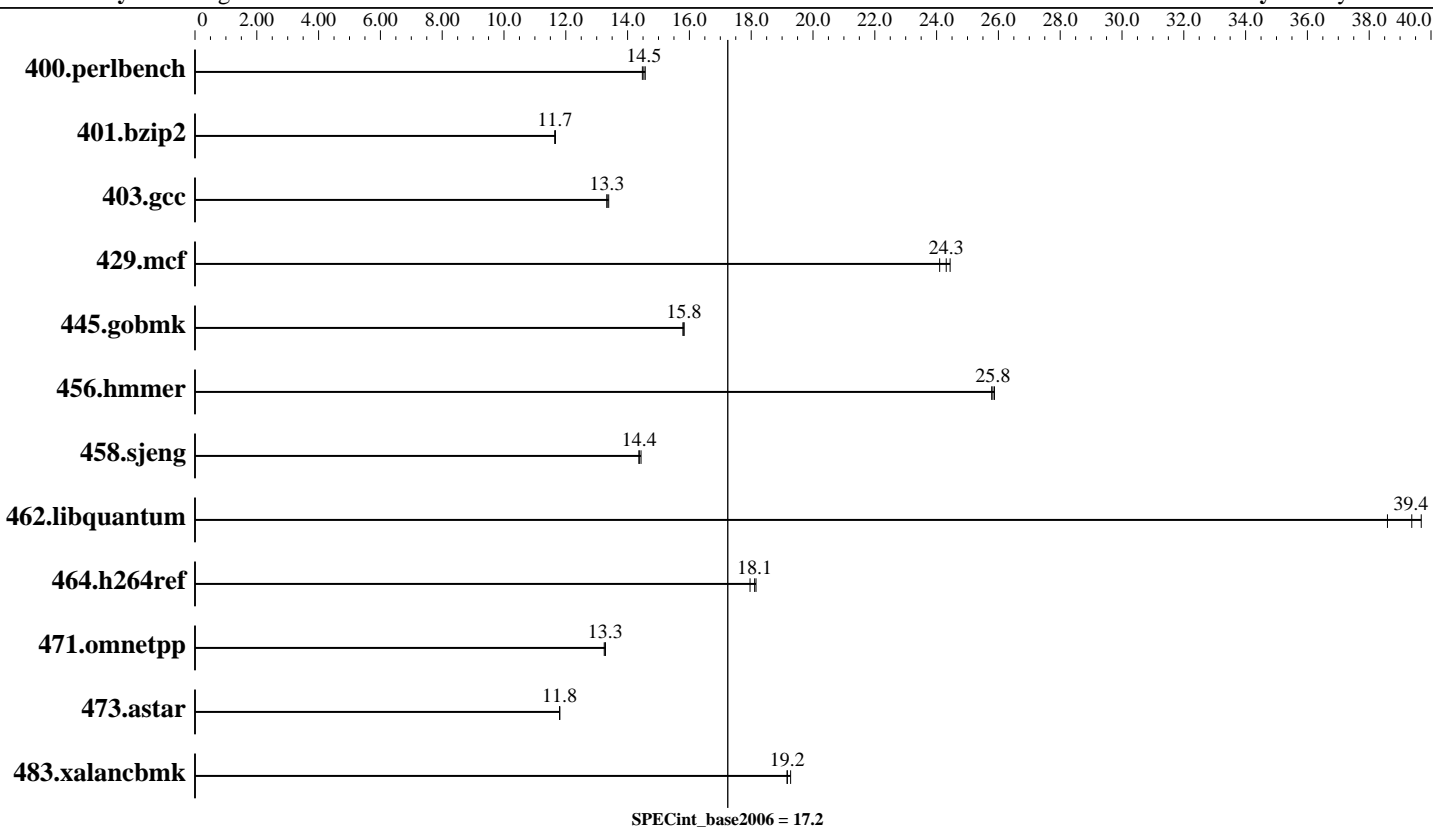
Test sponsor: guee

Tested by: guee

Test date: Sep-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)
15.323 GB fixme: If using DDR3, format is:
'N GB (M x N GB nRxn PCn-nnnnnR-n, ECC)'
Disk Subsystem: 860 GB add more disk info here
Other Hardware: None

Software

Operating System: uos 20 SP1
4.19.0-loongson-3-desktop
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	671	14.6	673	14.5	675	14.5						
401.bzip2	828	11.7	827	11.7	829	11.6						
403.gcc	601	13.4	604	13.3	604	13.3						
429.mcf	373	24.4	378	24.1	375	24.3						
445.gobmk	664	15.8	663	15.8	663	15.8						
456.hammer	361	25.8	361	25.9	362	25.8						
458.sjeng	842	14.4	842	14.4	838	14.4						
462.libquantum	522	39.7	526	39.4	537	38.6						
464.h264ref	1222	18.1	1232	18.0	1219	18.2						
471.omnetpp	471	13.3	472	13.2	471	13.3						
473.astar	595	11.8	595	11.8	595	11.8						
483.xalancbmk	358	19.3	360	19.2	360	19.2						

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 Tue Sep 21 01:33:04 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:      16067440 kB
  HugePages_Total:      0
  Hugepagesize:    32768 kB
```

```
/usr/bin/lsb_release -d
uos 20 SP1
```

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Platform Notes (Continued)

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

```
debian_version: 10.3
```

```
deepin-version:
```

```
[Release]
```

```
Version=20 SP1
```

```
Type=Professional
```

```
Type[zh_CN]=ä, "ä, šç%^
```

```
Edition=Y2020E0001
```

```
Copyright=Y2020CR001
```

```
[Addition]
```

```
Milestone=
```

```
os-release:
```

```
PRETTY_NAME="uos 20 SP1"
```

```
NAME="uos"
```

```
VERSION_ID="20 SP1"
```

```
VERSION="20 SP1"
```

```
ID=uos
```

```
HOME_URL="https://www.chinauos.com/"
```

```
BUG_REPORT_URL="http://bbs.chinauos.com"
```

```
uname -a:
```

```
Linux 3a4000 4.19.0-loongson-3-desktop #1189 SMP PREEMPT Fri Mar 27 15:45:36  
CST 2020 mips64 GNU/Linux
```

```
run-level 5 Sep 21 01:00
```

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

```
Filesystem      Type  Size  Used Avail Use% Mounted on  
/dev/nvme0n1p5 ext4  860G  8.1G  808G   1% /home
```

```
(End of data from sysinfo program)
```

General Notes

Base Compiler Invocation

C benchmarks:

gcc

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Base Compiler Invocation (Continued)

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
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=n32
483.xalancbmk: -DSPEC_CPU_LP64 -mabi=n32 -DSPEC_CPU_LINUX -std=c++03
```

Base Optimization Flags

C benchmarks:

```
-O3 -mmsa -flto -fomit-frame-pointer -fprefetch-loop-arrays
-finline-functions -ftree-vectorize -faggressive-loop-optimizations
-funroll-all-loops -static
```

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```
-O3 -mmsa -flto -fomit-frame-pointer -fprefetch-loop-arrays
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-funroll-all-loops -static
```

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
Report generated on Tue Sep 21 08:16:00 2021 by SPEC CPU2006 PS/PDF formatter v6401.