Huawei

Huawei CH121 (Intel Xeon E5-2618L v2)

**SPECint®2006 =** 34.1

**SPECint_base2006 =** 32.6

**CPU2006 license:** 3175

**Test date:** Dec-2014

**Test sponsor:** Huawei

**Hardware Availability:** Sep-2013

**Tested by:** Huawei

**Software Availability:** Sep-2014

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<td>23.3</td>
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<tr>
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<td>458.sjeng</td>
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<td>464.h264ref</td>
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<td>471.omnetpp</td>
<td>23.2</td>
<td>None</td>
</tr>
<tr>
<td>473.astar</td>
<td>18.8</td>
<td>None</td>
</tr>
<tr>
<td>483.xalancbk</td>
<td>18.8</td>
<td>None</td>
</tr>
</tbody>
</table>

**Hardware**

- **CPU Name:** Intel Xeon E5-2618L v2
- **CPU Characteristics:**
  - CPU MHz: 2000
  - FPU: Integrated
  - CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip
  - CPU(s) orderable: 1.2 chip
  - Primary Cache: 32 KB I + 32 KB D on chip per core
  - Secondary Cache: 256 KB I+D on chip per core
  - L3 Cache: 15 MB I+D on chip per chip
  - Other Cache: None
  - Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC, running at 1333 MHz)
  - Disk Subsystem: 1 x 300 GB SAS, 10000 RPM
- **Other Hardware:** None

**Software**

- **Operating System:** Red Hat Enterprise Linux Server release 7.0 (Maipo) 3.10.0-123.el7.x86_64
- **Compiler:** C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux
- **Auto Parallel:** Yes
- **File System:** ext4
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32/64-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.0
**SPEC CINT2006 Result**

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### SPECint_base2006 = 32.6

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- **Software Availability:** Sep-2014

### Results Table

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<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>1720</td>
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<td>199</td>
<td>34.6</td>
<td>199</td>
<td>34.6</td>
</tr>
</tbody>
</table>

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.

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

### Platform Notes

- **BIOS configuration:**
  - Set Power Efficiency Mode to Custom
  - Baseboard Management Controller used to adjust the fan speed to 100%
  - Set Hyper-Threading to Disabled
- **Sysinfo program** /spec15/config/sysinfo.rev6914
- **$Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
  running on localhost.localdomain Sat Dec 13 04:34:20 2014

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:** Intel(R) Xeon(R) CPU E5-2618L v2 @ 2.00GHz
- 2 "physical id”s (chips)
- 12 "processors"
- cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

Continued on next page
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Platform Notes (Continued)

```
cpu cores : 6
siblings : 6
  physical 0: cores 0 1 2 3 4 5
  physical 1: cores 0 1 2 3 4 5

cache size : 15360 KB

From /proc/meminfo
  MemTotal: 263924204 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
  os-release:
    NAME="Red Hat Enterprise Linux Server"
    VERSION="7.0 (Maipo)"
    ID="rhel"
    ID_LIKE="fedora"
    VERSION_ID="7.0"
    PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
    ANSI_COLOR="0;31"
    CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
  redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
  system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
  system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

uname -a:
  Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57
  EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Dec 12 10:27

SPEC is set to: /spec15
  Filesystem Type Size Used Avail Use% Mounted on
  /dev/mapper/rhel-root ext4 256G 8.2G 235G 4% /

Additional information from dmidecode:

    Warning: Use caution when you interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

    BIOS Insyde Corp. RMIBV629 05/12/2014
    Memory:
      16x Hynix HMT42GR7BFR4C-RD 16 GB 2 rank 1867 MHz, configured at 1333 MHz
      8x NO DIMM NO DIMM

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

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/spec15/libs/32:/spec15/libs/64:/spec15/sh"
OMP_NUM_THREADS = "12"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0
Transparent Huge Pages enabled with:
  echo always > /sys/kernel/mm/transparent_hugepage/enabled
  runspec command invoked through numactl i.e.:
  numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
  icc  -m64

C++ benchmarks:
  icpc -m64

Base Portability Flags

C benchmarks:
  -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
  400.perlbench: -DSPEC_CPU_LP64
  401.bzip2: -DSPEC_CPU_LP64
  403.gcc: -DSPEC_CPU_LP64
  429.mcf: -DSPEC_CPU_LP64
  445.gobmk: -DSPEC_CPU_LP64
  456.hmmer: -DSPEC_CPU_LP64
  458.sjeng: -DSPEC_CPU_LP64
  462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
  464.h264ref: -DSPEC_CPU_LP64
  471.omnetpp: -DSPEC_CPU_LP64
  473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

C++ benchmarks:
  -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
  -W1,-z,muldefs -L/sh -ismartheap64
## SPEC CINT2006 Result

### Huawei

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### Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

### Peak Compiler Invocation

C benchmarks (except as noted below):

- `icc -m64`

  400.perlbench: `icc -m32 -L/opt/intel/compiler_xe_2015/lib/ia32`

  445.gobmk: `icc -m32 -L/opt/intel/compiler_xe_2015/lib/ia32`

C++ benchmarks (except as noted below):

- `icpc -m64`

  471.omnetpp: `icpc -m32 -L/opt/intel/compiler_xe_2015/lib/ia32`

### Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64` `-DSPEC_CPU_LINUX`

464.h264ref: `-DSPEC_CPU_LP64`

473.astar: `-DSPEC_CPU_LP64`

483.xalancbmk: `-DSPEC_CPU_LP64` `-DSPEC_CPU_LINUX`

### Peak Optimization Flags

C benchmarks:

400.perlbench: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`

- `-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`

- `-opt-prefetch -ansi-alias`

401.bzip2: `-xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`

- `-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32`

- `-opt-prefetch -ansi-alias`

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Peak Optimization Flags (Continued)

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc
-opts-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-ansi-alias

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml
http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.xml
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