

QEMU support for Xtensa

- Git tree (view): <http://jcmvbkbc.spb.ru/git/?p=dumb/qemu-xtensa.git;a=summary>
- Git tree (clone): <git:jcmvbkbc.spb.ru/dumb/qemu-xtensa.git> / <http://jcmvbkbc.spb.ru/dumb/qemu-xtensa.git> * *Toolchain build scripts (view):* <http://jcmvbkbc.spb.ru/git/?p=dumb/xtensa-toolchain-build.git;a=summary> * *Toolchain build scripts (clone):* <git:jcmvbkbc.spb.ru/dumb/xtensa-toolchain-build.git> / <http://jcmvbkbc.spb.ru/dumb/xtensa-toolchain-build.git>

Things to do

- core/basic opcodes implementation;
 - [+] and/or/xor/neg/abs;
 - [+] shifts;
 - [+] add[x*]/sub[x*]/add.n/addi.n;
 - [+] call0, callx0, j, b*;
 - [+] l32*, s32*;
 - [+] accurate SR write semantics;
 - [-] boolean registers/commands;
- windowed registers;
 - [+] call*/callx*, retw, rotw, rfwo, rfwu;
 - [+] simple overflow algorithm that's triggered from ENTER;
 - [+] accurate overflow triggering;
- [+] loop option;
- [+] extended L32R option;
- [-] floating point;
- MMU;
 - [+] no-MMU mode;
 - [+] proper mem_idx usage;
 - [-] region protection (with/without translation);
 - [+] MMU mode;
- gdbserver;
 - [+] xml register map, read/write register;
 - [+] correct SR mapping;
 - [+] debug exception, single step mode;
 - [+] hw/sw breakpoints;
 - [-] gdbserver for different processor types;
- [-] debug option;
- exceptions;
 - [+] debug (only external);
 - [-] break;
 - [+] window overflow/underflow;
 - [+] user/kernel (invalid insn, privileged insn, alignment, division by 0,...);
 - [+] relocatable vectors;
 - [+] external interrupts;
 - [+] timer interrupts;
 - [-] correct opcode timings?;
 - [+] qemu timer to avoid busy looping in waiti;

- sample evaluation board;
 - [+] memory mapping, ELF loader;
 - [-] standard peripherals;
 - [+] dc232b;
- simulation quality;
 - [+] pass command line arguments to argc/argv SIMCALLs (DAN branch only);
 - [+] TB chaining;
- [+] external configuration (a-la xtensa overlay)?
- [-] automatic regression test suite;

Events

- 2011.04.20: C++ 'hello world' is working in qemu (stdio, stdlib, simcalls, windowed registers, loops, ext l32r) (:)
- 2011.04.26: multithreaded ThreadX application is working in qemu (timer interrupts)
- 2011.04.30: preparation for qemu mainline submission started
- 2011.05.04: first RFC patchset sent to qemu-devel
<http://lists.nongnu.org/archive/html/qemu-devel/2011-05/msg00242.html>
- 2011.05.18: first PATCH patchset sent to qemu-devel
<http://lists.nongnu.org/archive/html/qemu-devel/2011-05/msg01525.html>
- 2011.06.19: [linux boots](#), issues on userspace application startup
- 2011.06.22: successfull userspace app startup in linux
- 2011.06.29: xtensa linux session on qemu-xtensa is available at ssh -p 3022
xtensa@jcmvbkbc.spb.ru (passwd: xtensa)

[qemu](#)

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Permanent link:
<http://wiki.osll.ru/doku.php/etc:users:jcmvbkbc:qemu-target-xtensa?rev=1309305963>

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