

Processor Functional Description

This hardware component is a Mips-32 processor core.

This ISS uses the [ISS2 API](#) and can be wrapped in a CABA or TLM-T [Wrapper](#).

It implements all instructions defined in the MIPS32 architecture specification, with the following limitations:

- The floating point instructions are supported, FPU exception detection is partially implemented
- The Mips virtual memory instructions are not supported. The MMU is implemented as an external TLB (SoCLib generic MMU) in the [VciVcacheWrapper](#) component.

Both little-endian and big-endian implementations are available.

Component definition & implementation

- [source:trunk/soclib/soclib/iss/mips32/metadata/mips32.sd?](#)
- [source:trunk/soclib/soclib/iss/mips32/include/mips32.h?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_cp0.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_fpu.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_hazard.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_instructions.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_load_store.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_run.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_special.cpp?](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_special2cpp](#)
- [source:trunk/soclib/soclib/iss/mips32/src/mips32_special3.cpp?](#)

Template parameters

This component has no template parameters.

Interrupts

Mips defines 6 interrupts lines. The handling and prioritization of the interrupts is deferred to software.

Ports

None, it is to the wrapper to provide them.

Debug and traces

When built with `SOCLIB_MODULE_DEBUG` defined (for example by calling `soclib-cc` with `"-b common:mips32 -b common:mips32el"`), some debug messages are available, controlled with the [ISS2](#) `set_debug_mask()` method. By default all messages are enabled; see [source:trunk/soclib/soclib/iss/mips32/include/mips32.h?](#) for possible values.