

UNDER DEVELOPMENT

ARM7TDMI Processor Functional Description

This hardware component is a ARM7TDMI processor core. This is only an ISS, which should be wrapped with an [IssWrapper](#).

The simulation model is actually an instruction set simulator with an ARM7TDMI pipeline.

Currently it only exists in bigendian form.

Component definition

Available in source:trunk/soclib/soclib/lib/arm7tdmi/metadata/arm7tdmi.sd

Usage

ARM7TDMI has no parameters.

```
Uses('iss_wrapper', iss_t = 'common:arm7tdmi')
```

Before compiling any SoClib simulator using the ARM7TDMI you will need to download the UNISIM (<http://www.unisim.org>) library (well, just a piece of it, the `unisim_lib`).

To do so just download it using svn from [?https://unisim.org/svn/devel/unisim_lib](https://unisim.org/svn/devel/unisim_lib) with the following command:

- `svn import ?https://unisim.org/svn/devel/unisim_lib`

You will have to enter a username and password. If you do not have access to the UNISIM development, you can simply use 'guest'/'guest' for username and password respectively. Once you have downloaded UNISIM you will need to create a link in trunk/soclib/lib/arm7tdmi/include/iss/ and trunk/soclib/lib/arm7tdmi/src/iss/ to <your_path_to_unisim_lib>/unisim.

If you wish you can download the full UNISIM library by downloading `unisim_tools` and `unisim_simulators`:

- `svn import ?https://unisim.org/svn/devel/unisim_tools`
- `svn import ?https://unisim.org/svn/devel/unisim_simulators`

ARM7TDMI Processor ISS Implementation

The implementation is in

- source:trunk/soclib/lib/arm7tdmi/include/iss/arm7tdmi.h
- source:trunk/soclib/lib/arm7tdmi/src/iss/arm7tdmi.cpp

The previous files use the ARM7TDMI implementation provided in the UNISIM library.

Template parameters

This component has no template parameters.

Constructor parameters

```
ARM7TDMIss(  
    sc_module_name name,    // Instance Name  
    int ident);            // processor id
```

Visible registers

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Interrupts

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The handling and prioritization of the interrupts is deferred to software.

Ports

None, it is to the wrapper to provide them.