

VciPiTargetWrapper Functional Description

This hardware component is a VCI/PIBUS protocol converter. It behaves as a target on the PIBUS interface, and behaves as an initiator on the VCI interface. It can be used by a VCI target to interface a PIBUS based system on chip.

- A single FSM controls the PIBUS and VCI interfaces. Therefore, the maximum throughput is 2cycles per 32bits words, even in case of a burst.
- The supported PIBU response codes are PI_ACK_RDY, PI_ACK_WAT, and PI_ACK_ERR.

Component definition

Available in source:trunk/soclib/desc/soclib/vci_pi_target_wrapper.sd

Usage

VciPiTargetWrapper has no other parameter than VCI ones, it may be used like others, see [SoclibCc/VciParameters](#)

```
Uses( 'vci_pi_target_wrapper', **vci_parameters )
```

VciPiTargetWrapper CABA Implementation

The caba implementation is in

- source:trunk/soclib/systemc/include/caba/interconnect/vci_pi_target_wrapper.h
- source:trunk/soclib/systemc/src/caba/interconnect/vci_pi_target_wrapper.cc

Template parameters

```
template<typename vci_param>
```

Constructor parameters

```
VciPiTargetWrapper( sc_module_name name);    // Instance Name
```

Ports

- sc_in<bool> **p_resetn** : Global system reset
- sc_in<bool> **p_clk** : Global system clock
- sc_in<bool> **p_sel** : Target select (from the PIBUS controller)
- soclib::caba::VciInitiator<vci_param> **p_vci** : The VCI port
- soclib::caba::PibusTarget **p_pi** : The PIBUS port