

VciSimpleRingFast

1) Functional Description

This hardware component is a VCI compliant ring, implemented as a combinational daisy-chain and well suited for FPGA implementations.

Policy arbitration uses a circulating token which allows the wrappers to access the ring in a round-robin fashion.

2) Component definition & usage

source:trunk/soclib/soclib/module/network_component/vci_simple_ring_fast/caba/metadata/vci_simple_ring_fast.sd?

3) CABA implementation

CABA sources

- interface :
source:trunk/soclib/soclib/module/network_component/vci_simple_ring_fast/caba/source/include/vci_simple_ring_fast.h
- implementation :
source:trunk/soclib/soclib/module/network_component/vci_simple_ring_fast/caba/source/src/vci_simple_ring_fast.cpp

CABA Constructor parameters

```
VciSimpleRingNetwork( sc_module_name insname,           // instance name
                     const soclib::common::MappingTable &mt, // mapping table
                     const soclib::common::IntTab &ringid,  // global subsystem index
                     const int &wrapper_fifo_depth,         // wrapper fifo depth
                     int nb_attached_initiator,              // number of VCI initiators
                     int nb_attached_target);                // number of VCI targets
```

CABA ports

- sc_in<bool> p_clk; *Global system clock*
- sc_in<bool> p_resetrn; *Global system reset*
- soclib::caba::VciInitiator<vci_param>* p_to_target; *Ports to VCI targets*
- soclib::caba::VciTarget<vci_param> * p_to_initiator; *Ports to VCI initiators*

4) TLMT implementation

The TLM-T implementation is not available yet.