

VirtualDspinRouter

1) Functional Description

This is the elementary node of a Virtual Dspin Array.

2) Component definition & usage

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

3) CABA implementation

CABA sources

interface source:trunk/soclib/soclib/module/network_component/virtual_dspin_router/caba/source/include/virtual_dspin_router_caba.h

implementation source:trunk/soclib/soclib/module/network_component/virtual_dspin_router/caba/source/src/virtual_dspin_router_caba.c

CABA Template parameters

int data_size	Size of flit
int io_mask_offset	Emplacement of IO checking
int io_mask_size	Size of IO checking
int io_number_offset	Emplacement of IO index in IO table
int io_number_size	Size of IO index
int x_addressing_offset	Emplacement of target x in first flit
int x_addressing_size	Size of target x
int y_addressing_offset	Emplacement of target y in first flit
int y_addressing_size	Size of target y
int eop_offset	Emplacement of eop checking
int broadcast_offset	Emplacement of broadcast checking
int in_fifo_size	Size of input fifos
int out_fifo_size	Size of output fifos
int x_min_offset	Emplacement of x_min for broadcast confinement
int x_max_offset	Emplacement of x_max for broadcast confinement
int y_min_offset	Emplacement of y_min for broadcast confinement
int y_max_offset	Emplacement of y_max for broadcast confinement

CABA Constructor parameters

sc_module_name insname	instance name
int x	x position in the network
int y	y position in the network
bool n	North connexion enabled
bool s	South connexion enabled
bool e	East connexion enabled

bool w	West connexion enabled
bool broadcast0	Broadcast activated for channel 0
bool broadcast1	Broadcast activated for channel 1
bool io0	IO enable for channel 0
bool io1	IO enable for channel 1
clusterCoordinates<x_addressing_size, y_addressing_size> * aIO_table	list of IO Clusters

CABA ports

- sc_in<bool> p_clk; *Global system clock*
- sc_in<bool> p_resetn; *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.