SocLib Components General Index

VirtualDspinArray

1) Functional Description

The Virtual Dspin Array is a two-dimensionnal array composed of VirtualDspinRouter, for routing paquets of two virtual channels on the same physic network.

Two Virtual Dspin Arrays can be combined, one for request paquets, other for response paquets to form a VirtualDspinNetwork.

2) Component definition & usage

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

3) CABA implementation

CABA sources

interface	source:trunk/soclib/soclib/module/network_component/virtual_dspin_array/caba/source/include/virt
implementation	source:trunk/soclib/soclib/module/network_component/virtual_dspin_array/caba/source/src/virtual_

CABA Template parameters

int io_mask_size	Size in bits of IO checking
int io_number_size	Size in bits of IO index
int x_addressing_size	Size in bits of first coordinate addressing
int y_addressing_size	Size of second coordinate addressing
int cmd_data_size	Size in bits of flits
int cmd_io_mask_offset	Emplacement of IO checking in paquets
int cmd_io_number_offset	Emplacement of IO index in IO table in paquets
int cmd_x_addressing_offset	Emplacement of target x in first flit in paquets
int cmd_y_addressing_offset	Emplacement of target y in first flit in paquets
int cmd_eop_offset	Emplacement of eop checking in paquets
int cmd_broadcast_offset	Emplacement of broadcast checking in paquets
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 size_x	width of network
int size_y	height of network
bool broadcast0	broadcast activated on first channel
bool broadcast1	broadcast activated on second channel
bool io0	IO activated on first channel
bool io1	IO activated on second channel
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
DspinOutput<cmd_data_size>	*** p_out**	For each cluster and each virtual channel : out
DspinInput<cmd_data_size>	* p_in	For each cluster and each virtual channel : in

4) TLMT implementation

The TLM-T implementation is not available yet.