tb_cocotb.v

AUTHORS

JAY CONVERTINO

DATES

2024/12/11

INFORMATION

Brief

Test bench wrapper for cocotb

License MIT

tb_cocotb

```
module tb_cocotb #(
parameter
BUS_WIDTH
  =
1,
parameter
WEIGHT
  =
1
) ( input aclk, input arstn, output [(BUS_WIDTH*8)-1:0] m_axis_tdata, output
```

Test bench for axis moving average. This will run a file through the system and write its output. These can then be compared to check for errors. If the files are identical, no errors. A FST file will be written.

Parameters

BUS_WIDTH parameter	Width of the bus input/output
WEIGHT parameter	Divisor for moving average, rounded to the highest power of two.

Ports

aclk	Clock for AXIS
arstn	Negative reset for AXIS
m_axis_tdata	Output data
m_axis_tvalid	When active high the output data is valid
m_axis_tready	When set active high the output device is ready for data.
s_axis_tdata	Input data
s_axis_tvalid	When set active high the input data is valid
s_axis_tready	When active high the device is ready for input data.

INSTANTIATED MODULES

dut

```
axis_moving_average #(
                                                                    .
BUS_WIDTH(BUS_WIDTH),
                                                                    .
WEIGHT(WEIGHT)
) dut ( .aclk(aclk), .arstn(arstn), .m_axis_tdata(m_axis_tdata), .m_axis_tva
```

Device under test, axis_moving_average