

# tb\_cocotb.v

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## AUTHORS

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## DATES

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## INFORMATION

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### Brief

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Test bench wrapper for cocotb

### License MIT

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## tb\_cocotb

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```
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

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

Ports

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

INSTANTIATED MODULES

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dut

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```
axis_moving_average #(
    BUS_WIDTH(BUS_WIDTH),
    WEIGHT(WEIGHT)
) dut ( .aclk(aclk), .arstn(arstn), .m_axis_tdata(m_axis_tdata), .m_axis_tvalid(m_axis_tvalid), .s_axis_tdata(s_axis_tdata), .s_axis_tvalid(s_axis_tvalid))
```

Device under test, axis\_moving\_average