

tb_cocotb.v

AUTHORS

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DATES

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INFORMATION

Brief

Test bench wrapper for cocotb

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tb_cocotb

```
module tb_cocotb #(
  parameter
  DELIMITER
  =
  " , "
  parameter
  TERMINATION
  =
  "\n"
  parameter
  STRING_LEN
```

```
=
4,
parameter
MBUS_WIDTH
=
1,
parameter
USER_WIDTH
=
4,
parameter
DEST_WIDTH
=
4,
parameter
PREFIX_LEN
=
1,
parameter
DATA_PREFIX
=
"#",
parameter
DEST_PREFIX
=
"&",
parameter
USER_PREFIX
=
" * ",
parameter
KEYWORD_LEN
=
3,
parameter
SET_KEYWORD
=
"set",
parameter
CLR_KEYWORD
=
"clr"
) ( input aclk, input arstn, output [(MBUS_WIDTH*8)-1:0] m_axis_tdata, output
```

Test bench for string to data converter. 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

DELIMITER parameter	break value between multiple strings
TERMINATION parameter	termination value of full string from serial port, byte only. (\n = 0A \r = 0D).
STRING_LEN parameter	max lenth of string including delimiter
MBUS_WIDTH parameter	bus width of master (data) output
USER_WIDTH parameter	user width of master bus, only in 4 bit nibbles, and at least 4 bits.
DEST_WIDTH	dest width of master bus, only in 4 bit nibbles, and at least 4 bits.

parameter

PREFIX_LEN length of following prefix strings in bytes.

parameter

DATA_PREFIX prefix for data hex strings

parameter

DEST_PREFIX prefix for destination hex strings

parameter

USER_PREFIX prefix for user hex strings

parameter

KEYWORD_LEN length of the following keywords

parameter

SET_KEYWORD keyword to output data over tdata,tuser,tdest on master interface.

parameter

CLR_KEYWORD keyword to clear output data and buffers of master interface.

parameter

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_tuser Output user data

m_axis_tdest Output destination data

m_axis_tready When set active high the output device is ready for data.

s_axis_tdata Input string 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_string_to_axis_data #(
    DELIMITER(DELIMITER),
    TERMINATION(TERMINATION),
    STRING_LEN(STRING_LEN),
    MBUS_WIDTH(MBUS_WIDTH),
    USER_WIDTH(USER_WIDTH),
    DEST_WIDTH(DEST_WIDTH),
    PREFIX_LEN(PREFIX_LEN),
    DATA_PREFIX(DATA_PREFIX),
    DEST_PREFIX(DEST_PREFIX),
    .
```

```
USER_PREFIX(USER_PREFIX),  
KEYWORD_LEN(KEYWORD_LEN),  
SET_KEYWORD(SET_KEYWORD),  
CLR_KEYWORD(CLR_KEYWORD)  
) dut ( .aclk(tb_dut_clk), .arstn(tb_dut_rstn), .m_axis_tdata(tb_dut_data),
```

Device under test, axis_string_to_axis_data